The Two Faces of Adolescent Invulnerability

DANIEL K. LAPSLEY

The onset of adolescence is associated with a dramatic increase in health-compromising behavior, including the use of tobacco, alcohol, and controlled substances; unprotected sexual activity; and numerous other "reckless" behaviors (Arnett, 1992). Moreover, it is widely believed, in both the popular and theoretical literature, that adolescents engage in risk behaviors partly because of their greater sense of felt invulnerability to injury, harm, and danger. According to the received view, there is something about the developmental status of adolescents that disposes them to feelings of greater invulnerability, which, in turn, underwrites their tendency to engage in patterns of "risk-taking" behavior. When put this way, adolescent invulnerability is considered a psychosocial risk factor that warrants intervention.

Hence, the received view makes at least three claims: (a) that the sense of invulnerability has a developmental source, (b) that adolescents engage in risk behaviors because of their greater sense of felt invulnerability, and (c) that invulnerability is a psychosocial risk factor that should be the target of intervention. Each of these claims is controversial. The claim that invulnerability has a developmental source, or is otherwise linked to the developmental status of adolescents, is contested by research in the risk perception and decision-making literature (e.g., Beyth-Marom, Austin, Fischhoff, Palmgren, & Jacobs-Quadrel, 1993; Cohn, MacFarlane, Imai, & Yanez, 1995; Jacobs-Quadrel, Fischhoff, & Davis, 1993; Whalen et al., 1994). This research shows that teenagers and adults do not appear to differ greatly in how they appraise risk, with both groups tending to "rely on similar, moderately biased psychological processes" that lead them to attribute more risky possibilities to target others than to the self (Jacobs-Quadrel et al., 1993, p. 112). Hence, these data do not support the claims regarding the singularly invulnerable adolescent. The claim that greater felt invulnerability predicts engagement in risk behaviors is not well established and is otherwise contradicted by research that shows that risk behavior is compatible with perceptions of vulnerability (e.g., Gerrard, Gibbons, Benthin, & Hessling, 1996). The claim that felt invulnerability should be the target of intervention in order
to reduce exposure to health-compromising hazards is premature in the absence of a better theoretical understanding of the function of invulnerability in normal adolescent development and in light of research on allied constructs that suggest that self-enhancing ideation, including perceptions of invulnerability, is an important moderator of stress and otherwise serves broad adaptational purposes.

In this chapter, I would like to explore each of these claims about adolescent invulnerability and its relationship to risk behavior. I will argue that felt invulnerability has a developmental source that has not been adequately considered in adolescent health psychology. Moreover, I will argue that the traditional assessment of invulnerability in terms of risk perception (or “optimism bias”) does not exhaust our methodological options. To this end, I will describe a new assessment strategy and report on preliminary studies that document the “two faces” of adolescent invulnerability—that is, its role in predicting both risk behaviors and positive developmental outcomes. I will conclude with some implications of these data for health promotion and risk reduction intervention.

DEVELOPMENTAL SOURCES

Peterson (1996) argued that the promise of health psychology in contributing to the current strong emphasis on health promotion and prevention cannot be fully realized without increased attention to the role of developmental processes in shaping health behaviors. A developmental approach would help identify, for example, “critical developmental junctures of vulnerability to health risks and receptivity toward health interventions” (p. 155). Within health psychology, adolescent risk taking is more often attributed to faulty decision making (Furby & Beyth-Marom, 1992) or unrealistic optimism (Weinstein, 1993), which is itself understood as an “error in judgment” (Weinstein, 1980, p. 806). Is there a developmental source for these errors of judgment and decision making? The theory of adolescent egocentrism has been frequently invoked as a possible framework for understanding the developmental components of faulty risk perception and risk-taking behavior (Greene, Rubin, Walters, & Hale, 1996).

According to Elkind (1967) the transition to formal operations is accompanied by a tendency to assimilate social information to self-regarding ideation, resulting in a peculiar variety of cognitive egocentrism. According to this view, a young adolescent fails to differentiate what is the object of his or her own concern (e.g., the self) from the concerns and preoccupations of others, assuming, egocentrically, that others share one’s own preoccupation with the self. One consequence of cognitive egocentrism is the tendency to construct personal fables, which are modes of self-understanding that include themes of invulnerability (the self is incapable of being harmed or injured), omnipotence (viewing the self as a source of special authority or influence), or personal uniqueness (the perspective of the self is so special it cannot be understood, “No one understands me!”). This tendency to construct personal fables is traditionally invoked to account for reckless behavior in adolescents and for their seeming disregard for the dangerous consequences of their behavior.

Elkind (1967) suggested, for example, that personal fable ideation might help us understand teenagers who risk pregnancy by engaging in unprotected sex (“their personal fable convinces them that pregnancy will happen to others but never to them,” p. 1032). Similarly, Arnett (1992; also, Greene et al. 2000) explicitly argues that personal fable ideation (“cognitive egocentrism”), along with sensation seeking, is implicated in a variety of reckless teenage
activities, including drunk driving, driving at high speeds, engaging in unprotected sex, use of illegal substances, and other delinquent behaviors. Personal fable ideation has also been treated as “negative cognition” that predicts anxiety and depression (Garber, Weiss, & Shanley, 1993). Clearly, then, according to this traditional view, the personal fable is a lamentable feature of adolescent development. It is a sign of cognitive immaturity that has the untoward effect of impairing the judgment of adolescents in critical situations.

A number of studies purport to demonstrate a relationship between cognitive egocentrism and adolescent risk taking (Arnett, 1990a, 1990b; Greene, Rubin, & Hale, 1995; Greene et al., 2000; Greene et al., 1996), mostly by showing that personal fable tendencies (measured in various ways) are correlated with risk behaviors. Yet there are both theoretical (Blasi & Hoeffel, 1974; Lapsley, 1985, 1993; Lapsley & Murphy, 1985) and empirical (Lapsley, Milstead, Quintana, Flannery, & Buss, 1986; also, Dolcini et al., 1989) grounds for doubting that the link between personal fable ideation and risk behaviors can be safely traced to cognitive egocentrism as its developmental source. Moreover, in studies of risk perception, it is now well established that the “inviolability fable” is not unique to adolescents (Millstein, 1993). For example, both adults (Jacobs-Quadrel et al., 1993; Weinstein, 1987) and children (Whalen et al., 1994) report evidence of an optimism bias when asked to estimate one’s vulnerability to health and environmental hazards, findings often considered at odds with the theory of adolescent egocentrism.

Hence, adolescent egocentrism is not a good candidate for explaining the emergence of personal fable ideation or for providing the developmental link between felt invulnerability and adolescent risk behaviors. An alternative candidate views personal fable ideation not as an outcome of cognitive egocentrism but, rather, as an adaptive response to the demands of adolescent ego development (Lapsley, 1993; Lapsley & Rice, 1988). According to this view, an inflated sense of personal uniqueness, omnipotence, and invulnerability is an attempt by the adolescent to maintain the boundaries, integrity, and cohesion of the self as the adolescent wrestles with the second phase of separation-individuation (e.g., Blos, 1962). As such, personal fable ideation has little to do with the differentiation errors of formal operations but is instead a defensive or compensatory response, fueled by an upsurge of narcissism, that allows the adolescent to ward off mourning reactions, feelings of depletion, self-image vulnerabilities, and threats to self-esteem. It may also facilitate the taking of appropriate risks, motivate psychological separation from parents, and provide the inner resources for adolescents to explore new identities, roles, and tasks (Bjorklund & Green, 1992).

The “two faces” of personal fable ideation—that is, its dual role in predicting both risk behaviors and adaptive outcomes—was recently shown by Lapsley and Flannery (2002). In this study, 561 early and middle adolescents responded to the New Personal Fable Scale, which yields assessments of felt invulnerability, omnipotence, and personal uniqueness. They also responded to indices of internalizing symptoms (depression, suicidal ideation), health risks (smoking, drinking, use of controlled substances), delinquent behavior (fighting, vandalism, stealing), and positive mental health (self-worth, mastery coping, superior adjustment). The results showed that the three personal fables had a differential relationship to risk behaviors and adjustment. The omnipotence fable, for example, was consistently associated with positive adaptational outcomes. It was a strong predictor of self-worth, mastery coping, and superior adjustment. Indeed, the
correlation between omnipotence and mastery coping got significantly stronger with age. Moreover, omnipotence strongly counterindicated depressive affect and suicidal ideation. In contrast, the personal uniqueness fable was strongly and positively correlated with internalizing symptoms and had few redeeming qualities. Hence, the fables of omnipotence and personal uniqueness had uniformly positive and negative implications for mental health, respectively.

But the invulnerability fable cut in both directions. It was, as long suspected, a strong predictor of risk behaviors, including the use of tobacco, beer, and other controlled substances, at all ages. Moreover, there was a significant increase in reported invulnerability from early to middle adolescence, a shift that also corresponded to increases in reported delinquent acts (although the bivariate relationship between invulnerability and risk behaviors did not increase with age). However, invulnerability also predicted (along with the omnipotence fable) self-worth, mastery coping, and superior adjustment. Hence, these data would suggest that felt invulnerability presents two faces: It is a risk factor with respect to externalizing, health-compromising behavior; it is also associated with adaptive aspects of adolescent mental health.

FOUR IMPLICATIONS

Dual Functions. The fact that invulnerability (and omnipotence) predicted numerous aspects of positive adjustment is congruent with the theoretical claim that these are defensive or compensatory mechanisms that support adaptive functioning as the adolescent wrestles with normative developmental challenges. Indeed, that invulnerability is also positively associated with risk behaviors is perhaps not surprising in light of claims that engaging in risk behaviors may well serve normal psychological goals in adolescence. According to Jessor (1992), for example, a large class of risk behaviors is characteristic of normal psychosocial development. Engaging in risk behaviors often serves important personal and social functions, such as consolidating peer acceptance, affirming maturity and independence, and warding off stress, frustration, and anxiety. For many adolescents, risk behavior provides an opportunity to solidify a friendship, separate from parents, and experience autonomy. Hence, in his view, such behaviors, far from being irrational or psychopathological, are instead “functional, purposive, instrumental and goal-directed, and... the goals involved are often those that are central in normal adolescent development (Jessor, 1992, p. 378). The invulnerability bias may well be at the service of these normative developmental goals.

A Singular Construct? I noted earlier that there is little reason to regard personal fable ideation as an outcome of cognitive egocentrism. It is also time to reject the notion that personal fable ideation is a unitary construct. There has been a tendency in previous research to treat the personal fable as if it were a unidimensional construct with straightforward implications (invariably negative) for adolescent adjustment. This view is no longer tenable. It is now clear that personal fable ideation is a multidimensional construct, with differentiated relationships with risk behavior and indices of adjustment. This was clearly evident in the findings reported above (see Lapsley & Flannery, 2002). A similar pattern was noted by Goossens, Beyers, Emmen, and van Aken (2002). In a series of studies involving over 1,400 adolescents, Goossens et al. (2002, p. 209) reported that the three personal fables do not load on a common underlying factor and that the three fables show a differentiated pattern of association.
with indicators of mental health and of separation-individuation.

**Fables and Illusions.** Rather than a singular construct, the various personal fables may well be part of a family of “positive illusions” that have been linked to psychological and physical well-being (Taylor & Brown, 1988; Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000). Research has identified, for example, three cognitive illusions that appear to be consistently related to positive adaptation. Hence, individuals who demonstrate unrealistically positive self-evaluations, exaggerated perceptions of control or mastery, and unrealistic optimism (which is how invulnerability is regarded within the health psychology literature) tend to show better adaptation to psychosocial stressors, trauma, and risk than do individuals who are more accurate in their self-perceptions. Positive illusions are related to marital and relational satisfaction (Powers, Lyons, & Montel, 1996; Murray, Holmes, & Griffin, 1996). They counterindicate depressive symptoms (Alloy & Clements, 1992). They are associated with a wide range of positive criteria of mental health, including “positive self-regard, the ability to care for and about other people, the capacity for creative and productive work and the ability to effectively manage stress” (Taylor & Gollwitzer, 1995, p. 213).

Under this interpretation, then, having an exaggerated sense of one’s influence, authority, or power (“omnipotence”) or an exaggerated perception of one’s ability to resist injury or harm (“invulnerability”) is just the sort of self-enhancing bias that may characterize the thinking of many individuals, not just adolescents. Although this literature makes no developmental claims, it does underscore the fact that “illusions” and “fables” are often in the service of cognitive adaptation, including, presumably, adaptation to the developmental challenges common to adolescence. Of course, illusions and fables may also incur costs (Lapsley & Flannery, 2002; Robins & Beer, 2001).

**Assessment.** It is now clear that the current conceptualization of personal fable ideation is a long way from its source in the egocentrism of Piagetian cognitive development. As we have seen, the “new look” views personal fable ideation as a plural construct, conceptually related to other forms of narcissistic illusions, with differentiated relationships to separation-individuation and to risk behaviors, mental health, and adjustment. This change in the theoretical status of the construct calls for new forms of assessment of each variety of personal fable ideation. Although we have derived new scales to assess personal uniqueness (Duggan, Lapsley, & Norman, 2000) and omnipotence (Lapsley, 2000), most of our efforts have been directed toward development of the Adolescent Invulnerability Scale (AIS), given the prominence of invulnerability as an explanation of adolescent risk behavior. In the next section, I report preliminary research using the AIS that documents the “two faces” of invulnerability—that is, its association with certain risk behaviors and also its positive relationship to adaptive mental health.

**THE ADOLESCENT INVULNERABILITY SCALE**

Duggan et al. (2000) administered the AIS and a measure of delinquent risk behaviors (e.g., fighting, stealing, vandalism; Rowe, 1983) to a sample of 228 late adolescents. Exploratory factor analysis of the AIS resulted in two factors. One factor appeared to represent an invulnerability to external danger and was therefore labeled “danger invulnerability.” The second factor appeared to represent an invulnerability to psychological.
distress and was therefore labeled “psychological invulnerability.” Both subscales were significantly and positively correlated with risk behaviors. In a second study of early adolescents, danger and general invulnerability factors were joined by a third factor that reflected a belief that gossip, the opinion of others, and what “other people say” has no effect and cannot hurt the self. This “interpersonal invulnerability” was not evident in the previous study of older adolescents, and its presence in this sample of middle school students perhaps reflects the greater peer focus of younger teens.

As expected, the three invulnerability factors also showed a differential pattern of correlation with risk behaviors and indices of adjustment. For example, depressive symptoms were counterindicated by interpersonal invulnerability, but not by the other invulnerability factors. Use of substances (alcohol, tobacco, drugs) was more strongly related to danger invulnerability than to the other invulnerability factors. And general invulnerability more strongly predicted delinquent behavior than did general and interpersonal invulnerability, although these factors were also significant predictors as well. Clearly, then, the three dimensions of invulnerability have different implications for understanding adolescent behavior and adjustment: Danger invulnerability is more uniformly predictive of drinking, drug use, and smoking. General invulnerability is more strongly predictive of general delinquent or reckless behavior. Interpersonal invulnerability counterindicates depressive symptoms.

Not only is invulnerability not a unidimensional construct, it also does not function uniformly as a risk factor for poor adaptation in early adolescence. This is evident in the fact that at least one invulnerability factor (interpersonal invulnerability) counterindicates depressive symptoms. It is also evident in the fact that all three invulnerability factors were positively associated with mastery coping. Clearly, then, felt invulnerability is not a unidimensional construct with uniform implications for health and adjustment. Although danger and general invulnerability are each linked with certain risk behaviors, it would be inappropriate to conclude that adolescent invulnerability invariably menaces the adjustment of teenagers.

IMPLICATIONS FOR HEALTH PROMOTION

It is said that adolescents engage in all sorts of foolish, reckless, even dangerous, behavior as a result of their felt invulnerability to negative consequences. The implication is that health promotion would be served if adolescent invulnerability were to be undermined, perhaps by making salient the risks that attend such behavior. But it is now clear that the invulnerability construct will frustrate such straightforward conclusions. Although there is certainly evidence that felt invulnerability predicts both delinquent and health-compromising behaviors, there is also reason to believe that invulnerability, and other forms of personal fable ideation, have adaptive functions as well. Consequently, it is by no means clear that undermining an adolescent’s sense of invulnerability is desirable if this self-enhancing illusion contributes to psychosocial resilience in the face of normative developmental challenges.

Even if health promotion campaigns against adolescent invulnerability are desirable, these campaigns may well require precise targeting in order to effect desired outcomes. For example, interventions aimed at reducing the incidence of adolescents’ use of tobacco, alcohol, and drugs would be better served to target “danger invulnerability” rather than other forms. In contrast, interpersonal invulnerability should not be targeted at all and, indeed, may well have to
be mobilized as a psychosocial resource to reduce the incidence of internalizing symptomatology in early adolescence. Invulnerability is not a unidimensional construct, nor does it have uniform implications for health promotion.

Moreover, the effectiveness of health promotion and risk reduction interventions will hinge on how sensitive they are to “critical developmental junctures” (Peterson, 1996, p. 155) that adolescents face. One theme of this chapter is that felt invulnerability has a developmental source. It is a concomitant of normative separation-individuation, and its emergence underwrites positive developmental goals. Indeed, making friends, falling in love, trying out identity stances, experimenting with autonomy, exploring emotional reactions, testing ideological limits—these are normative experiences that are critical to adolescent ego development, and safe passage through this developmental juncture is not without risk. Consequently, it is here, at this juncture, facing up to these challenges, that a measure of felt invulnerability has adaptational advantages. Yet many adolescents will attempt to realize these normative developmental goals in the context of risk behavior, and hence, felt invulnerability will also underwrite a wide range of health-compromising behavior as well. But it is critical to note that adolescents will engage in risk behavior not so much because they are unaware of the risks but because of their perception of its benefits (Goldberg, Halpern-Felsher, & Millstein, 2002). The desire to realize important developmental goals trumps risk assessment. Indeed, as Jessor (1992) noted, risk behavior will seem attractive to adolescents as a means of realizing developmental goals so long as adequate alternatives are unavailing. One might conclude, then, that the enemy of health promotion is not felt invulnerability per se but, rather, inadequate alternatives for adolescents to achieve developmental goals.