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Positive Risk Taking in Adolescence

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Abstract

Adolescents are more likely to take risks than children or adults. This propensity can be directed toward negative (illegal and dangerous) or positive (socially acceptable and constructive) risk behaviors. Adolescents who take positive risks include teenagers winning Olympic medals for landing snowboard tricks and students protesting gun violence on a national platform. Yet little is known about the nature of positive risk taking because much of the research on adolescent risk taking has focused on negative risks, such as substance use or delinquency. In this article, we offer a theoretical model of positive risk taking, briefly review research on positive risk taking, and discuss theoretical correlates of positive risk taking based on models of adolescent risk taking. We aim to identify positive risks as a unique class of socially acceptable risks in which youth engage *in addition to* negative risks.

Keywords

adolescence; adolescent risk taking; positive risk taking

The Spectrum of Risk Taking

Risk is a general construct that is not restricted to illegal or dangerous behaviors. Based on neuroeconomic models of decision making (Mohr, Biele, & Heekeren, 2010; Van Duijvenvoorde & Crone, 2013), risk can be defined broadly by three components: 1) potential for both rewards and costs, 2) variability in the likelihood of potential outcomes being realized, and 3) uncertainty about the outcomes (Holton, 2004). Thus, a risky act is a behavior for which the likelihood of its outcome, good or bad, is uncertain (Crone, van Duijvenvoorde, & Peper, 2016), with high-risk behaviors evincing greater variability in, and uncertainty about, the outcomes (Figueredo & Jacobs, 2010).

Within this broad classification, risk behaviors can be thought of as falling along a spectrum of desirability. At one end are *positive* risks: socially acceptable and constructive risks such

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as trying out for a sports team, enrolling in a challenging course, or initiating a new friendship. At the other end are *negative* risks: illegal or dangerous behaviors such as fighting, drinking, or stealing (we use the term *negative* because these risks may be unsafe or harmful, though we recognize that not all negative risks are bad¹). Although various risks may be constructive for development (Chassin, Presson, & Sherman, 1989), in our framework, positive risks are unique in that they are also legal and socially acceptable. Positive risks are risky because of the variability and uncertainty of their potential outcomes (Figueredo & Jacobs, 2010), not as a consequence of the severity of their potential costs. In fact, a behavior is risky even if all the potential outcomes are positive (Furby & Beyth-Marom, 1992), in which case the cost is the less-desired outcome (Furby & Beyth-Marom, 1992).²

A Note on Terminology

Although we use the term *positive risk taking*, other researchers have described this phenomenon as *prosocial* (i.e., socially acceptable or the opposite of *antisocial*) or *adaptive* (Fischer & Smith, 2004; Hansen & Breivik, 2001; Wood, Dawe, & Gullo, 2013). We choose the term *positive* because the term *prosocial* may be confounded with behaviors solely intended to benefit others (e.g., Do, Guassi Moreira, & Telzer, 2017). Arguably, prosocial *risks* (e.g., defending a peer from a bully) are one category of positive risks because they yield uncertain outcomes and a potential cost to the risk taker (cf., Do et al., 2017). However, not all positive risk taking is prosocial. In contrast, the term *adaptive* may be confounded with behaviors that serve (or may have served previously) an evolutionary purpose. For example, fighting may stem from an evolutionarily adaptive desire to demonstrate dominance in a social hierarchy, but it would not be considered positive risk taking in the sense that it is described here. Thus, any antisocial risk, regardless of its adaptive purpose, is not a positive risk.

Elements of Positive Risk Taking

To clarify the nature of positive risks, we suggest three features that theoretically characterize positive risks. We acknowledge these features are broad and are not without potential exceptions. However, we hope this preliminary conceptualization of positive risk taking helps advance the field's understanding of these behaviors. As researchers explore positive risk taking, we expect that empirical work will sharpen the theoretical framework we propose.

First, positive risks *benefit adolescents' well-being*. Despite the potential costs of a positive risk, the adolescent stands to gain something from taking the risk. For example, an adolescent who enrolls in a challenging course may earn a poor grade in the class, become overwhelmed by the material, or be teased by his peers for being a nerd. Despite these

¹Researchers who study adolescence have long argued that many forms of risk taking are normative and adaptive for youth, facilitating qualities such as social responsibility, autonomy, and identity exploration (Baumrind, 1987; Chassin, Presson, & Sherman, 1989; Dworkin, 2005; Hollander & Willis, 1967).

²For example, if a student auditions for the school play and everyone gets a role, the negative outcome would be getting a less-desired role.

potential costs, the adolescent may still benefit in various ways (e.g., learning new skills and becoming more competitive for college admission). Furthermore, it is generally considered developmentally constructive to challenge oneself to facilitate self-growth.

Second, positive risks carry *potential costs that are mild in severity*, at least relative to those associated with negative risks. In our framework, costs associated with positive risk taking do not harm the adolescent's health, safety, or well-being. This characteristic distinguishes positive risks from negative risks (even negative risks serving an adaptive purpose), which by definition have potentially harmful consequences. For example, trying out but not being selected for the high school soccer team may be distressing and diminish an adolescent's social status, but this cost does not threaten her safety or health. In contrast, overdosing on ecstasy or having an accident while speeding pose immediate and long-term threats to adolescents' lives.

And third, positive risks are legal and *socially acceptable*. In the case of positive risk taking, social acceptability refers to the views of adults rather than those of other adolescents (although the positive risks youth take are often supported by their peers). We acknowledge that the social acceptability of certain positive risks can still be controversial. For example, protesting might be viewed as civil disobedience by some and civic engagement by others. Identifying and clarifying the nature of positive risks may allow youth development initiatives (e.g., Lerner et al., 2005) to develop programs that create opportunities for youth to take positive risks (e.g., trying new sports or making new friends).

To put the elements of risk into context (acknowledging there may be exceptions in which not all three elements apply to a particular risk), consider an adolescent initiating a friendship with a new peer group. First, this is a risk because it has the potential reward of establishing a new friendship and the potential cost of rejection (among other potential rewards and costs). Furthermore, the adolescent does not know whether this group will accept her, as this outcome depends on factors such as her social desirability and the status of the peer group. Applying the three elements described previously, we can characterize this risk as positive because 1) seeking out new friendships benefits adolescents' well-being and development, 2) the potential cost of being rejected does not threaten adolescents' safety or health, and 3) initiating friendships is legal and socially acceptable.

Research on Positive Risk Taking

Few studies have explored positive risk taking in adolescents (Fischer & Smith, 2004; Hansen & Breivik, 2001; Wood et al., 2013). Each of these studies used its own definitions and examples of positive risk taking (see Table 1), although none laid out a clear conceptual framework for the construct. Generally, studies of positive risk taking share the idea that positive risks are socially acceptable behaviors involving some potential for loss or harm.

Two compelling findings have emerged from studies of positive risk taking: 1) greater positive risk taking is associated with greater negative risk taking, and 2) sensation seeking is linked to higher rates of both positive and negative risk taking. The positive association between positive and negative risk taking is consistent with findings that youth who engage

in socially acceptable behaviors, such as team sports, also engage in socially unacceptable behaviors, such as substance use (Veliz, Boyd, & McCabe, 2015) and delinquency (Rutten et al., 2007). These findings indicate that adolescents may evince a domain-general propensity for risk taking that can be manifested in both positive and negative forms. This association may also indicate shared correlates between both forms of risk taking.

Sensation seeking—the tendency to seek novel and thrilling experiences—is one such trait shared by positive and negative risk taking (Fischer & Smith, 2004; Hansen & Breivik, 2001). That greater sensation seeking is associated with greater positive and negative risk taking is consistent with research demonstrating that greater sensation seeking among adolescents is associated with both antisocial behavior and positive ambitions, such as pursuing intense and altruistic occupations (e.g., saving people from danger) or novel (e.g., very creative) careers (Mallet & Vignoli, 2007). If adolescents are given more opportunities to channel their sensation-seeking proclivities toward positive activities (and limited opportunities to take negative risks), communities may be able to help reduce negative risk taking among youth who rate high in sensation seeking (D’Silva et al., 2011).

Self-regulation, or impulse control, has also been implicated in both positive and negative risk taking. Although findings are less clear, research suggests that self-regulation may evince opposite associations with negative and positive risk taking. Whereas low self-regulation is linked to greater negative risk taking (see Gottfredson & Hirschi, 1990), recent work suggests that higher self-regulation is associated with higher levels of certain types of positive risk taking (Wood et al., 2013; but see Fischer & Smith, 2004). In one study of adolescents, positive risks were separated into performance (e.g., public speaking) scales and physical (e.g., extreme sports) scales (see Table 1); higher performance, but not physical, positive risk taking, was associated with greater impulse control (Wood et al., 2013). These results suggest that the link between self-regulation and positive risk taking may depend on the type of positive risks in question (e.g., those requiring planning and impulse control, like public speaking). More research is needed to clarify the role of self-regulatory processes in positive risk taking, but studies suggest it may be one psychological factor that distinguishes positive from negative risk taking (Fischer & Smith, 2004).

Measuring Positive Risk Taking

The positive risk-taking scales in the aforementioned studies are limited in two ways. First, many of the items on the scales reflect physical thrill seeking rather than risk taking, such as riding a roller coaster (Fischer & Smith, 2004) or playing extreme sports (Wood et al., 2013); this may have conflated the association between positive risk taking and sensation seeking. That most of the thrill-seeking items are primarily physical thrills also may have limited endorsement to people interested in physical activities rather than those who took positive risks. Relatedly, many of the items on the positive risk-taking scales lacked language emphasizing the riskiness of the behaviors. Wording scale items to emphasize their riskiness may enhance the validity of positive risk-taking scales and prevent including behaviors that are socially acceptable but not necessarily risky. For example, modifying the item *played a sport* to *tried a new sport where you may have embarrassed yourself* emphasizes an uncertain outcome and a potential for loss.

Using the working model of positive risk taking we have presented and building on previous measures of positive risk taking (Fischer & Smith, 2004; Monahan, VanDerhei, & Amemiya, 2013), we developed a self-report scale of positive risk taking that addresses these limits. This scale includes socially acceptable and developmentally constructive risks from various life domains, including social risks (e.g., *spent time with a new group of people when you were not sure you would fit in*), academic risks (e.g., *took a class in a subject you knew nothing about or that seemed challenging*), and extracurricular risks (e.g., *joined a new club or activity when you were not sure you would like it*).

Although studies have used frequency scores to measure positive risk taking (e.g., Fischer & Smith, 2004; Hansen & Breivik, 2001), we prefer variety scores. Whereas frequency scores measure the number of *times* someone has engaged in a risk within a given timeframe, variety scores measure the *number* of different types of risks taken. An adolescent has only so many opportunities to take a positive risk (e.g., enrolling in a challenging course), and it is not always better for an adolescent to take the same risk repeatedly. Thus, variety scores may capture the propensity for positive risk taking more accurately.

Applications to Current Models of Adolescent Risk Taking and Beyond

Studies of positive risk taking, which have examined sensation seeking and self-regulation as correlates of positive risk taking, are largely consistent with contemporary dual systems models (Steinberg, 2008) of adolescent risk taking. According to dual systems theories, development in subcortical brain regions implicated in reward processing is more or less complete by adolescence, whereas development in prefrontal brain regions implicated in executive control is more protracted (Spear, 2013; Steinberg, 2008). Furthermore, connections between these regions are not fully established until early adulthood (Casey, 2015). In effect, adolescents are drawn to novel, exciting experiences—reflected by high sensation seeking—before they have the mature self-regulatory capacities to rein in impulsive behavior (Steinberg, 2008). The combination of high sensation seeking and immature self-regulation in adolescence is thought to contribute to a heightened interest in, and tolerance for, risk taking.

Dual systems theories are a useful starting point for developing testable hypotheses about positive risk taking, but they are not sufficient. We suggest several theoretical correlates of positive risk taking for researchers to consider. Given the dearth of research on antecedents and consequences of positive risk taking, we do not make causal claims about the direction of the associations between positive risk taking and its theoretical correlates. Indeed, many of the factors proposed in our model may be related bidirectionally with positive risk taking.

Since positive risk taking is a pattern of behavior rather than a personality type, there may be few fundamental personality differences between youth who take positive risks and those who take negative risks, especially because most adolescents probably engage in both forms of risk taking (Fischer & Smith, 2004). That said, youth inclined to take positive risks may internalize their families' values and have strong bonds to society (via social control theory; Hirschi, 1969). Positive risk takers may also have important and socially desirable long-term goals (academic or otherwise), and feel they have more to lose by taking negative risks

(Furby & Beyth-Marom, 1992), which motivates them to pursue risk taking in socially acceptable forms. Furthermore, youth who take positive risks may associate with and be influenced by peers who also take positive risks (e.g., Youngblade et al., 2007). Of course, this discussion is speculative, and further empirical work is necessary to identify adolescents' motives for taking positive risks.

As with other forms of risk taking, positive risk taking can help youth achieve developmental milestones such as autonomy and the acquisition of skills (Ellis et al., 2012; Spear, 2013). Positive risk taking may also create opportunities for youth to develop a sense of purpose (Malin, Liauw, & Damon, 2017) and identity (e.g., by standing up for one's beliefs), personal responsibility (e.g., by playing sports on a team), and social competence (e.g., by initiating friendships), as well as to set goals (e.g., by taking challenging courses). Over time, and combined with other positive influences, these may yield additional benefits such as school engagement and academic success (e.g., Wood et al., 2013), perseverance or grit (Duckworth & Gross, 2014), or positive socioemotional functioning (e.g., Crone & Dahl, 2012).

Positive risk taking may yield the unique benefit of offering youth opportunities to fulfill their desires for exciting and risky activities through behaviors that can be facilitated with adult support and societal resources. For example, an adolescent running for school president is likely to receive support from his parents, and students interested in the performing arts are likely to find opportunities for training and performing at their schools. In contrast, adolescents seeking opportunities to drink, cut class, or shoplift are unlikely to receive support for these endeavors from their parents or schools. In other words, positive risk taking allows adolescents to form stronger bonds to their parents and communities, which has numerous benefits to adolescents' well-being (for a review, see Blum & Rinehart, 2000).

Conclusions and Directions

In this article, we have offered a theoretical model of positive risk taking in adolescence and described the literature on this topic. We suggested that positive risks are characterized by three elements: 1) benefit to adolescents' well-being, 2) potential costs that are mild in severity, and 3) social acceptability. Based on research on positive risk taking, positive and negative risk taking are apparently driven by a similar domain-general propensity for risk taking and may share certain psychological correlates such as sensation seeking. Further empirical work is needed to identify additional psychological and contextual factors associated with positive risk taking, as well as to determine how positive and negative risk taking overlap and diverge as behavioral patterns.

Studies of positive risk taking offer a useful foundation for ongoing research, but the information from these studies is limited because positive risk taking has not been defined clearly or consistently. To advance the field's understanding of positive risk taking, we must establish a clearer conceptual framework of positive risk taking, perhaps using some of the ideas we have discussed. The field should also develop valid and reliable methods to measure positive risk taking. In this article, we have mentioned only self-report scales; the

extent to which positive risk taking can be measured using experimental tasks is an important question for research.

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Table 1
 Terms, Definitions, and Examples of Positive and Negative Risk Taking Used in the Positive Risk-Taking Literature

Citation	Terminology	Positive Risk Definition	Positive Risk Examples	Negative Risk Definition	Negative Risk Examples
Hansen & Breivik, 2001	Positive and Negative Risk Taking	Activities that are socially accepted and legal	Riding a rollercoaster, performing in front of a large audience	Activities that are criminal or not socially accepted	Getting drunk, shoplifting, ringing the doorbell and running
Fischer & Smith, 2004	Adaptive/Non-negative and Maladaptive/Negative Risk Taking	Activities lacking a reasonable chance of a negative life outcome	Playing a sport with a member of the opposite sex, auditioning for a play, initiating a friendship	Activities with a reasonable chance of a negative life outcome	Misusing prescription drugs, plagiarizing, driving a car after drinking alcohol
Wood, Dawe, & Gullo, 2013	Prosocial Risk Taking and Substance Use	Objective situation that can be appraised in terms of the potential physical or emotional consequences; potential for physical harm or injury, or mental or emotional harm or punishment	Physical-Risk: Playing rugby, riding a dirt bike; Performance-Risk: Public speaking/debating, dancing, singing	Study examined only substance use; did not offer formal definition for negative risk taking	Using cannabis, tobacco, and alcohol