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Time-limited, structured youth mentoring and adolescent problem behaviors

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Abstract

Youth mentoring can have a profound impact on the lives of high-risk youth. This study presents the Campus Corps program, a time-limited (12-week), structured mentoring program for high-risk youth (ages 11–18), and results from a quasi-experimental pilot evaluation. Baseline and post-intervention problem behavior data from 315 offending youth were used in multiple regression analyses. After accounting for baseline group differences, pre-intervention scores, and demographic covariates, Campus Corps participants (*n*=187, 63.1% male) reported less engagement in problem behavior, lower acceptance of problem behavior, and greater sense of autonomy from marijuana use post-intervention than participants in the comparison condition (*n*=128, 66.4% male). Conversely, post-intervention group differences were not observed for peer

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refusal skills or autonomy from alcohol use. A description of the Campus Corps program design and supplemental preliminary findings contribute to the growing knowledge base of youth mentoring program designs and outcomes.

Keywords

youth mentoring; delinquency; substance use; adolescence; Campus Corps

There is an established relationship between substance abuse and delinquency among high-risk youth (Dembo, Wareham, Poythress, Cook, & Schmeidler, 2006; Fergusson, Lynskey, & Horwood, 1996). As many as 80% of youth in trouble with the law use alcohol and other drugs (CASA, 2004), and substance use disorders are among the most commonly diagnosed disorders within the juvenile justice system (Palermo, 2009). High-risk youth (e.g., adolescent offenders) appear to be at increased risk of delinquency and substance abuse due to additional challenges such as academic failure and deviant peer relationships (Mason, Hitchings, McMahon, & Spoth, 2007), as well as early aggressive behavior, instability, and poverty (Dodgen & Shea, 2000). Furthermore, such high-risk youth may experience poor impulse control, co-occurring mental health disorders, social skills deficits, and problems within their family (Hawkins, Catalano, & Miller, 1992; Weinberg, 2001).

Conversely, high-risk youth who experience protective factors, such as school connectedness, positive future orientation, sense of self, emotional and behavioral control, strong bonds to prosocial peers, and social competence are more likely to circumvent poor outcomes (Burrow-Sanchez, 2006; Haegerich & Tolan, 2008; Hawkins, Kosterman, Catalano, Hill, & Abbott, 2005). Likewise, scholars of positive youth development indicate that programs containing opportunities for positive adult-youth relationships, life-skills training, and involvement in important community activities are likely to be effective (Lerner, 2004; Theokas & Lerner, 2006). In fact, relationships with competent, caring adults can augment positive youth development and mitigate problem behaviors among high-risk youth (Bowers, Geldhof, Schmid, Napolitano, Minor, & Lerner, 2012; Masten & Coatsworth, 1998; Masten & Reed, 2002; Theokas & Lerner, 2006). Thus, formal adult-youth mentoring programs have become an increasingly popular intervention for vulnerable youth.

Despite diversity in the structure and purpose of adult-youth mentoring programs, at the heart of all programs is the relationship between a youth and an important non-parental adult. For programs that situate this important relationship within a structured program, mentoring can be conceptualized as “the practice of using program-sponsored relationships between identified youth and older volunteers (or paraprofessionals) as a context for prevention-focused activities and experiences” (Cavell & Elledge, 2014, p. 37). Utilizing this perspective, the current study presents *Campus Corps*, a time-limited (12-week) structured mentoring program for high-risk youth (ages 11–18), and preliminary outcomes related to delinquency and substance use.

Evidence for the success of youth mentoring continues to grow. In 2011, a meta-analytic review of 73 programs from 1999 to 2010 observed small effects (mean effect size = .21) for

quality youth mentoring on a number of developmental domains (e.g., social, academic; DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). However, few studies in this meta-analysis included juvenile offending and substance use as outcomes of interest (fewer than 5 and 6 studies respectively). Data on juvenile offending were insufficient for deriving a reliable estimate of program impact, whereas estimates on the impact on substance use showed no significant effect. Another meta-analysis focused exclusively on mentoring programs that targeted youth at risk for delinquency, however, observed small effects on delinquency, aggression, and academic achievement, as well as drug use (Tolan, Henry, Schoeny, Lovegrove, & Nichols, 2013). An evaluation of a mentoring program for at-risk youth (those receiving increased disciplinary action at school and demonstrating poor academic performance) found that mentoring improved youths' internalizing and externalizing behavior, as indicated by parent report (Jackson, 2002). Similarly, results from the Adolescent Diversion Program, aimed at youth in the juvenile justice system, showed that youth who participated in the mentoring program were less likely to commit future crimes and more likely to attend school regularly (Sturza & Davidson, 2006).

Despite some evidence that mentoring may be effective in preventing problem behavior, there is little research or consensus on whether mentoring produces favorable outcomes across all levels of risk. Notable, Herrera, DuBois and Grossman (2013) systematically examined the role of individual and environmental risk in impacting mentoring program outcomes among 8- to 15-year-old children. Results showed that program benefits, including fewer depressive symptoms, greater acceptance by peers, higher academic self-efficacy, and better grades, were fairly similar across risk profiles. One statistically significant exception was that youth high on individual risk showed greater improvements in levels of parent trust than youth in other risk profiles. At a program level, results of two meta-analyses found that programs serving higher-risk youth tended to yield stronger outcomes (DuBois et al., 2002; DuBois et al., 2011). More research is needed to determine the impact of mentoring on preventing problem behaviors in high-risk populations (e.g., those involved in the juvenile justice system).

In addition to this pilot study's contribution to the mentoring literature in its focus on understudied outcomes of policy interest, the study also contributes to efforts at elucidating the requisite length of mentoring relationships for achieving outcomes. Some research on the Big Brothers Big Sisters program has indicated that relationships longer than one year produce larger effects, and that youth in relationships lasting less than 3 months showed declines in some areas of functioning (Grossman & Rhodes, 2002). However, no evidence for an association between match duration and outcomes was found in DuBois and colleagues' (2002) earlier meta-analysis; additionally, in the more recent meta-analysis, positive effects were found in programs of relatively brief duration (e.g., less than 6 months; DuBois et al., 2011).

Of note, others have found intended effects in relatively brief mentoring programs. For instance, the Lunch Buddy program—a mentoring program designed specifically for bullied children—facilitates mentoring relationships for the length of one university semester. Despite this relatively brief duration, children in the Lunch Buddy program report significantly greater reductions in peer reports of peer victimization than children in the

control group (Elledge, Cavell, Ogle, & Newgent, 2010). Similarly, a randomized controlled trial of the Fostering Healthy Futures program, a 9-month preventive mentoring and skills group intervention for children in foster care due to maltreatment, demonstrated positive effects on mental health, placement, and permanency outcomes (Taussig & Culhane, 2010; Taussig, Culhane, Garrido, & Knutdson, 2012). It may be that the length of the match is less important than avoiding an unexpected early termination, which can result in negative consequences (DuBois, Neville, Parra, & Pugh-Lilly, 2002; Grossman & Rhodes, 2002). Perhaps when mentoring relationships are maintained for the intended period of time (whether one semester, 6 months, or one year), youth are able to prepare for and are less likely to personalize the end of the relationship (De Ayala, & Perry, 2005; DuBois et al., 2011; Larose, Tarabulsy, & Cyrenne, 2005).

While the study of mentoring and its effectiveness continues to grow, gaps in research persist and provide opportunities for further investigation, particularly for time-limited programs and those serving high risk youth. Given the observed modest effect sizes, a need exists for the development and evaluation of alternative program structures. In particular, DuBois et al. (2011) recommend the development of well-specified models grounded in theory and/or research and the comparison of youth mentoring to other youth interventions. Although an examination of mediating and moderating mechanisms is outside the scope of the current study, the following description of *Campus Corps* is included to introduce the theoretical underpinnings of the program and to provide a context for our hypothesis: Controlling for pre-intervention differences, baseline scores, and key covariates, youth who participate in Campus Corps will report lower frequency and acceptance of problem behavior and higher peer refusal skills and level of autonomy from substance use at posttest than participants in the comparison group.

Campus Corps

Campus Corps is a structured, time-limited (12-week) mentoring program for high-risk youth (ages 11–18), including those at risk for entering the juvenile justice system and youth formally charged with an early offense. Campus Corps provides prevention and early intervention services prior to deeper involvement in juvenile justice, school dropout, or serious behavioral health problems. Campus Corps' mentors are undergraduate university students enrolled in a 3-credit service-learning course which includes mentor training, live supervision, and ongoing support (cf. Weiler, Haddock, Zimmerman, Krafchick, Henry, & Rudisill, 2013).

Primary mentoring relationship

A successful mentoring relationship is theorized to provide opportunities for cognitive, socio-emotional, and identity development (Rhodes 2002, 2005). It is through this type of relationship, youth learn to view themselves as important to the world and gain important skills. According to Rhodes (2002, 2005), quality mentoring relationships are characterized by mutuality, trust, and empathy. She posits that the mentee will derive little benefits from the mentoring experience without a strong and meaningful bond between the mentee and mentor. Findings from existing literature support the assumption that a strong emotional connection is a distinguishing feature of mentoring relationships that are associated with

better outcomes for youth (DuBois & Neville, 1997; Grossman & Rhodes, 2002; LoSciuto, Rajala, Townsend, & Taylor, 1996; Sipe, 2002). For this reason, the primary component of Campus Corps is the strength of the mentoring relationship.

Intentional, multi-level community

Foundational to Campus Corps is the intentional multi-level mentoring community. Each mentor-mentee relationship is a part of a Mentor Family (i.e., small groups of 4 mentor-mentee pairs) nested within the larger mentoring community which is further supervised and supported by Mentor Coaches (i.e., experienced youth mentors) and family therapist instructors (i.e., graduate students trained in systemic thinking and therapeutic interventions who oversee the mentoring community and service-learning course) (Weiler et al., 2013). Added benefits may occur as a result of combining one-on-one mentoring within a structured group setting (e.g., Deutsch, Wiggins, Henneberger, & Lawrence, 2013). Through the primary mentor-mentee relationship, as well as additional prosocial peer and adult relationships in the Mentor Family and larger community, youth build positive prosocial relationships and gain a sense of mattering.

This intentional structure is designed to promote youth's connectedness and prosocial relationships (Weiler, Zimmerman, Haddock, & Krafchick, 2014). Mentor Families provide a prosocial network for youth to build relationships with other mentors and fellow mentees. Meanwhile youth gain opportunities to practice and obtain feedback on pro-social relationships, an important socio-emotional asset for youth (Sullivan, Farrell, Bettencourt & Helms, 2008). Building and maintaining pro-social relationships provides social support, friendship, and opportunities for appropriate activities (Brown, 2004). Because peers are one of the most influential factors in promoting (e.g., Akers & Jensen, 2006; Sullivan, 2006) and discouraging problem behavior (e.g., Elliot, 1994), Mentor Families promote positive relationships with same-age peers, while avoiding deviancy training (Dishion, McCord, & Poulin, 1999) through direct supervision of multiple adults. Mentor Families also provide an opportunity for youth to build positive relationships with other adults, in addition to their primary mentor. Providing access to different resources, such as multiple adult role models or academic support, may promote positive adaptation among juvenile offenders (Chen & Henry, 2014). Additionally, the intentional structure of Campus Corps is designed to provide in-the-moment support and live supervision for mentors (Weiler et al., 2014). Mentors rely on fellow mentors, their Mentor Coach, or the instructor to alleviate pressure to be all-knowing, to support behavioral interventions, and to model positive relationships.

Weekly schedule

Finally, Campus Corps includes 4-hour weekly meetings on campus in which mentors and mentees participate in (1) walks on campus to promote building relationships, physical activity, and opportunities of education, (2) individualized educational/career activities to encourage success in school and positive future orientation, (3) family-style dinners to foster relationships, social skills, and connectedness, and (4) pro-social activities (e.g., sports, art, cooking, music) to strengthen life skills, self-confidence, and productive engagement with the community. Because unstructured activities in the absence of adults correlates to delinquency and substance use (Flannery, Williams & Vazsonyi, 1999; Osgood et al., 1996),

each evening (4pm–8pm) of Campus Corps provides a safe environment for youth to build relationships with their mentors, learn new skills, and have fun. Indeed, prosocial activities are key deterrents to delinquency (Kaufmann, Wyman, Forbes-Jones, & Barry, 2007) and others have indicated an added benefit to integrating mentoring with other program components (Kuperminc, Emshoff, Reiner, Secrest, Niolon, & Foster, 2005; Taussig, Culhane, & Hettleman, 2007).

Method

Participants

Participants were recruited to participate in this pilot study if they were 11 to 18 years old and either had a prior legal offense or were deemed at risk of offending by their agency contact (i.e., professional at the Office of the District Attorney, Probation Department, restorative justice and diversion programs through the Department of Human Services and two local agencies). Community partners were instructed to refer youth at risk for entering the juvenile justice system or youth formally charged with an early offense. Youth were considered at risk of offending if one of six risk factors from the Arizona Needs/Risk Assessment (described below; Krysik & LeCroy, 2002) was present in his or her life. Given the high risk nature of the adolescents served by these community partners, it was not surprising that all youth referred to the study met the inclusion criteria of a prior offense or presence of at least one risk factor. Also not surprisingly, youth at the deeper end of the juvenile justice system (who may not benefit from such a preventive intervention) were not referred by the selected agencies. As noted below, however, some youth were too young to participate in the study and were excluded from the final sample. Youth were not excluded due to other demographic characteristics, mental health status, or prior offense. The entire study protocol was approved by the institutional review board. Recruitment occurred during Spring 2011, Fall 2011, Spring 2012, and Fall 2012 semesters.

Utilizing a quasi-experimental design, participants for the pilot study were recruited separately for intervention and comparison group conditions. First, participants were referred to Campus Corps by contacts at one of the following juvenile justice agencies: Office of the District Attorney, Probation Department, restorative justice and diversion programs through the Department of Human Services and two local agencies. The majority of youth (65%) were referred from these juvenile justice agencies. The other 35% were referred by police officers or school counselors in the school. Initial recruitment for the intervention group occurred June–August for Fall Semesters and November–January for Spring Semesters. Adolescents referred to Campus Corps were offered the opportunity to participate in the research study and enroll in the program. Youth could choose to decline participation in the Campus Corps program and/or research without consequence.

Next, individuals who were eligible for Campus Corps (i.e., youth ages 11–18 who had a prior offense or were at risk of offending) were recruited for the comparison group through trained personnel at the two largest referring agencies for Campus Corps who also agreed to participate in recruitment of youth for the comparison group: the Office of the District Attorney and the Probation Department. These adolescents did not participate in the program because the program had reached capacity or because they missed the limited

recruitment window for participation in the program (June–August for Fall Semesters and November–January for Spring Semesters). All comparison group youth participated in treatment as usual (e.g., life skills classes, afterschool programs) as part of his or her program with the Probation Department or the Office of the District Attorney. Additionally, comparison group participants were invited to enroll in the Campus Corps program after the completion of the research study.

Of the 382 youth enrolled in Campus Corps during the aforementioned semesters, 74.7% (n = 286) participated in the research study. The remaining youth did not participate due to being 10 years old at the time of the pretest, lack of parental consent, and/or choosing not to participate in the research study. Forty-eight percent of youth recruited to participate in the comparison group consented to research (n = 136). In all, 422 youth consented to participate. Twelve participants were lost to follow-up (4 in the intervention condition, 8 in the comparison condition). Attrition analyses revealed no observable differences between those who were lost and those who remained in the study. A notable difference between youth in the intervention group and youth in the comparison group was that 65% had a prior offense in contrast to 100% of the comparison group. In order to conduct the most reasonable comparison with the available data for this pilot study, a subsample of youth with a prior offense (N=315) was used in all analyses. Multiple imputations in IBM SPSS Statistics were utilized to handle any missing data. Missing data were negligible at less than 2%; pooled imputations were utilized in analyses. Because of the quasi-experimental design of the pilot study, chi-square and t-tests were used to determine demographic group differences. The groups appeared similar on proportion of males and level of risk, but differed by ethnicity and age (see Table 1).

Procedure

Participants who were interested in the research opportunity were informed of the purpose of the study. Youth in the Campus Corps program were recruited and informed of the study during their intake meeting with a trained staff member and were assured that choosing not to participate would have no effect on their standing in the program. In exchange for their participation, youth names were entered into a drawing for one of four I-pods given away each semester. Youth in the comparison group were recruited and informed of the research opportunity at either the Probation Department or the Office of the District Attorney during their initial appointment at these agencies. They participated in treatment as usual, and in exchange for their participation, were given a $15 gift card for each completed survey. After describing the study conditions, informed consent for participation was obtained for all youth participants and at least one guardian. Data for the study were collected through questionnaires which were completed in 30 to 45 minutes. The intervention group questionnaires were completed prior to, and immediately after the program. The comparison group pretest was completed after consent was obtained and the posttest was completed about 12 weeks later.

Measures

Demographic and Risk Variables—Participants' demographic information was gathered through self-report. Dummy codes were created for the categorical control

variables gender (female = 1), ethnicity (minority ethnicities = 1), and group (intervention = 1). Referring agency workers reported on whether the youth had a formal charge within the juvenile justice system and completed the Arizona Risk/Needs Assessment (ARNA; Krysik & LeCroy, 2002) which assessed the youth's level of risk for offending. The risk assessment provides stable predictive validity estimates for recidivism and does not appear to vary appreciably between males and females or among White youth, Latino youth, African American youth, and Native American youth (Schwalbe, 2009). Six dichotomous items, such as *"Has the juvenile ever been assaultive?"* and *"Does the juvenile have behavior problems/mental health issues?"* were used in this study. Higher scores indicated higher risk of offending.

Problem Behavior—To assess engagement in problem behavior, the 13-item Frequency of Problem Behavior scale (Multisite Violence Prevention Project, 2004) was used. Participants reported the frequency, (1) *0 times* to (6) *20 or more times* in the past month that they have participated in the delinquent or substance use behavior. Sample items include *"Hit someone or gotten into a physical fight"* and *"Smoked marijuana."* A single, open-ended truancy item, *How many unexcused absences have you had in the past month,* was utilized in place of the original item, *skipped school,* due to lower overall reliability with the original item. The truancy item was recoded to be consistent with the coding for the measure, (1) *0 times* to (6) *20 or more times*. With this substitution, adequate reliability was observed, Cronbach's alpha = .71. Scores were summed and higher scores indicated greater frequency of engagement in problem behaviors.

Perception of Problem Behavior—To assess participants' acceptance of problem behavior, the 10-item Perception of Problem Behavior measure (Loeber, Farrington, Stouthamer-Loeber, & Van Kammen, 1998) was utilized. Participants responded to the prompt *"How right is it for you to…."* on a scale of (1) *not at all right* to (3) *completely all right.* Sample items include: *"Take a drink of alcohol"* and *"Get into fist fights."* Cronbach's alpha equaled 0.83. Higher scores indicated greater acceptance of problem behaviors.

Peer Refusal Skills—To assess youth's perception of his or her ability to refuse an offer to use alcohol or drugs, a 4-item measure of one's peer refusal skills was used (Epstein, Botvin, Diaz, Baker, & Botvin, 1997). Participants responded to the prompt *"How likely would you be to…"* A sample item is: *"Say 'no' when someone tries to get you to smoke marijuana or pot."* Responses ranged from (1) *definitely would not* to (5) *definitely would.* Cronbach's alpha equaled 0.87. Higher scores indicated a greater ability to refuse an offer to engage in substance use.

Autonomy from Substance Use—Finally, a measure of one's autonomy from alcohol and marijuana use (Henry, Shtivelband, Comello, & Slater, 2011) was given to assess youth's identity related to substance use. It contained 4-items in response to the prompts "*NOT using marijuana….*" and "*NOT drinking alcohol…*" Sample items include: "*Is an important part of who I am*" and "*Is a way of showing my own independence.*" Responses ranged from (1) *strongly disagree* to (5) *strongly agree.* Cronbach's alpha equaled .95 for

the marijuana subscale and .96 for the alcohol subscale. Higher scores indicated a greater sense of autonomy from alcohol or marijuana use.

Results

Prior to hypothesis testing, descriptive and comparative statistics were calculated to examine normality of study variables and group equivalency on baseline levels of each dependent variable. *T*-tests were conducted to determine significant pre-intervention differences between intervention and comparison groups on each outcome variable (see Table 2). Results indicated no significant difference between groups on frequency of problem behavior, perception of problem behavior, autonomy from marijuana use, and autonomy from alcohol use. Conversely, significant differences were found between groups on peer refusal skills.

Assessment of Post-intervention Group Differences

A series of linear regression models were estimated to determine if there were significant post-intervention differences between the intervention and comparison condition for the variables of interest, after adjusting for key background factors and pre-intervention levels of the outcome of interest. Prior to hypothesis testing, assumptions for multiple regression analyses were checked and met. For each outcome variable, age, gender, minority status, pre-intervention levels of peer refusal skills, pre-intervention levels of the outcome of interest, and the treatment indicator served as predictors of the post-intervention measure of the outcome of interest. Each continuous control was centered at the mean. Table 3 presents the post-intervention adjusted means (adjusted for background variables and pre-intervention levels of key variables) by condition calculated for all variables from the linear regression models.

Significant post-intervention differences between groups were observed for autonomy from marijuana use, perception of problem behavior, and frequency of problem behavior, indicating that participants in the treatment condition had more desirable scores post-intervention than participants in the comparison condition. Overall, the effect sizes were small. Substantively, participants in the intervention condition reported higher levels of autonomy from marijuana use, lower frequency of problem behavior, and lower acceptance of problem behavior than participants in the comparison condition at post-intervention. No post-intervention differences were found between groups on peer refusal skills or autonomy from alcohol use after accounting for group differences pre-intervention, participants' Time 1 levels, and covariates.

Discussion

This study presents *Campus Corps*, a time-limited, structured mentoring program for high-risk youth, and results of a quasi-experimental pilot study. Consistent with prior research, mentoring may have a positive, yet modest, impact on the attitudes, behaviors, and identities of youth related to problem behavior (e.g., Dubois et al. 2011; Tolan et al., 2013). On average, Campus Corps participants reported lower acceptance of problem behaviors, such that they were less likely than the comparison group to perceive delinquent and substance

use behavior as acceptable. Campus Corps participants also reported lower frequencies of problem behaviors than youth in the comparison group. No observable differences, however, were found between groups regarding peer refusal skills after accounting for pre-intervention differences. In terms of sense of identity, mentored youth demonstrated a greater sense of autonomy from marijuana use than non-mentored youth, but no group differences were noted on autonomy from alcohol use.

The aforementioned findings contribute to the growing body of literature on the utility of mentoring for mitigating a number of poor outcomes for high risk youth (DuBois et al., 2011; Tolan et al., 2013). Despite a lack of noticeable group differences at post-intervention for peer refusal skills and autonomy from alcohol use, the results are promising and warrant further investigation into the program via a randomized controlled trial. Of particular importance is the fact that group differences were observed after a 12-week mentoring program. Although some research on Big Brothers Big Sisters programs has indicated that relationships longer than a year produce larger effects (Grossman & Rhodes, 2002), it is noteworthy that similar effect sizes were found in the current study. The critical issue may not be whether the relationship lasts 12 months or more, but whether the relationship is maintained for the full duration of a pre-established time frame, as this may allow youth time to prepare for the end of the relationship (De Ayala, & Perry, 2005; DuBois et al., 2011; Larose, Tarabulsy, & Cyrenne, 2005).

Given previous empirical and theoretical literature, the following three factors are hypothesized to be the key mechanisms of change: (1) primary mentoring relationship, (2) intentional, multi-level mentoring community, and (3) Campus Corps' weekly schedule. Although future research to replicate and extend these preliminary findings is needed, we hypothesize that the Campus Corps intervention may produce similar results in a shorter period of time due to the contributions of unique program components (e.g., Mentor Families, structured community setting) that may both strengthen the mentor-mentee relationship as well as provide for additional mechanisms of change. For instance, by embedding the mentor-mentee pair within a community, mentors and youth gain the added support of being part of a larger prosocial support system (Weiler et al., 2014). The support of the community may promote feelings of self-efficacy for mentors, which is hypothesized to translate to a positive mentoring relationship (Karcher, Kuperminc, Portwood, Sipe, Taylor, 2006). Likewise, through opportunities to develop additional relationships within a prosocial setting, youth may experience an increased sense of connectedness, belonging, and mattering, which may subsequently decrease the drive to engage in problem behavior (Elliot et al., 2004). Through this multi-level supportive structure, youth are exposed to positive individuals who see them as important and treat them with respect. They are relied on within their Mentor Families and experience unconditional positive regard from their mentor. This is consistent with recent, exploratory research on the benefits that may result from providing one-on-one mentoring within a structured group setting (e.g., Deutsch et al., 2013; Weiler et al., 2014). Additional research, however, is needed to further elucidate the mechanisms of change.

Overall, the findings of this pilot study contribute to the growing body of literature on quality youth mentoring. Specifically related to the problems of delinquency and its

associated outcomes, the effect sizes observed in the present study (and in similar studies of mentoring programs) are comparable to other evidence-based prevention strategies and treatment approaches aimed at this particular population of high-risk youth. Mentoring, as a result, is a viable prevention strategy directed at addressing the important public health problems of delinquency, substance abuse, and related concerns. Offending youth are particularly in need of effective intervention efforts, as without it, they are at elevated risk for developing life trajectories that are permeated by substance abuse, mental illness, and criminal behavior.

The results must be interpreted within an understanding of the study's limitations. The most notable limitation is the quasi-experimental design which prohibits any casual statements that the results were due to participation in *Campus Corps.* Subjects were not randomly assigned to intervention and control conditions, and the groups differed on some measurable variables. Comparison youth were, on average, older than intervention youth and held higher pre-intervention peer refusal skills. All comparison youth were referred from the Probation Department and the Office of the District Attorney, as opposed to a variety of community agencies that referred to the intervention group. Presumably, control youth were more deeply involved in the juvenile justice system. They may have also had more opportunity to develop peer refusal skills as a result of being older. The groups did not differ, however, on level of risk for offending or frequency of problem behavior despite the comparison youth being older and presumably more involved in the juvenile justice system. Furthermore, the percent of youth who consented to research was low and differed by condition. Thus, there is a likelihood of selection bias. Because the control group was one of convenience, these preliminary results should be interpreted with caution until replicated through a more rigorous research design. Lastly, self-report measures were used for each youth outcome which are vulnerable to reporting bias. However, for assessments of youth's attitude and sense of autonomy, self-reports may be preferred to more objective measures of such constructs.

Despite study limitations, these preliminary findings are an important addition to the youth mentoring literature with respect to the unique program design and promise of time-limited programs. In future research, the program will be subjected to a randomized controlled trial to determine program efficacy under empirically rigorous conditions. In addition to youth report measures, parent report and administrative data will be used to corroborate findings. Future studies will also examine the long-term effects of Campus Corps for high-risk youth. Finally, it is our goal to examine the impact of specific program components to further our understanding of the mechanisms for change. For example, future studies may manipulate the multi-level structure component (e.g., use of mentor families) in order to compare whether this specific structure is particularly salient to the positive results of the time-limited mentor program design. Although replication and extension of findings is needed, results of the pilot study indict Campus Corps as a promising intervention for high-risk youth that warrants further investigation.

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Table 1

Demographic Characteristics of the Intervention and Comparison Groups (N=315)

Variable	Intervention Group (*n*=187)	Comparison Group (*n*=128)	chi-square/*t*-test value
Age (years)	15.01 (1.87)	15.60 (1.53)	3.01*
Risk	2.17 (1.28)	1.88 (1.54)	−1.72
Gender			0.36
Male	63.1%	66.4%	
Female	36.9%	33.6%	
Ethnicity			23.67*
White (non-Hispanic)	50.3%	75.0%	
Hispanic	33.2%	14.1%	
American Indian/Alaskan Native	5.9%	3.1%	
African American/Black	4.8%	4.7%	
Native Hawaiian/Pacific Islander	2.1%	0.0%	
Asian American	2.1%	0.8%	
Other	1.6%	2.3%	

Note. Standard deviations are presented in parentheses.

* p<.01

Table 2

Pre-Intervention Means for Key Variables by Condition

Variable	Intervention		Comparison		Mean Difference	
	M	*SD*	*M*	*SD*	*t*	95% CI
Frequency of Problem Behavior	5.00	5.45	5.06	5.17	.10	[−1.14,1.27]
Perception of Problem Behavior	1.51	.48	1.47	.39	−.67	[−.13,.07]
Peer Refusal Skills	3.53	1.45	3.97	.88	3.48*	[.20,.72]
Autonomy from Marijuana Use	3.45	1.44	3.64	1.21	1.26	[−.11,.48]
Autonomy from Alcohol Use	3.89	1.33	3.70	1.30	−1.25	[−.49,.11]

Note.

*p<.01

Table 3

Post-Intervention Adjusted Means for Key Variables by Condition

Variable	Intervention		Comparison		95% CI	Effect Size
	M	*SE*	*M*	*SE*	Mean Difference	Cohen's *d*
Frequency of Problem Behavior	3.31	.53	5.52	.53	[−3.47, −.95]**	−.33
Perception of Problem Behavior	1.38	.03	1.49	.03	[−.19, −.03]*	−.29
Peer Refusal Skills	4.13	.11	4.00	.11	[−.12,.39]	.09
Autonomy from Marijuana Use	4.11	.11	3.50	.11	[.34,.85]**	.44
Autonomy from Alcohol Use	3.99	.11	3.75	.12	[−.03,.52]	.17

Note.

* p<.01

** p<.001. Models adjusted for age, gender, minority status, Time 1 peer refusal skills, and Time 1 levels of the outcome of interest.