


A Randomized Controlled Trial of a Long-Term Professional Mentoring Program for Children at Risk: Outcomes Across the First 5 Years

J. Mark Eddy^{1,2,3}  · Charles R. Martinez Jr.^{3,4} · Jean Baldwin Grossman^{5,6} · Jennifer J. Cearley³ · Danita Herrera³ · Alice C. Wheeler^{3,7} · Jeff S. Rempel³ · Dana Foney⁸ · Jeff M. Gau⁹ · Bert O. Burraston¹⁰ · Tracy W. Harachi¹¹ · Kevin P. Haggerty¹² · John R. Seeley⁹

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Abstract Child outcomes due to a paid professional mentoring program, Friends of the Children (FOTC), were investigated across the first 5 years of an ongoing multi-site randomized controlled trial. Participants were 278 children attending kindergarten or first grade who were identified as “at risk” for adjustment problems during adolescence. The program was delivered through established nonprofit community-based organizations. Mentors were hired to work full time and were provided training, supervision, and support to work individually with small numbers of children. Recruitment took place across a 3-year period. Random assignment to the intervention condition or a services as usual control condition was conducted at the level of the individual, blocking on school and child sex. After the initial assessment, follow-up assessments were conducted every 6 months. Differences in growth curves across the elementary school years were examined in intent-to-treat analyses. Significant effects favoring FOTC were found in terms of caregiver ratings of posi-

tive school behavior and less trouble in school, with a trend for higher child behavioral and emotional strengths. Effect sizes were in the range typical in recent trials of youth mentoring.

Keywords Paid professional mentoring · Middle childhood · Randomized controlled trial

Background

Across cultures, adult support and guidance are considered the cornerstones of healthy child development (e.g., Reid et al. 2002). Parents and other close relatives are typically the primary providers of support and guidance, but some children may need additional assistance to successfully journey through the difficulties they face as youth. For these boys

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✉ J. Mark Eddy
mark.eddy@nyu.edu

¹ Family Translational Research Group, Department of Cariology and Comprehensive Care College of Dentistry, New York University, 137 E. 25th Street, New York, NY 10010, USA

² Partners for Our Children, University of Washington, Seattle, WA, USA

³ Oregon Social Learning Center, Eugene, OR, USA

⁴ Center for Equity Promotion, University of Oregon, Eugene, OR, USA

⁵ Princeton University, Princeton, NJ, USA

⁶ MDRC, New York, NY, USA

⁷ Oregon Community Programs, Eugene, OR, USA

⁸ Lewin Group, Falls Church, VA, USA

⁹ Oregon Research Institute, Eugene, OR, USA

¹⁰ University of Memphis, Memphis, TN, USA

¹¹ University of Washington, Seattle, WA, USA

¹² Social Development Research Group, University of Washington, Seattle, WA, USA

and girls, the involvement of nonfamilial adults may be critical not only for their well-being, but for achieving the milestones that pave the way to enduring prosocial success as an adult. Over the years, various longitudinal researchers have found that some children who manage to overcome disadvantaged backgrounds and thrive as adults often were able to connect with one or more “natural mentor” adults who assisted them along the way (Hurd and Zimmerman 2010; Werner and Smith 1992). Unfortunately, not all children living in challenging situations have the opportunity to meet and develop relationships with natural mentors (Scales 2003), and these children in particular might benefit from programs that not only proactively connect them with nonfamilial adults who are willing to serve as mentors, but also provide training and support to help mentors succeed in their role. Ideas such as these have encouraged the most recent proliferation of mentoring programs throughout the USA (Rhodes 2005), and today, mentoring continues to be one of the most high profile preventive interventions advocated for children living in “at risk” circumstances in this country (DuBois and Karcher 2014).

Despite the recent enthusiasm, interest in mentoring is not new. Formal mentoring programs were started over a century ago, and from the beginning, served children living in distressed urban environments (Baker and MaGuire 2005). Research on the effects of mentoring followed. The most well-known investigation on child outcomes due to these early efforts was the Cambridge–Somerville Study, conducted during and following World War II in Boston. In this study, over 500 “at risk” elementary school age boys (up to 12 years old) were randomly assigned either to receive mentoring from a paid counselor across a 5-year period or to a control condition (McCord 1992). The program was found to have no impact on outcomes for children either initially or within a few years after the program ended (Powers and Witmer 1951; McCord and McCord 1959) and to have *iatrogenic* effects during adulthood (McCord 1978, 1981). To date, this study remains the only published study of “paid” mentoring that occurred over several years and includes a long-term follow-up.

In contrast to these discouraging findings, recent meta-analyses of high quality studies on the impacts of mentoring have found generally positive benefits for children, at least over the short term (e.g., DuBois et al. 2002; DuBois et al. 2011), with average effect sizes ranging from a Cohen’s *d* of 0.02 to 0.41, and an overall average of 0.20. Almost all of the studies in these meta-analyses focused on volunteer rather than paid mentoring. Similar to the early mentoring programs, children in many of these studies tended to come from disadvantaged backgrounds. In fact, DuBois et al. (2002) found that programs that served children living in more “at risk” circumstances had slightly larger effect sizes than programs serving children in less disadvantaged situations. They also found that

effect sizes were slightly larger for programs that served relatively younger children, with children who were mentored during late elementary school having better outcomes than children mentored during high school. No differences in outcomes were found due to paid versus volunteer mentors (although few studies were available for this comparison), but having a mentor with a background in the helping professions was related to better child outcomes. Importantly, DuBois and colleagues found that no single program practice was strongly related to better outcomes. However, they concluded that programs that both had a strong organizational infrastructure and that employed commonly agreed upon “best practices”—such as ongoing training for mentors, structured activities for mentor–child pairs, mechanisms for the support and involvement of the parents, and tight monitoring of program implementation—tended to have stronger positive impacts on youth.

The Friends of the Children (FOTC) program incorporates practices such as these, and takes them a step further. Independent nonprofit “chapters” hire men and women to work *full time* as mentors. Mentors conduct *intensive screenings* to identify children who appear to be most at risk for the development of serious problem behaviors. Mentors are matched with same sex children during the summer following kindergarten or first grade and FOTC *commits* to providing the child a mentor until high school graduation. To date, there has been no published randomized trial conducted on a mentoring program that embodies all of these characteristics.

Intervention Model

The primary mechanism of change in FOTC is hypothesized to be the ongoing relationship between the mentor and child (Rhodes 2005). By design, FOTC engages children early in the developmental process of problem behaviors (e.g., Reid and Eddy 1997). Over time, the mentoring relationship is hypothesized to provide a child with social support as well as the opportunity to observe, learn, and practice emotion regulation skills, which include traditional interpersonal problem solving skills (Taylor et al. 1999). Secondly, it opens up opportunities for a child that he or she otherwise might not have had, from concrete opportunities like access to academic assistance and health care, to more abstract opportunities like the chance to participate in enriching experiences that enhance their ability to envision a positive future.

The establishment of a strong, close interpersonal connection between a mentor and child is hypothesized to lead to positive gains for the child in three interconnected areas: social-emotional development, cognitive development, and identity development. In the social-emotional realm, by effectively communicating with a child, and providing him or her with caring and support, a mentor can provide a child with the

opportunity to experience what positive relationships with adults are like, something which Olds et al. (1997) refer to as a “corrective experience.” Mentors can also help children to learn to better express and manage their feelings through modeling and active teaching, a phenomenon referred to as “emotion coaching” (Gottman 2001).

These types of experiences may lead a child to view themselves and others in both different and more accurate ways. The mentor may become a “secure base” from which a child may explore the world (Bowlby 1988). In the cognitive realm, a positive, ongoing relationship between mentor and child that is skillfully managed by the mentor is hypothesized to provide a child with the opportunity to learn a variety of cognitive problem solving skills. Opportunities to verbally interact with a caring adult within a safe and long-term relationship provide a child the chance to express him or herself, to verbally investigate his or her thoughts and feelings, to hear a different perspective, and to receive guidance (Rhodes 2002). In the identity realm, the support for exploration provided by the mentoring relationship, and the increased number of activities that a child participates in due to the existence of the relationship and the connection to the FOTC program per se are hypothesized to provide a child with multiple avenues to explore and shape his or her identity. A strong sense of identity grows along with feelings of self-worth and confidence.

Gains in each of these areas are hypothesized to lead to an increase in the likelihood of positive outcomes for the child during adolescence and emerging adulthood. Key to the model, and congruent with developmental models of problem behaviors, is that gains in these three areas of development are hypothesized to lead to improvements in the other social relationships a child has, not only with peers but also with parents, teachers, and “natural” mentors (Klaw et al. 2003), such as close relatives, youth group leaders, and coaches. In turn, these relationships are hypothesized to further shape the social-emotional, cognitive, and identity development of a child toward an increased likelihood of positive outcomes and a decreased likelihood of negative outcomes during emerging adulthood and beyond.

Hypotheses

H1: Children randomly assigned to the FOTC Intervention condition will exhibit less growth in problems over time, as rated by caregivers and themselves, than children assigned to the Control condition.

H2: Children randomly assigned to the FOTC Intervention condition will exhibit more growth in strengths over time, as rated by caregivers and themselves, than children assigned to the Control condition.

Method

Identification, Randomization, and Recruitment

Child identification took place within public elementary schools that had existing relationships with their local FOTC chapters (hereafter referred to as “sites”). Sites were located within four major urban areas in the USA, namely Boston, New York City, Portland (Oregon), and Seattle. In each of three consecutive years (2008 to 2011), teams comprising mentors from each site and local school personnel conducted a multi-agent and multi-method screening of the risk and protective factors present for each child in all kindergarten (three sites) or first grade classes (one site) within partner schools (see Eddy and Beckett 2007). To ensure standard FOTC practice in identification was employed, screening was conducted independently of the authors and their research team colleagues, and was done with the approval and oversight of local school districts. Over 95% of caregivers consented to their child’s participation in the screening. During the first stage of screening, the identification team spent 4 to 6 weeks directly observing children in their classrooms and gathering input from school staff, which included asking teachers to complete questionnaires. At the end of this stage, mentors completed questionnaires on individual risk factors (e.g., child aggressive behavior, poor school attendance, social withdrawal) and environmental risk and protective factors. Scores from these questionnaires were combined with scores from the teacher questionnaires to compute a “net risk” score (greater risk and lower protection) for future problems. For a child to move on to the second stage, his or her score needed to be in the top half of scores for same-sex same-school peers who were participating in the current screening. During the second stage of screening, mentors, teachers, and the school principal met to review the information that had been collected. The specific situation of each child was discussed, with a focus on the types, severity, and constellation of risk factors for each child, as well as whether and how much these risk factors were mitigated by the types, strength, and constellation of protective factors. At this point in time, children who were suspected of having serious psychiatric disorders or of being developmentally disabled were referred to a mental health professional for additional evaluation. If a child was determined to have an IQ of less than 75 and/or to require a level of psychosocial service that FOTC could not provide, the child was deemed ineligible for the program. At the end of this process, a second set of questionnaires was completed by mentors on risk and protective factors, and again, a composite “net risk” score was computed. Children whose second-stage scores were in the top half of the remaining same sex children in their school were deemed eligible for the program and the study. Once the pool of potential participants was identified, each site had the option to allow one child per year who was identified

as of particular concern to the team to bypass randomization and directly enter the program. This option was used only three times during the course of the study, and these children are not participants in the study. The remaining children were then randomized to the Intervention or to the Control condition, blocking on school and child sex. Next, caregivers of each child were contacted by school staff and invited to participate in home visits during which they would either learn about the study from the research team (for those randomized to the Control condition), or about the program from the FOTC intervention team and the study from the research team (for those randomized to the Intervention condition). Finally, caregivers who consented to participate in the study and their identified child were invited to participate in the initial assessment.

Assessments

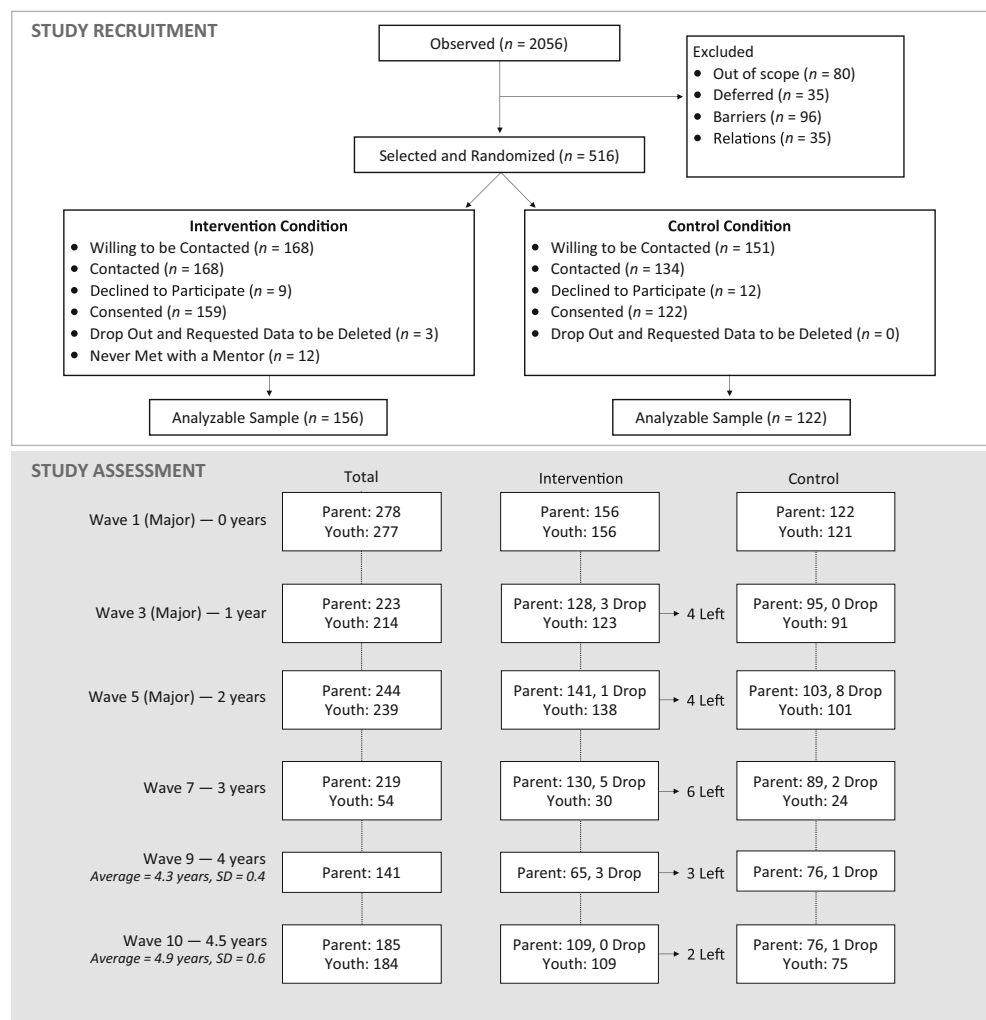
During initial data collection, known as the “Wave 1” assessment, caregivers and children were interviewed separately. At subsequent assessment waves, which occurred every 6 months

and were numbered sequentially, information was collected from various reporters on child outcomes. Participants were compensated from \$20 to \$60 for their time in completing each assessment wave, which varied in the amount of time required. Analyses presented here utilize data collected from caregivers, children, and mentors during Wave 1 to Waves 9 or 10, depending on the reporting agent. On average, Wave 9 was conducted 4.3 years (SD = 0.3) after the Wave 1 assessment, and Wave 10 was conducted 4.9 years (SD = 0.5) after the Wave 1 assessment.

Sample

The original sample comprised 281 children and one of their caregivers (see CONSORT flow diagram in Fig. 1). To generate this sample, a total of 2056 children were screened. Of these, 246 children were determined to be ineligible. Of the remainder, 516 were identified as meeting the net risk threshold and thus were eligible for the program and the study. Of these, 319 children (62%) had caregivers who verbally consented with school staff to be contacted by the research

Fig. 1 CONSORT flow diagram



team. In the end, 17 caregivers were unable to be contacted, 21 declined to participate, and 281 consented to participate in the study with their child. Thus, 88% of caregivers who were contacted agreed to participate in the study, with consent rates ranging from 84 to 93% across the four sites. After consent, over the course of the study, three caregivers ultimately withdrew their families from the study and asked that their data be destroyed, leaving 278 children and caregivers in the analyzable sample. Within this sample, site 1 served 60 Intervention children and included 53 Control children, site 2 served 31 Intervention and included 22 Control children, site 3 served 37 Intervention children and included 30 Control children, and site 4 served 28 Intervention children and included 17 Control children. Participant numbers varied across sites due to differences in funding.

Participant Characteristics

At Wave 1, the average child was 6.5 years old (see Table 1). About half of children (53%) were girls, and most children were racial and/or ethnic minority, with 46% African American, 18% Latino, 18% multiracial, and 14% White. Most caregivers had similar race/ethnicity to their children. The average age of caregivers was 35 years, and most were women (91%). Caregivers faced a variety of challenges. About 42% had not graduated from high school (including 8% having not graduated from middle school), and 7% had earned a college degree. About 30% had been arrested by police one or more times in their lifetimes, 25% reported being drunk or high at least once in the past month, 22% had spent time in jail or prison during adulthood, and 13% of caregivers reported having diagnosed mental health problems. Only 23% of children lived with both biological parents, and only 15% lived with caregivers who were married. The typical household included four members, but there was wide variation in household composition, from one child and his or her caregiver to 10 children and 11 adults. About 40% of caregivers were unemployed, 40% worked full time, and the remainder worked part time or were self-employed; the vast majority of families earned less than \$50,000 (the US median income at the beginning of the study). About 92% of children received free or reduced cost school meals. About 60% of families received some other form of food aid, either through the federal food stamp program (SNAP) or through the Women, Infants, and Children (WIC) Program; many families received other forms of government aid: 39% received medical assistance, 23% lived in public housing, 20% received welfare assistance, and 8% received unemployment benefits.

Conditions

Intervention Children assigned to the Intervention condition were enrolled in FOTC and provided with a same-sex mentor

who worked full time in this capacity. The intervention was conducted independently of the research team. The average age of mentors in the study was 28.6 years ($SD = 6.4$). Less than half of mentors were White (42%), 25% were African American, 6% Latino, 6% Asian American, and 21% other (including multiracial). Most mentors had earned an undergraduate degree (69%) and an additional 17% had also earned a graduate degree. Most degrees were in the social sciences or education. In prior employment, most (82%) had worked with children or families. A total of 30% of mentors had mentored children prior to working at FOTC, either through a volunteer or paid position. When mentors are hired, they are asked to make a 3-year initial commitment to the children they will serve. Before mentors in the study were matched with their first child, they participated in a week-long, intensive experiential training program delivered by a team of experienced FOTC mentors and program directors as well as outside consultants (Bergen and Beckett 2008). Once mentors started working with children (individually, but up to a total of eight children at a time), a multilayered system was employed for monitoring, supporting, and supervising their work, including keeping records of all meetings with each child, and regular individual and team meetings with supervisors. Supervision on more serious clinical issues related to a child was provided on an as needed basis with appropriate in- or out-of-house professionals. Mentors were required to participate in ongoing continuing education on a regular basis.

Upon enrollment in the program, FOTC commits to the family to provide the child a mentor until high school graduation. Congruent with this commitment, FOTC has three long-term goals for program participants: school success, as evidenced by high school graduation or earning a GED and having a plan for the future; positive youth engagement, including participation in prosocial activities and avoiding delinquency and juvenile justice system involvement; and pursuing a healthy, developmentally appropriate, prosocial lifestyle, including avoiding early parenthood. Progress toward long-term goals is made through meeting developmental “Milestones” that are set along the way. Milestones are specified for each child in five areas: social-emotional development, school success, healthy habits, making good choices, and skills for the future. The Milestones for a specific child are documented on a “Roadmap” that is revised over time as a child matures. Since the driver of child outcomes related to the program is hypothesized to be a strong mentor-child relationship, program activities center on one-on-one activities with mentor and child as well as structured group activities with other mentors and children. Most activities occur in the community or at the FOTC program office. Mentors are required to meet with each child for an average of 4 h per week, and to engage with the child in a wide variety of developmentally appropriate, skill building activities that are related to meeting general Milestones and/or individually focused goals set with the

Table 1 Baseline demographic characteristics

Demographic characteristic	Control (<i>n</i> = 122)		Intervention (<i>n</i> = 156)	
	<i>n</i>	%	<i>N</i>	%
Gender of target child (% female)	65	53.3	82	52.6
Race/ethnicity of target child				
White/Caucasian	22	18.0	17	10.9
Black/African American	52	42.6	75	48.1
Latino	19	15.6	31	19.9
Multiracial	24	19.7	26	16.7
Other	5	4.1	7	4.5
Age of target child (mean, SD)	6.5	0.6	6.6	0.6
Gender of primary caregiver (% female)	110	90.2	143	91.7
Relationship of primary caregiver to target child				
Biological parent	111	91.0	139	89.1
Step-parent	0	0.0	1	0.6
Grandparent	6	4.9	8	5.1
Foster parent	3	2.5	1	0.6
Adopted parent	1	0.8	2	1.3
Other	1	0.8	5	3.2
Living situation for target child and primary caregiver				
Own your home	15	12.3	22	14.1
Rent your home	99	81.1	122	78.2
Live in someone else's home and pay rent	6	4.9	2	1.3
Live in someone else's home and do not pay rent	2	1.6	5	3.2
Homeless	0	0.0	5	3.2
Age of primary caregiver (mean, SD)	34.8	7.7	35.2	9.1
Marital status of primary caregiver				
Married	19	15.7	23	14.7
Married but separated	11	9.1	13	8.3
Single, never married	56	46.3	84	53.8
Single, widowed	5	4.1	7	4.5
Divorced	10	8.3	17	10.9
Partnered/engaged	20	16.5	12	7.7
Annual household income of primary caregiver				
Less than \$10,000	26	23.2	25	17.7
\$10,001–\$19,999	29	25.9	36	25.5
\$20,000–\$39,999	33	29.5	54	38.3
\$40,000–\$59,999	17	15.2	19	13.5
\$60,000–\$74,999	2	1.8	6	4.3
More than \$75,000	5	4.5	1	0.7

child. Mentors maintain contact with caregivers and teachers, and visit the child's neighborhood, home, and school regularly. If children move to a new residence, mentors work with children as long as they reside within a specified distance from the program office (i.e., a 15 to 30 mile radius, depending on the site). FOTC has a national quality assurance program overseen by the National chapter, which monitors the compliance of sites with program standards. The cost of the program

varies by site, but on average is estimated at between \$10,000 to \$12,000 per child per year (e.g., Hamilton et al. 2010). More information about the FOTC program is available in Eddy et al. (2013), Lakind et al. (2014), and Lakind et al. (2015).

Control Children in the Control condition were not provided a FOTC mentor. However, during the initial home visit,

caregivers in the Control condition (as well as in the Intervention condition) were offered an easy-to-use, up-to-date list of programs, besides FOTC, operating in the local community and intended to build child strengths and to assist when children are struggling. Caregivers were also given a card with the phone number of a research staff member who, upon request, assisted families in contacting referrals on the list or in finding other referrals that might meet the current needs of a child. This service was available throughout the study.

Measures

All measures for caregivers and children were collected via in-person or phone interviews. Monthly reports of time utilization and mentor-child activities for each child were completed by mentors. Except for the Wave 1 Risk Score, multiple item measures from each of the 6 assessment waves had internal consistency values (i.e., Cronbach's alpha) in the range of .65 to .90.

Caregivers Ratings on 22 dichotomous risk factors were summed to create a Wave 1 child Risk Score (e.g., “child ever in foster care,” “both caregivers unemployed,” “one or more caregivers arrested as adult”). As part of their yearly assessment, caregivers were asked questions from two standardized and widely used measures. One focused on child psychopathology—the Child Behavior Checklist (CBCL; Achenbach 1992)—and the other focused on child strengths, the Behavioral and Emotional Rating Scale (BERS-2; Epstein 2004). From the CBCL, an Externalizing scale score was computed, comprised of the sum of the Rule Breaking Behavior subscale score (17 Likert-scaled items; e.g., “disobeys”) and the Aggressive Behavior subscale score (18 items; e.g., “fights”). In addition, an Internalizing scale score was computed, comprising the Anxious/Depressed subscale score (13 items; e.g., “cries a lot”), the Withdrawn subscale score (8 items; “would rather be alone than with others”), and the Somatic Complaints subscale score (11 items; e.g., “feels dizzy or lightheaded”). From the BERS-2, a Total Strength Index score was computed, comprising the mean of five subscale scores: Interpersonal Strength (15 Likert-scaled items; e.g., “uses anger management skills”), Family Involvement (10 items; e.g., “expresses a sense of belonging to family”), Intrapersonal Strength (11 items; e.g., “is self-confident”), School Functioning (9 items; e.g., “completes school assignments on time”), and Affective Strength (7 items; e.g., “accepts a hug”). Behavior at school was measured from caregiver answers to in-house interview questions. Youth Trouble in School was scored by the sum of five dichotomous items (e.g., “suspended,” “expelled,” “been in trouble with teachers, parents contacted”). Youth Positive Behavior in School was assessed via one five-point Likert-scaled item

(i.e., “in general, how is his/her behavior in school this year?”). Youth School Work was assessed via one Likert-scaled item (“how is he/she doing with his/her school work this year?”).

Children As part of their yearly assessment, children were asked questions about their own behavior as well as that of their friends. A child Antisocial Behavior scale was computed by summing five dichotomous in-house items focused on a child (e.g., “steal from store,” “talk back, argue with adults,” “hit or threaten to hit someone”). A Deviant Peers scale was computed by summing the scores of five similar dichotomous in-house items focused on a child's friends.

Mentors At the end of each month, mentors were asked questions about the amount of contact they had and specific activities that they did with and on behalf of each of the study children who were on their caseload (a typical mentor was working with both study and non-study children at various points during the period of this report).

Preliminary Analyses

Distributions of each of the outcomes were examined for violations of normality. Only one variable had significant deviation in this regard, parent report of Youth Trouble in School. The distribution for this variable was normalized with a log base₁₀ transformation. Conditions were compared on basic demographic characteristics, baseline risk score, and baseline measures of the outcomes; no statistically significant differences were found (see Tables A1 and A2, available online). Unfortunately, for various reasons, data were not collected from all participants at all time points. Most missing data for both caregivers and children was due to an inability to contact a given family at a given wave, and for mentors was due to a failure to turn in monthly reports. The result was that for caregivers, missing data varied from 4% at Wave 1 to 34% at Wave 10 and for children from 0% at Wave 1 to 34% at Wave 10 (see Fig. 1 for participation at each wave). The total number of completed assessments was not significantly associated with condition for caregivers or children. On average, mentors turned in monthly reports in 94% of the months they mentored a given child.

Outcome Analyses

Model Fitting Mixed-effects growth models, which accommodate multilevel data and can handle common issues in longitudinal designs such as unevenly spaced and missing data, were fit with SAS 9.2 PROC MIXED (SAS Institute Inc 2008) and estimated with restricted maximum likelihood (REML). Prior to model building, site was examined as a source of non-independence. The intraclass correlation

coefficient at each level of an unconditional means model was computed with youth nested within site. The contribution of each random effect was assessed using a z -test that tested the null hypothesis that the random effect was zero. All random effects associated with site level were either nonsignificant or estimated at zero, and thus site was eliminated as a level. Similar analyses were conducted for mentors as a source of non-independence, since some mentors mentored more than one child in the study, and similar findings were found, and thus mentor was also eliminated as a level.

The longitudinal portion of the model was constructed through the following steps: (1) examine empirical growth plots; (2) evaluate an unconditional means model; (3) fit an unconditional linear growth model; (4) fit unconditional non-linear models; and (5) test different error covariance structures. Competing longitudinal change and error structures were compared using the Bayesian Information Criterion. The unconditional linear growth model showed better fit than a linear plus quadratic model for all study outcomes. Four competing error covariance structures were tested (i.e., variance components, autoregressive, Toeplitz, and unstructured); variance components and unstructured showed superior fit across study outcomes and thus were retained in final models. Intervention effects on growth then were examined with an intent-to-treat model using all available data to estimate the model parameters via REML. Individual varying time scores were modeled as months since the baseline assessment. Condition was coded as “0” for Control and “1” for Intervention. An interaction term between time and condition was included in the model. The time-by-condition interaction represents group differences between baseline and the 5-year assessment trajectories. Effect sizes were estimated by converting t values to Cohen’s d -statistics (Lipsey and Wilson 2001).

Results

Intervention Condition Participation

Of the 156 children randomized to the Intervention condition, while almost all children were matched with a mentor, only 144 (92%) met with a mentor. On average, it took 62 days ($SD = 86$) after a caregiver consented to be in the study for the first mentor-child meeting to occur; most children (70%) met with their mentor within 8 weeks of consent. During the observation period of interest here, most children had only one mentor (54%), but 21% had two, 10% three, and 15% four or more (average of 2.1 mentors, $SD = 2.2$; range 0 to 9). The average child met together with their first mentor over a period of 1241 days ($SD = 708$), with their second mentor over a period of 656 days ($SD = 431$), and with their third mentor over a period of 386 days ($SD = 308$). A child generally had

only one mentor at a time; however, during the period of time when a new mentor was being introduced to a child, he or she may have had two mentors. The average cumulative number of days a child had any mentor was 1614 ($SD = 661$), or approximately 4.4 years. At the most recent data collection point (Wave 10), of the original 144 children who started with mentors, 116 children had a mentor, 9 children did not have a mentor and were awaiting a new match, and 19 children had dropped out of the program (see “left” tallies in Fig. 1 for the wave when this occurred).

Intervention Condition Fidelity

As noted above, FOTC utilizes paid, full time, professional mentors with caseloads of up to eight children each, and mentors are encouraged to continue as a mentor to each child for as long as possible. Sites 1 through 3 maintained these core practices of the “standard FOTC model” throughout the observation period of this report. However, due to program financial difficulties, 2 years after the launch of the trial, site 4 changed these practices and adopted a lower cost model that utilized volunteer “intern mentors” from local Bachelors of Social Work training programs. Interns were supervised by paid, full time “master” mentors, each of whom held a Masters of Social Work degree. Each intern was matched to one child for one academic year, with master mentors providing mentoring in the summer. Besides these modifications, the other aspects of FOTC remained the same at site 4 as at the other sites, including a commitment to the family to provide a mentor until high school graduation.

Across all sites, based on mentor monthly reports, on average, a child in the program met with a mentor over 300 times, for a total of almost 650 h (see Table A3, available online). To prepare for and support this contact, not only did 100% of mentors participate in initial training, but also participated in continuing education in 40% of the months they were mentoring, group supervision in almost 60% of the months, and individual supervision in almost 80% of the months (see Table A4, available online). The majority of hours reported by a mentor were spent in direct contact with a child, and the majority of those were in activities where the mentor and child were engaging in activities without other FOTC mentors and/or children present (an average of 387 h). However, another 257 h, on average, were spent with other children from FOTC, and a proportion of those hours included contact with other FOTC mentors as well. During their time together, on average, mentors reported that they engaged in activities with the children they were mentoring that were related to each of the FOTC milestones, with about 40% of time focused on social and emotional development, 26% on school success, 14% on healthy habits, 11% on making good choices, and 9% on skills for the future. In 89% of the months that mentors reported direct contact hours with a

child, they also provided information on specific types of program activities in which they had engaged. In the majority of months, mentors participated in core activities in the FOTC model. Notably, in 94% of the months reported, a mentor and child went on outings together, and in 93% of the months reported a mentor talked in person with a parent or guardian of the child, two activities common to many youth mentoring programs.

Control Condition Fidelity

No children in the Control condition received mentoring through FOTC. A minority of children in the Control condition were reported by caregivers as having some type of mentor. For example, at Wave 5, midway through the observation period of this report, and in response to an open-ended question on mentoring, 34% of caregivers in the Control condition reported that their child had some type of adult mentor in their lives. Of these, caregivers formally labeled adults for only three children as “mentors” per se, but also mentioned other adults connected to their children through various programs, such as Boys and Girls Clubs and Big Brothers Big Sisters.

Intervention Condition Satisfaction

Caregiver satisfaction with the FOTC program was high at each wave of data collection (see Table A5, available online). Almost all caregivers (i.e., 88 to 97%, depending on the wave) endorsed the most positive response choices to both general and specific questions about how well they liked the program, and very few (typically, 1 or 2%) endorsed the most negative response choices.

Table 2 Results of condition \times time interactions for intent-to-treat test of the intervention

Outcome	Estimate	SE	<i>t</i> value	<i>p</i> value	<i>d</i>
Parent report					
CBCL externalizing	-0.016	0.022	-0.73	0.47	0.09
CBCL internalizing	-0.036	0.026	-1.41	0.16	0.17
BERS total strength	0.069	0.041	1.70	0.09	0.21
Youth trouble in school ^a	-0.001	<0.001	-2.44	0.02	0.30
Youth positive school behavior	0.007	0.002	3.10	0.00	0.38
Youth school work	0.003	0.003	0.95	0.34	0.11
Youth report					
Deviant peers	-0.001	0.004	-0.21	0.83	0.03
Antisocial behavior	<-0.001	0.003	-0.02	0.98	<0.01

Cohen's *d* is provided as a measure of effect size with the convention 0.2 small, 0.5 medium, and 0.8 large
CBCL Child Behavior Checklist, *BERS* Behavioral and Emotional Rating Scale-2, *TRF* Teacher Report Form, *SE* standard error

^a Parameter estimate based on the log-transformed values

Hypotheses Tests

Results for the condition-by-time interactions from the mixed-effects growth models for the intent-to-treat analyses are presented in Table 2. The other parameter estimates from these models are provided in Table A6 (available online). In terms of H1, relative to Control youth, Intervention youth showed significantly less growth in caregiver report of Youth Trouble in School ($t = -2.44$, $p = 0.016$, $d = 0.30$). Conversely, in terms of H2, relative to Control youth, Intervention youth showed significantly greater growth in caregiver report of Youth Positive Behavior in School ($t = 3.10$, $p = 0.002$, $d = 0.38$). Further, a trend was found for greater growth in caregiver report of the BERS-2 Total Strength Index ($t = 1.70$, $p = 0.09$, $d = 0.21$). No other significant differences were found for any other variable relevant to H1 or H2.

Discussion

Across the 5-year period following entry into the controlled trial, children randomly assigned to FOTC were rated by their caregivers as growing at a significantly greater rate on one measure of strength, and a significantly slower rate on one measure of problems. However, no significant differences were found for measures as rated by children. In terms of effect size, the range of all effects (i.e., regardless of statistical significance) was $d = 0.01$ to 0.38 , with an average of 0.16 . While modest, these results are more optimistic than the early findings from the most similar comparator study—the aforementioned Cambridge–Somerville Study—and indicate that the impacts of FOTC professional mentoring during the early stages of the program are in the average range of recent (and

mostly, volunteer) mentoring studies (i.e., $d = 0.02$ to 0.41 , average 0.20).

While outcomes to date are similar to those found for relatively brief volunteer mentoring programs, in terms of intervention processes, FOTC clearly deviates from the average such program (see DuBois and Karcher 2014). Quite unlike the programs examined in most mentoring studies, the mentors in this study were paid to work *full time* as mentors. Further, most had both extensive experience and training working with children before they became FOTC mentors, and then received further training and supervision from FOTC. Men mentored boys and women mentored girls, and in contrast to what is typical (e.g., Tierney et al. 2000), the majority of mentors (and children) were members of a racial and/or ethnic minority group. Unlike most studies which involve mentoring programs that last about a year, mentoring in the period of observation here went on for 4 years, and continues as of the date of this publication. Over 90% of the children randomized to receive a mentor actually met with their mentor, and most continued to do so over the course of the 5 years of observation. These and other aspects of the FOTC mentoring program put it at odds with the typical program, at least based on the limited program participation data provided in the mentoring literature (Sorenson and Eddy 2017). Clearly, FOTC is making a more significant investment in the mentoring relationship, in both time and money, than most programs.

Given the exceptional nature of the processes in this program, why are the results, to date, in the average range? Unlike most other mentoring programs that have been studied, which begin when children are in late elementary or middle school, children participating in FOTC were in kindergarten when this program began. Across the period of elementary school, which this report focuses on, most children even in “at risk” circumstances do not exhibit consistently high levels of problem behaviors. Thus, there were bound to be few, if any, differences between children in the Control and Intervention conditions during the early years of the program. Nevertheless, based on anecdotal information from the sites prior to the start of the study, the prediction was made that some differences in growth would be detected between the conditions, and a few were.

Of equal importance may be that FOTC is a *relationship-based* program. This puts it in contrast to the *skill-based* programs that dominate the existing evidence-based practices lists for children and their families. FOTC does not seek to guide children through a short-term, lesson-driven training experience that focuses on learning specific cognitive and behavioral skills that can be demonstrated, and thus detected, over the short run. Rather, mentors spend time building a solid, trusting, and dependable relationship with each mentee. When possible, transitions to new mentors are planned far in advance, and attempts are made to facilitate

and ease a change in mentor to the extent possible. As the program progresses, mentors work with mentees on the development and maintenance of a broad, and subtle, set of cognitions and behaviors that are intended to build on each other over time, with the intention of helping a child prepare specifically for the *relational* challenges to come during adolescence and emerging adulthood.

Thus, it seems plausible that the most meaningful positive impacts of the program are likely to emerge when children reach a point when good decisions regarding both their social relationships and the behaviors they engage in within them are absolutely critical to their long-term success. For most children, this crossroads is not reached until sometime during adolescence. At this point, children who struggled through elementary school, and continue to do so during middle school, are much more likely than their peers to become involved in a diverse set of behaviors that can have major and serious long-term consequences, such as delinquency, frequent substance use, and sexual behavior (Dishion et al. 2004). This usually occurs in the presence of and in partnership with peers engaging in the same behaviors. It is at this time when the role of an existing mentor—and the potentially positive effects of a mentor-child relationship that began long prior—becomes vital, and when intervention effects seem most likely to be detected. Such effects were not found in the Cambridge–Somerville Study, where some children in the sample were mentored during adolescence. However, these children entered their mentoring relationships at a much older age than the children in this study, so how they would have fared under the conditions here are not known.

An important aspect of FOTC is that a child in the program does not just spend time with their own mentor, but also with other mentors and children in the program. In the Cambridge–Somerville Study as well, opportunities were provided for children in at risk situations to associate with each other, and the forming of new friendships between so-called deviant peers is hypothesized to be why this program led to long-term harm (Dishion et al. 1999). While interventions that bring deviant peers together do appear to have the potential to be iatrogenic (see Dodge et al. 2007), research on that topic has not focused on the impact of long-term programs with the package of characteristics of the program examined here. In FOTC, children in at risk situations are connected to each other very early in their public social lives. From the beginning, they are closely supervised and guided by responsible and caring adults while in the presence of children in similar situations. Thus, upon enrollment in the program, these children entered a prosocial community that was intentionally fostered by adults for the benefit of children, and as they grew, most stayed a part of this community. By the time children in this type of situation enter a period of high risk for serious problems during adolescence, the presence and power of this community, in addition to the presence and power of the

mentoring relationship, may serve as powerful protective factors that are not present in short-term, skill-focused interventions or in brief, individual-focused volunteer mentoring programs.

Limitations

The sample size of the study limited the ability to detect effects. The largest sample size possible was obtained, but was restricted by available grant money and the need to fund recruitment and assessment activities simultaneously in four major metropolitan areas, with two on the East Coast and two on the West Coast. On a related note, once the study was launched, the multiple and independent study sites, the multiple and independent funding streams, the length of a typical grant (i.e., 3 to 5 years), and the sheer length of the program increased the likelihood that at some point, funding issues would further interfere with plans for the “ideal” study. As noted above, the first bump occurred within 2 years of the start of the study, when one site decided to change the program model in response to financial difficulties. This led to unplanned variability within the Intervention condition and might have increased overlap between the Intervention and Control conditions. However, in analyses not discussed here, removing this site from the analyses did not change the results. It is possible that the lack of differences is due to measuring the “wrong” constructs. The constructs chosen for this study were similar to those typically examined in mentoring studies and focused on observable child outcomes. There are other constructs that also might be changing due to a long-term mentoring relationship, such as the internal capacity to form healthy social relationships with peers and adults. Unobservable constructs such as this were not measured due to the unavailability of low cost, valid, reliable, and sensitive-to-change measures of such for young children. A variety of other measures of import that might have changed also are missing from this report, such as teacher ratings of child problems and strengths and school administrative records documenting grades and attendance. This is not for a lack of trying to collect this type of information. Strategies that worked quite well in the past for school data were used, but failed to garner a sufficient response. Mitigating factors included the Great Recession and recent policy initiatives that significantly impacted practices in school districts and schools and limited the availability and willingness of administrators, teachers, and other school staff members to participate in outside data collection activities. Finally, all significant effects were on measures rated by caregivers who were not blind to condition. It could be that this led to a “halo effect” where positive outcomes were expected and reported for children in the Intervention versus the Control condition regardless of actual behavior change (e.g., Patterson 1982).

Conclusions

Almost half way through the FOTC paid professional mentoring program, the effects observed for children are similar to findings in the volunteer mentoring literature. The most promising effects were found in growth in positive caregiver perceptions of a child. While this could be interpreted as due simply to a flaw in the measurement plan, having adults in the life of a child that have positive attributions about and confidence in a child encourages further success. Such encouragement can be a protective factor in and of itself. Hopefully, this and other protective factors related to program participation—most notably a strong and positive mentor-child relationship and multiple strong and positive relationships with other children who are being mentored and their mentors—will increase the likelihood of success during adolescence on the three long-term goals of the program: school success, positive youth engagement, and a prosocial lifestyle. New funding is being pursued in the hope of reaching the end of this story and of beginning to follow the next—the journey through adulthood.

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Compliance with Ethical Standards

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Conflict of Interest The authors declare that they have no conflicts of interest.

Ethical Approval This research was conducted with the approval of the Oregon Social Learning Center Institutional Review Board. All procedures performed in studies involving human subjects were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent or assent was obtained from all individual participants included in the study.

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