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Evaluation of behavioral measures of risk taking propensity with inner city adolescents

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Abstract

The current study examined the utility of behavioral measures of risk-taking propensity in the assessment of self-reported real-world risk-taking behaviors using a sample of 51 high-school-aged inner-city adolescents. Results indicated that performance on one behavioral measure, the balloon analogue risk task, accounted for unique variance in self-reported delinquency/safety risk behaviors as well as substance use risk behaviors, above and beyond that provided with demographics and self-report measures of risk-related constructs (i.e., impulsivity and sensation seeking). These results are discussed in relation to the potential utility of using a multimethod assessment approach for better understanding risk-taking vulnerability among adolescents.

Keywords: Risk-taking behaviors; Adolescents; Assessment; Prevention

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1. Introduction

Risk-taking behaviors are those that involve potential negative consequences (Jessor, 1998), balanced in some way by perceived positive consequences (Gullone & Moore, 2000; Leigh, 1999). Available studies indicate that risk behaviors often are established during adolescence and remain as major contributors to the health problems of adults, including Axis I and II psychopathology as well as physical illnesses (Bachman et al., 1991; Barnes & Welte, 1986; Dembo, Williams, Schmeidler, & Berry, 1992; Resnick et al., 1997). Given the potential negative health outcomes associated with adolescent risk behaviors, the development of technologies for assessing a propensity to engage in risk-taking behaviors is of great public health importance.

One strategy for assessing risk-taking is to use self-report measures of related constructs such as impulsivity and sensation seeking (Brown, DiClemente, & Park, 1992; Neumark-Sztainer, Story, French, & Resnick, 1997; Gullone & Moore, 2000; Pack, Crosby, & St. Lawrence, 2001). Despite evidence suggesting the value of such an approach (Krueger et al., 2002; Sher, Bartholow, & Wood, 2000), evidence also suggests that these constructs alone are not sufficient to capture fully the multidimensional nature of risk taking (Eysenck & Eysenck, 1977; Wills, Sandy, & Yaeger, 2002). Additionally, relying exclusively on a unimethod assessment approach (i.e., self-report) has well-established limitations (e.g., method variance; Campbell & Stanley, 1963). In the case of adolescent risk taking, there also are some specific reasons why exclusively relying on self-report measures of risk-related constructs may be problematic. First, the veracity of self-reports may be affected by any perceived negative consequences of reporting risky behavior. Second, some respondents may lack the insight or cognitive ability to provide an accurate report of their own behavior (e.g., Ladouceur et al., 2000). Finally, because many of these instruments often rely on questions that directly query about the behavior under question, their use in early identification of risk behaviors for primary prevention purposes are limited (Andrew & Cronin, 1997).

Rather than reling exclusively on self-report measures, researchers have begun to develop and utilize behavioral assessment tools that allow for a controlled assessment of actual risk-taking behavior. Although engagement in any particular risk behavior does not guarantee engagement in other risk-taking behaviors, research does suggest some level of clustering among risk behaviors (Gullone & Moore, 2000; Jessor & Jessor, 1977; Kar, 1999; Lejuez et al., 2002), and therefore the utility of identifying a propensity to take risks.

To date, the Bechara gambling task (BGT; Bechara, Damasio, Damasio, & Anderson, 1994) has arguably been the most popular and well-tested behavioral measure of risk taking with adults. In this task, the participant is provided with four decks of cards on a computer screen. Using a mouse, the participant clicks on any of four decks. After each selection, the computer provides feedback indicating the amount of money the participant has won and/or lost on that card as well as a grand total. Following this feedback, the participant can select another card. For cards from two of the decks (A and B), the winnings are high but the losses are even higher. In contrast, for cards from the other two decks (C and D), the winnings are somewhat low but the losses are even lower. Thus, according to Bechara et al. (2001), decks A and B are "disadvantageous" while decks C and D are "advantageous". In this way, risk taking may be indexed by the percentage of cards selected from the disadvantageous decks. Research using the BGT has focused on differentiating typologies of adults who engage in substance abuse. Several studies indicate that adult drug abusers may be more risky than nondrug abusing adults on the BGT (Bechara et al., 2001; Petry,