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Suicidality Among Preadolescent Maltreated Children in Foster Care

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Abstract

This study sought to determine the prevalence of suicidal ideation, plans, and attempts among 515 preadolescent (aged 9–11 years) maltreated children who entered foster care within the prior year. Over a quarter (26.4%) of the children had a history of suicidality according to their own and/or their caregiver's report, 4.1% of whom were imminently suicidal. In bivariate analyses, children at higher risk of suicidality tended to be younger, non-Hispanic, abused, and to have experienced multiple types of maltreatment, more referrals to child welfare, more household transitions, and a longer length of time in foster care. There were no gender differences. Multiple regression analyses found physical abuse and chronicity of maltreatment to be the most robust predictors of suicidality. It is critically important that these high-risk children are screened for suicidality before adolescence and that caregivers and professionals are informed of their risk status so that they may implement mental health treatment, monitoring, and harm reduction measures.

Keywords

suicide; preadolescent; child maltreatment; foster care; screening

Introduction

This study examined the rates and correlates of suicidal thoughts and behaviors among an exceptionally high-risk group of children – those that experienced recent maltreatment and subsequent placement into foster care. The focus of the study was on preadolescent youth aged 9–11, an often overlooked age group in studies assessing suicide risk. Suicide is the second most common cause of death among 15–24 year olds in the United States, and the fourth most common for children aged 5–14 years (Hoyert & Xu, 2012). Far more youth report suicidal ideation or make plans for suicide than die by suicide; thus, the numbers

affected by this issue are substantially higher than national death statistics represent. In 2011, 15.8% of U.S. high school youth had considered suicide in the previous 12 months and 7.8% reported a suicide attempt in the past year according to the population-level Youth Risk Behavior Surveillance Study (Eaton et al., 2012). Despite an overall decline among high school students since 1991, there has been a recent increase in suicidality defined as “suicidal thoughts or behaviors” since 2009 (Centers for Disease Control and Prevention, 2011).

Community and national surveys have found that being the victim of child maltreatment increases the odds of suicidal ideation about four fold and the odds of attempts 3–13 fold in childhood and young adulthood (Beautrais, Joyce, & Mulder, 1996a; Bebbington et al., 2009; Dube et al., 2001; Johnson et al., 2002; McHolm, MacMillan, & Jamieson, 2003; Salzinger, Rosario, Feldman, & Ng-Mak, 2007). One population-based study in Denmark which used administrative records found that there was a 10-fold increase in hospitalizations for suicide attempts among young people ages 14–27 who had received prior medical attention for child abuse (Christoffersen, Poulsen, & Nielsen, 2003). A second population-based study conducted in Sweden found that the risk of completed suicide was 2.7 times greater for young people ages 13–27 who had experienced maltreatment (Hjern, Vinnerljung, & Lindblad, 2004). In a recent Canadian study, maltreated children (ages 12 and older) were twice as likely to have a repeat presentation to the emergency department (ED) for self-inflicted injury or poisoning than their non-maltreated peers (Rhodes et al., 2013).

Characteristics of the maltreatment experience, including type, chronicity, and severity have also been found to be associated with suicidality. Findings suggest that physical and sexual abuse, as well as emotional maltreatment, may be the types of maltreatment most strongly associated with suicidality (Beautrais et al., 1996a; Beautrais et al., 1996b; Dube et al., 2001; Finzi et al., 2001; Johnson et al., 2002; Thompson et al., 2005; Thompson et al., 2012). Greater severity and chronicity of maltreatment have also been associated with increased risk (Thompson et al., 2005). For example, the Adverse Childhood Experiences (ACE) Study found that for every unit increase in ACE score, the risk of suicide attempt increased by 60% (Dube et al., 2001). In addition, a prospective study using administrative records found that there was a 625% increase in suicide attempts seen in the ED among children with four or more official reports of maltreatment compared with those who had none (Jonson-Reid, Kohl, & Drake, 2012).

Youth placed in foster care due to maltreatment also have an increased risk of suicidality. Rates of foster youth-reported suicidal ideation range from 7%–27% (Anderson, 2011; Chernoff, Combs-Orme, Risley-Curtiss, & Heisler, 1994; Pilowsky & Wu, 2006), and rates of suicide attempts range from 8%–15% (Leslie et al., 2010; Pilowsky & Wu, 2006) which are 3–9 times higher than rates in the general population (Beautrais et al., 1996b; Pilowsky & Wu, 2006). Population-based studies have used administrative records to demonstrate that the risk of suicide attempts and deaths by suicide (as documented by ED visits, hospitalizations, and death records) among children and young adults with a history of foster care are between 2–6 times higher than rates in the general population (Christoffersen et al., 2003; Hjern et al., 2004; Katz et al., 2011; Rhodes et al., 2012; Thompson & Newman,

1995; Vinnerljung, Hjern, & Lindblad, 2006). Those studies that examined age, gender, and race/ethnicity did not find differences in suicidality risk by these factors, nor did studies which examined the impact of length of time in foster care or number of placements changes children had experienced (Christoffersen et al., 2003; Hjern et al., 2004; Katz et al., 2011; Rhodes et al., 2012; Thompson & Newman, 1995; Vinnerljung et al., 2006).

While many of the studies reviewed had a wide age spectrum, few studies examined whether children at younger ages were demonstrating suicidal behaviors. Most of the studies in general samples of youth describe the epidemiology of adolescent suicidality, and substantially less attention has been paid to suicidal behaviors in pre-adolescents (Greydanus & Calles, 2007). One notable exception is a 30-year epidemiological study of suicide mortality in Austria which described the rare instances of suicide completion among 5–9-year-old children (all by hanging) (Dervic et al., 2006). Focusing specifically on children at-risk for, or involved in, the child welfare system, three studies explicitly examined rates of suicidality among preadolescent youth. The first, a small Israeli study, compared rates of suicidal behavior among 6–12 year olds and found that 54% of the physically abused children had experienced suicidal ideation or attempts, compared with 6% of the nonabused youth (Finzi et al., 2001). A second study of 850 children ages 6–13, found that the rate of suicidal ideation was higher in maltreated children compared with non-maltreated peers of low socioeconomic status (Cicchetti, Rogosch, Sturge-Apple, & Toth, 2010). Finally, a multisite US study, the Longitudinal Studies on Child Abuse and Neglect (LONGSCAN), examined suicidal ideation in over 1,000 8-year-old children who had either experienced, or were at risk for, maltreatment. Overall, 10% of the children endorsed suicidal ideation; severity of physical abuse and chronicity of maltreatment were significant positive predictors (Thompson et al., 2005).

Because having a past history of suicide attempts confers a substantial risk of completed suicide, identifying and treating suicidality early is a key prevention strategy for reducing morbidity and mortality in childhood (Gould, Greenberg, Velting, & Shaffer, 2003). One of the most challenging aspects of suicidality among children is that parents/caregivers may be unaware that their children are actually considering suicide. In one study of youth who were psychiatrically hospitalized due to suicidality, 37% of parents were previously unaware of their child's suicidal thoughts and 59% were unaware of their suicidal plans (Klaus, Mobilio, & King, 2009). In another community sample study, over 90% of parents were unaware of their children's suicidal ideation and/or attempts (Breton, Tousignant, Bergeron, & Berthiaume, 2002). A study of high-risk 8-year-old children, over half of whom had been maltreated and 6% who were in foster care, found low concordance between child report of suicidal ideation and parents' and teachers' reports. Parents of more than three-quarters of children were unaware of their child's suicidal ideation; there were no differences in concordance for children with documented maltreatment or those in foster care (Thompson et al., 2006).

The current study builds upon and extends the prior research in this area by examining suicidality in a large number of children who entered foster care within the prior year. Given the well-documented association between maltreatment and suicidality, we hypothesized that children who had a history of maltreatment severe enough to warrant placement in

foster care may be at particular risk for suicidality. Indeed, the Interpersonal Theory of Suicide posits that thwarted belongingness (i.e., social isolation) and perceived burdensomeness (of which family conflict is a main component) are key factors in completed suicides; children who have been removed from their homes due to maltreatment are more likely to experience these interpersonal risks (Van Orden et al., 2010). In addition, given the prior literature, we hypothesized that children who experienced physical, sexual and/or emotional abuse and those with a history of more chronic maltreatment, would be at increased risk for suicidality.

If we are to offer timely and appropriate help to vulnerable children experiencing suicidality, the first step is to understand the scale of the problem. This study sought to examine the prevalence, awareness, methods, and correlates of suicidality among a large, representative cohort of preadolescent youth (aged 9–11 years) who were placed in foster care due to maltreatment. This study also explored demographic, maltreatment, and foster care correlates of preadolescent suicidality as well as caregiver knowledge of children's suicidal ideation and plans. Finally, multiple regression analyses examined the most salient risk factors for suicidality. No known prior research has examined these constructs and correlates in such a large sample of preadolescent children in foster care, interviewing both children and their caregivers, and reporting on planned methods of attempting suicide. Furthermore, no studies have examined foster parent knowledge of suicidality for children who are imminently suicidal, which is critical for intervention efforts. Knowledge of suicidal ideation, planned methods, and prior attempts among these younger children is crucial if caregivers are to implement harm reduction measures.

Method

Participants

Participants included youth and their caregivers from a large, urban Western city, who were recruited for a randomized controlled trial of an intervention for preadolescent foster youth known as Fostering Healthy Futures (Taussig, Culhane, & Hettleman, 2007). Children, ages 9–11, were eligible for the randomized-controlled trial if the following criteria were met: 1) they had been placed in out-of-home care by court order in one of four participating counties within the preceding year, 2) placement was ordered due to maltreatment, 3) they still resided in out-of-home care at the time of the baseline interview, and 4) their cognitive functioning (based on our testing) was sufficient to comprehend the interview questions. Ninety-one percent of those meeting eligibility requirements were enrolled in this study. In the current study, we analyzed baseline data that were collected pre-randomization from interviews with 515 children and their out-of-home caregivers.

The sample was 52.0% male, with a mean age of 9.8 years ($SD=.90$). The racial/ethnic composition (non-exclusive categories) was 49.9% Hispanic, 31.6% Caucasian, 25.2% African American, 12.2% Native American, and 3.3% Asian or Pacific Islander. Types of maltreatment were coded as present/absent for each child: 27.2% had experienced physical abuse, 11.3% sexual abuse, 48.9% physical neglect, 83.1% supervisory neglect, 62.3% emotional maltreatment, and 77.9% multiple types of maltreatment. The foster caregivers were primarily female (90.1%). Youth were living in non-relative foster care (44.3%),

kinship care (52.2%), or congregate care (3.5%; i.e., shelters or residential treatment). Children had been in foster care an average of 7.1 months ($SD=3.5$) and had been living in their current placement for an average of 6.0 months ($SD=3.8$) at the time of the interview.

Procedure

This study was approved by the institutional review board, and informed consent and assent were obtained. Children and their caregivers were interviewed separately, typically at their residence. Children and caregivers were each paid \$40.00 for their participation. The battery of instruments included standardized and non-normed measures that assessed functioning across multiple domains (Taussig et al., 2007). Interviews contained confidential and non-confidential sections. Results of the non-confidential interview/testing were summarized in reports given to caseworkers. Confidential interview data were not shared except for information about harm to self or others. Both the non-confidential and confidential interviews contained questions about suicidality.

Children were told during the assent process that they could skip any questions if they “felt uncomfortable or for any other reason.” They were also told that they would get paid even if they did not answer all questions or if they chose to stop the interview. The non-confidential assent form explicitly stated that information provided would be shared with children’s caseworkers who could share the information with other adults. The assent forms stated that if the child shared any information about hurting themselves or others, the researchers would need to report this information.

Graduate student research assistants administered the interviews. They were trained to implement the “suicide protocol” to assess Imminent Suicidality if a child endorsed any of the questions regarding suicidality on either the non-confidential or confidential interview, or if the child chose to skip any of those items. The suicide protocol was administered at the end of an interview session and included the following two questions: “Are you currently thinking seriously about killing yourself?” and “Do you have a plan for killing yourself?” If the answer was in the affirmative to either question, or if the interviewer felt there was a risk despite the child’s denial (for example, if the child chose to skip questions related to suicidality or asked what would happen if they answered the suicide protocol questions in the affirmative), the following ensued: (1) The interviewer told the child that they would share this information with their caregiver and caseworker immediately (the child was given an opportunity to tell the caregiver in the interviewer’s presence); (2) The information the child shared was reported to the caregiver, caseworker (or social services’ hotline), and project manager before the interviewer left the interview site; and (3) The interviewer ensured that the caregivers felt they could keep the child safe before the interviewer left.

Measures of Independent Variables

Demographic and Placement Characteristics—The following data were collected from interviews and records: gender, race/ethnicity, age, number of prior social services referrals, number of lifetime household changes, type of current placement (i.e., foster, kinship, or congregate care), time in current placement, and length of time in out-of-home

care during the current episode. Only number of prior referrals had missing data ($n = 37$), due to insufficient information in child welfare records.

Maltreatment Experiences—Trained research assistants coded each child's legal petition and social history (child welfare records' narrative of the history and events preceding the legal filing that led to the child's removal from the home) using the Maltreatment Classification System (Barnett, Manly, & Cicchetti, 1993). The developers of the rating system report an overall kappa of .60 and adequate estimates of interrater agreement (.67–1.0; (Manly, Cicchetti, & Barnett, 1994)). In the current study, a history of physical abuse, sexual abuse, physical neglect, supervisory neglect, and emotional maltreatment were coded as present or absent for each participating child. In addition, a dichotomous variable of "Multiple Maltreatment" was coded as present for children who had experienced more than one type of maltreatment. Only maltreatment that occurred within the previous two years was coded because of concerns that not all caseworkers would reliably include information about past history of abuse. All records were consensus coded by at least two trained staff, and discrepancies were resolved through consultation with one of the senior investigators.

Measures of Suicidality

Several standardized measures administered to children and their caregivers on the non-confidential interviews included items used to index suicidality. Each measure has demonstrated validity and reliability with racially and ethnically diverse samples. They include: (1) the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 2000), a child self-report measure of anxiety, which asks children to report "whether you ever have thoughts and/or feelings like these;" (2) The Trauma Symptom Checklist for Children (TSCC; Briere, 1996), a child self-report measure of posttraumatic stress and related symptomatology which asks questions in the present tense, i.e., "How often do each of these things happen to you?" and (3) the Child Behavior Checklist (CBCL; Achenbach & Rescorla, 2001), a widely-used caregiver-report measure of child behavior problems, which asks caregivers to rate the frequency of behaviors occurring now or in the past 6 months. Although the TSCC and CBCL each have multiple response options, the scales were dichotomized for the analyses described below to increase power, and because we wanted to set a low threshold for identification of suicidality, given the consequences of missing true positives. In addition, this follows the procedure others have used to examine suicidality in this population, making our findings more comparable (Thompson et al., 2005, 2006). On the confidential interview, children answered questions from the Adolescent Risk Behavior Survey (ARBS; Taussig, 1998) about lifetime history of suicidal ideation, plans, attempts, and methods. Finally, children who endorsed one or more items indicating any suicidal risk were administered the "suicide protocol" by research assistants, as described above.

Six dichotomous variables indexed suicidality: 1. Suicidal Ideation was coded if a child had an affirmative response to either/both of two items: "Wanting to kill myself" (item #52 on the TSCC) and "Have you ever thought seriously about wanting to kill yourself?" (item from ARBS). 2. Suicidal Plan was coded if a child responded affirmatively to the question,

“Have you ever made a plan to kill yourself?” (ARBS question). 3. Suicidal Attempt was coded if a child answered affirmatively to the question, “Have you ever tried to kill yourself?” (ARBS question). 4. Caregiver Report of Suicidality was coded if the caregiver responded affirmatively to either/both of two items about their child’s behavior: “Deliberately harms self or attempts suicide” (CBCL item #18) or “Talks about killing self” (CBCL item #91). 5. Imminently Suicidal was coded if the child answered “yes” to either or both of the two items in the suicide protocol including: “Are you currently thinking seriously about killing yourself?” and “Do you have a plan for killing yourself?” 6. Any Suicidality was coded if any of the above five child- or caregiver-report items was coded as “yes.”

Analysis Plan

We first examined the descriptive statistics and missing data for each dependent variable as well as the frequencies describing children’s suicidal plans and attempts. Chi-square and univariate logistic regression analyses were then used to estimate the bivariate relationships between each of the independent variables and the six dependent variables of suicidality. Multiple logistic regression analyses examined the predictive validity of a set of predictors identified a priori based on prior literature. Finally, caregiver knowledge of youth imminent suicidality was examined using crosstabulation tables. Given the low prevalence of many of the indicators of suicidality, and the small sample size in some subgroups, we chose to identify and report marginally significant findings to enable the reader to discern patterns and to support subsequent replication efforts.

Results

Descriptive Statistics

Over a quarter ($n = 136$, 26.4%) of the children had a history of suicidality according to their own and/or their caregiver’s report. Suicidal Ideation ($n = 85$, 16.6%) was the most frequently child-endorsed type of suicidal behavior; Reports of Plans ($n = 20$, 3.9%), Attempts ($n = 19$, 3.7%) and Imminent Suicidality ($n = 21$, 4.1%) were much lower. According to caregivers, 15.7% ($n = 81$) of children had a history of suicidality. Only 3 children (0.6%) chose to skip some of the suicide items (no children skipped all items).

Of the 20 youth who reported a history of planning for suicide, the majority (68.4%) reported that they had made a plan to kill themselves once, a quarter (26.3%) reported that they had made a plan 3–5 times. Among the 19 children who had attempted suicide, 78.9% reported that they attempted suicide once, 10.5% reported attempting twice, and 10.5% reported attempting five times. Two children reported that their attempts required medical attention.

Children’s reports of the methods with which they planned to attempt suicide or those methods used in actual attempts are shown in Table 1. Individual children could have more than one type of plan and attempt represented in the table. As shown, cutting or stabbing oneself was the most frequent plan and method of attempt followed by choking or hanging oneself. A number of children reported planning or attempting to die by getting an animal or

person so angry that they would attack them, or by placing themselves in a position to be hurt by an object (e.g. running into the street or into a tornado). Of note is the fact that no children reported planning or attempting suicide via overdose or firearms.

Bivariate Analyses

The bivariate analyses describing the associations between dichotomous predictors of gender, race/ethnicity, placement and maltreatment types with suicidality indicators are shown in Table 2. The percentages for the total sample are shown in the first row of Table 2, and serve as a basis for comparison. As shown in Table 2, there were no gender differences on any of the six suicidal items. There were, however, several differences between rates of reporting by race/ethnicity. In interpreting these differences, keep in mind that categories of race/ethnicity were non-exclusively coded, such that a child could be represented in multiple racial/ethnic categories. Accordingly, findings for each ethnic/racial category should only be interpreted in regard to the reference group for that dichotomous variable (i.e., those children who are not of the given racial/ethnic category). White children (as opposed to non-White) were more likely to report suicidal ideation [$\chi^2 (1, N = 513) = 4.48, p=.03$] and attempts [$\chi^2 (1, N = 515) = 3.99, p=.05$] and there was a marginal finding for Caregiver Report of Suicidality to be higher [$\chi^2 (1, N = 515) = 2.74, p=.10$]. A third of White children had a history of Any Suicidality, which was higher than for non-White children [$\chi^2 (1, N = 515) = 4.58, p=.03$]. There was a marginally significant finding for African American children, compared with non-African American children, to have more Suicidal Ideation [$\chi^2 (1, N = 515) = 3.07, p=.08$] but lower rates of Caregiver Reports of Suicidality [$\chi^2 (1, N = 515) = 3.23, p=.07$]. Hispanic children, in comparison to non-Hispanic children, were less likely to endorse Suicidal Ideation [$\chi^2 (1, N = 514) = 7.46, p=.006$] or attempts [$\chi^2 (1, N = 514) = 6.52, p=.01$], and there was a marginally significant finding for them to be less likely to have Any Suicidality [$\chi^2 (1, N = 515), p=.08$]. Native American youth, in comparison with non-Native American children, reported Planning for Suicide at twice the rate of the total sample which was marginally significant [$\chi^2 (1, N = 515) = 3.12, p=.08$]. Finally, although the numbers are small and findings should be interpreted with caution, the group of Asian/Pacific Islanders (compared with non-Asian/Pacific Islanders) reported high rates of suicidality across all categories, with a marginally significant findings for Suicide Attempts [$\chi^2 (1, N = 515) = 3.21, p=.07$] and Imminent Suicidality [$\chi^2 (1, N = 515) = 2.66, p=.10$].

In terms of placement type, there were no differences between children in non-relative foster care, kinship care, or congregate care on any index of suicidality based on child report. Although the numbers are small and findings should be interpreted with caution, caregivers reported much higher knowledge of suicidality among children in congregate care than for children in foster or kinship care [$\chi^2 (1, N = 515) = 22.61, p<.0001$] and this difference was reflected in any report of suicidality [$\chi^2 (1, N = 515) = 17.67, p=.0001$]. Children who experienced abuse demonstrated higher rates of suicidality on several indices. Specifically, physically abused children had higher rates of Suicidal Ideation [$\chi^2 (1, N = 515) = 8.22, p=.004$] and plans [$\chi^2 (1, N = 514) = 11.41, p=.0007$], and there was a marginally significant finding for physically abused children to have higher Caregiver Reports of Suicidality [$\chi^2 (1, N = 515) = 3.61, p=.06$]. Over a third (35.0%) of physically abused children had Any Suicidality which was significantly higher [$\chi^2 (1, N = 515) = 7.30, p=.007$] than for children

without physical abuse. Sexually abused children were more likely to report higher rates of Suicidal Ideation [$\chi^2 (1, N = 514) = 6.09, p=.01$] and they were over twice as likely to be Imminently Suicidal [$\chi^2 (1, N = 515) = 3.45, p=.06$]. There was a marginally significant finding for emotionally abused children to have higher rates of Suicide Plans [$\chi^2 (1, N = 514) = 2.75, p=.10$]. Finally, children who had experienced multiple forms of maltreatment were more likely to report Suicidal Ideation [$\chi^2 (1, N = 512) = 9.03, p=.003$] and there was a marginally significant finding for them to have Any Suicidality [$\chi^2 (1, N = 515) = 3.16, p=.07$].

Table 3 shows the relations between the continuous predictors of age, number of referrals, number of household changes, time in current placement and time in out-of-home care with the suicidality indicators. Younger age was a significant predictor of being Imminently Suicidal ($OR=.54, p=.02, CI=.32-.91$) and of having Any Suicidality ($OR=.76, p=.02, CI=.61-.95$). The number of lifetime household changes was positively related to Suicidal Ideation ($OR=1.17, p=.002, CI=1.06-1.30$), Suicide Plans ($OR=1.21, p=.03, CI=1.02-1.44$), Suicide Attempts ($OR=1.17, p=.09, CI=.98-1.41$), Caregiver Report of Suicidality ($OR=1.15, p=.008, CI=1.04-1.28$) and Any Suicidality ($OR=1.16, p=.001, CI=1.06-1.27$). The number of family referrals to social services (perhaps a proxy for chronicity of maltreatment) was positively related to Caregiver Report of Suicidality ($OR=1.05, p=.02, CI=1.01-1.09$), Imminent Suicidality ($OR=1.07, p=.05, CI=1.00-1.14$), and there was a marginally significant finding for more referrals to be related to Any Suicidality ($OR=1.03, p=.09, CI=.99-1.07$). Children with a longer length of time in out-of-home care were more likely to have attempted suicide ($OR=1.16, p=.03, CI=1.01-1.33$), but length of time with current caregiver was unrelated to any of the suicidality variables.

Multiple Regression Analyses

Based on prior literature and the Interpersonal Theory of Suicide, we hypothesized that experiencing physical, sexual and/or emotional abuse, as well as more chronic maltreatment (as operationalized by number of prior referrals for maltreatment) would be the strongest predictors of indices of suicidality. In order to examine the predictive validity of each of these indices over and above the others, we simultaneously entered each of the four predictor variables into a series of logistic regression equations, each predicting one of the six suicidality dependent variables. In predicting Suicidal Ideation, the omnibus test was significant, $\chi^2 (4, N=475) = 12.72, p=.01$. The significant predictors (over and above the other predictors in the model) were physical abuse ($B = .62, SE = .26, Wald = 5.5, OR = 1.9, CI: 1.1, 3.1, p = .02$) and sexual abuse ($B = .72, SE = .34, Wald = 4.4, OR = 2.1, CI: 1.1, 4.0, p = .03$). In predicting Suicidal Plans, the omnibus test was significant, $\chi^2 (4, N=476) = 10.11, p=.04$. Only physical abuse was a significant predictor ($B = 1.4, SE = .51, Wald = 7.6, OR = 4.1, CI: 1.5, 10.99, p = .01$) above the others in the model. For Suicide Attempts, the omnibus test was not significantly significant, nor were there any significant predictors over and above the others in the model. For Caregiver Report of Suicidality, the omnibus test was marginally significant, $\chi^2 (4, N=478) = 8.04, p=.09$. The number of prior maltreatment reports was a significant predictor ($B = .05, SE = .02, Wald = 5.0, OR = 1.05, CI: 1.01, 1.09, p = .02$) and physical abuse was a marginally significant predictor ($B = .51, SE = .27, Wald = 3.4, OR = 1.7, CI: .97, 2.85, p = .06$) above the others in the model. For

Imminent Suicidality, the omnibus test was not significant. Number of prior maltreatment reports was a marginally significant predictor ($B = .06$, $SE = .03$, $Wald = 3.4$, $OR = 1.06$, $CI: .996, 1.14$, $p = .07$). Finally, in predicting Any Suicidality, the omnibus test was significant, $\chi^2 (4, N=478) = 9.81$, $p=.04$. Physical abuse was a significant predictor ($B = .58$, $SE = .23$, $Wald = 6.4$, $OR = 1.8$, $CI: 1.1, 2.8$, $p = .01$) and number of prior maltreatment reports was marginally significant ($B = .03$, $SE = .02$, $Wald = 2.7$, $OR = 1.03$, $CI: .99, 1.07$, $p = .098$) over and above the other variables in the equation. The multiple regression analyses predicting indices of suicidality with low base rates (i.e. plans, attempts, and imminent suicidality) should be interpreted with caution.

Caregiver Awareness of Imminent Suicidality

Finally, we examined whether caregivers of children who were imminently suicidal reported any awareness of suicidality in their child. Among the caregivers of the 21 imminently suicidal children, two thirds ($n=14$) reported no knowledge of their child's suicidality. Of the 14 caregivers who were unaware, eight were kinship caregivers and six were non-relative foster parents.

Discussion

This is the first large-scale study to explore suicidal ideation, plans, and attempts among preadolescent maltreated children in foster care. Despite the young age (9–11 years) of study participants, suicidality was high, with an overall prevalence of 26%. This rate is nearly five times the rate of suicidality of the general population at this age (King et al., 2001), and over twice as high as that reported among 8-year-old children in the LONGSCAN study (Thompson et al., 2005). The higher prevalence in the current study may be attributable to more severe maltreatment and/or the additional stress of entry to foster care, as only 6.1% of the participants in the LONGSCAN study were in foster care, and not all of them had substantiated maltreatment (Thompson et al., 2005).

Major Findings

The most common methods by which young children in this study planned or attempted suicide included cutting/stabbing and choking/hanging. A previous study of young children in child welfare noted similar methods, but also found that children reported overdosing, which was notably absent in our study (Finzi et al., 2001). To reduce risk for younger children with suicidality, caregivers should restrict access to potentially lethal objects (e.g., knives, rope).

In terms of demographic characteristics, the current study's findings regarding a lack of gender differences in suicidality, was largely consistent with prior studies' findings for both preadolescent and adolescent children involved in the child welfare system (Anderson, 2011; Leslie et al., 2010; Rhodes et al., 2012). Unlike gender, there has been a more consistent finding that certain ethnic groups exhibit higher levels of suicidality. In this study, Non-Hispanic White children reported higher levels of ideation and attempts than non-White children, consistent with the LONGSCAN study findings (Thompson et al., 2005). Native American children were twice as likely to have suicidal plans, which is consistent with

national data (National Center for Injury Prevention Control). While Asian/Pacific Islander children constituted a small group within our study, they exhibited high levels of suicidal behavior, a finding which merits further study in a larger population. Hispanic children (relative to non-Hispanic youth) were less likely to report suicidal ideation or attempts.

The research on type of maltreatment has found that those who have been physically abused (Finzi et al., 2001), sexually abused (Beautrais et al., 1996a; Bebbington et al., 2009; O'Connor, Rasmussen, & Hawton, 2009) or emotionally abused (Johnson et al., 2002; Thompson et al., 2012) are at greater risk of suicidality than those exposed to neglect only, a finding replicated to some extent in the bivariate analyses in current study. Physical abuse was the most consistent correlate and predictor (in multiple regression models) of suicidality. Children who had experienced physical abuse were four times as likely to have made suicidal plans than non-physically abused children. Characteristics of the children's child welfare involvement were also associated with indices of suicidality. Contrary to other studies which used population-based administrative data (Katz et al., 2011; Rhodes et al., 2012; Vinnerljung et al., 2006), this study's bivariate analyses found that suicide attempters had been in out-of-home care longer than those who had not attempted suicide and that more lifetime household transitions were associated with almost every index of suicidality. The number of prior referrals to social services (perhaps a proxy for maltreatment chronicity) also predicted caregiver reports of suicidality, imminent suicidality, and any suicidality (in both bivariate and multiple regression analyses), consistent with the LONGSCAN study findings (Thompson et al., 2005). Finally, length of time children had been with their current caregiver did not predict any indices, suggesting that children's suicidality was not solely a reaction to a recent move. This finding also suggests that it may be important to provide ongoing screening, even if a child remains in a stable placement.

Although a strength of the current study was the multi-informant report of suicidality, it was very concerning that two-thirds of the caregivers of the most high-risk children (i.e., those imminently suicidal) were not aware of their children's risk. This finding is not surprising, as other studies have found similar or higher rates of parental lack of knowledge (Breton et al., 2002; Thompson et al., 2006), but nevertheless highlights the importance of screening and informing parents/caregivers, as they play a key role in minimizing suicide morbidity and mortality. Of note is the fact that children in foster and kinship care did not differ on self-reported suicidality, yet kinship caregivers reported less suicidality among their children than did foster parents. Given the fact that the majority of kinship caregivers were unaware of their children's imminent suicidality, particular attention may need to be given to informing kinship caregivers of this risk.

Strengths and Limitations

While prior studies have explored past ideation in younger children (Anderson, 2011; Thompson et al., 2005), and many studies explore previous (Pilowsky & Wu, 2006) or lifetime (Chernoff et al., 1994) suicidal behavior, there are little data on imminent suicidality, which was an important contribution of this study. Another strength of the current study was the representativeness of the sample, as 91% of children entering foster care in participating counties were interviewed and the sample was racially and ethnically

diverse. Finally, the multi-informant method of data collection and the level of detail recorded on ideation, plans, and attempts enabled a comprehensive examination of suicidality among a high-risk population, which overcomes some of the limitations of prior studies of suicidality in maltreated and at-risk children (Anderson, 2011; Finzi et al., 2001; Thompson et al., 2005).

Although the multi-informant method was a strength of the current study, the caregivers were not asked as detailed questions about suicidality as were the children, thereby precluding an examination of the precise youth-caregiver concordance between indices of suicidality (ideation, plans or attempts). In addition, because the caregiver measure of suicidality was comprised of an item that included self harm, our findings may actually overestimate caregivers' knowledge of imminent suicidality. Another limitation of the current study was that children were interviewed at a time of great stress, having been placed in out-of-home care within the prior year, which may have increased their reports of suicidality. The questions asked regarding suicidality, however, were related to both current and past experiences, suggesting this phenomenon was not solely a consequence of their recent separation from their families. Finally, this study did not examine receipt of mental health services or mental health symptoms that were associated with suicidality. This was an intentional decision, as the high rates of suicidality among these young children suggest that *all* maltreated children and children in foster care should be screened, not just those that score high on a measure of depression or anxiety.

Practice Implications

The current study's findings - that one in four children had a history of suicidality - should be a call to action. In terms of screening, considerable attention has been given to the medical and dental screens that children should undergo when they enter foster care (American Academy of Pediatrics, 2005), but recommendations for suicide screening are less clear cut. Children entering foster care are 3–10 times more likely to receive a mental health diagnosis than comparable children receiving Aid to Families with Dependent Children (Harman, Childs, & Kelleher, 2000). Despite this, it is estimated that just over a fifth of children with identified mental health needs actually receive mental health services (Petrenko, Culhane, Garrido, & Taussig, 2011). Disparities in mental health service provision for children in foster care have been found by race/ethnicity, type of maltreatment, and placement type (Garland, Landsverk, & Lau, 2003; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004). Given these discrepancies it is vital that *all* children are screened for suicide at entry to out-of-home care. This might be done upon entry into the system or as a part of primary care services at any point along the continuum of health care (Gardner et al., 2010). In addition, although children in the child welfare system are five times more likely to present to the ED with suicide-related behaviors than are children with no system involvement (Rhodes et al., 2011), many children with suicidality never present to the ED, again suggesting that all children involved in the child welfare system should be screened. For the general population, the most effective prevention programs to date rely on primary care physicians being trained to recognize those at risk of suicide and restricting access to lethal means (Mann et al., 2005). This training, however, must not be restricted to recognition and means restriction for adults or adolescents, but also should include the

recognition of suicidality in pre-adolescent children, especially those with a history of maltreatment and placement in foster care.

Because it is well established that early suicidality predicts later suicidality, it is critical to intervene at the earliest possible stage in this deleterious trajectory (Van Orden et al., 2010). Screening offers opportunities to inform caregivers so they can access appropriate treatment, minimize risk within and outside the home, and ensure regular screening for suicidal ideation and plans (which has been shown to reduce suicidality in adults; cf. Motto & Bostrom, 2001). Although professionals recognize the importance of screening, many harbor anxiety about asking about suicide, feeling it may trigger suicidal ideation. The evidence does not, however, support these concerns (Hawton, Saunders, & O'Connor, 2012). Indeed, a review of evidence from a variety of school- and clinic-based prevention, intervention, and referral programs suggests that the decline in youth suicide supports screening efficacy (Gould et al, 2003). The current study demonstrated that preadolescent children were willing to share this information (i.e., <1% skipped any suicide item) even when they knew it would be shared with their caregivers and social services.

Conclusion

While practitioners are aware of suicide risk in older children who are experiencing maltreatment or entering foster care, many do not consider this risk in younger children. It is also unlikely that caregivers for these young children, even kin, will feel comfortable spontaneously exploring the issue with children in their care. Thus, there is clearly a need for professionals working with maltreated children in foster care to explore this issue, even in young children, to ensure that the caregivers of these children are informed in order to implement risk reduction within the home and facilitate access to appropriate mental health services. Although the participants in this study had all recently entered foster care, some children reported repeated ideation and attempts; while some children may be at higher risk (e.g., those who have been physically abused; those with more chronic maltreatment histories), all maltreated children must be viewed as at risk. If, as professionals and caregivers, we do not ask, we will not know, and will be unable to intervene with our most vulnerable children to prevent the ultimate tragedy.

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References

- Achenbach, TM.; Rescorla, LA. Manual for the ASEBA School-Age Forms and Profiles. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families; 2001.
- American Academy of Pediatrics. Fostering health: Health care for children in foster care. 2. American Academy of Pediatrics; 2005.
- Anderson HD. Suicide ideation, depressive symptoms, and out-of-home placement among youth in the U.S. child welfare system. *Journal of Clinical Child & Adolescent Psychology*. 2011; 40(6):790–796. [PubMed: 22023270]

- Barnett, D.; Manly, JT.; Cicchetti, D. Defining child maltreatment: The interface between policy and research. In: Cicchetti, D.; Toth, SL., editors. *Child abuse, child development, and social policy*. Norwood: Ablex; 1993. p. 7-74.
- Beautrais AL, Joyce PR, Mulder RT. Risk factors for serious suicide attempts among youths aged 13 through 24 years. *Journal of the American Academy of Child and Adolescent Psychiatry*. 1996; 35(9):1174–1182. [PubMed: 8824061]
- Beautrais AL, Joyce PR, Mulder RT, Fergusson DM, Deavoll BJ, Nightingale SK. Prevalence and comorbidity of mental disorders in persons making serious suicide attempts: a case-control study. *American Journal of Psychiatry*. 1996; 153(8):1009–1014. [PubMed: 8678168]
- Bebbington PE, Cooper C, Minot S, Brugha TS, Jenkins R, Meltzer H. Suicide attempts, gender, and sexual abuse: data from the 2000 British Psychiatric Morbidity Survey. *American Journal of Psychiatry*. 2009; 166(10):1135–1140. [PubMed: 19723788]
- Breton JJ, Tousignant M, Bergeron L, Berthiaume C. Informant-specific correlates of suicidal behavior in a community survey of 12- to 14-year-olds. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2002; 41(6):723–730. [PubMed: 12049447]
- Briere, J. *Trauma Symptom Checklist for Children - Professional Manual*. Odessa, FL: Psychological Assessment Resources, Inc; 1996.
- Centers for Disease Control and Prevention. Trends in the prevalence of suicide-related behavior. Atlanta, GA: 2011.
- Chernoff R, Combs-Orme T, Risley-Curtiss C, Heisler A. Assessing the health status of children entering foster care. *Pediatrics*. 1994; 93(4):594–601. [PubMed: 8134214]
- Christoffersen MN, Poulsen HD, Nielsen A. Attempted suicide among young people: risk factors in a prospective register based study of Danish children born in 1966. *Acta Psychiatrica Scandinavica*. 2003; 108(5):350–358. [PubMed: 14531755]
- Cicchetti D, Rogosch FA, Sturge-Apple M, Toth SL. Interaction of child maltreatment and 5-HTT polymorphisms: suicidal ideation among children from low SES backgrounds. *Journal of Pediatric Psychology*. 2010; 35(5):536–46. [PubMed: 19779024]
- Dervic K, Friedrichm E, Oquendo MA, Voracek M, Fredrich MH, Sonneck G. Suicide in Austrian children and young adolescents aged 14 and younger. *European Child and Adolescent Psychiatry*. 2006; 15(7):427–434. [PubMed: 16685473]
- Dube SR, Anda RF, Felitti VJ, Chapman DP, Williamson DF, Giles WH. Childhood abuse, household dysfunction, and the risk of attempted suicide throughout the life span: findings from the Adverse Childhood Experiences Study. *JAMA*. 2001; 286(24):3089–3096. [PubMed: 11754674]
- Eaton DK, Kann L, Kinchen S, Shanklin S, Flint KH, Hawkins J, et al. Youth risk behavior surveillance - United States, 2011. *MMWR*. 2012; 61(4):1–162. [PubMed: 22673000]
- Finzi R, Ram A, Shnit D, Har-Even D, Tyano S, Weizman A. Depressive symptoms and suicidality in physically abused children. *American Journal of Orthopsychiatry*. 2001; 71(1):98–107. [PubMed: 11271722]
- Gardner W, Klima J, Chisolm D, Feehan H, Bridge J, Campo J, Kelleher K. Screening, triage, and referrals of patients who report suicidal thought during a primary care visit. *Pediatrics*. 2010; 125(5):945–52. [PubMed: 20385642]
- Garland AF, Landsverk JA, Lau AS. Racial/ethnic disparities in mental health service use among children in foster care. *Children and Youth Services Review*. 2003; 25:491–507.
- Gould MS, Greenberg T, Velting DM, Shaffer D. Youth Suicide Risk and Preventive Interventions: A Review of the Past 10 Years. *Journal of the American Academy of Child Adolescent Psychiatry*. 2003; 42(4):386–405. [PubMed: 12649626]
- Greydanus DE, Calles J Jr. Suicide in children and adolescents. *Primary Care; Clinics in Office Practice*. 2007; 34(2):259–273. abstract vi.
- Harman JS, Childs GE, Kelleher KJ. Mental health care utilization and expenditures by children in foster care. *Archives of Pediatric and Adolescent Medicine*. 2000; 154(11):1114–1117.
- Hawton K, Saunders KE, O'Connor RC. Self-harm and suicide in adolescents. *Lancet*. 2012; 379(9834):2373–2382. [PubMed: 22726518]

- Hjern A, Vinnerljung B, Lindblad F. Avoidable mortality among child welfare recipients and intercountry adoptees: a national cohort study. *Journal of Epidemiology and Community Health*. 2004; 58(5):412–417. [PubMed: 15082742]
- Hoyert DL, Xu J. Deaths: Preliminary data for 2011. *National Vital Statistics Reports*. 2012; 61(6):1–64. [PubMed: 24984457]
- Jonson-Reid M, Kohl PL, Drake B. Child and adult outcomes of chronic child maltreatment. *Pediatrics*. 2012; 129(5):839–45. [PubMed: 22529281]
- Johnson JG, Cohen P, Gould MS, Kasen S, Brown J, Brook JS. Childhood adversities, interpersonal difficulties, and risk for suicide attempts during late adolescence and early adulthood. *Archives of General Psychiatry*. 2002; 59(8):741–749. [PubMed: 12150651]
- Katz LY, Au W, Singal D, Brownell M, Roos N, Martens PJ, Sareen J. Suicide and suicide attempts in children and adolescents in the child welfare system. *CMAJ*. 2011; 183(17):1977–1981. [PubMed: 22007122]
- King RA, Schwab-Stone M, Flisher AJ, Greenwald S, Kramer RA, Goodman SH, Gould MS. Psychosocial and risk behavior correlates of youth suicide attempts and suicidal ideation. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2001; 40(7):837–846. [PubMed: 11437023]
- Klaus NM, Mobilio A, King CA. Parent-adolescents' suicidal thoughts and behaviors. *Journal of Clinical Child & Adolescent Psychology*. 2009; 38(2):245–255. [PubMed: 19283602]
- Leslie LK, Hurlburt MS, Landsverk J, Barth R, Slymen DJ. Outpatient mental health services for children in foster care: a national perspective. *Child Abuse & Neglect*. 2004; 28(6):699–714. [PubMed: 15193856]
- Leslie LK, James S, Monn A, Kauten MC, Zhang J, Aarons G. Health-risk behaviors in young adolescents in the child welfare system. *Journal of Adolescent Health*. 2010; 47(1):26–34. [PubMed: 20547289]
- Manly JT, Cicchetti D, Barnett D. The impact of subtype, frequency, chronicity, and severity of child maltreatment on social competence and behavior problems. *Development and Psychopathology*. 1994; 6:121–43.
- McHolm AE, MacMillan HL, Jamieson E. The relationship between childhood physical abuse and suicidality among depressed women: Results from a community sample. *American Journal of Psychiatry*. 2003; 160(5):933–938. [PubMed: 12727698]
- Mann JJ, Apter A, Bertolote J, Beautrais A, Currier D, Haas J, Hegerl U. Suicide prevention strategies: A systematic review. *Journal of the American Medical Association*. 2005; 294(16):2064–74. [PubMed: 16249421]
- Motto JA, Bostrom AG. A randomized controlled trial of postcrisis suicide prevention. *Psychiatric Services*. 2001; 52(6):828–33. [PubMed: 11376235]
- National Center for Injury Prevention Control. Web-based Injury Statistics Query and Reporting System. from <http://www.cdc.gov/ncipc/wisqars/>
- O'Connor RC, Rasmussen S, Hawton K. Predicting deliberate self-harm in adolescents: a six month prospective study. *Suicide and Life-Threatening Behavior*. 2009; 39(4):364–375. [PubMed: 19792978]
- Petrenko CL, Culhane SE, Garrido EF, Taussig HN. Do youth in out-of-home care receive recommended mental health and educational services following screening evaluations? *Child Youth Serv Rev*. 2011; 33(10):1911–1918. [PubMed: 21912444]
- Pilowsky DJ, Wu LT. Psychiatric symptoms and substance use disorders in a nationally representative sample of American adolescents involved with foster care. *Journal of Adolescent Health*. 2006; 38(4):351–358. [PubMed: 16549295]
- Reynolds, CR.; Richmond, BO. Revised Children's Manifest Anxiety Scale (RCMAS) Manual. Los Angeles, CA: Western Psychological Services; 2000.
- Rhodes AE, Boyle MH, Bethell J, Wekerle C, Goodman D, Tonmyr L, Manion I. Child maltreatment and onset of emergency department presentations for suicide-related behaviors. *Child Abuse and Neglect*. 2012; 36(6):542–551. [PubMed: 22749614]

- Rhodes AE, Boyle MH, Bethell J, Wekerle C, Tonmyr L, Goodman D, Manion I. Child maltreatment and repeat presentations to the emergency department for suicide-related behaviors. *Child Abuse and Neglect*. 2013; 37(2–3):139–149. [PubMed: 23260122]
- Rhodes AE, Boyle MH, Tonmyr L, Wekerle C, Goodman D, Leslie B, Manion I. Sex differences in childhood sexual abuse and suicide-related behaviors. *Suicide and Life-Threatening Behavior*. 2011; 41(3):235–254. [PubMed: 21477094]
- Salzinger S, Rosario M, Feldman RS, Ng-Mak DS. Adolescent suicidal behavior: Associations with preadolescent physical abuse and selected risk and protective factors. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2007; 46(7):859–866. [PubMed: 17581450]
- Taussig, HN. Unpublished Doctoral Dissertation, Doctoral Dissertation. San Diego State University/University of California, San Diego; San Diego: 1998. Risk behaviors in maltreated adolescents.
- Taussig HN, Culhane SE, Hettelman D. Fostering Healthy Futures: An innovative preventive intervention for preadolescent youth in out-of-home care. *Child Welfare*. 2007; 86(5):113–131. [PubMed: 18422051]
- Thompson AH, Newman SC. Mortality in a child welfare population: Implications for policy. *Child Welfare*. 1995; 74(4):843–857. [PubMed: 7641529]
- Thompson R, Briggs E, English D, Dubowitz H, Lee L, Brody K, Hunter W. Suicidal ideation among 8-year-olds who are maltreated and at risk: Findings from the LONGSCAN studies. *Child Maltreatment*. 2005; 10(1):26–36. [PubMed: 15611324]
- Thompson R, Dubowitz H, English DJ, Noonan KB, Wike T, Bangdiwala SI, Runyan DK, Briggs E. Parents' and teachers' concordance with children's self-ratings of suicidality: Findings from a high-risk sample. *Suicide and Life-Threatening Behavior*. 2006; 36(2):167–181. [PubMed: 16704322]
- Thompson R, Proctor LJ, English DJ, Dubowitz H, Narasimhan S, Everson MD. Suicidal ideation in adolescence: examining the role of recent adverse experiences. *Journal of Adolescence*. 2012; 35(1):175–186. [PubMed: 21481447]
- Van Orden KA, Witte TK, Cukrowicz KC, Braithwaite SR, Selby EA, Joiner TE Jr. The interpersonal theory of suicide. *Psychological Review*. 2010; 117(2):575–600. [PubMed: 20438238]
- Vinnerljung B, Hjertqvist A, Lindblad F. Suicide attempts and severe psychiatric morbidity among former child welfare clients--a national cohort study. *Journal of Child Psychology and Psychiatry and Allied Disciplines*. 2006; 47(7):723–733.

Table 1

Methods Reported by Children Who Made Suicidal Plans and Attempts

Methods reported	Suicidal Plan, <i>n</i>	Suicidal Attempt, <i>n</i>
Cut or stab self	13	9
Choke or hang self	3	7
Attempt to be killed by object, animal or person	5	4
Burn self	2	0
Jump from height	1	0
Drown self	1	0
Missing or "Don't know"	3	2
Total	28	22

Table 2

Bivariate Associations Between the Dichotomous Variables of Gender, Race/Ethnicity, Type of Placement and Type of Maltreatment and Indicators of Suicidality

	<i>N</i>	Suicidal Ideation %	Suicide Plan %	Suicide Attempt %	Caregiver Report %	Imminent Suicidality %	Any Suicidality %
Total sample	515	16.6	3.9	3.7	15.7	4.1	26.4
Sex of Child							
Girls	247	17.1	4.1	4.1	14.6	3.2	25.9
Boys	268	16.1	3.7	3.4	16.8	4.9	26.9
Race/Ethnicity of Child ^a							
White, non-Hispanic	163	21.7*	3.7	6.1*	19.6 ^t	2.5	32.5*
African American	130	21.5 ^t	3.9	4.6	10.8 ^t	5.4	25.4
Hispanic	257	12.1*	3.9	1.6*	14.4	3.9	23.0 ^t
Native American	63	17.5	7.9 ^t	1.6	20.6	6.3	31.7
Asian/Pacific Islander	17	31.3	5.9	11.8 ^t	23.5	11.8 ^t	35.3
Type of Placement							
Foster care	228	17.5	5.7	4.8	18.9*	3.9	28.1*
Kinship care	269	15.0	2.6	2.6	10.8*	4.5	22.3*
Congregate care	18	29.4	0.0	5.6	50.0*	0.0	66.7*
Type of Maltreatment ^a							
Physical abuse	140	24.3*	8.6*	5.7	20.7 ^t	5.0	35.0*
Sexual abuse	58	28.1*	5.3	5.2	13.8	8.6 ^t	29.3
Physical neglect	252	15.5	3.2	4.0	17.1	3.2	27.4
Supervisory neglect	428	16.9	3.3	4.0	15.4	4.0	25.7
Emotional maltreat.	321	18.5	5.0 ^t	4.4	15.6	5.0	27.7
Multiple Maltreatment	401	19.2*	4.5	4.0	16.8	4.5	28.2 ^t

Notes:

* .05

^t .10

^aThese categories were non-exclusively coded; that is, a child could be coded in more than one category.

Table 3

Bivariate Associations Between the Continuous Variables of Age, Number of Referrals, Number of Household Changes, Time in Current Placement, and Time in Out-of-Home Care and Indicators of Suicidality

	<u>Suicidal Ideation</u>		<u>Suicide Plan</u>		<u>Suicide Attempt</u>		<u>Caregiver Report</u>		<u>Imminent Suicidality</u>		<u>Any Suicidality</u>	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Age, yrs.	9.86	9.69	9.83	9.95	9.83	10.11	9.86	9.70	9.86	9.38*	9.89	9.68*
No. of Prior Referrals	4.52	5.20	4.64	4.72	4.59	5.67	4.39	5.87*	4.53	6.89*	4.38	5.29 ^f
No. of Lifetime Household Changes	4.29	5.05*	4.37	5.40*	4.38	5.21 ^f	4.31	4.98*	4.41	4.52	4.24	4.90*
Time in Current Placement, mo.	6.00	5.99	6.01	6.23	5.98	6.66	6.09	5.64	6.01	6.36	6.12	5.74
Time in Out-of-Home Care, mo.	7.06	7.56	7.15	7.29	7.08	8.86*	7.14	7.22	7.13	7.68	7.14	7.19

Notes:

* .05

^f .10