

The Potential Role of an Adult Mentor in Influencing High-Risk Behaviors in Adolescents

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Background: While mentorship programs, which connect adolescents with adults to whom they can turn to for help and advice, are proliferating in an attempt to prevent high-risk behaviors in teenagers, there are few data to show that mentorship actually makes a difference.

Objective: To determine if there is an association between having an adult mentor and high-risk behaviors in adolescents.

Hypothesis: Adolescents who have an adult mentor would be less likely to engage in high-risk behaviors than those without an adult mentor.

Design: Cross-sectional study. A self-administered, anonymous questionnaire was developed to assess demographics, involvement in risk behaviors, and the prevalence of a mentor in the life of a young person.

Participants: A convenience sample of 294 adolescents, seen consecutively (93% of those approached), receiving outpatient medical care. Participants were predominantly female (68%), of mixed race/ethnicity, aged between 12 and 23 years (mean \pm SD age, 16.9 \pm 2.4), and

from diverse socioeconomic backgrounds.

Setting: An adolescent health service in a suburban community-based teaching hospital.

Main Outcome Measures: Adolescent smoking, alcohol and drug use, sexual practices, and weapon carrying.

Results: Adolescents with mentors were significantly less likely to participate in 4 of the 5 measured risk behaviors: ever carrying a weapon (odds ratio, 0.41; $P \leq .01$), illicit drug use in the past 30 days (odds ratio, 0.44; $P \leq .01$), smoking more than 5 cigarettes per day (odds ratio, 0.54; $P \leq .05$), and sex with more than 1 partner in the past 6 months (odds ratio, 0.56; $P \leq .05$). No significant difference was found with alcohol use (≥ 3 drinks in the past 30 days).

Conclusion: A strong positive relationship was found between adolescents having an adult mentor and decreased participation in 4 of the 5 risk behaviors evaluated.

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Editor's Note: It looks like it takes more than adult mentoring to decrease the use of alcohol in adolescents. Do you think leading by example is worth a try?

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ADOLESCENTS ARE known to engage in high-risk behaviors with consequential adverse health effects. National data indicate that more than 75% of adolescent deaths are due to unintentional injuries, homicides, and suicides, and many, if not most, of these deaths are the consequences of high-risk behaviors.¹⁻³ Beyond issues of mortality are the significant morbidities associated with the risks of emerging sexuality, drug experimentation, violence, and

weapon use. The consequences of such behaviors include unintended pregnancies, sexually transmitted diseases, pelvic inflammatory disease, infections with human immunodeficiency virus, trauma and severe lifelong disabilities associated with violence, and the psychosocial concomitants of adolescent drug use, as well as the interrelationship of drug use and other risk behaviors.⁴⁻⁶

The trend of adolescent high-risk behaviors seems to be worsening as youth engage in such behaviors at earlier ages.⁶ It is difficult to impress upon adolescents the health, socioeconomic, and psychosocial effects of these risk behaviors, as most consequences are not experienced until later on in life.⁶ Adolescents who engage in one high-risk behavior are at increased risk for engaging in other risk be-

SUBJECTS AND METHODS

SUBJECTS

Adolescents seeking routine health care at an adolescent health service, involving approximately 720 adolescents per year, within a community-based teaching hospital in suburban New Jersey, were asked to participate in the study. The population served by this adolescent health service represents diverse socioeconomic backgrounds, including approximately 19% Medicaid patients, 38% without any form of health insurance, 3% children of hospital employees, and 40% with private insurance. Of the 316 adolescents approached, 294 (93%) agreed to participate in the study and gave informed consent. It was made clear to the adolescents that their participation in the study or refusal to participate would in no way influence their medical care. The reasons for nonparticipation were that they did not speak English (5%), religious objections (1%), and not specified (1%). The mean \pm SD age of the 294 subjects was 16.9 ± 2.4 years (range, 12-23 years). Other demographics are given in **Table 1**. The study was approved by the Institutional Review Board of Morristown Memorial Hospital, Morristown, NJ.

MEASURE

A 99-item self-administered, anonymous questionnaire was developed by the investigators and included questions about demographics, family interactions, academic achievement, involvement in risk behaviors, and the presence of an adult mentor. The questionnaire was designed at the sixth grade reading level. All items were closed-ended, requiring specific responses, and inquiring about behaviors within a defined time frame (eg, daily, in the past 30 days, in the past 6 months, or ever in their life). There were a series of questions related to each risk behavior, including onset, duration, intensity, and degree of risk. There was an emphasis on 5 major categories of risk behaviors: smoking cigarettes, drinking alcohol, using drugs, violence, and sex. The questions on drug abuse were adapted from the National Institute on Drug Abuse/University of Michigan Study of Substance Abuse.¹³ The investigators developed the remaining questions, with adolescent input.

The questionnaire took approximately 25 minutes to complete. Seventy-nine percent of the adolescents answered all the questions, with an additional 16% responding to all but one item.

The questionnaire was piloted by a group of 15 young people with backgrounds similar to our study population. As with the study population, they were told only that we

wanted to learn more about adolescent health issues, in order to give better health care. They were asked to comment on the questionnaire, helping to make it clearer and more relevant.

The exact wording of the mentorship question was, "Is there an adult in your life you can usually turn to for help and advice?" The word "mentor" was never used nor defined in the questionnaire or to the adolescents. Subjects responded by checking yes or no. If the response was positive, they were then asked to specify that adult. Although "adult" was underlined, some answered friend, brother, or sister. We could not be certain whether those who had indicated a friend or a sibling as a mentor were referring to an adult friend or sibling rather than a peer. Therefore, we compared the respondents who had clearly indicated an adult mentor and those with a possible "peer" mentor both vs those without a mentor. We found no difference in mean percentage risk factors between the 2 mentor groups, so they were grouped together.

PROCEDURE

Between August 1995 and March 1996, subjects for this study were recruited consecutively at all clinic sessions at which research assistants were present. They were asked to complete the self-administered questionnaire with the explanation that we were improving our understanding of the health needs of adolescents to give them the best care. The adolescents were active participants in the informed consent process. The adolescents were told that the questionnaire was anonymous, and, as was noted previously, the decision whether to participate in the study would not influence the medical services given. They were administered the questionnaire in a separate room with individual desks, with the research assistant in the front of the room to answer questions. When the questionnaires were completed, the teenagers placed them in a secured box in the back of the room.

DATA ANALYSIS

Analyses of the data were performed using Epi Info (Centers for Disease Control and Prevention, Atlanta, Ga) and SAS (SAS Institute, Cary, NC) statistical packages. Univariate statistics, including odds ratios (ORs) as a measure of risk, provided summary information on the population demographics and behavioral characteristics. Multivariate analysis was used to compare the relationships between risk behaviors, mentoring, and demographic characteristics (age, sex, race/ethnicity, and family constellation), and were analyzed using logistic regressions.

aviors,⁷ which not only increases adverse health outcomes, but also the difficulty of implementing prevention and treatment programs. The cost to society includes not only emergency department visits, hospitalizations, chronic care, drug and alcohol treatment programs, prisons, and care of the children of adolescents, but also the impact on families and communities, and the loss of future productivity and creativity.⁶

There are many studies that identify factors associated with risk-taking behaviors.⁷⁻¹⁰ There is also a resiliency literature^{11,12} that identifies protective factors, including posi-

tive social skills, regular involvement in religious activities, and family cohesion. Despite myriad attempts at reducing risk behaviors, few successes have been reported. An alternative approach is to further identify protective factors, such as the presence of an adult guide and mentor, that might suggest future interventions, and dramatically contribute to youth development. These factors can then be used to implement programs to help at-risk teenagers make a healthy transition from childhood to adulthood.

There has been recent national emphasis on the provision of mentorship to youth as an initiative for a posi-

Table 1. Demographics of the 294 Subjects

Characteristic	No. (%)
Sex	
Female	201 (68)
Male	93 (32)
Race/ethnicity	
White	111 (38)
Hispanic	77 (26)
African American	76 (26)
Asian/other	26 (9)
Incomplete data	4 (1)
Family constellation	
2 Parents	187 (64)
1 Parent	91 (31)
Other	16 (5)

tive contribution to youth development, including the prevention of risk-taking behaviors and the consequences of such behaviors. While the concept of mentoring youth is appealing and seems intuitive, emphasis on mentorship has gone forward without any proof of the efficacy of such initiatives in the prevention or amelioration of such behaviors.

An important part of adolescent development is the choosing of role models. While it is commonly assumed that having such a role model will influence the behavior of a young person, the nature of this relationship and the behavioral outcomes have not been adequately explored. Clarifying the efficacy of the mentor relationship assumes great importance as we attempt to address the long-term consequences of adolescent risk-taking behaviors. Assessing the impact of mentoring assumes particular importance as curtailment of federal and state funding for adolescent health initiatives is often precipitated by a failure to demonstrate positive outcomes.

This study was undertaken to determine if, in fact, the presence of an adult mentor is associated with less participation in high-risk behaviors during adolescence.

RESULTS

RISK BEHAVIORS

Of the risk behaviors reported by the total study population of 294 adolescents, 75 (26%) of the adolescents reported that they had sex with more than 1 partner in the past 6 months, 69 (23%) currently smoked 5 or more cigarettes per day, 66 (22%) reported having used illicit drugs in the past 30 days, 54 (18%) said that they ever carried weapons (principally knives and guns), and 44 (15%) reported having 3 or more alcoholic beverages in the past 30 days.

REPORTED MENTOR

When asked, "Is there an adult in your life you can usually turn to for help and advice?" 201 (68%) said yes, 67 (23%) said no, and 26 (9%) did not respond to the question. Of those 201 responding affirmatively, they were

Table 2. Reported Mentor of 201 Subjects Who Responded as Having an Adult to Turn to for Help and Advice

Mentors	No. (%)
Mother	103 (51)
Relative	34 (17)
Adult friend	18 (9)
Same-sex friend	13 (6)
Father	9 (5)
Therapist	8 (4)
Sister	5 (2)
Opposite-sex friend	5 (2)
Teacher	3 (2)
Brother	1 (<1)
Physician	1 (<1)
Other adult (not specified)	1 (<1)
Clergy	0

Table 3. Association of Risk Behaviors With Adult Mentorship*

Risk Behavior	Independent Variable	Odds Ratio	P
Ever carry a weapon	Mentor	0.41	<.01
	2-Parent home	0.48	<.05
	Female	0.42	<.05
Illicit drug use in the past 30 d	Mentor	0.44	<.01
	Nonwhite	0.42	<.01
	2-Parent home	0.49	<.05
	Younger age (12-16 y)	0.50	<.05
Smoking >5 cigarettes per day	Mentor	0.54	<.05
	Nonwhite	0.30	<.001
Sex with >1 partner in the past 6 mo	Mentor	0.56	<.05
≥3 Alcoholic beverages in the past 30 d	Mentor	0.64	.21
	Younger age (12-16 y)	0.28	<.01

*By logistic regression controlling for age, sex, race/ethnicity, mentor, and family constellation.

then asked, "Who is that person?" (**Table 2**), and 103 (51%) identified "mother" as the mentor, while 9 (5%) specified "father." Fewer than 1% of the adolescents identified their physician as that person they could turn to for help and advice, and no one specified a member of the clergy.

ASSOCIATION OF RISK BEHAVIORS WITH ADULT MENTORSHIP

Adolescents with an adult mentor reported statistically significant less participation in 4 of the 5 risk-taking behaviors (**Table 3**). Adolescents with mentors were significantly less likely to ever carry weapons (OR, 0.41), use illicit drugs in the past 30 days (OR, 0.44), have sex with more than 1 partner in the past 6 months (OR = 0.56), or smoke 5 or more cigarettes per day (OR, 0.54). Being less likely to have more than 1 sexual partner in the past 6 months was only significantly associated with mentorship, and not with age or gender.

The risk behavior not significantly associated with mentorship in the logistic models was alcohol use in the past 30 days.

EFFECTS OF MENTORSHIPS ON HIGHER-RISK ADOLESCENTS

We also assessed the effects of mentorship on higher-risk adolescents, ie, those who participated in more than 1 risk behavior. As many at-risk youth do not have the option of having a parent mentor, we also assessed the impact of parent mentors and nonparent mentors, compared with having no mentor. Those adolescents who had nonparent mentors (9 of 86) were less than half as likely (OR, 0.40; $P \leq .05$) to be at higher risk, participating in 2 or more of the measured risk behaviors, than those with no mentors (22 of 98). Also, for adolescents who had parent mentors (12/111), there was a trend (OR, 0.47; $P \leq .06$) toward being less than half as likely to participate in higher-risk behaviors than those without mentors.

COMMENT

The key findings from this study were that adolescents having mentors were less likely to have participated in 4 of the 5 measured risk behaviors—ever having carried a weapon, having used illicit drugs in the past 30 days, having more than 1 sexual partner in the last 6 months, or smoking more than 5 cigarettes on a daily basis. We did not find adult mentorship to have a significant effect on current use of alcohol. When we assessed the impact of nonparental mentors and parental mentors vs no mentors, we found that adolescents with either type of mentor were less likely to be at higher risk, ie, participating in 2 or more risk behaviors compared with adolescents who did not have a mentor. This study indicates that there is a relationship between adolescents who have mentors and less participation in certain risk behaviors.

There have been few studies that have assessed the effects of mentorship on adolescents, and the studies that are available report mixed results. One study examining factors affecting the drinking patterns of pregnant African American, Hispanic, and white adolescents found that those who identified mentors and/or parents providing high levels of support were less likely to have consumed alcohol during pregnancy.¹⁴ Another study of mentoring demonstrated significant improvement in school attendance, discipline, and academic achievement,¹⁵ which are indicators for decreased participation in risk behaviors, and a third showed a positive trend in students' self-concept.¹⁶ In contrast, yet another study showed that, compared with controls, mentored students did not show improved self-concept or academic achievement.¹⁷

While there has been a proliferation of mentorship programs in recent years, particularly in school settings, there is a paucity of data evaluating these programs.¹⁸ One of the problems with these evaluations is that the mentorship program may be a component of a larger intervention program to help at-risk adolescents, making it difficult to isolate the effect of mentorship alone. Also, it is often likely that the mentor may be involved in more than one program, making it difficult, when analyzing the data, to isolate the effect of the mentor from confounding factors.¹⁹

The reason that it is so difficult to study mentorship, and document what intuitively seems to be its ben-

eficial effects, is that it is such a complex issue. There are many different components to mentorship: what mentors see as their role and how adolescents relate to their mentor. In a study of 32 at-risk 10th graders who were given mentors from school personnel, at the end of the 6-month program it was found there were no significant differences in the dropout rate between them and the control group. While there may not have been enough time to make such a difference as to change behaviors, it was found, by reviewing the logs kept by the mentors, that there were differences in the quality of the mentoring.¹⁷ In a review of mentoring programs, it was noted that some mentors considered that their primary goal was to develop a relationship with the youth, others to introduce options, or to help youth to achieve character development, and others felt that their role was to help develop competence.²⁰

There are many interpretations of what would constitute a mentor. In this study, a mentor may be defined as someone whom the young person can trust. The adolescent must believe that the person really cares, is there to help them, and will treat them with respect. The mentor must have competence, and know something that the youth does not know, and be able to share that knowledge. These traits are particularly important to adolescents, where testing of the limits is the norm. In this study, we looked at the association of mentoring and a lower rate of risk-taking behaviors among adolescents. We do not know whether we would have had similar results in a mentorship program where mentors were assigned to adolescents who had been previously identified as being at high risk. In a study assessing a school-based mentorship program,¹⁸ changes in self-esteem and grade point average were evaluated in 30 male and 46 female African American students from 2 Washington, DC, high schools. The authors found no significant changes between the mentorship group and controls; however, this may be because they were assessed after only 3 months.¹⁸ Three months may be an insufficient interval for bonding, trust, and connectiveness to emerge. In another study of 36 at-risk African American youth who were matched with mentors,²¹ it was found that there were no significant differences between the mentored group and controls with regard to self-esteem, attitudes about drugs and alcohol, grade point average, school absences, and disciplinary infractions. The authors suggest that the 15-month (median) relationship between the youth and mentors (with an average of 2 hours per week), was insufficient time to impact upon extremely difficult lives.²¹

A considerable number of adolescents identified a parent as the person they could turn to for help and advice. This finding may be a measure of family caring and connectiveness, a known protective factor for preventing youth from participating in high-risk behaviors,²² as recently reported in a national adolescent health study.²³ Because there was such a large number of adolescents who chose parents as mentors, we assessed the difference between parent and nonparent mentors in a subset of higher-risk adolescents, who might be similar to at-risk youth who would be candidates for mentorship programs, and may not have the option of having a parent mentor. We did not find family connectiveness

to be a confounding factor in our study. However, it seems that connectiveness with a trusted adult makes a positive contribution to the life, development, and behaviors of an adolescent.

Our study had several limitations. It was based on a convenience sample, not a random sample. However, since the subjects were patients seen consecutively, there is no reason to believe that the sample is unrepresentative of our overall clinic population. And, as with all cross-sectional studies, we cannot establish causality. Thus, it may be that the stronger, low-risk adolescents are more apt to seek out a mentor for help and guidance, rather than mentorship leading to a decrease in risk behaviors. In interpreting the results of this study, one should keep in mind that this is a suburban adolescent population with mixed socioeconomic backgrounds. Caution should be taken in applying these results to inner-city or rural populations.

And finally, the fact that fewer than 1% of adolescents in this study think of their physician as the person they can usually turn to for help and advice, gives us, as health care providers, something to think about. Practical implications of this study would include not only to encourage health care providers to let adolescents know that we are there for them and are approachable, but also to inform parents, both mothers and fathers, about the vital role they can play as mentors to their adolescent children. They can be told, "You can mentor your adolescent. You can be that person to whom your teen turns to for wisdom and guidance. Adolescents who have someone to turn to for help and advice are less likely to participate in risky behaviors. And this is how you go about becoming that person they will go to. . . ." In part due to the omnipresent discussion of peer influence on adolescent behavior, parents of teenagers often feel that they are powerless and ineffective. Our results would call this into question. In addition, the finding of an association that adolescents who identify mentors participate in fewer health risk behaviors, lends support for the development of initiatives that intervene by providing mentorship.

We can conclude that the utilization of adult mentors should be supported as a key strategy in working with adolescents to decrease certain risk behaviors and their consequent morbidity and mortality. Further clarification of these relationships will be useful in our attempts to evolve strategies that use positive adult relationships for the prevention of risk-taking behaviors in adolescents.

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