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The Importance of Parental Warmth, Support, and Control in Preventing Adolescent Misbehavior

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Abstract

Parents are often told that better monitoring can prevent adolescents' misbehavior. However, recent research suggests that adolescents' voluntary self-disclosure of behaviors is more important than parents' active attempts to supervise (i.e., track and control) their children in determining adolescent misbehavior. This secondary analysis of a survey administered to students in grades 7, 9, and 11/12 in a diverse community in the northeastern region of the U.S. examines the contribution of various dimensions of parenting (i.e., parental warmth, support, and control) and child disclosure to parental knowledge of their child's activities and whereabouts and child involvement in problem behaviors. The findings, similar for both younger (under 16 years) and older adolescents, suggest that 1) youths' reports of parents' knowledge of their activities and whereabouts (parental knowledge) is significantly associated with truancy, alcohol use, drug use, and delinquency; 2) parental knowledge was determined predominantly by the youth's willingness to disclose; 3) youth's willingness to disclose was predicted by perceived parental warmth and parental support; 4) in addition to indirect effects on risky behaviors (through parental knowledge), a youth's willingness to disclose also had direct effects on grades; and 5) parental support also had direct effects on four of the six risky behaviors independent of youth disclosure while parental warmth had direct effects on grades and delinquency. These findings, together with those of others, suggest that parents may still play a role, albeit indirectly through parental warmth and support, in reducing adolescent misbehaviors.

Keywords: Parenting; Adolescence; Prevention; Aggression; Substance abuse; Delinquency

Introduction

Poor parental monitoring has been associated with a wide range of adolescent behavior problems that include delinquency; tobacco, alcohol, and drug use; and violence [1]. In addition, parental monitoring may buffer the impact of negative risk factors such as genetic vulnerability proactive aggressive behaviors and exposure to sexual abuse peer pressure neighborhood risk or community violence [2-8]. Not surprisingly, clinical and educational interventions to reduce adolescent problem behavior often instruct parents to supervise their children better (e.g., "Do you know where your child is?"). These instructions often focus on increasing parents' attention to and tracking (i.e., through parental involvement and solicitation of information from the child, friends, or their parents) or control (i.e., setting limits, curfews, and requiring permission) of their children's activities or whereabouts.

Studies have questioned the importance of parental tracking and control in reducing adolescent misbehavior. A handful of cross-sectional studies as well as two longitudinal studies have suggested that parents know where and what their adolescent children do because their children willingly tell them [9-17]. Adolescent disclosure was also more strongly associated with adolescent misbehaviors in some but not in all of these studies. In contrast, actively soliciting information from the adolescent child has been associated with increased delinquency and norm-breaking Based on these findings, Stattin and Kerr called for change in the advice given to parents based on a better understanding of the determinants of child disclosure [11,12,16].

Little is known about why adolescents disclose behaviors to parents. The limited studies examining adolescent disclosure suggest it may be increased by authoritative parenting responsive parenting a positive parent-child relationship more leisure time spent with parents and less with peers adolescents' beliefs in the legitimacy of parental authority and trust in their parents parents' positive reactions to adolescent disclosure and adolescents' personality [9,11,13,15,16,18-21]. Parents' active monitoring (i.e., tracking and control) increased disclosure in three studies and had no effects in another [12,14,16,17]. Finally, there is some evidence for adolescents' negative behaviors decreasing the likelihood of disclosure and child disclosure affecting parents' tracking and control [17,18].

There are several limitations to this research. With three exceptions the previous research on how parents know what their children are doing and the importance of child self-disclosure is based on non-US samples [9,14,18]. In addition, the American samples represent highly selected populations sampling from adoption agencies [9], YMCA sports program or snowball sampling to recruit youth in locations frequented by adolescents [14,18]. Furthermore, all but one of these studies limited their analyses to delinquency or antisocial behavior [13].

This paper replicates and expands on the previous research by examining potential determinants and mediating effects of child disclosure for multiple outcomes (i.e. school performance, smoking, alcohol consumption, drug use, delinquency and peer-to-peer aggression) among a large sample of diverse youth from 12 to 18 years of age in a northeastern county of the U.S. Specifically, our analyses examine: (1) the independent influences of child disclosure and parental control on parents' knowledge of adolescents' activities and

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whereabouts (as there was no measure of active tracking available in the dataset utilized, the contribution of parental tracking was not explored); (2) potential bidirectional effects of child disclosure and parental control for adolescents' involvement in risky behaviors; (3) independent direct and indirect contributions of parental warmth and parental support to child disclosure, parental knowledge, and adolescents' involvement in risky behaviors.

The hypothetical model showing potential roles of parenting constructs and sources of parental knowledge for five problem behaviors tested in these data is depicted in Figure 1. First we hypothesize that parental warmth and support will influence child disclosure and parental control which in turn will determine levels of parental knowledge which affects youth involvement in problem behaviors (indirect effects of parental warmth and support on child disclosure and on problem

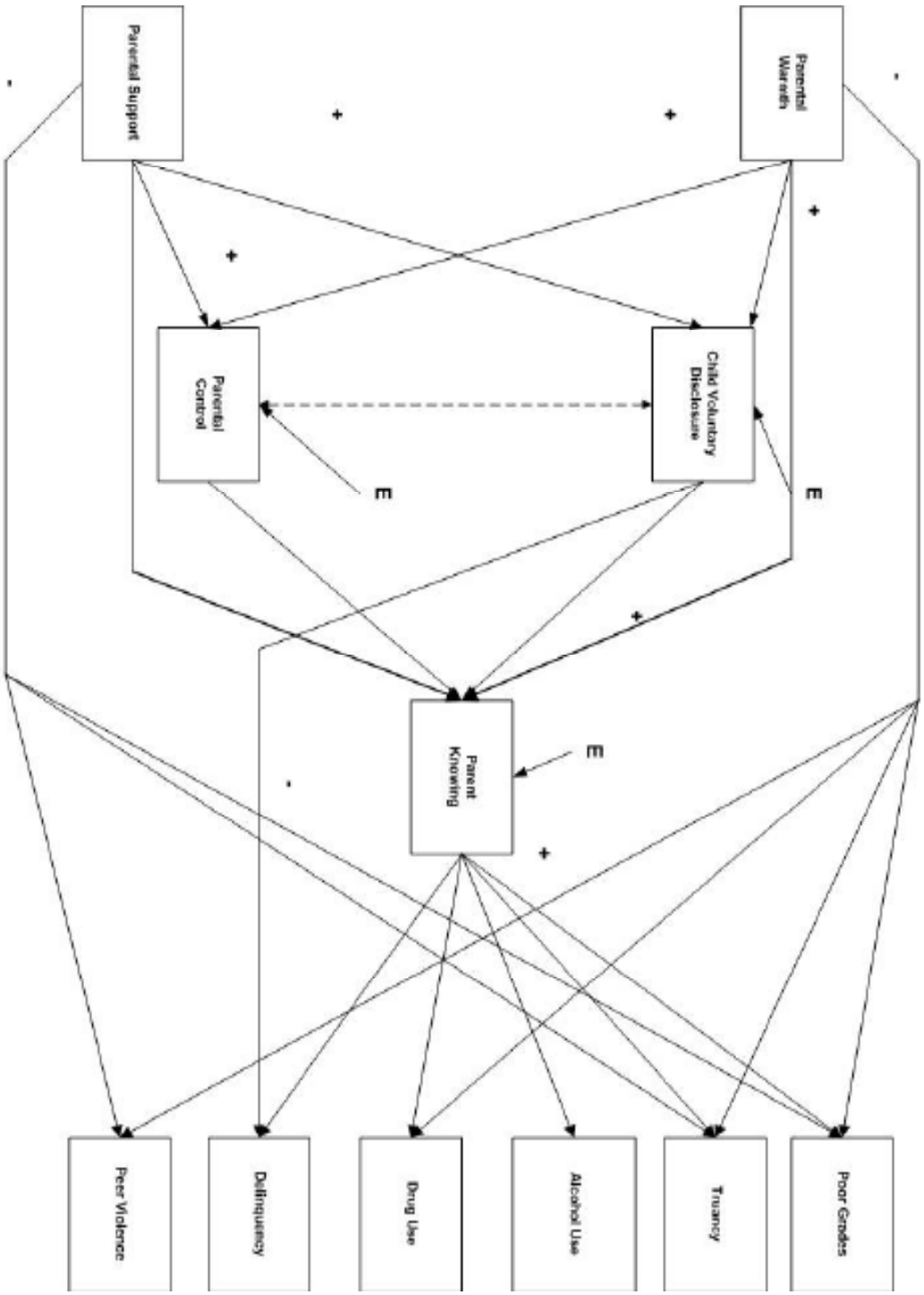

Figure 1: Pathways predicting parents' knowledge of youth's activities and whereabouts and problem behaviors.

behaviors). We also hypothesize that parental warmth and support will have direct effects on youth involvement in problem behaviors beyond the contributions of youth disclosure/parental controls and parental knowledge. This model also assumes reciprocal relationships among youth and parenting behaviors, that is, parenting behaviors may also be a response to child behaviors. In addition, because parental influence and opportunity to directly track or control a child decrease as a child progresses through adolescence, we examined differences between younger and older adolescents in this model.

Methods

Participants

We conducted a secondary analysis of the data obtained from the "Student Health and Safety Survey" which was designed to determine whether there are linkages among various experiences with violence and between risk/protective factors and such experiences of violence. The "Student Health and Safety Survey" was administered to a census of public school students enrolled in grades 7, 9, and 11/12 in a school district in a diverse community in the northeastern region of the U.S. (Grades 11 and 12 were combined due to the low enrollment in each of those grades.) This community was chosen by ranking all major U.S. cities on several community indicators (i.e., poverty, unemployment, single parent households, and serious crimes). Cities were ranked by each indicator separately, and then a combined ranking was created to identify the 20 cities nationwide with the highest rates of poverty, unemployment, single parent households, and serious crimes. Of these 20 cities, six were selected for additional consideration based on the size of the school district(s) serving the city, the feasibility and capacity to enroll sufficient number of students in the study, and the school district's potential interest in hosting the study.

Census tracts within these cities were then ranked by community indicators (i.e., poverty, unemployment, single parent households, and serious crimes) to identify the 20 tracts at highest risk within each of the candidate sites. The highest risk census tracts were then mapped within the city boundaries to identify a neighborhood within each city formed by contiguous tracts. The neighborhood definitions, and the associated street boundaries, were then used to identify the possible target area and the set of schools serving that area. Based on commitment to the study and the feasibility of conducting a suitable census of students in targeted grades, two possible host sites emerged with the understanding that all schools enrolling students in one or more of grades 7, 9, 11, and 12 would participate in the study, including alternative schools. Because of the high drop-out rate, students in grades 11 and 12 were included to produce a sufficient number of participants in the oldest of the three age groups. The site that fully committed to the project first was selected as the study site.

The selected school district was racially and ethnically diverse and located in a city with a population of less than 250,000. This district operated 16 schools and served students in the targeted grades. All 16 schools agreed to participate in the study. These included elementary, middle and high schools, and alternative schools.

All English-speaking students in the targeted grades were invited to participate in the study. However, students who could not complete the questionnaire independently (e.g., enrolled in a special education class, required the assistance of a translator, or had cognitive disabilities that would prevent adequate understanding and responding to the survey; n=151), or who were no longer attending school (e.g., had dropped out of school, had been expelled, or were on long-term out-of-school suspension; n=202), were excluded.

Students voluntarily completed the anonymous, self-administered 174-item questionnaire in classrooms during a 40-minute class period. Students without parental permission or who did not want to participate in the study were assigned individual deskwork which they completed at their desks or at an alternate location designated by the school during the survey administration. The classroom teacher was not present during the survey administration. The questionnaire, an optically scannable booklet in multiple-choice format, was administered by field staff highly experienced in school-based survey data collection.

Active, signed, written parental permission, and student assent were required for all students under 18 years of age to participate in the study; students 18 years of age or older provided written consent prior to participating in the survey. Parental permission forms were provided in English, Spanish, and other major languages as requested by the schools. Students received a $5 gift card for returning the parental permission form regardless of whether the parent approved or denied the student's participation in the survey. Students who completed the survey received an additional $5 gift card. The study received IRB approval from the Centers for Disease Control and Prevention and ORC Macro International.

Of the 5,098 students who met eligibility criteria, 4,131 participated, yielding a participation rate of 81%. About half the participants were boys; 44% were Latino, 28% were non-Latino Black, 23% were non-Latino White, and 5% were other race/ethnicities; 40% of participants lived in single-parent homes, 39% with two parents, 16% with step-parents, 4% with relatives, and 2% lived in a foster home.

Variables

Parental knowledge of youth's activities was operationalized as the adolescents' report of their parents' knowledge of activities and whereabouts based on the mean score to the following three questions: In the past 30 days how often did your parents/guardian know who you were with when you were not at home?; In the past 30 days, did your parents/guardian know what time you would be home?; In the past 30 days, when you and a parent/guardian were at home, how often did he or she know what you were doing? Response options were almost always, sometimes or almost never.

The following question was used as a proxy measure of child voluntary disclosure: "In the past 30 days, if your parents/guardian were not at home how often did you leave a note or call to let them know where you were going?" Response options were almost always, sometimes or almost never with total scores ranging from 1 to 6.

We used two items in the survey to tap proxies of parental control: in the past 30 days, how often did you have a set time to be home on school nights/ and on weekend nights? Response options were no set time, sometimes I had a set time, I almost always had a set time.

Parental warmth was assessed by calculating the mean score of adolescent's responses on a three point scale to the questions: In the past 30 days when you did something that your parents/guardian liked or approved of, how often did one of them (1) say something nice about it, praise or give approval; (2) give you a hug, pat on the back, or kiss for it?; and (3) Do something special together with you?. Parental support was based on the youth's agreement or disagreement on a three point scale to the following three statements: there are people in my family (1) I can talk to, who care about my feelings and what happens to me; (2) who give good suggestions and advice about my problems; (3) who help me with my practical problems, like helping me get somewhere or help me with a job or project.

The items we used for child disclosure, parental control, and parental warmth were taken from the Parenting Practices Scale [22] for the Student Health and Safety Survey and were selected for our analyses based on their face validity for the constructs we wished to measure. The last three items used to measure parental support were taken from Social Support Record [23].

The survey provided data on six problem behaviors: (1) academic grades was based on their response to the question: "During the past 12 months, how would you describe your grades in school, mostly A's, B's C's, D's, or F's?"; (2) truancy was based on youths' response to the question "How often did you skip school without an excuse?" with a 4-point response option (never, 1-2 times,3-4 times, 5 or more times); (3) alcohol use was based on youths' response to the question "In the past 12 months, on how many days did you have at least one drink of alcohol?" with a 7-point response option (every day or almost every day, 3-5 days a week, 1-2 days a week, 2-3 days a month, once a month or less (3-12 times in the year), 1-2 days in the past 12 months, and never); (4) drug use was based on youths' response to the question "During the past 12 months, on how many days did you use inhalants (glue or solvents), or illegal drugs such as marijuana, cocaine, or heroin?" using the same 7-point response scale as for the alcohol question; (5) delinquent behavior was assessed by calculating the mean score of the youths' responses to the frequency with which they had been involved in 10 types of behavior that included deliberately damaging property that didn't belong to them, selling drugs, stealing, running away from home, skipping school, carrying a weapon, group fights, and physically hurting someone using a 4-point response scale (never, 1-2 times, 3-4 times, and 5 or more times); (6) aggression towards same sex peers was assessed by calculating the mean score of youths' responses to the frequency with which they had engaged in 12 types of aggressive behavior that included both verbal aggression (e.g., put downs, insults) as well as physical aggression (e.g., hit, kick, slam, hurt or threaten with a weapon) on a 4-point response scale (never, 1-3 times, 4-9 times, and 10 or more times).

Participants with missing responses on two thirds or more of the items on any given scale missing were coded as missing. Sums were calculated for scales with two items and means were calculated for scales with more than two items to take into account missing responses. The means, standard deviations, range of scores, and internal consistency of these measures are presented in Table 1.

Previous research has shown differences in parental monitoring and risky behaviors to vary by sex, and race/ethnicity, and family structure and therefore these variables were collected and controlled for in our analyses [24-28]. Age, sex, and family structure were each assessed by one question on the survey, and race/ethnicity by combining two questions.

Variable	N	M	SD	Range	Cronbach's α
Parental knowledge	4005	2.42	.52	1.0-3.0	.66
Youth disclosure	3992	2.44	.75	1.0-3.0	NA
Parental control	3959	3.76	1.47	2.0-6.0	.75
Parent warmth/support	3848	2.22	.51	1.0-3.0	.81
GPA	3538	2.47	1.00	0.0-4.0	NA
Alcohol past year	4001	5.87	1.51	1.0-7.0	NA
Drugs past year	4038	6.25	1.63	1.0-7.0	NA
Delinquency	4037	1.27	.47	.83-3.78	.81
Peer violence	3937	1.23	.43	1.0-4.0	.94
No. risk behaviors	4131	6.22	.456	0.0-25.0	.90

NA: not applicable because assessed with only one item

Table 1: Sample size, means, standard deviation, range, and internal consistency of study variables.

Statistical analyses

All analyses were conducted for the full sample as well as for younger (under 16 years of age) and older adolescents separately. Sixteen was selected as a critical milestone for these analyses because this is the age when youth or their friends get their driver's license. The first set of analyses established whether demographics (i.e., age, sex, race/ethnicity and family structure), considered as potential confounders, were each associated with mean scores of parents' knowledge of youths' activities and whereabouts and number of risky behaviors t tests and ANOVA. Associations among the study variables were examined using correlations. Path analysis was used to test the theoretical models proposed in Figure 1. All analyses were conducted using MPLUS version 5.1. Parameter estimates were derived using weighted least square parameter estimates using a diagonal weight matrix with standard errors and mean- and variance adjusted chi-square test statistic that use a full weight matrix. Analyses were performed on the variance-covariance matrix and accounting for the clustering of students within schools. Model fit was assessed using numerous indices. These included two non-centrality based measures of fit: the Comparative Fit Index, (CFI) and the Root Mean Square Error Of Approximation (RMSEA) as well as the Tucker-Lewis Index (TLI also known as the Non-normed Fit Indexa measure of relative fit. The CFI and TLI range from 0 to 1 with index scores over 0.9 suggesting a good fit between the theoretical model and the data [26-29]. For the RMSEA, values larger than 0.1 are indicative of poor-fitting models, values in the range of 0.05 to 0.08 are indicative of fair fit and values less than 0.05 are indicative of close fit.

The final models for this study were derived using an iterative model development process. Paths were trimmed if their standardized coefficients were not significant at the 0.05 level or were trivial in magnitude (i.e., displaying absolute values less than 0.05). Paths were added only if a review of modification indices and standardized residuals indicated that these additions would significantly improve model fit and if doing so was justified according to theory or prior research.

Results

Bivariate analyses of covariates and parent's knowledge showed significant differences for means by age, sex, race/ethnicity, and family structure. Younger adolescents, girls, non-Latino White, and youth from intact families tended to have higher means on parent's knowledge overall and within each age group. Similar analyses showed no significant differences among mean scores of the number of problem behaviors the youth engaged in between younger and older adolescents or by race/ethnicity. However, there were significant differences in mean scores for total number of problem behaviors between boys and girls (t=8.46, p=.000) and by family structure (F=8.172, p=.000). These potential confounders were controlled for in the multivariate analyses.

Table 2 presents the correlation matrix among study variables. All correlations were in the expected directions and statistically significant (p<.01). Parenting variables and youth disclosure were all positively correlated amongst them and negatively correlated with the child's engagement in problem behaviors in the full sample and for both younger and older adolescents. Parent's knowledge was the variable most strongly correlated with problem behaviors followed by youth disclosure. Disclosure and parental warmth/support were more strongly correlated with parent's knowledge than parental control.

Measure	2	3	4	5	6	7	9
Parental warmth/support	.39	.18	.42	.19	-.19	-.15	-.14
Under 16	.37	.20	.42	.21	-.21	-.16	-.13
16+	.42	.15	.41	.18	-.13	-.11	-.15
Youth discloses		32	.54	.20	-.18	-.19	-.14
		29	48	.20	-.17	-.17	-.14
		.36	61	.19	-.18	-.20	-.14
Parental control			.34	.12	-.11	-.10	-.09
			.31	.10	-.13	-.08	-.07
			.37	.14	-.09	-.12	-.12
Parent knowing				.19	-.27	-.24	-.19
				.21	-.29	-.25	-.22
				.19	-.20	-.20	-.15
Academic grades					-.15	-.28	-.16
					-.19	-.30	-.14
					-.13	-.28	-.19
Alcohol past year						.48	.25
						.48	.29
						.46	.23
Drugs past year						.51	.26
						.47	.26
						.54	.27
Delinquency							.47
							.48
							.46
Peer violence							

Table 2: Correlations among study variables in the full sample, and separately for younger and older youth. All correlations are significant at p< .01.

Table 3 lists the goodness-of-fit indices for the three models tested: null model, theoretical model, and the revised model. Comparison of fit indices between the null models, where all variables were uncorrelated, to the hypothesized model indicated improvements over the null model, but also suggested that the fit of the proposed theoretical model was poor in both subgroups. A review of the path coefficients indicated that significant fit improvements could be attained if paths from parental warmth to truancy, drug use, and delinquency, and paths from parental support to truancy, alcohol use, and delinquency were deleted from the 15 and under model. Similar improvements could also be achieved if paths from parental warmth to truancy, alcohol use, drug use, delinquency, and peer aggression and paths from parental knowing to poor grades and peer aggression were removed from the 16 and older model. Coefficients associated with these paths were not statistically significant.

Modification indices accompanying the models also suggested that model to data fit could be further improved by adding several new paths. Theoretically justifiable paths for the 15 and under model included: paths from parental support and child voluntary disclosure to poor grades and a bidirectional path between child voluntary disclosure and parental control. Paths from parental support to poor grades and between child voluntary disclosure and parental control were also suggested for insertion into the model for respondents 16 and over. The preceding modifications were added and the resulting revised models were estimated.

Figures 2 and 3 present revisions of the theoretical model with the suggested paths. The three models fit indices CFI, TLI, and SRMR indicated that the revised model represented a significant improvement over the original model. This interpretation is further supported by changes in the chi-square statistics which decreased and lost statistical significance in at least one instance (i.e., for the 15 and under model). In addition, all of the standardized path coefficients in the revised model were statistically significant and non-trivial in magnitude. Based on these results, this revised model was accepted as the final model.

One last set of results should be noted. These results involved associations whose directions ran counter to our initial hypotheses. For the 15 and under model, these included positive associations between parental warmth and delinquency, between parental support and truancy, and between parental support and peer aggression. Similarly, in the 16 and over model the path between parental support and peer aggression was also positive.

Discussion

In this secondary analysis of data collected for the Student Health and Safety Survey we re-examined the importance of child disclosure in predicting parents' knowledge of their adolescent's activities and whereabouts and adolescent's involvement in aggression and other misbehaviors as well as the direct and indirect effects of parental warmth and support in a large diverse American sample. We used youths' reports of parents' knowledge of their activities and whereabouts as the best indicator of parents really knowing. The results of the present analyses suggested that, among this sample, parental knowledge was a significant predictor of youth reported truancy, alcohol use, drug use, and delinquency; parents' knowledge is determined more by the youth's willingness to disclose than by parental controls; and parental warmth was the most important predictor of a youth's willingness to disclose (followed by parental control and parental support). In addition, we found direct negative effects of child disclosure and parental control on grades. Parental support also had direct effects on five of the six misbehaviors (although these effects were positive for truancy and peer aggression among the younger adolescents and only for peer aggression among the older adolescents). Overall, the relationships among the variables in our final models were more complicated than those originally proposed but were a better reflection of how these factors relate to each other in this population.

Various limitations need to be taken into account before discussing the potential implications of our findings. First, our exploration of determinants of parental monitoring was greatly limited by the constraints of a secondary analysis. Parents' knowledge of their child's activities and whereabouts was not of primary interest in the Student Health and Safety Survey; as a result its assessment as well as that of its

Model	Chi-Square	df	p-value	CFI	TLI	RMSEA
Age 15 and under						
Null Model	479.4166.2709.034*	745				
Proposed model (Figure 1)			<.0001	-	-	-.0610.014
Revised model (Figure 2)			<.0001	.868	.769	
			.108	.991	.988	
Age 16 and older						
Null Model	287.192	4	<.0001	-	-	-
Proposed model (Figure 1)	110.107*	4	<.0001	.625	.625	.080
Revised model (Figure 2)	8.264*	3	.041	.981	.975	.021

CFI: Bentler's Comparative Fit Index
TLI : Tucker-Lewis Index also known as Bentler&Bonett's (1980) Non-normed Fit Index
RMSEA: Root Mean Square Error of Approximation

Table 3: Goodness-of-fit indices for the four models tested: null model, proposed model, and revised models for adolescents aged 15 and under and adolescents aged 16 and above.

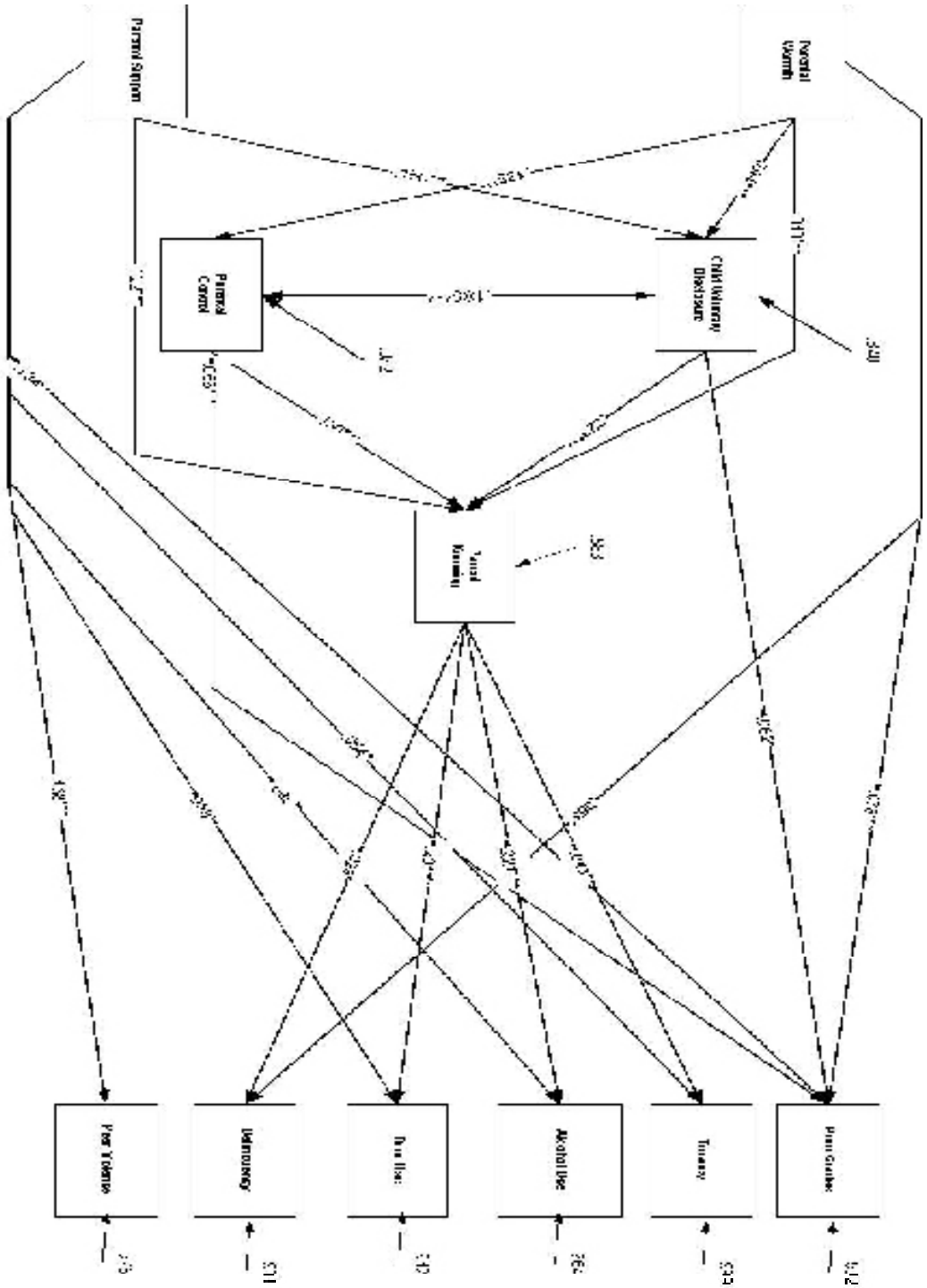

Figure 2: Path coefficients of revised model predicting parents' knowing youth's activities and whereabouts and problem behaviors: Youth ages 15 and under.

potential determinants was less than ideal. For example, the questions available to assess our chosen outcome variable, parents knowing, did not establish whether parents knew the youth's activities outside the home. Moreover, there were no items that measured active parental tracking of the youth's activities, which has also been hypothesized to determine parents knowing their youth's whereabouts and activities. Information on other potential determinants such as parents' socioeconomic status or level of education, or neighborhood characteristics was also not available in these data.

Other notable limitations include: the study's 1) use of path analysis techniques with cross-sectional data---this feature limits our ability to definitively address the possible causal relationships among the variables of interest; 2) reliance on one source of data (adolescent self-report) regarding the constructs of interest—these data could not

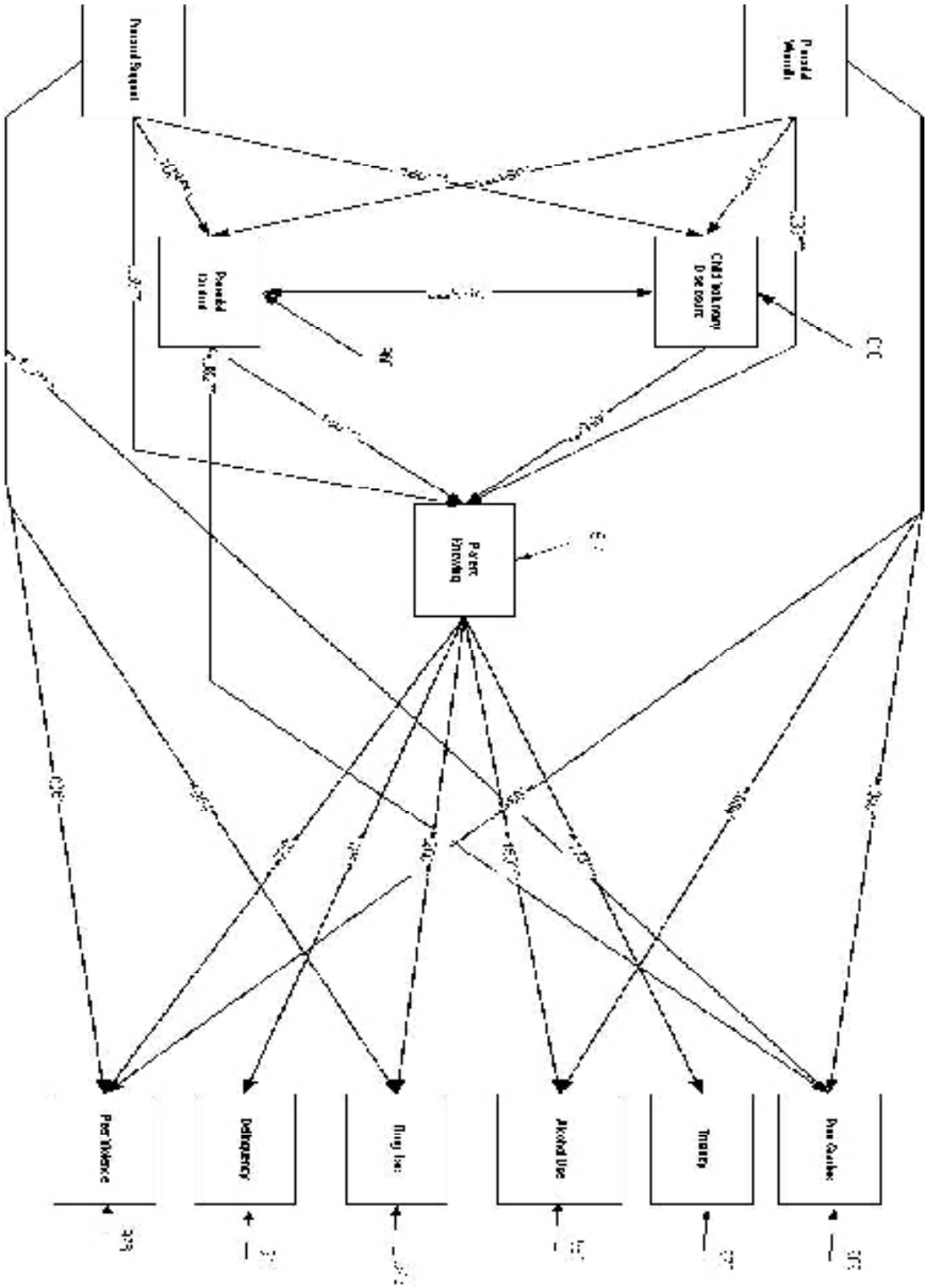

Figure 3: Path coefficients of revised model predicting parents' knowing youth's activities and whereabouts and problem behaviors: Youth ages 16 and above.

be corroborated using observational data or parent self-report as these data were not collected; and 3) use of a specially constructed sample limits its generalizability to other geographic regions or to youth at lower levels of risk as well as to those who dropped out, were expelled, or on suspension. Testing of the proposed model using longitudinal data, multiple data sources and a wider variety of measures is needed to verify the findings reported here.

Despite these limitations, our findings in this diverse American sample are consistent with others [9-17] adding to the evidence that a youth's willingness to disclose may be of greater importance than parental controls in determining parents' knowledge of their children's activities and whereabouts. If this is the case, then factors promoting voluntary disclosure become important. In our analyses, a youth's willingness to disclose was strongly associated with the quality of the

parent child relationship (i.e., parental warmth) and parental warmth also directly predicted parents' knowledge.

For our analyses, parental warmth was operationalized by combining two items on how often parents showed approval by saying something nice, praising, or giving hugs or kisses. These practices might be indicative of a certain parenting style. Different parenting practices may have different outcomes depending on the parenting style [30,31]. For example, setting a curfew within a warm parent-child relationship will be perceived very differently from setting a curfew in a relationship that is cold or rejecting. Research suggests that parenting characterized by both warmth and control lead to the best outcomes among adolescence [19,24,25,32]. While control establishes the expectations, limits, and guidance adolescents need, parental warmth makes the adolescent more receptive to parental influence.

Recommendations to improve parenting practices among parents of adolescents tend to focus on improving parental monitoring, communication of expectations and norms, and utilization of non-punitive disciplinary practices [33]. The findings in this population along with previous research on determinants of child disclosure suggest that parents may still play a role, albeit indirectly through parental warmth and support, in reducing adolescent misbehaviors.

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Author's note: The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

References

1. Crouter AC, Head MR (2002) Parental monitoring and knowledge of children. In MH Borstein (Ed.) Handbook of parenting Vol.3. (2nd edn, pp. 461-483). Lawrence Erlbaum Associates, Mohwah, NJ.
2. Miranda R, Reynolds E, Lara R, Justus A, Knopik VS, et al. (2013) Preliminary evidence for a gene-environment interaction in predicting alcohol use disorders in adolescents. Alcoholism: Clinical and Experimental Research 37: 325-331.
3. Brendgen M, Vitaro R, Tremblay RE, Lavoie F (2001) Reactive and proactive aggression: predictions to physical violence in different contexts and moderating effects of parental monitoring and caregiving behavior. Journal of Abnormal Child Psychology 29:293-304.
4. Tyler KA (2002) Social and emotional outcomes of childhood sexual abuse: A review of recent research. Aggression & Violent Behavior 7: 567-589.
5. Kung EM. Farrell AD (2000) The Role of Parents and Peers in Early Adolescent Substance Use: An Examination of Mediating and Moderating Effects. Journal of Child and Family Studies 9: 509-528.
6. Supplee LH, Unikel EB, Shaw DS (2007) Physical environmental adversity and the protective role of maternal monitoring in relation to early child conduct problems. Journal of Applied Developmental Psychology 28: 166-183.
7. Ceballo R, Ramirez C, Hearn KD, Maltese KL (2003) Community violence and children's psychological well-being: does parental monitoring matter? Journal of Clinical Child & Adolescent Psychology 32: 586-592.
8. Sullivan TN, Kung EM, Farrell AD (2004) Relation between witnessing violence and drug use initiation among rural adolescents: parental monitoring and family support as protective factors. Journal of Clinical Child and Adolescent Psychology 33: 488-498.
9. Eaton NR, Krueger RF, Johnson W, McGue M, Iacono WG(2009). Parental monitoring, personality, and delinquency: Further support for a reconceptualization of monitoring. Journal of Research on Personality 43: 49-59.
10. Keijsers L, Frijns T, Branje SJT, Meeus W (2009) Developmental links of adolescent disclosure, parental solicitation, and control with delinquency: Moderation by parental support. Developmental Psychology 45: 1314-1327.
11. Kerr M, Stattin H (2000) What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. Developmental Psychology 36: 366-380.
12. Stattin H, Kerr M (2000) Parental Monitoring: A reinterpretation. Child Development 71: 1072-1085.
13. Soenens B, Vansteenkiste M, Luyckx K, Goosens L (2006) Parenting and adolescent problem behavior: An integrated model with adolescent self-disclosure and perceived parental knowledge as intervening variables. Developmental Psychology 42: 305-318.
14. Waizenhofer RN, Buchanan CM, Jackson-Newsom J (2004) Mothers' and fathers' knowledge of adolescents' daily activities: Its sources and its links with adolescent adjustment. J Family Psychol 18: 348-360.
15. Vieno A, Nation M, Pastore M, Santinello M (2009) Parenting and antisocial behavior: A model of the relationship between adolescent self-disclosure, parental closeness, parental control, and adolescent antisocial behavior. Developmental Psychology 45: 1509-1519.
16. Keijsers L, Branje SJ, VanderValk IE, Meeus W (2010) Reciprocal effects between parental solicitation, parental control, adolescent disclosure, and adolescent delinquency. Journal of Research on Adolescence 20: 88-113.
17. Kerr M, Stattin H, Burk WJ (2010) A reinterpretation of parental monitoring in longitudinal perspective. J Res Adolescence 20: 39-64.
18. Darling N, Cumsville P, Caldwell LL, Dowdy B (2006. Predictors of adolescents' disclosure to parents and perceived parental knowledge: Between- and within-person differences. J Youth Adolescence 35: 667-678.
19. Willoughby T, Hamza CA (2011) A longitudinal examination of the bidirectional associations among perceived parenting behaviors, adolescent disclosure and problem behavior across the high school years. Journal of Youth and Adolescence 4: 463-478.
20. Smetana JG, Metzger A, Gettman DC, Campione-Barr N (2006) Disclosure and secrecy in adolescent-parent relationships. Child Development 77: 201-217.
21. Tilton-Weaver L, Kerr M, Pakalniskeine V, Tokic A, Salihovic S et al. (2010) Open up or close down: How do parental reactions affect youth information management? Journal of Adolescence 33: 333-346.
22. Gorman-Smith D, Tolan PH, Zelli A, Huesmann IR (1996) The relation of family functioning to violence among inner-city minority youth. Journal of Family Psychology 10: 101-116.
23. Vaux A (1988) Social support: theory, research, and intervention. Praeger, New York..
24. Racz SJ, MacMahon RJ (2011) The relationship between parental knowledge and monitoring and child and adolescent conduct problems: A 10-year update. Clinical Child and Family Psychology Review 14: 377-398.
25. Brown BB, Bakken JP (2011) Parenting and peer relationships: Reinvigorating research on family-peer linkages in adolescence. J Res Adolescence 21: 153-165.
26. Bentler PM (1989) EQS structural equations program manual. BMDP Statistical Software, Los Angeles.
27. Steiger HH, Lind JM (1980) Statistically based tests for the number of common factors. Paper presented at the annual meeting of the Psychometric Society, Iowa City, IA.
28. Browne MW, Cudeck R (1993) Alternative ways of assessing model fit. In KA Bollen & JS Long (Eds.) Testing structural equation models (pp. 136-162). Sage, Newbury Park, CA.
29. Bentler PM, Bonett DG (1980) Significance tests and goodness-of-fit in the analysis of covariance structures. Psychological Bulletin 88: 588-606.
30. Darling N, Steinberg L (1993) Parenting style as context: an integrative model. Psychological Bulletin 113: 487-496.
31. Steinberg L (2001) We know some things: Adolescent-parent relationships in retrospect and prospect. Journal of Research on Adolescence 11: 1-20.
32. Patrick MR, Snyder J, Schrepferman LM, Snyder J (2005) The joint contribution of early parental warmth, communication and tracking, and early child conduct problems on monitoring in late childhood. Child Development 76: 999-1014.
33. Kumpfer KL, Molgaard B, Spoth R (1996) The Strengthening Families Program for the prevention of delinquency and drug use. In R. D. Peters and R J. McMahon (Eds.) Preventing childhood disorders, substance abuse, and delinquency, Sage, Twin Oaks, CA.