Adult and Middle School Girls' Perceptions of Risk-Taking Behavior: Implications for School Practitioners

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Abstract: *There is an overwhelming disconnect between young adolescent girls and adults, in relationship to perceptions of middle school girl risk taking. This mixed-methods study investigates the differences between adult practitioners and middle school girls' perceptions of risk taking, understanding of consequences, and needs among middle school girls. Understanding such cohort differences is critical to providing adult practitioners with a blueprint for best supporting middle school girls. Four-hundred and nine middle school girls, and 226 adult practitioners, who worked with middle school girls in a variety of contexts, anonymously responded to five open-ended questions relating to their risk taking, understanding of consequences, and needs. The results highlight an overwhelming disconnect between the two cohorts. Most significantly, the findings reveal the risks and needs that are salient to middle school girls and underscoring the misinterpretation of their risk taking and needs among adult practitioners. Implications for school practitioners are discussed including strategies for effectively connecting with middle school girls.*

"When we (girls) do take risks, pressure and stress always leads us to do so. Or it might just be our heart telling us to follow it."

-Eighth-grade girl

Middle school girls, like most young adolescents, are often challenged with the transition from childhood to adolescence as their peers, rather than their parents, become a more salient source of social support and intimacy. With this shift comes an increase in risk taking (Steinberg, 2004, 2008), such as substance use (Raboteg-Saric, Rijavec, Brajsa-Zganec, 2001; Wang, Peterson, & Morphy, 2007), sexual experimentation (Little & Rankin, 2001; Van den Akker, 2001), illegal activity (Solomon, 2006, 2007), and an increased probability of dropping out of school (Rumberger & Lim, 2008). Because risk taking among middle school girls is unique to their developmental stage, finding the best way to support them is often a challenge, particularly for adult practitioners (e.g., middle school teachers, counselors, social workers, and psychologists) who interact with middle school girls on a consistent basis. Hence, it is important for adults in these roles to have an accurate understanding of young adolescent risk taking in order to establish best practices for effective social and emotional support. Further, it is particularly important that this understanding be tailored to middle school girls who, as a population and compared to boys, are underreported in the risk-taking literature.

With the range of risk-taking behaviors related to school dropout growing broader from increasing violent crimes committed by adolescent girls (Office of Juvenile Justice and Delinquency Prevention, 2008) to trends in cyber-bullying (e.g., "sexting;" Greiner, 2011), understanding how they perceive risk taking and related consequences is crucial. Furthermore, if school practitioners are to provide middle school girls with preventative or "promoting" support, understanding how adults perceive risk taking among this population can inform the opportunities and processes through which support is implemented in schools (Powers, Bower, Webber, & Martinson, 2010).

The following mixed-methods study investigates perceptions of risk taking among middle school girls from the adult professional and middle school girl perspectives. For the purposes of this paper, middle school girl risk taking involves engaging in behaviors that yield a potential for harm or opportunity for reward (Lejuez, et al. 2002). Though risk taking has been identified as a typical part of adolescent development (e.g., breaking curfew), those who take risks often place value on the positive outcome of a risk rather than on the harmful consequences (Beyth-Marom, Austin, Fischhoff, Palmgren, & Jacobs-Quadrel, 1993). There is minimal qualitative evidence that reflects nuanced accounts and contextual explanations of adults' and girls' perceptions of risk taking among middle school-aged girls. This type of research is important because it provides personal perspectives of risk taking, and also highlights differences in perceptions between adults and girls. Hence, the literature review and subsequent study are built upon three bodies of research: (a) the risks that adolescents and middle school girls take, (b) influences on risk taking, and (c) the needs of middle school girls.

Background
Adolescent Risk Taking

Adult perceptions of adolescent risk taking. Most of the adult perception literature that focuses on adolescent risk taking is centered on parent perceptions of their own adolescents' behavior. This literature generally reflects a disconnect between how adolescents and parents perceive specific risk behaviors such as sexual involvement (Downing-Matibag, 2009; Ivey, 1999), concealment (Finkenauer, Frijns, Engels, & Kerkhof, 2005), substance use (Downing-Matibag, 2009), aggression, antisocial or undercontrolled behaviors (Seiffge-Krenke & Kollmar, 1998), and general risk taking (Cottrell et al., 2006). Most of this disconnect can be attributed to the typical phase in adolescent development relating to an adolescent's drive towards autonomy (Steinberg, 1988).

Though parents typically have the most interaction with adolescents, school practitioners perhaps have a wider breadth of exposure to adolescents. As a result, school practitioners are in a unique position to gauge risk-taking trends among the populations with whom they work. Vander Jagt, Shen, and Hsieh (2001) investigated elementary and secondary school principals' perceptions of risk-taking behaviors such as truancy, violence, delinquent behavior, drug and alcohol use, which they identified as school problems. Through survey responses, these authors found that risk-taking problems were most severe in larger, urban and rural schools, and also increased with age.

Hines and Pearson (2006) used self-report assessments to determine if teachers and parents differed in their views of adolescent storm and stress. These authors write that teachers "exposure to a diverse group of adolescents is most likely to create stereotypic views" (p. 600), and that years of working with adolescents may intensify these views. As such, stereotypic views or perceptions may seemingly hinder teachers' understanding of typical adolescent development, and obstruct ideal practices for supporting them.

Moyer and Sullivan (2008) surveyed middle school and high school counselors on student risk-taking behavior to determine when they felt it appropriate to break confidentiality. These authors found that counselors perceived it more ethical to break confidentiality when a younger student (middle school aged) was involved in risk-taking activities such as sex, smoking, and alcohol use, as opposed to when older, high school students were involved.

The above studies are noteworthy in that they report school practitioner perceptions of adolescent risk taking, a construct that is underreported in comparison to parent perception research. If there is something to be learned from the parent perception literature, it is that adults often underestimate the type and amount of risk taking that adolescents actually engage in.

Middle school girl risk taking. Though the research that reflects risk taking among middle school girls (ages 11-14) is limited, the literature that does exist provides a foundation for better understanding such behavior. Four major types of risk taking emerge from this literature that are also factors related to dropout (Battin-Pearson et al., 2000; Newcomb et al., 2002; Rumberger & Lim, 2008) included sexual experimentation, substance experimentation/use, social media engagement, and illegal activities.

Sexual experimentation. The 2009 National Youth Risk Behavior Surveillance System reports that 6% of high school students first had sexual intercourse before the age of 13 (Centers for Disease Control and Prevention, 2010). Specifically, 3.1% of girls reported to have sexual intercourse before the age of 13, with more prevalence among Black (5.6%) and Hispanic (3.7%) girls, than White (2.2%) girls. O'Donnell et al. (2008) found that sixth-grade girls from urban communities were more likely than others to initiate sexual involvement close to the same time that they first used alcohol.

Substance use. McIntosh, MacDonald, and McKeganey (2006) reported that virtually no research exists on decisions to use drugs, and the factors that influence them, among young adolescents (11-14), bringing to question why youth experiment with illegal drugs. Through semistructured interviews, these authors found that drug experimentation and use increased during the late preteen and early teenage years, and that 64% of the participants (ages 10-12) reported peer-related factors for initiation and use. Their research also revealed that as this cohort aged, the influence of peers on drug experimentation decreased considerably (McIntosh et al., 2006). Though no gender specifications were indicated, these authors report that the onset of substance use occurs in early adolescence which generally coincides with the desire for more autonomy (McIntosh et al., 2006).

Social media. The increase in the use of electronic technologies and social media has also accounted for recent risk taking among middle school girls. Kowalski and Limber (2007) found that when compared to boys, middle school-aged girls were overrepresented among electronic bullying victims (those victimized by bullies) and bully-victims (those victimized by bullies and who are also bullies). These findings indicate that social media is a salient avenue for risk taking, particularly social aggression, among middle school girls.

Illegal activity. The Office of Juvenile Justice and Delinquency Prevention (2004) reported that 29% of juvenile crimes in 2002 were committed by females. In reference to the type of crimes committed by adolescent girls, Solomon (2006) found that 41% of adolescent female offenders studied were detained for crimes against a person, followed by property offenses (37%), drug-related crimes (18%), or public order (4%).

Though the research on risk taking among middle school girls is limited, the evidence suggests that this population is taking risks that in fact garner a multitude of harmful consequences. The evidence underscores the need to understand their perceptions of risk taking contextually, and to also understand adult practitioner perceptions, in an effort to best support this population.

Influences on Risk Taking

Historical context of adolescent risk-taking perceptions. Initial findings surrounding adolescent perceptions of risky behaviors indicate that they possess unrealistic beliefs about their own invulnerability (Elkind, 1967; Weinstein, 1980). For instance, middle school- aged adolescents (ages 11-14) in comparison to older adolescent and adult cohorts, more often viewed smoking as less of a personal health risk, while simultaneously possessing a belief that smoking has a positive psychological benefit (Chassin, Presson, Rose, & Sherman, 2001). Further, adolescents were more likely than adults to mention social consequences as either costs or benefits in relation to risky behaviors, (Beyth-Marom et al., 1993; Quadrel, Fischhoff, & Davis, 1993) which is consistent with notions of adolescent sensitivity to peer influence (Brown, Clasen, & Eicher, 1986).

Peer influence has been found to have both direct and indirect effects on adolescents' judgment (Steinberg & Scott, 2003). Steinberg and Scott (2003) report that peer pressure accounts for the direct influence, while fear of rejection or disapproval may account for an indirect influence. Steinberg and Monahan (2007) suggested that young adolescents (ages 10-14) often strive for emotional autonomy which coincides with a susceptibility to peer influence. The authors posited that this susceptibility generally decreases in middle to late adolescence (ages 14-18), as individuals mature.

Understanding Needs

Risk taking among middle school girls certainly cannot be explored without addressing the needs among this age group. Sullivan (1953) believed that the need for intimacy among preadolescents is their primary and preoccupying concern, and this age group depends on friends to address their social needs. Buhrmester (1996) found that girls' friendships often focus on meeting communal needs and the need for certain forms of social input are integral to psychological health and happiness. Further, when individuals do not attain such social input, they experience personal distress and maladjustment (Buhrmester, 1996). The risk-taking literature has established that adolescents value positive social outcomes as a result of risky behaviors, view social consequences as either a cost or a benefit to risky behavior, and are impacted by the direct and indirect influence that peers have on their judgment (Steinberg & Scott, 2003). Thus, making the connection between needs and risk taking may be as simple as understanding that adolescent girls may take risks in order to establish or maintain communal needs in an effort to avoid distress and maladjustment.

The Current Study

The current study investigates adult practitioner and middle school girl perspectives of risk taking for two reasons. First, the literature reflects a disconnect between adult and adolescent perspectives of risk taking. In order to best support middle school girls in making appropriate decisions relating to school, for instance, it's crucial to understand the perceptions that adult practitioners have about their risk taking, as well as to provide them with a qualitative understanding of girls' perceptions. Second, compared to boys, girls, as a population, are underrepresented in the risk-taking literature. Hence, the following study is the first of its kind to investigate risk-taking perceptions of middle school aged girls among adult practitioners and middle school girls.

Further, if adult practitioners, specifically, are to establish ideal practices for supporting middle, and ultimately high-school girls, they must first understand the risks that they take. Hence, the first question guiding this study asks: Is there a difference between what adults and middle school girls perceive to be risky? It is also important to understand the causes or influences of risk taking among middle school girls, as well as how they perceive consequences. Thus, the second research question asks: Are there differences between what adults and girls perceive as the antecedents to middle school girls' risk taking? And how do they perceive consequences? Third, and arguably the most important, adult practitioners can benefit from strategies for meeting the needs of middle school girls in an effort to reduce their risk taking. Thus, the third research question asks: Is there a difference between adult practitioners and middle school girls in the perception of the girls' needs, as well as how adults can meet those needs?

Method
Participants

Middle school girls. Four-hundred and nine (409) young adolescent girls, ages 11 to 15 (M = 13) participated in this study. All participants attended one ethnically diverse, urban middle school in Santa Clara County, California, and included Hispanic American (32%), Asian American (22%), European American, (16%), African-American (4%), and Multiracial (16%) girls. Ten percent of the participants declined to state their ethnicities. Approximately two thirds of the students attending this school qualified for the free or reduced lunch program. Once passive parental consent was obtained, participants were recruited during their sixth-, seventh-, and eighth-grade science classes.

Adults. Two-hundred and twenty-six (226) adults participated in this study (53% women, 47% men). They worked with young adolescent girls in a variety of community-based settings, in Santa Clara County, California, as after-school program counselors, school teachers, school administrators, social and recreational staff, probation officers, and social workers. Adult data were collected at the start of a symposium that focused on middle school girls and their development. Adult participants worked primarily in Northern California and their ethnicities included: Hispanic American (57%), European American (20%), Asian American (10%), African American (8%), and Other (5%). Though they came from the same or similar communities as the middle school girls, they were not associated with the school that the girls attended.

Instrumentation questionnaire. In an effort to generate qualitative data for understanding the perceptions of risk taking among middle school girls, the authors developed a five-item, open-ended questionnaire (see Table 1 for questions asked to girls and adults). In addition, girls reported their age, grade, and ethnicity. Adult ethnicities and occupations were obtained at each symposium.

Procedure

Girls were asked to complete the five-item questionnaire (which took approximately 10 minutes) individually and anonymously during their science class. Adults participated in one of two symposia led by the first author, who asked them to complete the five-item questionnaire at the beginning of each meeting. Each adult participant individually and anonymously answered the questions, which also took approximately 10 minutes. Not all adults answered every question, and frequency of responses varied. To ensure participants understood the contents of the questionnaire and individual responses, the first or second author oversaw the administering of the questionnaire.

Content analysis. The analysis of the participants' responses was conducted to quantify and analyze thematic trends in their written responses and make inferences about these trends (Krippendorff, 2004). This process was based on the theoretical framework established by Miles & Huberman (1994), and encompassed: (1) inductively searching for themes in participant responses, and

(2) organizing these themes into categories and subcategories. For instance, question one ("what are some risky things that girls your age do?") initially yielded several themes, but responses were subsequently shaped into five general categories that connect to related empirical evidence: (a) age inappropriate activities (O'Donnell et al., 2008), (b) illegal activities (Solomon, 2006, 2007), (c) inappropriate social activities (Kowlawski & Limber, 2007), (d) mak bad decisions in general (Cottrell et al., 2006), (e) self-harm, and (f) ambiguous. The authors incorporated these categories into a coding book for each survey question, which included codes for each category, as well as corresponding code definitions and examples. Subthemes were also identified and refined into subcategories, such as the five subcategories comprising the general category for "illegal activities" (i.e., crimes against a person, property, or public order, and drug-related crimes). In some cases, if the number of participants who identified with a subcategory was very small, such as self-harm ($n = 7$), these responses were dropped from further analysis. Several responses were identified as "ambiguous" and dropped from further analysis because these responses did not fit within the established theoretical framework (see Table 1 for initial and final coding categories, as well as category criteria and representative quotes).

Coding. To facilitate the coding process, two undergraduate research assistants were iteratively trained to independently code the participant responses until agreement was achieved (among the co-authors and RAs) with Cronbach's Alpha for inter-rater reliability at .80. Frequencies of emergent themes were calculated to gauge the magnitude of the response. All responses were coded, yet only first responses were included for the data analysis. Once codes were assigned to responses, chi-squares were used to determine relationships between response categories (individual questions) and cohorts (adults and middle school girls).

Results

The results are organized by the three questions that guided this research, and show differences between adult practitioner and middle school girl perceptions of risk-taking behavior, consequences, and needs. In most cases, both cohorts identified the same categories in response to each question, but varied in their perceptions of the degree of involvement. Table 2 shows the distribution of adult practitioner and middle school girl group totals by response category for each question, as well as significant chi-squares and *p*-values.

To establish a foundation for supportive and ideal practices, the second half of the results reflect different response patterns made by middle school girls only, as well as examples of their compelling statements, which provide an understanding of their risk-taking behavior. Table 3 shows the distribution of middle school girl responses by grade for each question, as well as significant chi-squares and *p*-values.

Perceptions of Middle School Girl Risk-Taking Behavior

Adult practitioners and middle school girls established that middle school girls engaged in age-inappropriate activities, illegal activities, socially inappropriate activities, and making bad decisions in general. The results of the chi-square analysis show that both adolescents and adults equally perceived age-inappropriate activities, "such as

smoking," "having sex," and "going out with older guys" to occur among middle school girls. However, adults perceived illegal activities, such as "stealing money from a store" or "doing drugs" to occur more often than the girls perceived them. Further, adults perceived inappropriate social activities, such as "starting rumors online" or "meeting perverts online" to occur less often than middle school girls did. Further, there was a tendency for middle school girls to perceive girls their age to make bad decisions, such as "walking home alone" or "going somewhere they don't know by themselves" more often than adults perceived them to. The difference between adult practitioner and middle school girl perceptions of risky things that middle school girls do was highly significant, $\chi^2 (3) = 23.57$, $p < .001$. Similar developmental differences emerged among the girls. The youngest girls of the sample (6th graders) significantly perceived girls their age to engage in more socially inappropriate interactions, compared to 7th and 8th graders, $\chi^2 (6) = 54.22$, $p < .001$.

Influences on Risk-Taking Behavior

Adult practitioners and middle school girls identified peer pressure, boyfriends, the self, and general social pressures as contributors to risk taking among middle school girls. Both cohorts equally perceived that general social pressure, such as "impressing others" or "being popular," was a contributor to risk taking. However, the girls identified boyfriends as a contributing factor much more often than adults, who did not indicate the significant role of boyfriends in middle school girls' lives. In addition, adults underestimated peer pressure, relative to middle school girls. Adult practitioners did perceive self-related factors, such as "curiosity," "stupidity," or "boredom," to be more salient to risk taking among middle school girls than girls did. The difference between adult practitioners and middle school girls' perceptions of influences on risk-taking behavior was highly significant, $\chi^2 (3) = 86.35$, $p < .001$.

Among the girls there were minimal developmental differences, as peer pressure, family, and self-related factors consistently stood out as salient influences on risk-taking behavior. One sixth-grade girl stated, "I think it depends on your friends, because if you have bad friends, you are going to make bad decisions, but if your friends are nice, you are not going to do bad stuff." Self-related factors are also influences to risk-taking behavior. A seventh grader simply wrote "not having happiness or feeling left out from a group or parents." However, eighth graders more often than sixth and seventh graders perceived that peer influences within a romantic context (i.e., boyfriend) led girls to take risks, $\chi^2 (6) = 16.06$, $p < .05$.

Understanding the Consequences of Risk-Taking Behavior

Adult practitioners perceived middle school girls to understand the consequences of their actions much less than middle school girls did, $\chi^2 (2) = 94.63$, $p < .001$. Eighth-grade girls reported that girls their age do not understand the consequences of their actions, which significantly differed from what the sixth and seventh grade girls report, $\chi^2 (4) = 11.31$, $p < .05$. An eighth grade girl states, "Most girls don't think about their actions as they are doing them. They don't think about the consequences of their actions. They know they are doing wrong and don't care." Sixth grade girls, however, were more likely

Table 1

Open-Ended Questions and Response Coding Categories: Initial (Step 1) and Collapsed (Step 2)

Question/Step 1 Coding	N	Step 2 Coding	N	Category Criteria	N	Select Middle-School Girl Representative Quotes
1. What are risky things that middle-school girls do?	409				367	
Age-Inappropriate Activities	124	Age-Inappropriate Activities	124	Activities that would not be considered age-inappropriate if engaged in by an adult including: dating an older guy, drinking, smoking, driving, and having sex		"Start smoking cigarettes." "Have sex." "Go out with scary older guys."
Illegal Activities	78	Illegal Activities	78	Drugs, person, property or public order crimes		"Steal money from a store." "Do drugs."
Inappropriate Social Activities	136	Inappropriate Social Activities	136	Challenging authority, social aggression, having a boyfriend, chatting with or meeting strangers online, cyber-bullying, and "sexting"		"Meeting perverts on MySpace." "Gossip and tease." "Dating boys behind parents' back." "Start rumors online." "Send dirty pictures."
Make bad decisions (in general)	29	Make bad decisions	29	Making the wrong choices, doing things that result in trouble or not thinking before doing something risky		"Walk home alone." "Going somewhere they don't know by themselves." "Make bad decisions they will regret later."
Self Harm[a]	7			Cutting, anorexia, bulimia, attempting suicide	-	"Cut themselves." "Hang there self." "Don't eat."
Ambiguous[a]	35			Ambiguous (answered question but out of context), and don't know	-	"Have a period when you get one." "Mostly about everything."
2. What are some things that lead middle-school girls to take risks?	409				379	
Social	328	General Social	139	Peers, friends, social valence, peer rejection, modeled behavior, peer rejection, and family		"Impressing others." "Being popular." "Friends." "Annoying people who don't leave you alone." "Bullies."
		Peer Pressure	115	Direct responses indicating peer pressure		"Peer pressure." "They might get pressured by friends"
		Boyfriends	74	Direct responses indicating boyfriends, boys or guys		"Their boyfriends." "Boys." "Cute guys lead girls into doing stupid things."
Self	51	Self	51	Thoughts, feelings and self-beliefs including esteem, attitude, degree of confidence, maturity, and efficacy		"Curiosity." "All of the things that surround us and the feelings inside." "Depression." "Stupidity." "When they are pushed to their limit." "Rage." "Boredom."
Lack of guidance[a]	9			Lack of guidance, support or attention from adults	-	"They want attention from their parents." "Parents not giving you much advice."
Ambiguous[a]	21			Ambiguous (answered question but out of context), and don't know	-	"To have fun or to just waste time." "Never give up."

Table 1 *(Continued)*

Question/Step 1 Coding		Step 2 Coding		N	Category Criteria	Select Middle-School Girl Representative Quotes
3. Do middle-school girls understand what will happen as a result of their actions?	409			409		
Yes	131			131	Direct responses indicating "yes"	"Yes, they do. But they seem to ignore the aftermath."
No	104			104	Direct responses indicating "no"	"No, that's why they do it."
Sometimes	174			174	Sometimes, don't know, not always, yes and no	"Not always, some girls think before they act, others don't."
4. Middle-school girls are in greatest need of?	409			378		
Support	204	Support	204	204	Attention, guidance, parenting, understanding, being present, not judging	"Support from adults." "Attention." "Their parents." "Parents that learn and understand before they punish."
Social Connections	75	Social Connection	75	75	Friends, boyfriends, acceptance from others	"Friends." "Being accepted." "Boys." "A reputation."
Self-efficacy	75	Self-efficacy	75	75	Self-confidence, maturity, personal value, self-worth, strong sense of self	"Maturity." "Self-respect." "Happiness."
Education/Programs	24	Education/Programs	24	24	Responses relating to schooling, education, counseling or programmatic services	"School." "Counseling." "Program that helps with mostly everything because girls go through a lot." "Education."
Privacy[a]	14			-	To be left alone or directly stated privacy	"Their own space." "Privacy."
Love[a]	10			-	Direct responses indicating love	"Love."
Ambiguous[a]	7			-	Ambiguous (answered question but out of context), and don't know	"A good work." "Pregnancy, cancer, chance of death." "?"
5. How can adults help middle-school girls meet their needs?	409			409		
Communicate	192	Communicate	192	192	Direct responses relating to communication, listening, or talking	"Say why it is bad to date older boys." "By sitting and talking with them."
Support	146	Support	146	146	Attention, guidance, being there, not judging	"They can be our friends." "Learn to understand girls."
Education/Programs	18	Education/Programs	18	18	Schooling, education, counseling or programmatic services	"Activities that help them think about their future."
They Can't/Don't Know	53	They Can't/Don't Know	53	53	Adults can't help girls, or respondent does not know how adults can help girls	"They can't." "Adults can't help us." "I don't know."

[a] Dropped from further analysis due to small n or "ambiguous" response

Table 2

Percentage Comparisons of Middle School Girls to Adult Practitioners and Chi-square

	Respondents		
What are risky things that middle school girls do?	Middle School Girls (n = 367)	Adults (n = 221)	χ^2
Age-Inappropriate Activities	34	32	
Illegal Activities	21	34	
Inappropriate Social Activities	37	21	
Bad Decisions	8	13	23.57***
What are some things that lead middle school girls to take risks?	Middle School Girls (n = 379)	Adults (n = 198)	χ^2
General Social	37	43	
Peer Pressure	30	11	
Boyfriends	20	1	
Self	13	30	86.35***
Do middle school girls understand what will happen as a result of their actions?	Middle School Girls (n = 409)	Adults (n = 226)	χ^2
Yes	32	19	
No	25	68	
Sometimes	43	13	94.63***
Middle school girls are in greatest need of . . .	Middle School Girls (n = 378)	Adults (n = 145)	χ^2
Support	54	55	
Social Connections	20	0	
Self-Efficacy	20	15	
Education/Programs	6	30	77.31***
How can adults help middle school girls meet their needs?	Middle School Girls (n = 409)	Adults (n = 141)	χ^2
Communicate	47	40	
Support	36	21	
Education/Programs	4	39	
They Can't/Don't Know	13	0	120.91*

***p < .001. * p < .05.

Table 3

Percentages of Middle School Girl Total Group, Grade, and Chi-squares

What are risky things that middle school girls do?	Total	6th	7th	8th	χ^2
Age-Inappropriate Activities	34	20	32	48	
Illegal Activities	21	12	21	30	
Inappropriate Social Activities	37	57	40	16	
Bad Decisions	8	11	7	6	54.22***

What are some things that lead middle school girls to take risks?	Total	6th	7th	8th	χ^2
General Social	37	42	43	26	
Peer Pressure	30	33	27	31	
Boyfriends	20	14	17	27	
Self	13	11	16	16	16.06*

Do middle school girls understand what will happen as a result of their actions?	Total	6th	7th	8th	χ^2
Yes	32	32	31	33	
No	25	19	24	34	
Sometimes	43	49	45	33	11.31*

Middle school girls are in greatest need of…	Total	6th	7th	8th	χ^2
Support	54	51	58	54	
Social Connections	20	21	26	12	
Self-Efficacy	20	17	12	30	
Education/Programs	6	11	4	4	25.08***

How can adults help middle school girls meet their needs?	Total	6th	7th	8th	χ^2
Communicate	47	42	52	47	
Support	36	33	31	43	
Education/Programs	4	7	5	1	
They Can't/Don't Know	13	18	12	9	12.77*

***$p < .001$. * $p < .05$

than others, to not be sure about whether girls their age understood what will happen as a result of their actions. One sixth-grade girl stated "I do, but some people might not," while another sixth-grade girl wrote "some do, if their parents tell them."

Needs of Middle School Girls

Both adult practitioners and girls perceived middle school girls to need support, self-efficacy, and education or programs. In addition, girls perceived the importance of social connections, whereas adults did not identify social connections as a need at all. Rather, adult practitioners perceived girls to need education and programs more so than girls did. The difference between adult and middle school perceptions of needs was highly significant, $\chi^2 (3) = 77.31$, $p < .001$.

All grades similarly reported that girls their age most need support, but sixth and seventh graders significantly reported that girls their age need social connections, as a seventh grader reported that girls her age needed "firm, strict, open, loving, trusting, mothers to tell them what's going on." However, eighth graders more often than the others reported that girls their age need self-factors (e.g., efficacy or esteem), as one eighth grader highlights "maturity and some confidence, and a sense of not having to be jealous over every girl who talks to their crushes," while sixth graders most often reported that middle school girls need more educational opportunities and programmatic experiences, $\chi^2 (6) = 25.08$, $p < .001$.

How adults can help meet girls' needs. Adult practitioners and middle school girls identified communication, support, and education/programs as ways in which adults can help middle school girls. However, responses from girls led to establishing an "adults can't help girls" category, a notion that was not identified by the adult participants. The chi-square analysis shows that compared to middle school girls, adult practitioners underestimated the need for communication and support for girls. Conversely, adult practitioners mentioned education and programs as a means of meeting middle school girls' needs much more often than middle school girls did. The difference between the two cohorts is significant, $\chi^2 (3) = 120.91$, p < .001.

When middle school girls were asked how adults can help to meet the needs of girls their age, all grades of participants reported that girls their age need adults to support and communicate with them, as one eighth grader wrote "Give them more of a friend than an adult/parent. Let them (girls) know that they can come to you." However, sixth graders were significantly more likely than seventh and eighth graders to perceive adults as not being able to help girls their age, $\chi^2 (6) = 12.77$, $p < .05$. Interestingly, the category "adults can't help girls" emerged from this question. Middle school girls made statements such as "They almost can't help because girls feel adults don't understand them," and "I think they shouldn't help, it's going to make it worse."

Discussion

This study was the first of its kind to investigate risk-taking perceptions among middle school girls and adult practitioners. The findings underscore the issues surrounding risk taking and needs that are important to middle school girls, and also provide adult practitioners with a foundation for how to best support them. The findings also highlight the overwhelming disconnect between middle school girls and adult practitioners in relationship to perceptions of risk taking and needs.

Risk Taking

In relationship to the type of risks that middle school girls take, the adult practitioners' underestimation of girls' involvement in inappropriate social activities highlights a social and perhaps technological disconnect between the cohorts. This disconnect may be attributed to activities that occur "under the radar" of adults; such as online communications, which consequently may perpetuate great personal implications for the girls. Knowledge of such risk taking puts adult practitioners in a unique position to not only understand the disconnect, but to also build a bridge between themselves and the girls.

There are personal and legal implications associated with adults not understanding and building such a bridge. In reference to inappropriate social activities, girls face psychological (depression, anxiety, conduct disorder) and/or physical (early sexual involvement, sexual assault, self-harm) implications as a result of engaging in inappropriate social activities. Legal implications relate to long-term effects of engaging in illegal activities and the impact on academic and professional attainment, as well as child rearing (Colman, Kim, Mitchell-Herzfeld, & Shady, 2008). Research indicates that nearly one-third of the adult women incarcerated in Santa Clara County, California, first committed crimes during adolescence, and nearly half of the adult women incarcerated in Santa Clara County reported being in jail five or more times (County of Santa Clara Office of Women's Policy, 2008). Such outcomes are not desired for the participants in this study or for any young woman.

Having an understanding of the types of risks that middle school girls take, and why they take such risks is a start to supporting them and to eliminating the personal and legal implications that they may face in the future. Specifically, if middle school girls are disconnected from parents and adult practitioners, then to whom can they (or do they) turn?

Antecedents and Consequences

Adult practitioners seemingly perceive girls' understanding of consequences in a dualistic fashion, such that middle school girls either do or do not understand consequences. Conversely, the middle school girls in this study seemed to be more complex in their perceptions of consequences, often times providing responses that consider the social implications of risk taking. Consistent with O'Donnell and Stueve (2008) who revealed significant underestimations (by adults) of young adolescent girls' risk-taking behaviors, the adult practitioners in this study underestimated the challenging social implications that girls often confront when making a risky decision. Hence, if a bridge is to be built, adult practitioners need to lay the foundation, starting with listening to what middle school girls really have to say.

Needs

The adult practitioners in this study indicated an interest in the development of middle school girls, as they attended a symposium that focused on middle school girl development at the time that the data was collected. Yet understanding needs revealed different and distinct perspectives between adult practitioners and middle school

girls. Although both populations agreed that girls needed support and self-factors, adults did not recognize the saliency of social connections for girls. Presumably, from an adult perspective, identifying the needs of young adolescent girls would not yield a need for social connections. More specifically, while adult practitioners perceived middle school girls to need support, their responses indicated that "support" meant the provision of education or programs. In contrast, for middle school girls, "support" predominantly related to social connections (including connections with adults), which is consistent with past research suggesting that young adolescents want to spend more time with adults such as their parents (Wang et al., 2007).

Implications for Adult Practitioners

The middle school girls who participated in this study are experts relating to risk-taking behaviors and needs among their cohort. The adult practitioners who participated in this study have misinterpreted their risk-taking behaviors and needs. The findings crucially inform effective practice for dropout prevention, by allowing adult practitioners to hear from middle school girls, understand their perceived risk-taking behaviors and needs, and establish a foundation for building solid connections between themselves and middle school girls.

Though adult practitioners can best meet the needs of middle school girls in an effort to circumvent risk-taking behaviors by influencing the resources available to them, the findings of this study reveal that resources available to middle school girls may not always be in line with their needs. Programs are typically the "ideal" solution to risk prevention as educators and policymakers have traditionally propagated efforts to encourage adolescent girls' appropriate and healthy decisions. However, as Steinberg (2007) highlights, even the "best" health education programs (e.g., D.A.R.E, abstinence education, or driver education) can enhance knowledge without actually modifying adolescents' risk-taking behavior.

To increase knowledge and mitigate risk-taking behaviors among middle school girls, adult practitioners can consider an approach that supports both positive relationships and knowledge acquisition. Traditional programs are noted to predominantly improve knowledge, but not behavior, so the true focus of resources needs to be on improving behavior through personally supportive relationships. Consistent with the middle school girls' need for adult support, "supportive relationships" that manifest in a mentoring context have been known to contribute to the mitigation of school dropout with the reduction of problem behaviors (Mentoring Resource Center, 2005; Tierney & Grossman, 2000) and risk taking (Public/Private Ventures, 2000), positively influence social and emotional development (e.g., youth's understanding, expression and regulation of emotions; Rhodes, 2002), and improve academic success (Blum, 2005) among adolescents. Further, Wentzel (1998) found that teacher support was a positive predictor of class and school-related interests as well as social responsibility goal pursuit among sixth grade students.

Distinct from "role models" (Merton, 1968), a mentor denotes direct interaction and value-laden modeling, as well as skill modeling from an unrelated adult (e.g., teacher, counselor, or coach; Darling, Hamilton, & Shaver, 2003). Although it has been assumed that early adolescents tend to be more influenced by peers as they navigate the behavioral and emotional challenges associated with early adolescence (Angold & Rutter, 1992; Fleming, Boyle, & Offord, 1993), research indicates that mentors (somewhere between parents and peers) preeminently support positive developmental transitions from early to late adolescence (Lengua, 2006).

Further, the differences found between adult practitioners and middle school girls and within participants (sixth-, seventh-, and eighth-grade girls) reflect implications for *how* positive mentoring relationships can support knowledge and cultivate learning experiences. As such, mentors should differentiate learning experiences between sixth-, seventh-, and eighth-grade girls. Specifically, mentors of sixth-grade girls may aim to support social development, more so than with eighth-grade girls who might benefit from mentoring that emphasizes instrumental factors such as helping individuals reach particular goals (Bogat, & Liang, 2005; Darling, Bogat, Cavell, Murphy, & Sanchez, 2006; Darling, Hamilton, & Shaver, 2003).

Rhodes (2002) suggests that a key mediator between mentoring and successful outcomes is "meaningful conversation." This suggestion is consistent with the findings from this study, which reflect both adult practitioners' perceptions that educational programs are sufficient and girls who commonly report the need for "someone to talk to." Further, matching girls with mentors of the same gender or similar interests is optimal for enhancing the quality of relationships (e.g., Herrera, Sipe, McClanahan, 2000; Rhodes, Lowe, Litchfield, & Walsh-Samp, 2008).

Limitations and Future Directions

Though the findings from this study provide a foundation for understanding risk taking and needs among middle school girls, a limitation is that data were collected at one diverse school. Future research may consider investigating perceptions of middle school students and practitioners from more than one school or program in order to strengthen generalizability. Similarly, the adult practitioners were not connected to the same school or program. Future research may consider streamlining the participants, which may yield a more specific understanding of risk-taking perceptions of middle school girls and also assist with individualized support.

Lastly, future research may include middle school girl, adult practitioner, and parent perceptions of risk taking and needs in an effort to capture varied perspectives of each cohort, and specifically inform authentic support.

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