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## Bridging the gap between moral reasoning and adolescent engagement in risky behavior

TARA L. KUTHER AND ANN Higgins-D'Alessandro

Relations among moral reasoning, domain judgment and engagement in risky behaviors were assessed with 68 students attending a Just Community school and 122 comparison students from the larger high school with which the alternative school is affiliated. Risky behaviors were perceived as personal decisions, rather than as ones of morality or convention. Engagement and domain judgment of risky behavior interacted; with increasing substance involvement, students were more likely to view the decision to use drugs and alcohol as a personal decision than as either a moral or conventional decision. Domain judgments of risks appeared to moderate the relation between moral reasoning and engagement in risky behavior, suggesting that moral education interventions must encourage youth to explore their views that much of their behavior is only their own business.

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### Introduction

Research on the development of moral reasoning has revealed that, although reasoning increases throughout adolescence and young adulthood, it does not consistently predict behavior (Higgins *et al.*, 1984; Power *et al.*, 1989), particularly risky behaviors, such as whether young people will engage in risky activities such as substance involvement (Berkowitz *et al.*, 1991, 1995). The present study examined the relation of moral reasoning and engagement in risky behaviors during adolescence and hypothesized a moderator of this relation: domain judgment of the risky behavior, or whether it is perceived as a decision of morality, social convention or personal discretion.

Developmental tasks of adolescence centre on individuation, autonomy and identity formation (Erikson, 1950; Hill and Holmbeck, 1986). The exploration and independence-seeking that are characteristic of adolescence also increase young persons' vulnerability to risk. Adolescence is marked by increased rates of drug and alcohol experimentation, sexual activity, delinquency and suicide attempts (Windle, 1990; Dryfoos, 1991; Farrell *et al.*, 1992; Takanishi, 1993). For example, a study of 680 high school students from the California Bay Area revealed that over four-fifths had consumed alcohol, over two-thirds had used marijuana, nearly one-half had engaged in sexual intercourse, and over one-third reported engaging in unprotected sexual relations (Irwin, 1993). Antisocial activities are also prevalent among adolescents; nearly one-third of a sample of 2411 14- and 15-year-old adolescents sampled from the National Longitudinal Study of Youth reported shoplifting and nearly one-half reported being involved in a physical confrontation with other adolescents (Windle, 1990). Although numerous studies have quantified the extent to which adolescents engage in risky behavior (Watts and Wright, 1990; Windle, 1990; Dryfoos, 1991; Farrell

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*et al.*, 1992), we know little about social-cognitive factors that contribute towards such engagement (Nucci *et al.*, 1991).

### *The domain model of social reasoning*

The construction of an accurate knowledge base about adolescent risky behavior requires information on how adolescents perceive risk and how their perception impacts engagement. Social-cognitive theory may aid in improving our understanding of risky behavior. The domain model of the development of social reasoning (Nucci, 1981; Turiel, 1983) posits that individuals distinguish between conceptions of morality and social convention, where morality refers to issues of interpersonal harm and justice, and social convention refers to consensual social norms that maintain social structure (Turiel, 1983). The domains of morality and social convention can be differentiated from conceptions of personal issues, which are considered outside the realms of societal regulation and moral concern (Nucci, 1981). Personal issues may include non-social acts that concern individual safety, harm to the self, comfort and health (Tisak and Turiel, 1984; Smetana and Asquith, 1994; Smetana, 1995). Such issues may have negative consequences for the self that are directly perceptible by the self and are perceived as within the realm of personal choice.

Empirical research has demonstrated that adolescents tend to view substance use as a matter of personal choice (Nucci *et al.*, 1991) or as a mixture of moral and personal issues (Power *et al.*, 1989; Killen *et al.*, 1991). In contrast, theft and violence are usually viewed as moral issues, and suicide as a combination of moral and personal decisions, depending upon whether the adolescents view self-harm as a moral or personal issue (Killen *et al.*, 1991). Perception of a behavior as a moral, social or personal transgression is related to actual behavior, especially in situations where the role of personal choice and the role of moral or societal regulation is ambiguous (Nucci *et al.*, 1991). Domain judgment and risky behavior have been studied within the context of adolescent substance use; a study of 139 high school students revealed that those who reported high levels of substance use were more likely to report the belief that substance use is a personal decision than were those who reported low levels of substance use (Nucci *et al.*, 1991). As domain judgment and behavior relations have not been studied with regard to other risks such as delinquency, sexual involvement or suicide, our understanding of engagement in risky behavior during adolescence can benefit from studies including a greater variety of behaviors.

### *The development of moral reasoning*

The developmental construct of moral reasoning has contributed towards understanding and predicting behavior (Higgins *et al.*, 1984; Kohlberg and Candee, 1984; Power *et al.*, 1989). Kohlberg (1984) construed moral reasoning as a structural phenomenon and measured how individuals reason across situations. The tendency for individuals to consistently reason at one or two of the Kohlbergian stages, and for this to change with development in cognition and perspective-taking, is important for understanding engagement in risky behaviors such as substance use, antisocial behavior and sexual promiscuity, as such behaviors are highly intercorrelated (Jessor and Jessor, 1977).

According to Kohlberg's (1984) theory of the development of moral reasoning, the individual progresses through stages of reasoning capacity that are grouped into three levels to represent the relation of the self to the conventions of society. Individuals reasoning at the pre-conventional level view rules as something external to, and imposed upon, the self; decisions of justice are guided by the social perspective of an egocentric individual.

Conventional reasoning, on the other hand, is guided by the social perspective of a member of society; the self understands the purposes of society's conventions and can identify with them. Finally, individuals at the postconventional level define values in terms of moral principles voluntarily taken, rather than as conventional standards to be upheld. At this level, decision-making is guided by a self that reasons from a universal perspective, seeking solutions to specific dilemmas that preserve the dignity of human personality and uphold the moral claims of all persons involved, presently and in the future. At all levels, individuals reason about particular situations and the people, institutions and societies affected by them; thus, postconventional reasoning about a particular situation is not more abstract than at the previous levels, but is more adequate (Kohlberg, 1984; Kohlberg *et al.*, 1986). The development of moral reasoning may be stimulated by issue-focused discussions and through exposure to the next higher stage of reasoning (Blatt and Kohlberg, 1975; Higgins *et al.*, 1984; Kohlberg, 1984; Power *et al.*, 1989). The Just Community approach to education (Power *et al.*, 1989) represents the extension of Kohlberg's ideas of moral development through the creation of a democratic school-community. This approach has been employed for nearly three decades at the Scarsdale Alternative School, located in Westchester, NY, whose students (along with those of the associated high school) participated in the present study.

Moral reasoning has been consistently related to antisocial and delinquent behavior (Hains and Ryan, 1983; Jennings *et al.*, 1983; Hains, 1984; Trevethan and Walker, 1989) and less consistently to substance involvement (Berkowitz *et al.*, 1991, 1995). For example, although Bust *et al.* (1981) reported no relation between moral reasoning and substance use, Hann *et al.* (1973) reported lower levels of reasoning in drug users. Mohr *et al.* (1987) and Power *et al.* (1989) noted that adolescents tend to exhibit lower levels of moral reasoning in response to drug-related dilemmas than to the standard test moral dilemmas. It is important to explore relations between moral reasoning and engagement in risky activities in order to determine whether higher levels of reasoning and, thus, moral education interventions (Power *et al.*, 1989) are associated with protective factors against such activity.

#### *Relating domain and moral judgments to understand risky behavior*

Berkowitz *et al.* (1991, 1995) integrated the domain approach to social development (Turiel, 1983) with Kohlberg's (1984) theory on the development of reasoning in the moral domain. While there is evidence that moral reasoning plays an important role in determining action in moral situations (Blasi, 1980) and it is theoretically clear that it must play a role, the difficulty lies in determining what situations or actions are categorized as moral. In order for an individual's moral judgment to influence his or her perception of, and engagement in, a particular behavior, the individual must assume a moral orientation (Kohlberg, 1984; Berkowitz *et al.*, 1991). Individuals may differ with regard to whether they view particular actions as moral. Theory and research have suggested that moral evaluation of a particular behavior may be related to an individual's choice of whether to engage in that behavior (Power *et al.*, 1989; Berkowitz *et al.*, 1991; Nucci *et al.*, 1991). The next step in this line of research was to determine whether perception of behaviors as within the moral domain influences the relation between engagement in those behaviors and moral reasoning. Berkowitz *et al.* (1991, 1995) have argued that moral reasoning is related to behavior only if the individual sees the moral component in such behavior.

The present study examined the relation of domain judgment of risky behaviors, engagement in risky behaviors and moral reasoning, with a sample of suburban adolescents. It

was hypothesized that domain placement, or perception of the act as a moral, conventional or personal issue, would moderate the relation between engagement in risky behaviors and moral reasoning. An interactive effect of domain judgment and engagement was expected, such that perceiving a behavior as a moral issue and not engaging in it would be related to higher levels of reasoning, while perceiving it as a moral issue and engaging in it would be related to lower levels of reasoning; perceiving a behavior as a personal issue was not expected to be related to reasoning, regardless of engagement. Secondary purposes of the present study were to: (1) examine the frequency of engagement in risky behaviors with a sample of suburban adolescents; (2) explore adolescents' perceptions of risk decisions and the relation between risky behaviors and domain judgments; and (3) examine differences in moral reasoning, risk perception and risk engagement with students attending a moral education intervention and the high school with which it is affiliated.

## Method

### *Participants*

The intervention group consisted of 68 (54% female) students from grades 10 through 12 who, by choice, attended an alternative school program employing the Just Community approach to education, an intervention developed by Kohlberg and his research and high school teacher colleagues (Power *et al.*, 1989; described below). The comparison group consisted of 122 (46% female) students from grades 10 through 12 attending the "regular" public high school with which the alternative program is affiliated. A total of 225 students were invited to participate; 91 per cent of the intervention students and 81 percent of the comparison students returned both the parental consent and student assent forms. Students predominantly were Non-Hispanic White; 12 per cent described themselves as Asian American, 3 per cent as Hispanic/Latino and 2 per cent as African-American. While the sample was relatively ethnically homogenous, it was representative of the affluent suburban school district.

### *Intervention: the Just Community*

The Just Community school is a democratic community with goals to enhance student moral reasoning and increase their sense of community or attachment to the school through group discussion of moral and normative issues (Power *et al.*, 1989). One purpose of schools, generally, is to transmit the values of society. The Just Community school approaches this goal by teaching justice or by assisting students to develop an increasingly more adequate sense of fairness, including an understanding of the underlying purposes of laws and rules for building and maintaining trusting relationships and creating, critiquing and improving the social order of the program itself.

The Just Community school is a democratic community in the sense that each student and faculty member has one vote and all have a stake in the school. Weekly core-group advisory meetings are conducted, in which groups of 10 to 12 students meet with a faculty core-group leader over lunch to exchange thoughts, discuss both school and personal matters, and form personal bonds. Weekly community meetings of all students and teachers are held to formulate and discuss the fairness and other moral aspects of school issues before the community, and to discuss and decide upon school issues and policies, including rules and sanctions about risky behaviors, such as alcohol and drug use. Student discussion is

encouraged, as exposure to the logic of higher stages of reasoning, especially the next highest stage, promotes moral reasoning (Blatt and Kohlberg, 1975; Kohlberg, 1984; Power *et al.*, 1989), and group discussion is the basis of building school norms and enhancing the bond of community (see Power *et al.*, 1989, for operational definitions of these concepts).

### *Measures*

*Engagement in risky behaviors.* Students completed a questionnaire that assessed the frequency with which they engage in four types of risky activities: antisocial behavior (theft, violence), substance involvement (alcohol, marijuana, illicit drugs and selling drugs), sexual involvement (engagement, unprotected) and suicidal ideation. The items were phrased as follows: "Do you \_\_\_\_\_? If so, how often?" Participants were presented with seven responses ranging from "never" to "almost every day" (coded as 0 to 6). Responses were grouped by behavioral category (antisocial behavior, substance involvement, sexual involvement and suicidal ideation). The frequency of engagement in each category of risky activity was computed by summing the frequency of the component behaviors. In addition, the number of types of risk behavior students engaged in was computed for each of the categories of risky activity, with a possible range of 0–2 for antisocial behavior (theft, violence), 0–4 for substance involvement (alcohol, marijuana, illicit drugs, selling drugs), 0–2 for sexual involvement (engagement, unprotected) and 0–1 for suicidal ideation.

*Perception of risky behaviors as moral, social or personal transgressions.* This questionnaire, based upon the domain model of social development (Turiel, 1983), assessed how participants categorize decisions about whether to engage in the aforementioned risky activities: as decisions of morality, social convention or personal discretion. For each risk item, participants were asked, "What is the basis of your decision of whether the act is right or wrong?" and were presented with three choices: (1) "It is [right/wrong] regardless of existing laws, rules, or social norms" (moral decision); (2) "It is [right/wrong] based on parental rules, laws, or social norms" (conventional decision); (3) "It is not right or wrong, but a matter of personal choice" (personal decision). Responses were grouped to form three separate scores (moral, conventional, personal) for each risk category to indicate the number of behaviors that students perceived as moral, conventional or personal decisions for each of the four risk categories. For example, the moral decision score for substance involvement ranged from 0 to 4, with 4 indicating that all four behaviors comprising the substance involvement risk items were classified as moral decisions. Similar scores were derived for conventional and personal decisions for the substance involvement risk category, as well as the other three categories.

*Defining Issues Test.* The Defining Issues Test (DIT; Rest, 1986) was utilized as a measure of moral reasoning; participants were presented with short vignettes, patterned after the Kohlberg dilemmas. After reading each vignette, participants rated the importance of 12 statements which represent various stages of reasoning. A postconventional reasoning score was derived from those ratings, which represents the relative importance assigned to principled moral considerations in making decisions about moral dilemmas. Rest (1986, 1994) reported that the test–retest reliability and the Cronbach's alpha of internal consistency for the postconventional reasoning score averages in the 0.08s for samples of adolescents and adults (with ages ranging from 16 to 56). The postconventional reasoning score has been shown to exhibit a correlation coefficient of 0.68 (Rest, 1986) with the

standard Moral Judgment Interview (Colby and Kohlberg, 1987). Similar scores were derived for the percent of student reasoning at the pre-conventional and conventional levels. The pre-conventional and conventional reasoning scores represented the relative importance assigned to Stage 2 considerations (instrumental egoism and simple exchange; Kohlberg, 1984) and Stage 3 and 4 considerations (interpersonal exchange and social order; Kohlberg, 1984), respectively, in making moral decisions. Because of time limitations, a short version of the DIT was administered, consisting of three vignettes, as suggested by Rest (1986), who reported a 0.93 correlation with the full six-story version of the DIT.

### *Procedure*

After obtaining parental consent and student assent, participants completed the packet of surveys in the presence of the first author and classroom teachers. The comparison group completed the surveys during one class period, and the intervention group completed the surveys during a core-group lunch meeting.

## **Results**

### *Relation of moral reasoning, domain judgment and risky behavior*

The relation of moral reasoning, domain judgment and the summed frequency of engagement in each of the categories of risky behavior was assessed with a series of multiple regression analyses. The analyses were conducted separately for each type of domain judgment (perception as a moral issue, personal issue, or mixture of moral and personal issues in cases where some behaviors were classified as moral and some as personal) to allow for an examination of the relation of reasoning and behavior for each type of domain judgment. Because few students viewed risky behaviors as issues of convention, as described in the following sections, the category was dropped from analyses. The unstandardized regression coefficients ( $b$ ) from the three regression analyses were examined to determine the relation of reasoning and behavior across the three types of domain judgment. As multiple analyses were conducted, a more stringent level of alpha ( $p=0.01$ ) was employed for all significance tests. The results of these analyses are illustrated in Table 1.

When decisions to engage in antisocial behavior were considered as moral decisions, reasoning and behavior were associated such that engagement in antisocial behavior was negatively associated with postconventional reasoning ( $\beta=-0.24$ ). When antisocial behavior was considered a personal decision, or as a mixture of moral and personal issues, behavior was not related to reasoning. Analyses comparing the unstandardized regression coefficients across the levels of domain judgment revealed no differences in the relation of moral reasoning and behavior across the levels of domain judgment.

When decisions to engage in substance involvement were considered as moral decisions, reasoning and behavior were linked such that engagement in substance involvement was associated positively with pre-conventional reasoning ( $\beta=0.42$ ). When substance involvement was considered as a personal decision, or a decision involving a mixture of moral and personal issues, substance involvement was not associated with moral reasoning. Analyses comparing the unstandardized regression coefficients across the levels of domain judgment revealed that pre-conventional reasoning was more strongly related with substance use when substance use was perceived as a moral issue than when it was considered a personal issue or

**Table 1** Results of the regression analyses of domain judgment as moderate of the relation between moral reasoning and risky behavior

|                  | Moral issue           |         |          | Personal issue |         |          | Mixture of moral and personal issues |         |          |
|------------------|-----------------------|---------|----------|----------------|---------|----------|--------------------------------------|---------|----------|
|                  | <i>b</i>              | $\beta$ | <i>t</i> | <i>b</i>       | $\beta$ | <i>t</i> | <i>b</i>                             | $\beta$ | <i>t</i> |
|                  | Antisocial behavior   |         |          |                |         |          |                                      |         |          |
| Grade            | 0.39                  | 0.19    | 2.44     | 0.12           | 0.03    | 0.16     | 0.87                                 | 0.37    | 2.86*    |
| Sex              | -0.60                 | -0.19   | -2.39    | -0.21          | -0.35   | -0.19    | -0.95                                | -0.29   | -2.20    |
| School           | 0.11                  | 0.03    | 0.43     | 0.14           | 0.02    | 0.12     | 0.23                                 | 0.06    | 0.48     |
| Preconventional  | 0.03                  | 0.10    | 1.23     | -0.09          | -0.24   | -1.26    | 0.09                                 | 0.32    | 2.45     |
| Conventional     | -0.01                 | -0.12   | -1.46    | -0.06          | -0.37   | -2.01    | 0.01                                 | 0.01    | 0.08     |
| Postconventional | -0.02                 | -0.24   | -3.02*   | -0.07          | -0.45   | -2.41    | 0.01                                 | 0.08    | 0.62     |
|                  | Substance involvement |         |          |                |         |          |                                      |         |          |
| Grade            | 0.83                  | 0.18    | 2.27     | 1.91           | 0.29    | 2.28     | 3.36                                 | 0.64    | 5.63**   |
| Sex              | 0.89                  | 0.14    | 1.54     | -1.86          | -0.17   | -1.35    | 0.16                                 | 0.02    | 0.19     |
| School           | 1.15                  | 0.16    | 1.81     | 0.02           | 0.01    | 0.01     | -1.16                                | -1.15   | -1.31    |
| Preconventional  | 0.26                  | 0.42    | 4.65**   | -0.17          | -0.18   | -1.46    | -0.03                                | -0.04   | -0.38    |
| Conventional     | 0.01                  | 0.06    | 0.72     | -0.01          | -0.02   | -0.14    | -0.03                                | -0.13   | -1.16    |
| Postconventional | 0.01                  | 0.01    | 0.03     | -0.05          | -0.14   | -1.14    | -0.03                                | -0.14   | -1.22    |
|                  | Sexual involvement    |         |          |                |         |          |                                      |         |          |
| Grade            | 0.05                  | 0.07    | 0.32     | 1.19           | 0.36    | 3.96**   | 1.26                                 | 0.39    | 3.74**   |
| Sex              | -0.28                 | -0.26   | -1.21    | 0.76           | 0.15    | 1.70     | 0.55                                 | 0.11    | 1.05     |
| School           | -0.22                 | -0.20   | -0.93    | -0.47          | -0.09   | -0.97    | -0.36                                | -0.07   | -0.69    |
| Preconventional  | -0.01                 | -0.11   | 0.23     | -0.08          | -0.20   | -2.27    | -0.05                                | -0.08   | -0.73    |
| Conventional     | 0.01                  | 0.05    | 0.26     | -0.03          | -0.23   | -2.56    | 0.01                                 | 0.05    | 0.50     |
| Postconventional | 0.01                  | 0.06    | -0.53    | -0.02          | -0.11   | -1.17    | 0.01                                 | 0.03    | 0.26     |
|                  | Suicide contemplation |         |          |                |         |          |                                      |         |          |
| Grade            | -0.20                 | -0.12   | -0.99    | 0.17           | 0.08    | 0.93     |                                      |         |          |
| Sex              | -0.15                 | -0.06   | -0.49    | 0.44           | 0.12    | 1.50     |                                      |         |          |
| School           | 0.91                  | 0.35    | 2.89*    | -0.03          | -0.10   | -0.11    |                                      |         |          |
| Preconventional  | -0.03                 | -0.10   | -0.80    | -0.05          | -0.15   | -1.75    |                                      |         |          |
| Conventional     | -0.01                 | -0.05   | -0.43    | -0.01          | -0.13   | 1.60     |                                      |         |          |
| Postconventional | 0.01                  | 0.05    | 0.37     | -0.02          | -0.21   | -2.56    |                                      |         |          |

\* $p < 0.01$ \*\* $p < 0.001$ 

a mixture of moral and personal issues. Finally, all analyses for sexual involvement and suicidal ideation were non-significant.

### *Engagement in, and perceptions of, risk*

The frequency of engagement in risky behaviors was examined with a 2 (school)  $\times$  2 (gender)  $\times$  3 (grade) multivariate analysis of variance (MANOVA) with the summed frequency for substance involvement (0–24), antisocial behavior (0–12), sexual involvement (0–12) and suicide contemplation (0–6) as the dependent variables. Main effects emerged for grade,  $F(8, 348) = 3.61$ ,  $p < 0.001$ , and gender,  $F(4, 174) = 4.21$ ,  $p = 0.003$ . The means and standard deviations for risky behavior for gender and grade are presented in Table 2. Univariate  $F$  tests



**Table 2** Means and standard deviations for frequency of engagement in risky behaviors by gender and grade, across schools

|            | Substance Involvement (Range 0-24) |        | Antisocial Activities (Range 0-12) |        | Sexual Involvement (Range 0-12) |        | Suicide Contemplation (Range 0-6) |        |
|------------|------------------------------------|--------|------------------------------------|--------|---------------------------------|--------|-----------------------------------|--------|
|            | Mean                               | (S.D.) | Mean                               | (S.D.) | Mean                            | (S.D.) | Mean                              | (S.D.) |
| 10th grade | 2.77                               | (3.18) | 0.95                               | (1.46) | 0.42                            | (1.52) | 1.07                              | (1.58) |
| 11th grade | 5.80                               | (5.26) | 1.57                               | (1.91) | 1.31                            | (2.58) | 1.27                              | (1.73) |
| 12th grade | 6.91                               | (5.02) | 1.15                               | (1.57) | 1.31                            | (2.58) | 1.18                              | (1.59) |
| Males      | 4.29                               | (4.43) | 1.58                               | (1.78) | 0.70                            | (1.75) | 1.02                              | (1.58) |
| Females    | 4.29                               | (4.59) | 0.85                               | (1.43) | 1.34                            | (2.77) | 1.27                              | (1.64) |

followed by Scheffé tests indicated that 11th and 12th graders, who did not differ from one another, reported more substance involvement than did 10th graders,  $F(2, 177)=11.41$ ,  $p<0.001$ . Males were more likely to engage in delinquent activities than were females,  $F(1, 177)=5.93$ ,  $p<0.02$ . Females were more likely to report sexual involvement than were males,  $F(2, 177)=7.64$ ,  $p<0.001$ . Analysis of suicide contemplation scores revealed no significant main effects nor interactions.

Domain judgment of risk was analyzed with a  $2(\text{school}) \times 2(\text{gender}) \times 3(\text{grade})$  MANOVA with the moral, conventional and personal decision scores for each of the risk categories as dependent variables. All comparisons were non-significant ( $p=0.05$ ), indicating that there were no differences in how decisions to engage in each of the risky behaviors were perceived based on school, gender, or age.

Engagement  $\times$  domain judgment ANOVAs examined the relation between student engagement in, and domain judgment of, each of the four categories. Main effects of domain emerged for each risk category. Post-hoc analyses with Bonferroni contrasts ( $p=0.02$ ) indicated that students were more likely to view substance involvement as a personal choice ( $M=1.91$ ) than as a moral ( $M=1.03$ ) or conventional ( $M=0.80$ ) choice, and as a moral choice more often than one of convention,  $F(2, 370)=19.62$ ,  $p<0.0001$ . Students were more likely to view sexual involvement as a personal decision ( $M=1.42$ ) than as one of morality ( $M=0.038$ ) or convention ( $M=0.20$ ),  $F(2, 372)=80.40$ ,  $p<0.0001$ . Likewise, students viewed suicide contemplation as a personal decision ( $M=0.69$ ) rather than a moral ( $M=0.20$ ) or conventional ( $M=0.11$ ) decision,  $F(2, 376)=82.04$ ,  $p<0.0001$ . In contrast, antisocial behavior was considered a moral decision ( $M=0.98$ ) more often than a conventional ( $M=0.52$ ) or personal ( $M=0.39$ ) choice,  $F(2, 374)=28.52$ ,  $p<0.0001$ .

A engagement  $\times$  domain judgment interaction emerged for substance involvement,  $F(8, 370)=8.54$ ,  $p<0.0001$ . Table 3 presents the means and standard deviations for student engagement and domain judgment of each risk category. Scheffé post-hoc tests indicated that students who reported using a greater number of substances tended to view the decision to use alcohol and drugs as one of personal choice, rather than as a moral or conventional decision.

#### *Grade, gender and intervention differences in moral reasoning*

Grade, gender and intervention differences in moral reasoning were examined with a  $2(\text{school}) \times 2(\text{gender}) \times 3(\text{grade}) \times 3(\text{reasoning level})$  mixed ANOVA. Table 4 presents the means and standard deviations of students' level of moral reasoning by school and grade.



**Table 4** Means and standard deviations for moral reasoning (preconventional, conventional and postconventional) by school and grade

| Moral Reasoning  | Intervention group     |                        |                        |                   | Comparison group       |                        |                        |                   |
|------------------|------------------------|------------------------|------------------------|-------------------|------------------------|------------------------|------------------------|-------------------|
|                  | 10th Grade Mean (s.d.) | 11th Grade Mean (s.d.) | 12th Grade Mean (s.d.) | Total Mean (s.d.) | 10th Grade Mean (s.d.) | 11th Grade Mean (s.d.) | 12th Grade Mean (s.d.) | Total Mean (s.d.) |
| Preconventional  | 1.33<br>(2.74)         | 3.45<br>(4.40)         | 3.00<br>(4.82)         | 2.70<br>(4.16)    | 4.94<br>(5.70)         | 6.19<br>(7.09)         | 3.81<br>(5.04)         | 5.03<br>(5.88)    |
| Conventional     | 34.17<br>(24.18)       | 34.05<br>(19.51)       | 34.00<br>(18.81)       | 34.07<br>(20.48)  | 43.07<br>(21.91)       | 42.70<br>(24.35)       | 43.57<br>(20.23)       | 43.06<br>(21.98)  |
| Postconventional | 36.33<br>(12.88)       | 38.21<br>(19.13)       | 49.50<br>(15.68)       | 40.98<br>(17.19)  | 34.79<br>(16.70)       | 29.05<br>(11.98)       | 38.57<br>(13.44)       | 34.23<br>(15.76)  |

A main effect of reasoning level indicated that this sample of secondary school students demonstrated significantly less preconventional ( $M=3.87$ ) than conventional ( $M=38.57$ ) or postconventional ( $M=37.61$ ) reasoning,  $F(2, 177)=491.38$ ,  $p<0.0001$ , supporting the notion that the progression of moral reasoning is a developmental phenomenon. A significant reasoning level  $\times$  school interaction,  $F(2, 177)=4.72$ ,  $p<0.01$ , indicated that the students enrolled in the Just Community moral education intervention demonstrated higher levels of postconventional and lower levels of conventional and preconventional moral reasoning than did the high school comparison group. In addition, the intervention group demonstrated significantly more postconventional reasoning than conventional, while the reverse was true for the comparison group.

## Discussion

The present study examines the relation of domain judgment of risky behaviors, engagement in risky behaviors and moral reasoning. Secondary goals of this study were to: (1) examine the frequency with which suburban adolescents engage in risky behavior; (2) assess perceptions of risk and their relation with engagement in risky activities; and (3) assess differences in moral reasoning and the perception of, and engagement in, risky activities, with students attending a Just Community moral education intervention and the high school with which it is affiliated.

In accordance with our hypothesis, domain perceptions of antisocial behavior appeared to moderate reasoning-engagement relations. For students who considered delinquent activity to be a moral issue, engagement in such activity was associated with lower levels of postconventional reasoning. When antisocial behavior was considered to be a personal issue, moral reasoning and behavior were not related. Findings of no differences in the relation of reasoning and engagement in delinquency across the three types of domain judgment may be a function of the small sample sizes (with  $n$  ranging from 14 to 136) and low power (ranging from 0.46 to 0.97) associated with such sample sizes.

Similar results emerged for substance involvement, such that when it was viewed as a moral decision, reasoning and behavior were linked; however, when substance involvement

was viewed as a personal issue or as a mixture of moral and personal issues, reasoning and behavior were not related. In addition, pre-conventional reasoning was a better predictor of substance involvement when such behavior was considered as a moral decision than when it was considered as a personal decision or as a mixture of moral and personal issues. These findings are consistent with our hypothesis, as a behavior defined as personal is not under the domain of morality (Nucci, 1981); therefore engagement in the behavior was not expected to be related to moral reasoning (Berkowitz *et al.*, 1991).

The gender and grade trends for engagement in risky behaviors and the findings of no developmental trends nor gender effects in domain perception of each of the risky behaviors were consistent with previous work (Brooks-Gunn and Furstenburg, 1989; Dryfoos, 1991; Farrell *et al.*, 1992; Killen *et al.*, 1991; Nucci *et al.*, 1991; Windle, 1990). Overall, students viewed engagement in substance use, sexual involvement and suicide ideation as personal decisions; however, they viewed antisocial behavior as a moral decision. Killen *et al.* (1991) have argued that adolescents view issues that harm others as moral, while those that are perceived as affecting only the individual are viewed as personal decisions. Our results support their argument, as the risks that directly affect the individual (i.e. substance involvement, suicide and gender) were perceived as personal choices, while the one that more directly and obviously affects others, antisocial behavior, was perceived as a moral decision.

The youth sampled in the present study did not view engagement in risky behavior as a conventional issue or a violation of conventional norms. It may be that they have begun to understand (as evidenced by their post-conventional reasoning scores) that conventions are arbitrary or pragmatic, and are not based on primarily rational considerations (Smetana, 1995). The well-documented finding that youth do not view risky behaviors as bound by conventional considerations (Killen *et al.*, 1991; Nucci *et al.*, 1991) suggests that many youth may be tied only loosely into societal thinking and society, and some not at all. Issues are viewed in terms of morality or personal choice. The emphasis on personal choice is consistent with the developmental task of identity formation, adolescents' desire for autonomy and our American culture (Erikson, 1950). It may also serve a self-protective function of rationalization, as students who reported higher levels of substance involvement tended to view the decision to engage in substance use as a personal rather than as a moral or conventional choice, in accord with the findings of Nucci *et al.* (1991).

While students who were enrolled in the Just Community moral education intervention demonstrated higher levels of moral reasoning than did the high school comparison group, consistent with prior findings (Power *et al.*, 1989), there were no group differences in student engagement in, or perception of, risky activity. This finding is understandable in light of students' definitions of risky activities as mostly personal choices. Adolescents' differential perceptions of some risks as personal issues, others as moral, and still other as a mixture of personal and moral issues, suggest that interventions must address specific risks such as antisocial behavior or sexual involvement, rather than risk-taking as a whole. The present results indicate that engagement in risky behavior is related to moral reasoning when the behavior is perceived as a moral issue. The results also indicate that risky activity is not related to moral reasoning when it is perceived as a personal choice, as is often the case for adolescents. Perhaps education and interventions to decrease engagement in risky behaviors should help youth focus on the implications of their actions on others, rather than only on personal hazards which serves, albeit unintentionally, to define these risks as matters of personal decisions from the perspectives of adolescents.

Given that many adolescents view risky activities as personal decisions, with such behavior therefore unrelated to moral reasoning, there is a need to examine other constructs that may influence engagement in risky behaviors. Further work might incorporate findings from a promising approach which has shown that risky activity bears a paradoxical role in adolescent development, in the sense that adolescents' perception of benefits to risky behavior motivates such behavior, and engagement in risky activity may be a normative part of adolescent development (Baumrind, 1985; Maggs *et al.*, 1995; Maggs, 1997; Parsons *et al.*, 1997; Kuther, 1998; Kuther and Higgins-D'Alessandro, 1999). Despite the danger and potential harm that may result, engagement in risky activities such as substance involvement may serve constructive functions in adolescent development such as friendship formation, identity exploration, relaxation and experimentation with roles and activities which are perceived by youth to be characteristic of older, more mature individuals (Maggs *et al.*, 1995).

Interventions designed to decrease risky behavior during adolescence might incorporate our growing understanding of the potential benefits of risky behavior, as perceived by adolescents, by offering alternatives that are perceived to have similar benefits, but are less dangerous outlets for sensation-seeking (Parsons *et al.*, 1997). Such interventions might combine the development of higher stage moral reasoning with discussions and argumentation about why risky activities are moral decisions from society's point of view, emphasizing the fact of others' involvement in all that an individual does, and perhaps calling upon students' social responsibility concerns (Higgins *et al.*, 1984), and shifting their views of risks from being personal choices to necessitating morally-guided decision-making. However, shifts in moral reasoning and community rule-making must traverse the personal to moral domain judgment and reasoning-behavior gaps in order to demonstrate a relationship with students' engagement in risk; this is a continuing effort of the Just Community (Power *et al.*, 1989) and other interventions (Dryfoos, 1991). In addition to promoting moral reasoning, it is advisable that moral education interventions seek to bridge these gaps by emphasizing the individual's connection to social groups and society, attempting to change adolescents' perceptions of risky behaviors from matters of personal choice to matters of morality, and supporting their adoption of behaviors congruent with their developing senses of justice and identity.

## References

- Baumrind, D. (1985). Familial antecedents of adolescent drug use: a developmental perspective. In Jones, C. L. and Battjes, R. J. (Eds). *Etiology of drug abuse: implications for prevention*, Washington, DC: National Institute on Drug Abuse, Research Monograph Series 56.
- Berkowitz, M. W., Guerra, N. and Nucci, L. (1991). Sociomoral development and drug and alcohol abuse. In Kurtines, W. M. and Gewirtz, J.L. (Eds). *Handbook of moral behavior and development: Vol. 3. Application*, Hillsdale, NJ: Erlbaum.
- Berkowitz, M. W., Begun, A. L., Zweben, A., Giese, J. K., Mulry, G., Horan, C., Wheeler, T., Gimenez, J. and Piette, J. (1995). Assessing how adolescents think about the morality of substance use. *Drugs and Society*, 8, 111-124.
- Blasi, A. (1980). Bridging moral cognition and moral action: a critical review of the literature. *Psychological Bulletin*, 88, 1-45.
- Blatt, M. and Kolhberg, L. (1975). The effects of classroom moral discussion upon children's level of moral judgment. *Journal of Moral Education*, 4, 129-161.

- Brooks-Gunn, J. and Furstenberg, F. F. (1989). Adolescent sexual behavior. *American Psychologist*, *44*, 249–257.
- Bush, D. F., Alterman, A. I., Power, C. and Connolly, R. (1981). Moral reasoning in alcoholics and addicts: structure vs content. *Perceptual and Motor Skills*, *52*, 269–270.
- Colby, A. and Kohlberg, L. (1987). *The measurement of moral judgment: Vol. 1. Theoretical foundations and research validation*. New York: Cambridge University Press.
- Dryfoos, J. G. (1991). Adolescents at risk: a summation of work in the field: programs and policies. *Journal of Adolescent Health*, *12*, 630–637.
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Farrell, A. D., Danish, S. J. and Howard, C. W. (1992). Relationship between drug use and other problem behaviors in urban adolescents. *Journal of Consulting and Clinical Psychology*, *60*, 705–712.
- Hann, N., Stroud, J. and Holstein, C. (1972). Moral and ego stages in relationship to ego process: a study of “hippies”. *Journal of Personality*, *41*, 596–612.
- Hains, A. A. (1984). Variables in social cognitive development: moral judgment, role-taking, cognitive processes, and self-concept in delinquents and nondelinquents. *Journal of Early Adolescence*, *4*, 65–74.
- Hains, A. A. and Ryan E. B. (1983). The development of social cognitive processes among juvenile delinquents and nondelinquent peer. *Child Development*, *54*, 1536–1544.
- Higgins, A., Power, C. and Kohlberg, L. (1984). The relationship of moral judgment to judgments of responsibility. In Gewirtz, G. and Kurtines, W. (Eds). *Morality, moral development, and moral behavior: basic issues in theory and research*, New York: John Wiley & Sons.
- Hill, J. P. and Holmbeck, G. N. (1986). Attachment and autonomy during adolescence. *Annals of Child Development*, *3*, 145–189.
- Irwin, C. E. (1993). Adolescence and risk taking: how are they related? In Bell, N. J. and Bell, R. W. (Eds). *Adolescent risk taking*, Newbury Park, CA: Sage.
- Jennings, W. S., Kilkenny, R. and Kohlberg, L. (1983). Moral-development theory and practice for youthful and adult offenders. In Laufer, W. S. and Day, J. M. (Eds). *Personality theory, moral development, and criminal behavior*, Lexington, MA: Lexington.
- Jessor, R. and Jessor, S. L. (1977). *Problem behavior and psychosocial development: a longitudinal study of youth*. New York: Academic Press.
- Killen, M., Leviton, M. and Cahill, J. (1991). Adolescent reasoning about drug use. *Journal of Adolescent Research*, *6*, 336–356.
- Kohlberg, L. (1984). *Essays on moral development: Vol. 2. The psychology of moral development*. San Francisco: Harper and Row.
- Kohlberg, L., Boyd, D. and Levine, C. (1986). The return of stage 6: its principle and moral point of view. In Edelstein, W. and Nunner-Winkler, G. (Eds). *Zur Bestimmung der moral Philosophische und sozial Wissenschaftliche beitrage zur moral Forschung*, Frankfurt am Main: Suhrkamp Verlag.
- Kohlberg, L. and Candee, D. (1984). The relation of moral judgment to moral action. In Kurtines, W. and Gewirtz, J. (Eds). *Morality, moral behavior, and moral development*, New York: John Wiley & Sons.
- Kuther, T. L. (1998). *The influence of cognitive, affective, and developmental factors on alcohol consumption by adolescents and young adults*. Unpublished doctoral dissertation, Fordham University, Bronx, NY.
- Kuther, T. L. and Higgins-D'Alessandro, A. (1999). *Attitudinal and normative predictors of alcohol use by older adolescents and young adults*. Unpublished manuscript under review.
- Maggs, J. L. (1997). Alcohol use and binge drinking as goal-directed action during the transition to postsecondary education. In Schulenberg, J., Maggs, J. L. and Hurrelmann, K. (Eds). *Health risks and developmental transitions during adolescence*, New York: Cambridge University Press.
- Maggs, J. L., Almeida, D. M. and Galambos, N. L. (1995). Risky business: the paradoxical meaning of problem behavior for young adolescents. *Journal of Early Adolescence*, *15*, 344–362.
- Mohr, P. H., Sprinthall, N. A. and Gerler, E. R. (1987). Moral reasoning in early adolescence: implications for drug abuse prevention. *School Counselor*, *35*, 120–127.
- Nucci, L. (1981). Conceptions of personal issues: a domain distinct from moral or societal concepts. *Child Development*, *52*, 114–121.
- Nucci, L., Guerra, N. and Lee, J. (1991). Adolescent judgment of the personal, prudential, and normative aspects of drug usage. *Developmental Psychology*, *27*, 841–848.

- Parsons, J. T., Siegel, A. W. and Cousins, J. S. (1997). Late adolescent risk-taking: effects of perceived benefits and perceived risks on behavioral intentions and behavioral change. *Journal of Adolescence*, 20, 381-392.
- Power, F. C., Higgins, A. and Kohlberg, L. (1989). *Lawrence Kohlberg's approach to moral education*. New York: Columbia University Press.
- Rest, J. (1986). *Manual for the Defining Issues Test*. Minneapolis: University of Minnesota.
- Rest, J. (1994). Background: theory and research. In Rest, J. R. and Narvaez, D. (Eds). *Moral development in the professions: psychology and applied ethics*, Hillsdale, NJ: Erlbaum.
- Smetana, J. G. (1995). Morality in context: abstractions, ambiguities and applications. *Annals of Child Development*, 10, 83-130.
- Smetana, J. G. and Asquith, P. (1994). Adolescents' and parents' conceptions of parental authority and adolescent autonomy. *Child Development*, 65, 1143-1158.
- Takanishi, R. (1993). The opportunities of adolescence—research, interventions and policy: Introduction to the Special issue. *American Psychologist*, 48, 85-87.
- Tisak, M.S. and Turiel, E. (1984). Children's conceptions of moral and prudential rules. *Child Development*, 55, 1030-1039.
- Trevethan, S. D. and Walker, L. J. (1989). Hypothetical versus real-life moral reasoning among psychopathic and delinquent youth. *Development and Psychopathology*, 1, 91-103.
- Turiel, E. (1983). *The development of social knowledge: morality and convention*. Cambridge: Cambridge University Press.
- Watts, W. D. and Wright, L. S. (1990). The relationship of alcohol, tobacco, marijuana, and other illegal drug use to delinquency among Mexican-American, Black, and White adolescent males. *Adolescence*, 25, 171-181.
- Windle, M. (1990). A longitudinal study of antisocial behaviors in early adolescence as predictors of late adolescent substance use: gender and ethnic group differences. *Journal of Abnormal Psychology*, 99, 86-91.