

Responsible Behavior: The Importance of Social Cognition and Emotion

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Traditionally, the development of responsible behavior has been a primary aim of American education. Responsible behavior entails self-motivation and self-guidance, and not obedience and compliance to rules merely in response to external supervision, rewards, and punishment. External factors certainly play a major role in responsible behavior, but so too do social cognition and emotion. The purpose of this article is to present a brief review of research linking social cognition and emotion to responsible behavior. Implications for school psychologists are discussed, with a particular emphasis on the importance of developing and implementing prevention and intervention programs that address the multiple components of responsible behavior.

It is commonly understood that social cognition and emotion play a major role in behavior and that they influence, and are influenced by, one's environment (Izard, 2001a). The view that an individual's feelings and thoughts are the primary determinants of social behavior is most evident in theories that attempt to explain how individuals become responsible citizens over the course of development. By *responsible* we are referring to moral and social responsibility, which is the ability to make decisions that concern issues of justice, rights, and the welfare of others, and to act in accordance with such decisions. Various terms are used in psychology and education, often interchangeably, when referring to students who act in a morally or socially responsible manner, with the most common terms being self-discipline, self-regulation, self-control, moral conduct, autonomy, and character. Each of these terms conveys the notion that students are socially competent and that their competence is self-motivated and self-guided by social cognition and emotions. Moreover, each term denotes an understanding by students that they are accountable, or answerable, for their own behavior.

For sure, environmental events, such as what teachers, parents, and peers say and do, exert a powerful influence on children's feelings, thoughts, and behav-

This article was reviewed and accepted for publication under the Editorship of Terry B. Gutkin.

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iors. Observable antecedents and consequences often provide critical information as to the function of behavior. Yet, as noted by Bandura (2001), if external events were the sole determinants of behavior, "as a crude functionalism would suggest . . . people would behave like weather vanes, constantly shifting direction to conform to whatever influence happened to impinge upon them at the moment" (p. 7). Instead, most behavior is more directly determined by a variety of social cognitive and emotional factors that mediate the influence of environmental factors. These factors may support, enhance, or augment the influence of one's environment (Bandura, 2001). They are key mechanisms by which children come to perceive themselves as the cause, source, or agent of their own behavior, and act accordingly. At the practical level, these social cognitive and emotional factors explain why some children act responsibly while others fail to do so within the same situational context. The purpose of the present article is to review briefly these social cognitive and emotional factors. Particular attention is given to (a) social cognitions that help children perceive a need to act responsibly, determine what they ought to do, and decide if they plan to act in accordance with their moral reasoning, convictions, and intentions and (b) the "moral emotions" of empathy, guilt, and shame. Before reviewing these social cognitions and emotions, and their implications for practice in school psychology, their importance in responsible behavior is highlighted.

THE IMPORTANCE OF SOCIAL COGNITION AND EMOTION IN RESPONSIBLE BEHAVIOR

The development of social and moral responsibility has always been an educational priority among American educators (Bear, 1998). This remains true today, as reflected in recent Gallup Polls (e.g., Rose & Gallup, 2000) showing that the general public believes that the most important purpose of public education is "to prepare people to become responsible citizens." In school, responsible behavior benefits both the individual student and members of the school community. As noted below, it does so by promoting positive relations with others, a positive school climate, academic achievement, and self-worth.

Responsible Behavior Promotes Positive Relations with Others and a Positive School Climate

A large body of literature on peer acceptance and rejection demonstrates that children prefer peers and friends who display characteristics of responsible behavior, particularly the inhibition of frequent aggressive or antisocial behavior, and the exhibition of prosocial qualities such as sensitivity toward others, helpfulness, and cooperation (see Rubin, Bukowski, & Parker, 1998, for a recent review). This does not mean, however, that peers prefer those who never display aggression and who always act prosocially. Indeed, students who strictly pursue rule-following goals may be "teacher's pets," but often are not liked by class-

mates (Wentzel, 1994). Conversely, peers who display aggression for the "right" reasons (e.g., in sports, in self-defense, or in the defense of victims of aggression) are seldom socially rejected (Bear & Rys, 1994).

Teachers also are more accepting of children who act responsibly—children who demonstrate self-discipline and do not require constant supervision and external control. For example, teachers report feeling closer to students who exhibit self-directed and prosocial behavior in the classroom and do not require much guidance or correction of misbehavior (Birch & Ladd, 1998). Cooperative and responsible children receive more social support from both teachers (Hughes, Cavell, & Willson, 2001) and peers (Wentzel, 1994). Self-perceptions of such support foster positive feelings of self-worth (Harter, 1999; see below) and a sense of belonging to a school community (Osterman, 2000). Such feelings help foster a positive school climate where students display greater empathy for others, better conflict resolution skills, and reduced delinquency (Battistich & Hom, 1997; Battistich, Schaps, Watson, Solomon, & Lewis, 2000).

Responsible Behavior Fosters Academic Achievement

The relation between responsible behavior and academic achievement is both positive (Wentzel, 1996) and reciprocal (Welsh, Parke, Widaman, & O'Neil, 2001). Children who exhibit prosocial behavior and inhibit antisocial behavior tend to be successful academically (Elias et al., 1997; Wentzel, 1992, 1996). This is because many of the same social cognitions and emotions that account for academic competence also account for social competence. For example, students who pursue academic goals also tend to pursue social goals (Wentzel, 1996). Furthermore, students who are prone to experiencing guilt over irresponsible behavior tend to display prosocial behavior and perform well in school, due perhaps to an internalization of high social and academic standards (Williams, 1998).

Responsible Behavior Promotes Positive Self-worth

As discussed by Bracken elsewhere in this issue, children's overall self-worth, or self-esteem, is determined by multiple factors. Among them are self-perceptions of competence, or adequacy, in important domains of life (Harter, 1999). Central to children's self-worth is the domain of behavioral conduct, or what also has been referred to as the moral domain (Harter, 1985). Children are likely to perceive themselves negatively in this domain when they understand that their behavior is morally "wrong." Because nearly all children, including those with learning and behavior problems, perceive the behavioral domain to be of utmost importance, negative perceptions in this domain take a heavy toll on overall feelings of self-worth. Feelings of anxiety or guilt often result when discrepancies exist between children's self-perceptions of actual behavior and their internalized standards and values about how they *ought* to act. Conversely, acting in a manner that is consistent with their self-perceptions of being a *good* person helps

children maintain a sense of positive self-worth, preventing unjustified self-destructive experiences of guilt and shame (Harter, 1999) and promoting overall life satisfaction (Huebner, 1997).

The relation between self-worth and responsible behavior appears to be mediated by attributions of responsibility. Studies show that many aggressive children often do not have poor self-concepts (Crick & Dodge, 1996; Hughes, Cavell, & Grossman, 1997). Several researchers (e.g., Damon & Hart, 1988; Harter, 1999) have noted that this finding should not be unexpected because moral behavior and self-esteem should be positively related only among individuals who view moral behavior as central to their self-concept and act accordingly. Moreover, a positive relation between behavior and self-esteem should not be expected among those who tend to blame others for their irresponsible behavior, as has been found to be characteristic of aggressive children (Gibbs, 1991).

SOCIAL COGNITIONS AND EMOTIONS RELATED TO RESPONSIBLE BEHAVIOR

For heuristic purposes, in reviewing recent research linking responsibility to social cognitive processes, these processes are divided below into four components, similar to those proposed by Rest (1983). Note that this framework is not meant to imply that the processes always occur in the order presented, or that each component is necessary or sufficient to account for responsible behavior.

Social Cognitive Components of Responsible Behavior

Component 1: Perceiving the need to exhibit prosocial behavior or inhibit antisocial behavior. Acting in a responsible manner requires that children are aware of the need to respond in a given situation and hence should decide whether to exhibit or inhibit behavior that will impact the welfare of others. Such awareness entails multiple social cognitive processes. Foremost among them are attending to and interpreting social cues, foreseeing and anticipating the consequences of one's decisions and behavior (or lack of behavior), and adopting the perspectives of others (Crick & Dodge, 1994; Hoffman, 2000). As discussed later, emotions, especially those critical to empathy and sympathy, also play an important role with respect to social and moral awareness. They often arouse children to moral reflection, social problem solving, or to immediate action (Hoffman, 2000). These processes are influenced by situational factors (e.g., clarity of the circumstances involved; perceived severity of the problem; emotional and physical closeness with others involved), as well as by children's temperaments and previous experiences in similar situations (Crick & Dodge, 1994; Eisenberg & Fabes, 1998).

Recent research by Dodge and colleagues (e.g., Crick & Dodge, 1994; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001) clearly demonstrates the critical importance of encoding and interpreting social information, especially as it

relates to aggression. Aggressive children tend to see anger cues in nonangry facial expressions and in ambiguous conditions (Schultz, Izard, & Ackerman, 2000), overly interpret the intentions of others as hostile (Zelli, Dodge, Lochman, & Laird, 1999), and often fail to attend to mitigating cues (Dodge & Tomlin, 1987). Moreover, they are more likely than other children to have memory and retrieval deficits that interfere with the processing of social information. For example, they tend to be impulsive, quickly retrieving from memory cognitions that support aggression ("Hit if someone threatens you") before attending to mitigating social cues and reflecting upon a responsible course of action (Dodge, Pettit, Bates, & Valente, 1995; Dodge & Tomlin, 1987).

Component 2: Determining what one ought to do. At times children's behavior, especially that of young children, is habitual or impulsive, occurring with little, if any, reasoning. However, on many occasions children do stop and reflect upon their behavioral choices. They engage in sociomoral reasoning, making judgments and evaluations of right and wrong about what they *should* or *should not* do. After deciding among competing moral and social values and outcomes, they determine whether or not to act in a responsible manner.

Sociomoral reasoning of children is related to both antisocial and prosocial behavior. Less mature forms of sociomoral reasoning, particularly those grounded in a hedonistic perspective based on rewards and punishment, are associated with disruptive and/or aggressive behavior in the classroom (Bear & Rys, 1994; Hughes & Dunn, 2000; Manning & Bear, 2002) and with risk-taking and delinquent activities in the community (e.g., violence, theft, substance abuse [Kuther, 2000; Palmer & Hollin, 2001]). Conversely, more mature sociomoral reasoning (e.g., concern about the emotional needs of others and the impact of one's behavior on the welfare of others) is associated with the absence of aggressive behavior (Manning & Bear, 2002) and the presence of prosocial behaviors such as sharing and helping (Miller, Eisenberg, Fabes, & Shell, 1996), cooperative play (Dunn, Cutting, & Demetriou, 2000) and conflict resolution (Dunn & Herrera, 1997). Children with more mature sociomoral reasoning also tend to be more accepted by their peers (Bear & Rys, 1994; Schonert-Reichl, 1999). Indeed, sociomoral reasoning accounts for variance in peer acceptance beyond that explained by observable social behavior, indicating that children are more accepting of acts of misbehavior in others when such acts are grounded in more mature sociomoral reasoning (Bear & Rys, 1994).

Whereas the above research emphasizes children's active reasoning about moral and social issues, other research places greater emphasis on the importance of existing latent knowledge structures and cognitive scripts (or schemas) that are stored in memory. Grounded in personal beliefs, attitudes, and values, knowledge structures and cognitive scripts are analogous to the script in a film, telling children what to do and what to expect in a given situation (Huesmann, 1988). Among aggressive children, knowledge structures and cognitive scripts support their aggression (Burks, Laird, Dodge, Pettit, & Bates, 1999; Zelli et al., 1999). Cognitive scripts do not guide all social behavior, nor do they remain

constant. Certain social situations require new solutions, and thus require moral reflection and possibly new or revised scripts to guide present and future behavior (Huesmann, 1988). This often includes moral reflection—reflecting upon the impact of one's behavior on others and upon issues of fairness and justice (Guerra, Huesmann, & Hanish, 1995). As seen in the next component, such moral reflection often is preempted by more hedonistic goals, resulting in self-serving alternative solutions, including acts of aggression.

Component 3: Deciding to act (or not to act) in accordance with one's sociomoral reasoning. Moral values not only compete with one another, but also compete with other values and with goals based on these values. Research suggests that children conceptualize values as falling within three domains (moral, conventional, and personal), and that the domain into which a behavior falls often determines if children act in a responsible manner (Nucci, 2001; Turiel, 1998). The moral domain concerns issues of justice, fairness, rights, and the welfare of others (e.g., "You shouldn't tease others because it hurts their feelings"). The conventional domain concerns behavior governed by commonly agreed-upon rules and behavioral practices established by a particular social system (e.g., "You can't wear a hat in school because it's against the rules"). If the rule governing the social convention is removed, there is little reason to continue following the rule since it is not grounded in a moral prescription. Finally, the personal domain concerns behaviors pertaining to one's own health, safety, or comfort (e.g., "I don't wear a hat because it messes up my hair"). These behaviors are based on personal preference and choice, and not on matters of justice or the welfare of others (Nucci, 2001).

In general, children and adolescents believe that adults have every right to regulate behavior in the moral domain. However, they frequently question rules governing behaviors in the social conventional domain, especially those perceived to be determined by others in an arbitrary manner and those seen to be of little social or moral importance (e.g., rules against talking in class, turning in homework, coming to class on time, showing respect toward others). Likewise, they feel strongly that adults have little business regulating behaviors within the personal domain, including the use of alcohol and cigarettes, style of clothing and choice of music, sexual conduct, and curfews (Smetana & Bitz, 1996). Similarly, studies show that children with emotional and behavioral problems often fail to differentiate behavior in the moral domain from behavior in the social conventional and personal domains, and fail to reference the wrongness of moral transgressions to the welfare of others (Blair, Monson, & Frederickson, 2001; Guerra, Nucci, & Huesmann, 1994).

Grounded in moral values, goals also influence decisions related to Component 3. For example, upon interpreting a social situation, aggressive children tend to think of desired goals, or personal outcomes, instead of the welfare of others, and believe that aggression is socially acceptable, justified, and leads to positive outcomes (Burks et al., 1999). Although aggressive and nonaggressive children tend to share the goal of social acceptance, aggressive children often

preempt this goal with more hedonistic goals such as getting what they want and retaliating against those who interfere with their goal attainment (Erdley & Asher, 1998). Although to a lesser extent than aggressive children, nonaggressive children (and adults) also have a self-serving bias (Nisan, 1991). That is, they often recognize that they should share and help others but fail to do so after weighing personal benefits and costs.

Goals are also related to prosocial behavior. Children who act prosocially tend to be motivated to achieve social acceptance, respect from others, and a sense of integrity (Covington, 2000). Research suggests that children of all ages pursue these social goals, often more so than academic goals (Wentzel, 1992), and that the pursuit of social goals is highly related to peer acceptance (Wentzel, 1994).

Component 4: Acting in accordance with one's moral convictions and intentions. On many occasions children are well aware of the needs of others and how their prosocial or antisocial actions are likely to impact others. They give good moral reasons why they should or should not act a certain way, and they decide to act accordingly. Nevertheless, they fail to carry through with their decisions. Many of the same situational factors that influence the social cognitions in moral reasoning also influence the consistency, or lack thereof, between children's reasoning and intentions and their behavior. These include peer pressure, proximity of peers and adults, and the saliency of rewards and punishments. Likewise, many of the same social cognitive factors noted above also may account for a lack of consistency between decisional choice and actual behavior. For example, after children decide that they could and should act in a prosocial manner, self-serving personal considerations and contingencies of the moment often exert a strong influence on their behavior and override their prosocial values and goals (Eisenberg & Fabes, 1998; Gibbs, 1994). Two additional social cognitive processes play a critical role in linking moral reasoning and decisional choices to actual behavior: (a) feelings of self-efficacy and (b) attributions and judgments of responsibility.

In general, people who have strong perceptions of self-efficacy are more likely to accept challenging tasks, persist at them, and complete them successfully (Bandura, 1997). Aggressive children tend to have positive feelings of self-efficacy, believing that aggression is easy for them (Perry, Perry, & Rasmussen, 1986), whereas moral exemplars hold strong beliefs that they can act successfully to improve the welfare of others (Colby & Damon, 1999).

Attribution and judgments of responsibility ("Why did this happen? Am I responsible?") help determine consistency between sociomoral decision making and actual behavior (as well as consistency between Components 2 and 3 above [Weiner, 2001]). Of particular importance to attributions and judgments of responsibility are perceptions of controllability and intentionality. Individuals seldom hold someone, including themselves, responsible for actions attributed to an uncontrollable cause (e.g., "I couldn't do anything about it" or "I have ADHD"). However, unless there are mitigating circumstances, someone is held accountable for behavior believed to be controllable. Intentionality also is important, although to a lesser degree. Individuals generally hold others, and themselves, less

accountable when their transgressions are unintentional, although this is not always the case (e.g., when a student who did not intend to cause any harm pushes another student who falls and experiences a serious injury).

Often, the lack of consistency between decision making and behavior can be explained by social cognitive processes that allow individuals to deny responsibility for their actions by attributing blame to others or otherwise disengaging themselves from the consequences of their behavior. Such processes include moral or social justification (e.g., "Given the circumstances, I did the right thing"), euphemistic labeling (e.g., "I was only playing around"), advantageous comparison (e.g., "I didn't cheat as much as the others"), displacement of responsibility (e.g., "I wouldn't have stolen it if he hadn't been so dumb as not to lock his car"), and dehumanization, or victim-blaming (e.g., "The fag deserved it" [Bandura, 1991; Gibbs, Potter, & Goldstein, 1999]). These mechanisms of disengagement, or cognitive distortions, may come into play either before or after a decisional choice is made regarding intended actions. They also may follow rather than precede actual behavior. Regardless of when they occur, they serve to protect the self from feelings of failure that often result when children do not act in a manner that is consistent with their convictions. When verbalized to others, the distortions also serve as excuses that often allow children to avoid blame, negative perceptions from others, and punishment.

Influence of Moral Emotions on Responsible Behavior

In recent years an increasing number of researchers have argued that emotion plays an equal, if not greater, role in responsible behavior than does social cognition (e.g., Goleman, 1995; Hoffman, 2000; Saarni, 1999). With respect to motivating children to act prosocially and to refrain from antisocial behavior, three *moral emotions* have received the greatest attention: empathy, guilt, and shame (Eisenberg, 2000). Operating within each of the above components to moral behavior, these moral emotions foster sensitivity to the needs of others and to the impact of children's decisional choices and behavior on others and often provide the link between "knowing" what is right and "doing" what is right. Other emotions also have been linked to responsible behavior, especially pride and anger, but have received less attention with respect to their role in guiding responsible behavior. Given that empathy, guilt, and shame have received the most attention with respect to research on morally and socially responsible behavior, and due to space limitations, these emotions will be the focus of attention here.

Empathy. Empathy is not a discrete emotion per se, but an affective reaction that entails one or more specific emotions as well as cognitive processes (Hoffman, 2000). Empathy consists of experiencing feelings similar to those that another person experiences in a given situation, or feelings that are congruent with that situation (e.g., feeling angry when witnessing the crying and distress of a victim of abuse or starvation). Empathy can result either in *sympathy* (a combination of emotion and cognition that amounts to a sincere concern about the other person) or *personal distress* (a self-centered response to the other per-

son's distress, as seen in anxiety or fear for one's own safety or personal comfort).

Empathy and sympathy promote prosocial behavior and inhibit antisocial behavior, although the strength of these relations is largely dependent on how empathy is measured and conceptualized (Eisenberg, 2000). Empathy influences, and is influenced by, social cognitions involving each of the above components of responsible behavior. For example, children with conduct problems often have difficulty recognizing emotional cues in others, which likely contributes to the lower levels of empathy that they experience (Cohen & Strayer, 1996).

Guilt. More than any other emotion, guilt is at the core of responsible behavior. It is considered the "quintessential moral emotion" (Eisenberg, 2000, p. 666). In the context of empathy, guilt is the emotion that students experience after violating a personal moral standard and attributing responsibility for the violation to themselves. Although guilt is most likely to occur when children blame themselves for causing someone else's distress or suffering, it also can occur when they believe that they should have acted to prevent someone else's distress or suffering (Eisenberg, 2000). Guilt may occur in situations that adversely impact the student's own reputation or self-perceptions (e.g., when students cheat on tests or fail to complete homework assignments [Bybee, Merisca, & Velasco, 1998]).

Guilt does not have to follow behavior in order to influence it. The anticipation of guilt is also a powerful influence on both prosocial (e.g., "If I don't help now I know I'll feel awful later if she suffers") and antisocial behavior ("I don't think I could live with myself if I hurt him" [Bandura, 1991; Hoffman, 2000]). Guilt functions as a "self-administered sanction" (Williams, 1998, p. 234) that is experienced whether children's misbehavior is detected by adults or not. It is the anticipation of guilt, rather than the presence or absence of external rewards and punishments, that prevents most children from committing moral transgressions (Bandura, 1991; Hoffman, 2000). The anticipation of guilt reflects the internalization of society's values—the understanding that people are responsible for their own actions, and the awareness that their actions impact others.

Children who are more prone to guilt are more likely to help others (Chapman, Zahn-Waxler, Cooperman, & Iannotti, 1987) and to be viewed as caring, considerate, honest, and trustworthy by their classmates (Williams, 1998). Among delinquent youth, low levels of guilt are associated with impulsive, coercive, and unruly behavior (Booker, Hoffschmidt, & Ash, 2001), but increases in guilt are related to decreases in delinquent behavior (Born, Chevalier, & Humblet, 1997).

Not all children are motivated by empathic guilt, however. There is another type of guilt that motivates behavior—fear-related guilt based on concern about the negative consequences of one's behavior on oneself rather than others (e.g., "I would feel awful if I did that and had to be expelled"). Theorists distinguish fear-related guilt from empathy-related guilt, viewing the latter as being much more adaptive to social functioning (Hoffman, 2000). It is primarily empathy-based guilt that motivates children to undo, repair, or amend their misbehavior by confessing, apologizing, or making restitutions.

Shame. The terms guilt and shame are often used interchangeably, but most emotion theorists agree that although they often co-occur and are not easy to differentiate they differ in fundamental ways (Eisenberg, 2000; Izard, 1991). Shame is the emotion students experience when they recognize that their behavior falls significantly short of moral or other self-related standards or expectations that they or others have set for them. The failure to meet these standards is perceived as beyond their control yet within their long-term responsibility. This may lead to debilitating feelings of inadequacy that, if repeated often, may lead to feelings of sadness, hopelessness, and depression.

As with guilt and all other emotions, shame, and particularly the anticipation thereof, can be adaptive (Izard, 1991). In contrast to guilt, the focus of shame is not on the emotional harm experienced by others but on the negative perceptions and opinions others have toward oneself. Likewise, there is greater focus on devaluing oneself, as opposed to one's specific behavior (Tangney, 1998). Thus, instead of feeling autonomous and able to reduce negative feelings by taking reparative action, children feel deficient in some way and through repeated experiences may eventually realize that only a long-term effort that strengthens the self will make them less vulnerable to future experiences of shame (Izard, 1991). Shame also motivates the social conformity necessary for constructive social interactions. For example, many students refrain from the most reprehensible acts in anticipation of the feelings of shame that they would experience as a consequence.

Compared to guilt, however, shame often is less adaptive. Feelings of shame typically motivate children to escape, hide, or *crawl into a shell* in an attempt to avoid further embarrassment. Shame also can become linked to anger and aggression against others (Eisenberg, 2000). Among children, adolescents, and adults, shame correlates positively, and guilt negatively, with various forms of aggression (Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). The adaptive aspect of shame depends on one's ability to utilize shame, or the anticipation thereof, to motivate the acquisition of knowledge and skills that strengthen the self and make it less vulnerable.

IMPLICATIONS FOR PRACTICE AND RESEARCH

Consistent with the focus of this article, and in light of space limitations, in the following section we highlight the practical implications of research on social cognitions and emotions for the design and implementation of programs for developing responsible behavior. We also note several important areas in which research is needed.

Implications for Practice

Central to developing responsible behavior is the understanding that appropriate behavior, even when exemplary (e.g., always obeying the teacher and following school rules), is less important than the means by which it is achieved. Children

do not develop autonomy through the systematic control of their behavior by others, which is the focus of many popular models of school discipline (Kohn, 1996). Whereas school programs that emphasize external control often are effective in producing short-term improvements in behavior, there is little evidence that the gains continue in the absence of adult supervision and external rewards. This is consistent with research that has consistently shown the lack of generalization and maintenance of behavior to be a major limitation of social skills training programs in which students are directly taught specific overt behaviors using basic principles of operant behaviorism and social learning theory (Kavale & Forness, 1999). Few of these programs target the social cognitions and emotions reviewed above.

A consistent finding in the literature on interventions for children who display frequent aggressive and antisocial behavior is that effective interventions are broad-based, comprehensive, developmental, provided early, intensive, and sustained over time (see Bear, Webster-Stratton, Furlong, & Rhee, 2000 and Leff, Power, Manz, Costigan, & Nabors, 2001, for recent reviews of aggression prevention programs). There is a growing literature that the same holds true with programs designed to develop responsible behavior. Effective school-based prevention programs are comprehensive, entailing multiple components and techniques that target not only children's behavior, but also social cognitions and emotions that are related to responsible behavior (Zins, Elias, Greenberg, & Weissberg, 2000). Three such prevention programs, supported by theory and research, are Second Step: A Violence Prevention Curriculum (Committee for Children, 1992; Grossman et al., 1997), the Promoting Alternative Thinking Strategies program (PATHS; Greenberg, Kusche, Cook, & Quamma, 1995; Conduct Problems Prevention Research Group, 1999), and the Child Development Project (Battistich et al., 2000). Each of these programs contains curriculum lessons that use class discussions of social problems and moral issues, role plays, modeling, and direct instruction to develop responsible behavior. Lessons address deficits and deficiencies in social information processing and emotion regulation that are associated with aggression. Likewise, they emphasize social perspective taking, fairness, and empathy—important components of moral reasoning. Each of these programs also includes a parent education component and a strong teacher-training component. These components are designed to promote the generalization and maintenance of skills covered in the curriculum lessons and to foster communication between home and school.

The Child Development Project (e.g., Battistich et al., 2000; Solomon, Battistich, Schaps, & Delucchi, 2000) is the most comprehensive of the three programs, and is the most comprehensive program for developing prosocial and responsible behavior of which we are aware. In addition to the components noted above, the Child Development Project places heavy emphasis on the active involvement of students in classroom and school activities that foster social decision making, moral reasoning, and prosocial behavior. The active participation of all students in this process is designed to develop collaborative social decision

making skills and to generate shared norms and a strong commitment among students to abide by those norms. Other techniques used in the Child Development Project to promote responsible behavior include cooperative learning activities, helping activities (e.g., classroom chores, community service projects), the teaching of prosocial values throughout the curriculum (especially in literature and social studies), and *developmental discipline*. Developmental discipline emphasizes the use of inductions (i.e., statements that highlight the consequences of students' behavior upon others [Hoffman, 2000]) during disciplinary encounters and views such encounters as opportunities to help students develop responsible behavior. As part of a joint problem solving approach, teachers encourage students to consider the impact of their present actions upon others and to identify and practice more prosocial solutions that they can use to solve interpersonal problems in the future. When used in combination, these strategies support the development of responsible behavior and help create a caring community that fosters the continuation of responsible behavior. In such an environment, students feel supported by teachers and peers and understand that their own choices and behavior impact upon others in the community. Students demonstrate responsible behavior out of respect for each other and for the norms that govern responsible behavior, rather than out of the expectation of reward or the fear of punishment. This might explain the positive and lasting outcomes of the Child Development Project on students' social cognition, emotion, and behavior (see Battistich et al., 2000, and Solomon et al., 2000, for recent reviews).

An understanding and appreciation of the reciprocal and complex influences of cognition, emotion, behavior, and the environment is important to school psychologists when consulting and collaborating with others in the design and implementation of programs for preventing behavior problems and promoting responsible behavior. The above referenced programs provide school psychologists with a host of practical strategies and activities that reflect such an understanding. In addition to the design and implementation of prevention and promotion programs, theory and research on the development of responsible behavior has implications for current practices in school psychology in which a behavioral orientation, particularly operant behaviors, has tended to dominate. This includes functional behavioral assessment (e.g., Gresham, Watson, & Skinner, 2001), social skills training (e.g., Elliott & Gresham, 1991; Goldstein & McGinnis, 1997), and positive behavioral supports (e.g., Horner, Sugai, Todd, & Lewis-Palmer, 2000).

For example, recognition of the relations of social cognitions and emotions to responsible behavior, as reviewed above, would provide school psychologists and educators with greater understanding of the functions of behavior, especially those behaviors in which environmental antecedents and consequences are not readily observed (e.g., possession of weapons and drugs or acts of violent aggression). Likewise, it would help make positive behavioral supports more "positive" by complementing externally oriented strategies that reinforce prosocial behaviors with strategies, such as those used in the Child Development Project,

that also focus on the development of social cognitions and emotions that motivate prosocial behavior.

Implications for Future Research

Many school-based prevention programs have achieved some degree of success in increasing responsible behavior and reducing behavior problems. Yet, much remains for future research. In particular we need more research on several issues in the development of the social cognitions and emotions that are related to responsible behavior and on the relationships between them. For example, a considerable body of research shows that emotion knowledge or children's understanding of emotions—their expressions, feeling states, and functions—contributes to both their adaptive social behavior and their academic competence (Izard et al., 2001; see Denham, 1998 for a review). Nevertheless, we know little about the factors that contribute to such a knowledge and understanding of emotions.

Because of the ontogenetic primacy of the emotions and the relative independence of the emotion and cognitive systems, theorists have argued that the forming of connections between emotions and cognitions represents a key factor in the growth of emotion knowledge and in emotional development in general (Ackerman, Abe, & Izard, 1999; Izard, 2001a, 2001b). Very few studies have addressed this problem. As a consequence we do not know precisely how children make emotion-cognition connections. This includes connections between emotions and social cognitions described in the four components to responsible behavior reviewed above. For example, it is unclear how children develop hostile attributions, prosocial and antisocial goals, mechanisms of moral disengagement, or a hedonistic moral perspective, and how these processes become linked to responsible behavior. We do not know the extent to which such social cognitions and emotions and their connections are related to temperament/emotionality or to disciplinary practices and emotional climate at home and school. Likewise, we do not know why certain social cognitions and emotions lead to aggression in some children and not in others.

Although program evaluation research has shown clearly that many school-based programs have demonstrated some degree of effectiveness (Leff et al., 2001), it has not yet indicated which social cognitive and emotional processes are best targeted for prevention and intervention. Likewise, program evaluation research has done little to provide an explanation of the observed changes in children's behavior. Most school-based prevention programs contain many distinct components, and often these components have different theoretical underpinnings. For example, the Child Development Project, Second Step, and PATHS have roots in ecological, cognitive-behavioral, and emotion theories. This mix of methods and theories makes attribution of specific causal processes virtually impossible.

Thus, while a number of current preventive interventions have greatly benefited schools and society, they have done little to advance our understanding of

the development of responsible behavior. Further basic and applied research is needed to help guide school psychologists in the design and implementation of practices that are most effective in developing students whose behavior is not contingent upon the presence of adult supervision, rewards, and punishment, but is guided by adaptive social cognitions and emotions.

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Action Editor: E. Scott Huebner

Acceptance Date: July 2, 2002

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