



Late adolescent risk-taking: effects of perceived benefits and perceived risks on behavioral intentions and behavioral change

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To assess the predictive utility of perceived benefits and risks of risk-taking behaviors (RTBs) on behavioral intentions and behavioral change, data were collected from 187 male and female late adolescent college students (ages 17–20). Perceived benefits, perceived risks, behavioral intentions, and involvement for 18 RTBs were assessed at T1 and T2 (3 months later). Factor analyses were performed on T1 involvement data, and six RTB factors emerged: Alcohol RTBs, Illegal Drug RTBs, Stereotypic Male RTBs, Social RTBs, Sex RTBs, and Imprudent RTBs. Regression analyses indicated that perceived benefits accounted for significant variance in behavioral intentions for each of the six factors and Overall RTB; perceived risks accounted for significant variance in behavioral intentions for five of the factors. Similar regression analyses indicated that perceived benefits accounted for significant variance in behavior change (over a 3 month period) for each of the six factors and the Overall RTB score, whereas perceived risks accounted for significant variance for only one factor (Illegal Drug RTBs). The results suggest that, among late adolescents, perceived benefits are better determinants of behavior change for RTBs than are perceived risks. Both perceived benefits and perceived risks, however, are important determinants of behavioral intentions. These findings support previous work identifying adolescents as “sensation seekers.” Interventions should address perceived benefits of RTB, rather than relying solely on promoting knowledge of the risks. Assessment of adolescent RTB should continue to use multi-item measures to obtain a broad picture of the variety of behaviors commonly endorsed by adolescents.

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Introduction

The prevalence of adolescent risk-taking behaviors (RTBs) has been addressed through numerous epidemiological surveys (Newcomb and Bentler, 1988; Johnston *et al.*, 1991; NIDA, 1994). These studies have repeatedly focused, almost exclusively, on alcohol and other drug use. Adolescents, however, engage in a wide variety of RTBs, including such activities as driving a car after drinking, riding with a drunk driver, shoplifting, having sex without a condom, etc. Few adolescents engage in only a single risk-taking behavior (Jessor and Jessor, 1977; Severson *et al.*, 1989); instead, they are likely to engage in a variety of behaviors deemed “risky” by the adults around them.

The definition of risk-taking is best conceptualized relative to a person’s developmental context (Lerner and Tubman, 1991). Having sexual intercourse, although developmentally inappropriate for a 13-year-old, is quite normative (at least statistically) for a college

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student, despite the fact that such behavior is equally “risky” for both individuals. As a consequence, engaging in the same RTB may hold different meanings for younger and older adolescents.

Among older adolescents (including college students), experimentation with RTBs has been conceptualized as both statistically normative and psychologically adaptive by developmental researchers (Baumrind, 1987; Shedler and Block, 1990). Although such developmental theorists have identified “experimenters” as the most psychologically healthy adolescents, this should not be taken to suggest that activities such as illegal drug use and unprotected sexual intercourse can enhance an adolescent’s psychological well-being. Data from these researchers do support the notion that occasional experimentation with drugs (i.e. risk-taking) is neither “deviant” nor personally destructive. Further, their findings assert that although the majority of adolescents have experimented with marijuana, few progress to addiction and/or abuse. Instead, some “experimental risk-taking” allows for the exploration of “adult-like” activities. Risk-taking appears to be a method of developing optimal social and psychological competence, autonomy, independence, and self-regulation (Baumrind, 1987; Silbereisen and Noack, 1988; Shedler and Block, 1990).

Perceived risks

Many of the current adolescent prevention programs for such RTBs as smoking and drinking have been based on the belief that knowledge concerning the dangerous consequences of such behaviors will deter risk-taking (Evans, 1983). Adolescents, however, tend to experiment with RTBs even in the presence of knowledge regarding the dangerous consequences associated with their actions, suggesting that factual knowledge concerning the health-related dangers of engaging in RTBs is not enough to protect adequately adolescents (nor adults) from such behaviors (Irwin and Millstein, 1986). For these reasons, perceived risk may fail to offer substantial predictive utility with regard to adolescent risk-taking.

Perceived benefits

Although many studies have focused on adolescent perceptions of the dangerous costs associated with RTBs, few have examined adolescent perceptions of the potential benefits derived from risky behavior. The decisional balance approach (Janis and Mann, 1968, 1977) emphasizes both the associated risks and benefits of a given course of action. Similarly, the Stages of Change transtheoretical model (Prochaska and DiClemente, 1986) utilizes both a Con Scale and a Pro Scale to assess the negative and positive consequences of behavioral change. Unfortunately, both of these conceptual and methodological approaches have been applied to single behaviors among adult samples, and neither have targeted specifically adolescent RTBs.

Researchers who have considered perceived benefits for engaging in RTBs often combine them with perceived risks under the heading “perceived consequences” (Bauman, 1980; Urburg and Robbins, 1981; Bauman *et al.*, 1988; Beyth-Marom *et al.*, 1993). Methodologically, however, these studies failed to differentiate the differences between the notions of perceived risks and perceived benefits, instead offering adolescents a fixed list of consequences (both attractive and unattractive) to evaluate or asking them to list what “things might happen” if one were to engage in a given RTB. Such methodologies limit the

adolescents' conceptualization of how a particular behavior may be considered "risky" and/or "beneficial".

On the basis of whether they consistently chose the "sure thing" or "risky" options in a lottery task, Lopes (1987) dichotomized individuals into two groups: risk-seeking and risk-averse. Consistent with this model, adolescents who engage in RTBs might make their decisions based on the desire to explore the opportunities offered by such behaviors; their perceived benefits might be so high that they believe that the behavior must be experienced. Those who are classified as risk-averse, however, could be described as motivated toward maintaining the security and safety that abstention provides; their perceived risks might be so high that they perceive RTBs as far too dangerous to consider. Certainly such a perspective is not far removed from the aforementioned developmental researchers who have posited that experimental risk-taking is adaptive, and that total avoidance of risk-taking may limit autonomy and independence (Baumrind, 1987; Shedler and Block, 1990).

Thus, despite knowledge of the risks, adolescents continue to engage in RTBs. This suggests that perceived benefits may be weighted more heavily than perceived risks in adolescent decision-making regarding RTBs. Furthermore, it is possible that adolescents disregard the risks via adolescent egocentrism (Elkind, 1967), and instead focus on the salience of the beneficial aspects of RTBs.

Behavioral intentions

Fishbein and Ajzen developed a model—the "rational man" hypothesis—in which they proposed that individuals will think rationally and make decisions based on accumulated information (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980). Their Theory of Reasoned Action tries to account for the relationships between attitudes and behavior and maintains that a person's intention to act is the proximal determinant of behavior. They argue that an individual's perception of the severity of expected outcomes of some behavior plays a major role in formulating behavioral intentions. It is possible that perceived risks and perceived benefits may represent both attitudes and expected outcomes in such a way that these perceptions are predictive of behavioral intentions.

Wolford and Swisher (1986) identified behavioral intentions as the only significant variable related to licit and illicit substance use among middle and late adolescents (grades 7–12). Several other empirical studies have identified statistically significant associations between intended and actual frequency of substance use among adolescents, indicating that intentions to risk-take are quite predictive of later RTB (Downey and O'Rourke, 1976; Huba *et al.*, 1979; Swisher and Hu, 1983; Ajzen, 1989). These findings suggest that adolescents may possess the cognitive abilities to formulate rational behavioral intentions based on perceived attitudes (e.g. risks and benefits).

Hypotheses

To explore the utility of integrating the notions of perceived risks to self, perceived benefits to self, and behavioral intentions, we examined the relationship between perceived benefits, perceived risks, behavioral intentions, and reported involvement in 18 RTBs at Time 1 and Time 2 (3 months later) among late adolescent college students (ages 17–20).

It was hypothesized that perceived benefits to self (at Time 1) would account for

significantly greater variance in both behavioral intentions (at Time 1) and behavioral change (from Time 1 to Time 2) than would perceived risks to self.

Methods

Participants

Participants were recruited from undergraduate Introduction to Psychology courses at the University of Houston, a large, urban, commuter university serving a student body of diverse ethnic background and age. Students completed an informed consent prior to completing the questionnaire, and were offered extra-credit toward their final grade in return for their participation.

In order to promote honest responding, students were informed of the confidentiality of their responses, and only the last four digits of their social security numbers were used to match T1 and T2 data. Students were also told that research assistants (who lacked access to their social security numbers) would be entering the data, and that the instructor would be denied access to the data until after final grades had been posted. In addition, at T1 students were not told that they would be assessed again at T2.

To retain a more homogenous sample, only data from respondents aged 17 through 20 were used. Students aged 21 and above were excluded because 21 is the age at which alcohol use, one of the most commonly studied RTBs, becomes a legal behavior, potentially confounding perceptions of benefits and risk, as well as reported involvement. Thus, the final sample consisted of 187 late adolescent college students (ages 17–20).

The final sample included slightly more females (54%) than males (46%), and respondents were predominately Caucasian (59.4%), single (98.9%), freshman (77.5%), living with their parents (54.6%). Other ethnic groups were represented: African-American (15.5%), Asian (11.8%) and Hispanic (11.8%). These percentages were comparable to the representation of ethnic diversity found at the University and in previous research with this population (Siegel *et al.*, 1994).

Materials and procedure

The Risk Involvement and Perception Scale-Revised (RIPS-R), a paper and pencil questionnaire, was modified from previous versions of the RIPS and was administered to all participants. The original RIPS was developed by a collaborative research team from the University of Houston and Baylor College of Medicine, using students from the same University population (Siegel *et al.*, 1994). The original RIPS was modified to include 19 behaviors, eliminating items with very low involvement, to clarify wording, and to add additional items.

The original RIPS utilized three subscales: involvement, perceived risks, and perceived benefits. Test-retest reliability was computed based on student responses at two assessment points, separated by 2 weeks. Pearson product-moment correlations were computed for each of the 19 behaviors, producing significant reliability coefficients (all p 's < 0.001) for each of the three subscales: involvement (0.59–0.97), perceived risks (0.42–0.81), and perceived benefits (0.45–0.84). Cronbach's alpha coefficients of internal consistency for the three subscales were 0.72 for involvement, 0.87 for perceived risks, and 0.77 for perceived benefits.

Using data from responses to the involvement subscale from the original RIPS, factor

analyses with varimax rotation were conducted. Six factors were identified: Alcohol, Illegal Drugs, Sex, Stereotypic Male Behaviors, Socially Acceptable, and Imprudent Behavior. These factors accounted for 65.6% of the variance in involvement (Siegel *et al.*, 1994).

The RIPS-R utilized in this study included 18 behaviors, constituting a representative set of late adolescent RTBs. The items reflect a variety of RTBs ranging from low-risk (e.g. taking prescription drugs, walking alone at night) to high-risk (e.g. having sex without a condom, taking crack/cocaine). In addition to the three subscales identified previously, the RIPS-R included a fourth subscale for behavioral intentions.

The RIPS-R was administered in class during the first week of the semester, and 3 months later, at the end of the semester. For each of the 18 individual behaviors, participants rated (1) their involvement during the last 3 months—*involvement subscale*; (2) their predicted involvement during the next 3 months—*behavioral intentions subscale*; (3) how risky or dangerous it would be for them to engage in the behavior—*perceived risks subscale*; and (4) how advantageous or beneficial it would be for them to engage in the behavior—*perceived benefits subscale*. Students rated each of the 18 behaviors by circling the appropriate response on 9-point Likert scales ranging from never to daily (involvement and behavioral intentions), not at all risky to extremely risky (perceived risks), and not at all beneficial to extremely beneficial (perceived benefits).

At T1, 209 students completed the RIPS-R; at T2, 198 students completed the instrument. A total of 190 students completed the instrument at both T1 and T2. Data for three respondents were excluded due to a significant number of unanswered items. Consequently, data analyses were performed on a total of 187 completed sets of T1–T2 data. Random checks were performed on key variables to ensure the accuracy of data entry.

Results

Factor analyses with varimax rotation were performed on the T1 involvement data from the revised instrument, the RIPS-R. The following six factors were identified: Alcohol RTBs, Illegal Drug RTBs, Sex RTBs, Stereotypic Male RTBs, Socially Acceptable RTBs, and Imprudent RTBs. These six factors accounted for 60.3% of the variance for T1 involvement. A separate factor analysis was also computed on T2 data and the resulting factor structure was identical. The final factors and their loadings are presented in Table 1.

Factor loadings for the RIPS-R were quite similar to those of the original RIPS. One item on the RIPS-R, driving a car, did not load at the standard 0.40 cutoff for any factor, and was subsequently excluded from further analyses. One item, shoplifting, loaded at -0.35 ; because exclusion would have resulted in only one item for the Socially Acceptable RTBs factor, this item was retained for analyses. Cigarette smoking was the only item that loaded at the 0.40 level or above for multiple factors.

Using the six identified factors, factor scores were computed for each of the four subscales for all respondents at both T1 and T2. Mean scores for these factors are presented in Table 2. In addition, an "Overall RTB" score was created for each subscale by averaging the mean scores from each of the six factors. These Overall RTB scores were created in order to examine composite risk-taking involvement, intentions and perceptions across all factors.

Student's *t*-tests were calculated to identify statistically significant gender differences in the factors. As might be expected, females reported significantly less involvement, greater perceived risks, and lower perceived benefits for the Stereotypic Male Behaviors factor than

did their male counterparts ($t's > 2.76$, $p's < 0.01$). Females, however, did report greater involvement for the Socially Acceptable factor than did males ($t's > -2.38$, $p's < 0.05$). This difference appeared to result from the fact that the Socially Acceptable factor included only two items, one of which was taking prescription drugs; analyses indicated that females reported significantly greater involvement for this individual item than did males. Qualitative interviews with female adolescents from the sample indicated that this was largely due to the use of oral contraception. Interestingly, females did not report significantly lower perceived risks, nor greater perceived benefits for the Socially Acceptable factors than did males. Separate factor analyses were completed for each gender, however the resulting factor structure was identical. Due to the limited number of statistically significant gender differences, data were collapsed across gender for subsequent analyses.

Behavioral intentions

Regression analyses were performed to test the hypothesis that perceived benefits would be a better predictor of behavioral intentions than would perceived risks. Perceived benefits (T1) and perceived risks (T1) were regressed (in separate equations) on behavioral intentions (T1) for each of the six factors and the Overall RTB score.

Table 1 *Factor loadings for present study based on T1 involvement scores*

| | Alcohol | Illegal Drugs | Sexual Behavior | Stereotypic Male | Socially Acceptable | Imprudent Behaviors |
|---|---------|------------------|--------------------|---------------------|------------------------|------------------------|
| Get drunk | 0.86 | 0.09 | 0.15 | 0.09 | 0.08 | 0.01 |
| Drink alcohol | 0.87 | -0.03 | 0.13 | 0.14 | 0.01 | 0.04 |
| Ride with drunk driver | 0.69 | 0.26 | 0.20 | -0.04 | 0.07 | 0.02 |
| Drive drunk | 0.68 | 0.27 | 0.27 | -0.07 | -0.18 | 0.06 |
| Cocaine/Crack | 0.09 | 0.80 | 0.13 | 0.02 | -0.03 | 0.14 |
| Take speed | 0.11 | 0.73 | 0.02 | 0.02 | -0.08 | 0.09 |
| Marijuana use | 0.34 | 0.56 | -0.04 | -0.01 | 0.28 | -0.15 |
| Abuse prescribed drugs | 0.07 | 0.49 | 0.09 | 0.42 | 0.12 | -0.24 |
| Have sex | 0.14 | -0.01 | 0.84 | 0.00 | 0.11 | 0.24 |
| Have sex without condom | 0.24 | 0.04 | 0.80 | -0.10 | 0.16 | 0.08 |
| Motorcycle riding | 0.18 | -0.24 | 0.03 | 0.73 | 0.03 | 0.04 |
| Walk alone at night | -0.12 | 0.28 | 0.00 | 0.57 | -0.07 | 0.23 |
| Take prescribed drugs | 0.04 | -0.09 | 0.08 | 0.07 | 0.83 | -0.16 |
| Shoplift | 0.32 | -0.13 | -0.15 | 0.13 | -0.35 | -0.08 |
| Not use seatbelt | 0.07 | 0.13 | 0.19 | 0.12 | -0.15 | 0.79 |
| Binge/purge | 0.06 | 0.24 | 0.26 | 0.06 | -0.22 | 0.48 |
| Smoke cigarettes | 0.43 | 0.29 | -0.05 | 0.03 | 0.44 | 0.48 |
| Percentage of variance accounted for | 16.6 | 12.2 | 10.9 | 7.1 | 6.9 | 6.6 |

The results of these regression equations are presented in Table 3. For each of the six factors and Overall RTB score, perceived benefits accounted for significant amounts of variance in behavioral intentions; percentages of variance accounted for ranged from 4 to 39%. Perceived risk did account for significant amounts of variance for five of the factors: Alcohol RTBs (20%), Illegal Drug RTBs (14%), Sex RTBs (6%), Stereotypic Male RTBs (2%), and Imprudent RTBs (7%).

For these five factors, *post-hoc* multiple regression equations were performed, regressing both perceived benefits and perceived risks on behavioral intentions. Tests of R^2 change were performed to assess whether perceived risks had predictive utility over and above perceived benefits. Statistically significant R^2 change values were identified for three of the factors—Alcohol RTBs ($F=21.01$, $p<0.0001$), Illegal Drug RTBs ($F=16.49$, $p<0.0001$), and Imprudent RTBs ($F=11.08$, $p<0.001$)—showing that, for these factors, perceived risks did account for significant amounts of variance in behavioral intentions over and above the variance accounted for by perceived benefits.

For these three factors, in order to assess statistically whether or not perceived benefits was a better predictor of behavioral intentions than was perceived risks, partial correlations were calculated and followed by *t*-test comparisons of the difference between the coefficients for correlated samples. Each test was significant, t 's (185) >1.93 , p 's <0.05 , showing that the correlation between perceived benefits and intentions was stronger than the correlation between perceived risks and intentions.

Table 2 Mean scores for factors at Time 1 and Time 2

| | Involvement Subscale | Intentions Subscale | Perceived Risks | Perceived Benefits |
|-----------------------------|-------------------------|------------------------|--------------------|-----------------------|
| Alcohol RTBs | 1.36 1.33 | 1.23 1.27 | 5.84 5.94 | 0.74 0.83 |
| Illegal Drug RTBs | 0.20 0.20 | 0.17 0.21 | 6.75 6.83 | 0.27 0.37 |
| Sex RTBs | 2.27 2.23 | 2.15 2.31 | 4.88 4.82 | 3.12 3.26 |
| Stereotypic Male RTBs | 1.25 1.27 | 1.28 1.20 | 4.65 4.58 | 1.68 1.76 |
| Socially Acceptable RTBs | 1.13 1.26 | 1.12 1.26 | 3.96 4.11 | 2.95 3.26 |
| Imprudent RTBs | 1.32 1.19 | 1.15 1.01 | 5.34 5.49 | 0.63 0.45 |
| Overall RTB | 1.25 1.24 | 1.18 1.21 | 5.24 5.29 | 1.56 1.66 |

Time 1 data are presented on the first line for each factor; Time 2 data are presented on the second line for each factor.

Behavioral change from T1 to T2

It was hypothesized that perceived benefits would account for significantly greater variance for behavioral change from T1 to T2 for each of the six factors and the Overall RTB score than would perceived risks. In order to assess behavioral change without calculating difference scores (a procedure which squares the amount of error variance), two sets of multiple regression equations were performed by regressing: (1) T1 involvement and T1 perceived benefits on T2 involvement; and (2) T1 involvement and T1 perceived risks on T2 involvement. By entering T1 involvement first in the regression equations, it functioned as a covariate, and controlled statistically for baseline involvement. Consequently, a statistically significant R^2 change for perceived benefits and/or perceived risks indicated that one or both of these variables accounted for a significant amount of variance for behavioral change from T1 to T2. Table 4 displays the results of the regression equations and shows, for each factor, the R^2 change after controlling for T1 involvement, the F -test of significance for the R^2 change, and the standardized Beta-weight.

Perceived benefits accounted for significant amounts of the variance in behavior change (from T1 to T2) for each of the six factors and the Overall RTB score; percentages of variance accounted for ranged from 5 to 31%. In contrast, perceived risks was predictive of behavioral change for the Illegal Drug RTBs factor only.

The R^2 change for a *post-hoc* multiple regression analysis (entering both perceived

Table 3 *Perceived benefits and perceived risks and predictors of behavioral intentions*

| | R^2 | F | Beta |
|---------------------------------|-------|------------|-------|
| Alcohol RTBs | | | |
| Benefits | 0.39 | 116.70**** | 0.62 |
| Risks | 0.20 | 46.49**** | -0.45 |
| Illegal Drug RTBs | | | |
| Benefits | 0.22 | 53.53**** | 0.47 |
| Risks | 0.14 | 29.56**** | -0.37 |
| Sex RTBs | | | |
| Benefits | 0.33 | 90.32**** | 0.57 |
| Risks | 0.06 | 12.46*** | -0.25 |
| Stereotypic Male RTBs | | | |
| Benefits | 0.07 | 13.02*** | 0.26 |
| Risks | 0.02 | 3.80* | -0.14 |
| Socially Acceptable RTBs | | | |
| Benefits | 0.04 | 7.76** | 0.20 |
| Risks | 0.00 | 0.26 | 0.04 |
| Imprudent RTBs | | | |
| Benefits | 0.13 | 28.00**** | 0.36 |
| Risks | 0.07 | 14.96*** | -0.27 |
| Overall RTBs | | | |
| Benefits | 0.20 | 46.31**** | 0.45 |
| Risks | 0.01 | 1.40 | -0.08 |

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$.

benefits and perceived risks into the equation) indicated that perceived risks did not account for a significant amount of variance in behavioral change for the Illegal Drug RTBs factor over and above what was accounted for by perceived benefits. A *t*-test of the significance of the difference between partial correlation coefficients (calculated for correlated samples) was significant, $t(185)=3.32$, $p<0.01$, and showed that the relationship between perceived benefits and behavioral change was stronger than the relationship between perceived risks and behavioral change for the Illegal Drug RTBs factor. These *post-hoc* analyses for the Illegal Drug RTBs factor confirmed the finding that perceived benefits were a better predictor of behavioral change than were perceived risks.

Discussion

Consistent with previous work with the RIPS (Lavery *et al.*, 1993; Siegel *et al.*, 1994), the data of the present study support the notion that, among late adolescent college students, perceived benefits to self are more predictive of involvement with RTBs than are perceived risks to self. Original research on the RIPS, however, only examined the relationship between perceived benefits and involvement at a single point in time.

Table 4 *Perceived benefits and perceived risks as predictors of behavioral change*

| | R^2 | F | Beta |
|---------------------------------|-------|----------|-------|
| Alcohol RTBs | | | |
| Benefits | 0.31 | 19.19*** | 0.21 |
| Risks | 0.22 | 2.75 | -0.08 |
| Illegal Drug RTBs | | | |
| Benefits | 0.26 | 10.85*** | 0.17 |
| Risks | 0.18 | 10.81*** | -0.16 |
| Sex RTBs | | | |
| Benefits | 0.21 | 13.03*** | 0.17 |
| Risks | 0.07 | 2.38 | -0.07 |
| Stereotypic Male RTBs | | | |
| Benefits | 0.11 | 6.70** | 0.18 |
| Risks | 0.01 | 0.02 | 0.01 |
| Socially Acceptable RTBs | | | |
| Benefits | 0.05 | 5.68** | 0.14 |
| Risks | 0.00 | 0.68 | 0.05 |
| Imprudent RTBs | | | |
| Benefits | 0.22 | 24.98*** | 0.23 |
| Risks | 0.09 | 2.58 | -0.07 |
| Overall RTBs | | | |
| Benefits | 0.20 | 11.40*** | 0.16 |
| Risks | 0.02 | 0.04 | 0.01 |

* $p<0.05$; ** $p<0.01$; *** $p<0.001$.

The present study found that perceived benefits were a more powerful predictor of behavioral change over a 3-month period of time than were perceived risks for all six factors and the Overall RTB score. Similar results were found for behavioral intentions; however, for this subscale, perceived risks were significant predictors for three of the factors. *Post-hoc* analyses confirmed that, although risks were predictive of behavioral intentions for these three factors, benefits was a stronger determinant.

These findings suggest that older adolescents (in general) may be more oriented towards seeking beneficial opportunities that result from involvement in RTBs (Lopes, 1987). Similarly, these adolescents could be conceptualized as “sensation seeking” as described by Zuckerman (1971, 1994). Perceived risk accounted for a significant amount of variance in reported behavioral change for the Illegal Drug RTBs factor only, yet even for this factor—consisting of behaviors commonly considered to be “highly risky”—perceived benefits was the better predictor.

The negative connotations of “risky behavior” which dominate adult thinking are not necessarily viewed in the same manner by adolescents. Certainly the risks that adolescents perceive play a role in the decision-making regarding involvement in RTBs. These risk perceptions, however, appear to play a secondary role compared to perceived benefits. This is not to say that medical and psychoeducational efforts should not continue to emphasize the long-term health-related consequences of risky behavior. It does seem, however, that efforts should be made to address adolescents’ perceptions of the benefits of these behaviors. Qualitative research using many of the same behaviors assessed via the RIPS and RIPS-R have indicated that adolescents tend to report primarily short-term benefits resulting from involvement in RTBs (Lavery *et al.*, 1993). Consequently, psychoeducational programs might consider emphasizing comparisons between the short-term benefits and the long-term health risks of various adolescent RTBs.

The results of this study have specific implications for clinical work with adolescents. Clinicians may want to begin identifying the perceived benefits of adolescent RTBs and develop specific intervention efforts to change such perceptions. Identification of the benefits that adolescents perceive RTBs provide could provide clinicians with possible alternative behaviors or activities that give similar benefit. Perhaps the need for sensation seeking could be met through less dangerous pursuits, provided these alternative activities offer some perceived benefit to the adolescent. Further research should be conducted to understand why adolescents’ behavior is more determined by their perceived benefits than their perceived risks, and to identify specific perceived benefits for RTBs. In addition, the present data make a strong case for assessing a variety of RTBs among adolescents, rather than on limiting assessment to involvement with alcohol and other drugs.

A major methodological issue in research of this nature (i.e. RTBs of adolescents) is the reliability and validity of self-report data. Previous versions of the RIPS have been shown to have adequate reliability, stability over time, internal consistency, and construct validity (Lavery *et al.*, 1993; Siegel *et al.*, 1994). Self-report measures, rather than official records, have emerged as the assessment method of choice for examining adolescent RTB (Block *et al.*, 1988). Self-report data from recent adolescent RTB studies have been found to be both reliable and valid (Johnston and O’Malley, 1985). Furthermore, the probability of an adolescent “faking bad” (i.e. reporting that they have engaged in RTBs when, in fact, they have not) has been found to be quite low (Johnston *et al.*, 1987). The methods used in this study attempted to minimize potential misrepresentation of adolescent RTBs. Several

efforts were made to assure students of the confidentiality of their responses in order to elicit honest responses.

In summary, if perceived benefits are the best predictor of behavioral intentions, and behavioral intentions are the best predictor of the later risk-taking behavior, assessing adolescents' perceived benefits may hold the key to identifying potential risk-takers. The RIPS-R may serve as an effective tool in the clinical practice setting, identifying high-risk takers or those adolescents at-risk. By analysing the benefit scores on this measure, one can gain a better understanding of adolescents' potential to take risks, and proceed accordingly with prevention efforts.

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