Using Social Information Processing Theory to Counsel Aggressive Youth

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Abstract

The social information processing (SIP) model, which involves a sequence of six cognitive processing steps, is frequently used by researchers to understand proactive and reactive aggression in youth; however, there has been little discussion in the literature regarding the application of the SIP model in school counseling. This article presents a review of the SIP model followed by a brief summary of the research regarding the relationship between SIP deficits and aggression. Counseling interventions related to each of the SIP steps for use with proactive and reactive aggressive youth are also presented.

Keywords: social information processing theory, proactive aggression, reactive aggression, bullying, school counselor

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The social information processing (SIP) model is one of the most prominent frameworks for understanding aggressive behavior in children (Crick & Dodge, 1994). The specific processing components of the SIP model have been found to be more predictive of children's social adjustment than other global constructs, including perspective-taking and role-taking (Crick & Dodge, 1994).The SIP model provides a comprehensive framework for understanding children's social behavior and for designing prevention and intervention programs to reduce aggression (Li, Fraser, & Wike, 2013).

In the SIP model, the processing of social interactions is characterized as recursive, sequential cognitive processes that influence children's behavioral response to interpersonal events. When confronted with social stimuli, individuals progress through a sequence of cognitive processes that are activated in reaction to an external social stimulus and inform behavioral responses. The initial five cognitive processing steps include (a) encoding social cues, (b) interpretation of cues, (c) clarification of goals, (d) response construction, and (e) response decision. These five cognitive steps are followed by a sixth step, which is the (f) enactment of a behavioral response.

Although few school-based prevention or intervention programs have explicitly applied the SIP model (e.g., Li et al., 2013), studies suggest that prevention programs based on the SIP model are effective in reducing aggression and enhancing SIP skills (Fraser et al., 2005; Terzian, Li, Fraser, Day, & Rose, 2015). The SIP model seems beneficial to a professional school counselor (PSC), as it is based on cognitive behavioral theory. Furthermore, the SIP model seems particularly relevant to PSCs who

promote students' social and emotional development within the real-life context of their peer relationships. However, the SIP model does not appear to be utilized by the school counseling profession, as no articles could be found in which PSCs used the SIP model in prevention or intervention efforts. Use of the SIP model offers potential benefits for the school counseling profession as it is an empirically supported framework that has been used in several promising school-based programs (Fraser et al., 2005; Terzian et al., 2015). The purpose of this article is to provide an overview of the research concerning each step of the SIP model and identify suggestions for counseling with aggressive children who exhibit deficits or differences within each step.

Six Cognitive Processing Steps in the SIP Model

Dodge (1991) defined proactive aggression as intentional, whereas reactive aggression is characterized as involving a reaction to a presumed threat. A meta-analysis study showed that many studies distinguish between proactive and reactive forms of aggression (Polman, Orobio de Castro, Koops, van Boxtel, & Merk, 2007).

Encoding Social Cues

The first two steps of SIP (encoding and interpretation) guide the understanding of social situations. Non-aggressive children are more effective than aggressive children at encoding relevant cues about context and emotion (Dodge & Godwin, 2013). Aggressive children are more likely to encode fewer cues and more hostile social cues, than their nonaggressive peers (van Nieuwenhuijzen et al., 2015; Ziv, 2012). Hostile attribution bias (HAB) is the tendency to attribute aggressive intention to others, which involves both encoding and interpretation. A meta-analysis revealed that HAB is related to aggression in a variety of populations and age groups (Orobio de Castro, Merk,

Koops, Veerman, & Bosch, 2005), and predicts future increases in aggression (Dodge, Coie, & Lynam 2006).

Interpretation of Cues

Children with poor focused attention skills may have difficulty filtering out irrelevant information and stimuli, which contributes to inaccurate interpretations of social situations (Dodge & Godwin, 2013). These interpretation deficits are related to inaccurate problem solving, which may impact students' beliefs about possible responses, prediction of outcomes, and selection of appropriate behavioral responses (van Nieuwenhuijzen et al., 2015). For example, a child in an ambiguous social encounter may focus on children's laughter as being unrelated to the interaction and interpret the laughter as hostile. This interpretation may influence the child's beliefs about the ability to join with others and ultimately may contribute to the use of reactive aggression.

Clarification of Goals

The third step of SIP involves selecting a social goal, whether it be instrumental or relational. Children clarify their goals for a given social situation based on their desired outcome. According to the SIP model, after children have encoded and interpreted a social event, they must decide (consciously or unconsciously) if they will pursue an instrumental or relational goal, and what sort of social goal they want to pursue. High levels of emotional arousal are likely to interfere with decision-making processes related to goal identification (Frey, Nolen, Van Schoiack Edstrom, & Hirschstein, 2005). Children who are prone to emotional arousal are more likely to be impulsive and react with aggression when developing social goals in comparison to

children who do not demonstrate elevated levels of emotional arousal. Reactively aggressive children act aggressively as a response to rejection and are not motivated by social goals (Dodge & Godwin, 2013). Therefore, children who are reactively aggressive are likely to identify goals that reduce negative emotions, as opposed to goals related to regaining lost social status. Children who are more reactively aggressive than their peers are more likely to demonstrate deficits in emotional regulation. These deficits may contribute to goal selection that is based on inaccurate interpretation of social cues, hostile attribution biases, and the failure to evaluate the adequacy of possible responses. Such children are typically viewed negatively by peers, which reinforces the experience of rejection and hostile attributions of peers' intentions (Salmivalli & Nieminen, 2002).

Response Construction

In the fourth step of SIP, children generate options for identified goals. During response access or construction, possible responses are identified either by drawing upon schemas stored in memory, or by constructing new potential responses to address the demands of the situation (Dodge & Godwin, 2013). There is evidence that both proactive and reactive aggressors demonstrate deficits in this stage. Proactively aggressive children may display more attitudinal issues in that they value dominance and are more concerned with instrumental rather than relationship goals. In contrast, children who use reactive aggression struggle with goal identification that stems from a desire to eliminate negative emotions, and do not necessarily seek social dominance.

Research suggests that proactive and reactive aggressive children generate different response options. In comparison to reactively aggressive children, proactively

aggressive children identify aggressive responses as a means to fulfill instrumental goals (Arsenio & Gold, 2006), are more likely to be motivated by tangible rewards, and report happiness in using aggression (Arsenio & Gold, 2006) and elevated self-esteem (Cervone, 1997).

Proactively aggressive children appear to view aggressive responses favorably and feel good about themselves as a result of successful goal completion by aggressive means. This view of proactive aggression highlights potential deficits in empathic reasoning. While proactively aggressive children understand the negative consequences that their aggression has on others, they fail to consider these consequences when generating behavioral responses. Therefore, proactively aggressive children generate responses consistent with instrumental goal fulfillment and lack a connection to the wider consequences of their behavior. Proactively aggressive children perceive their aggression as effective, which increases the likelihood that they store these social experiences in memory and construct social knowledge that will inform future decision-making processes (Crick & Dodge, 1996). These memories of social knowledge and outcomes directly influence children's social behavior and can promote future use of proactive aggression. In summary, proactively aggressive children often understand the harmful impact of aggression but perceive aggression to be an acceptable means to achieve goals.

Whereas proactively aggressive children can often generate prosocial responses, reactively aggressively children exhibit difficulties in problem-solving (Arsenio & Gold, 2006), and may resort to aggression as a means of defense. In comparison to proactive aggressive children, reactively aggressive children

demonstrate less verbal ability and are more likely to exhibit attention and encoding deficits (Crick & Dodge, 1996). Reactive aggression at the response generation step results from inaccurate coding and hostile attributions (Crick & Dodge, 1996).

Moral knowledge structures at the response generation step differ significantly in proactive and reactive children. Both proactive and reactive aggressive children justify the morality of their behavior by disengaging themselves from consequences but through different means (Arsenio & Lemerise, 2001; Bandura, 1995). When proactively aggressive children pursue aggression, they avoid facing the harm they cause, or they minimize it. They readily recall prior information given to them about the potential benefits of the behavior but are less able to remember its harmful effects.

While proactively aggressive children demonstrate underdeveloped empathic or moral reasoning, reactively aggressive children appear to have moral values, but are impaired in their ability to exercise social reasoning while determining the hostile intent of others (Arsenio & Gold, 2006). These deficits in social reasoning are demonstrated by skewed moral justifications for aggression such as palliative comparisons of behavior (e.g., “what I did is not as bad as what they did”) or euphemistic labels for aggression such as “I was standing up for what’s right” or “I was always taught to defend myself” (Arsenio & Lemerise, 2001; Bandura, 1995). Reactively aggressive children disengage from their moral meaning structures by attributing blame to others and seeing themselves as faultless victims who are driven to use aggression. Consequently, aggressive behavior is justified as a self-defense against injustice. The cognitive processes that cue moral knowledge structures differ in terms of reactive (relational goals, with interpersonal focus) and proactive aggression (instrumental goals, with self-

focus), but equally influence the later steps of SIP, namely response generation, evaluation, and decision.

Response Decision

The fifth step of SIP involves the evaluation and selection of behavioral responses to social scenarios. Crick and Dodge (1994) described response decisions as a developmentally advanced processing step involving up to four cognitive operations. Once a behavior has been generated as an option for responding to a social interaction, an individual assesses the behavior based upon held beliefs and values, such as friendliness or moral acceptability, and this process is referred to response evaluation. The individual predicts the likely consequences of engaging in the behavior of interest, or outcome expectation. Responses are evaluated through self-efficacy evaluation, terms in which the individual can effectively enact the response. Aggressive children, in comparison to their non-aggressive peers, select aggressive goals and responses (Ziv, Leibovich, & Shechtman, 2013). Aggressive children report higher efficacy for using aggression (Arsenio & Lemerise, 2001; Oostermeijer, van Nieuwenhuijzen, van de Ven, Popma, & Jansen, 2016; Toblin, Schwartz, Hopmeyer Gorman, & Abou-ezzeddine, 2005), and have less confidence in their capacity to use conflict-avoidant behaviors (Crick & Dodge, 1994).

Children who perceive themselves as being effective in using aggression are more likely to choose aggression in ambiguous social interactions (Erdley & Asher, 1996). Aggressive children are less likely than non-aggressive children to refer to moral values in their behavioral selection (Sutton, Smith, & Swettenham, 1999) and are also more likely to regard aggressive responses as acceptable from a sociomoral

perspective (Fontaine, Burks, & Dodge, 2002). Children evaluate potential responses across domains such as instrumental and intrapersonal gains, consideration of relationships, and consequences (Fontaine, 2006). Aggressive children's expectancy that peers would aggressively retaliate in response to aggression does not appear to deter aggressive children's preference for aggressive behavior (Perry, Perry, & Rasmussen, 1986). Outcome expectancies and self-efficacy beliefs that reinforce the use of aggression are evaluated based on children's prior experiences that have been mentally rehearsed and carried out numerous times, are easily accessed from memory, and are selected for enactment (Crick & Dodge, 1994; Huesmann, 1988).

Behavioral decision-making processes differ between proactive and reactive aggressive children regarding outcome-oriented and ability-oriented processing. In comparison to reactively aggressive children, proactively aggressive children predict more positive outcomes from aggressive behavior (Dodge, Bates & Pettit, 1990; Orobio de Castro et al., 2005; Ziv, 2012). They believe that aggression increases self-esteem (Slaby & Guerra, 1998) and results in tangible rewards (Perry et al., 1986). In addition, children who are proactively aggressive, in comparison to reactively aggressive children, tend to believe that aggression is a relatively easy and effective way of achieving desired goals. The willingness to pursue social goals through instrumental aggression may reflect disruptions in moral reasoning rather than inaccurate social-cognitive biases (Arsenio, Adams, & Gold, 2009). An outcome of aggression that tends to be valued by proactively aggressive children includes control of the intended target; however, aggressive children tend to devalue the negative impact of aggression,

including victim suffering, retaliation, peer rejection, and negative self-evaluation (Fontaine, 2006).

Unlike proactive aggressors, children who react aggressively fail to evaluate the adequacy of possible responses and will be more likely to have highly emotional and impulsive responses that are retaliatory in nature (Crick & Dodge, 1996). Both emotion (anger) and impulsivity have been associated with aggressive behavior. Anger leads to psychological arousal that can flood pertinent processing mechanisms, impeding social reasoning and judgment (Dodge & Godwin, 2013; van Nieuwenhuijzen et al., 2015). Children who are reactively aggressive are less likely to review pertinent mental structures when deciding whether to retaliate. In fact, response evaluation may be entirely omitted as a result of emotional dysregulation (Fontaine et al., 2002).

Enactment of Behavioral Response

The sixth and final step of SIP is response behavioral enactment. In this step, children perform a selected behavioral response based upon the processes in the previous two steps. Performing aggressive responses during enactment can be a result of children's failure to think about consequences (impulsive responses) or a favorable evaluation of aggression (Dodge & Godwin, 2013). Due to the minimal processing requirements, aggressive behavior becomes habitual or automatic, resulting in reenactments that accumulate to form aggressive schemas, which can be readily accessed in social situations. The notion that cognitive schemas guide ongoing processing operations (Dodge et al., 2006) implies that SIP acts as a mediator between the schemas and aggressive behavior. Children develop schemas early in life and enter interactions with databases of acquired knowledge that inform their interpretations and

responses to social stimuli. In ambiguous social scenarios, children's cognitive schemas about themselves within the environment guide information processing, including the interpretations of others' intentions and feelings, and the access to aggressive scripts from memory. As a result of this ongoing processing, the individual will exhibit an aggressive response to the situation (Dodge & Pettit, 2003). Research indicates that early maladaptive schemas, consisting of memories, emotions, and cognitions about oneself and relationships, are significantly associated with aggressive behavior (Fontaine et al., 2002; Zelli et al., 1999).

Influence of Emotion on SIP

A primary criticism of the Crick and Dodge's (1994) SIP model is that it ignored the influence of emotion (Li et al., 2013). It has been suggested that reactively aggressive children demonstrate greater SIP biases than proactively aggressive children because reactively aggressive children experience greater emotional arousal than their proactively aggressive peers, due to the negative experience of victimization and greater likelihood of responding with reactive aggression, which has been associated with greater SIP deficits than proactive aggression (Pouwels, Scholte, van Noorden, & Cillessen, 2016). Although there has been relatively little work that integrates SIP and emotion, there is research that supports Lemerise and Arsenio's (2001) assertion that the child's emotional style or emotionality influences their SIP.

Research suggests that both a child's ability to regulate emotions and the intensity of their emotions influence the cues that they identify in social situations and the meaning attributed to those cues (Casey & Schlosser, 1994). Children who are dominated by their own or other's emotions may select avoidant or hostile goals

(Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994; Saarni, 1999). Children who experience intense emotions and lack the skills for emotional regulation are likely to become too self-focused to construct response options and evaluate those options while considering the perspectives of the various involved persons (Eisenberg et al., 1994; Saarni, 1999). Children experiencing intense emotions tend to use inflexible approaches (Casey & Schlosser, 1994; Saarni, 1999). Emotion is now acknowledged as an essential component of SIP, and thus, emotional regulation training is a common component of SIP-based interventions.

Counseling Interventions

Although there is varied research on the predictors of aggressive behavior, moral emotions and cognitive deficits are the best predictors (Aresenio & Lemerse, 2000). Recent research on SIP and aggression demonstrate that both emotional and cognitive factors are influential (Aresenio & Lemerise, 2000; Casey & Schlosser, 1994; Saarni, 1999). Interventions based on the SIP model, therefore, should account for contextual influences on aggressive behavior, with regard for the implications of both reactive and proactive subtypes of aggression. Encompassing frameworks may be especially relevant for PSCs. For example, the contextual social-cognitive model (Lochman & Wells, 2002) of aggression considers schema, emotional regulation, impulsivity, and SIP deficits as being the driving forces for aggressive behavior. Reactive aggressors are thought to be inhibited by high levels of emotional arousal and impulsivity, whereas proactive aggressors are more cognitively controlled and conscious of aggression-supporting schemas that influence SIP (Crick & Dodge, 1996).

In the first steps of SIP, aggressive children are more likely to exhibit deficits in spontaneously reading and correctly interpreting social cues, in addition to having trouble distinguishing central versus peripheral information. Interventions aimed at improving focused attention and encoding skills through accurate emotional recognition are helpful in the earlier steps of the SIP model.

Emotional recognition refers to the ability to distinguish various affective expressions in facial, gestural, and verbal displays in oneself and others, as well as to understand their social-contextual meaning (Bauminger, 2002). Aggressive children with deficits in emotional recognition abilities display challenges in explaining causes for complex emotions, and in reflecting on oneself in relation to others (e.g., pride, embarrassment). Interventions designed to strengthen emotional recognition skills, such as facial recognition, can aid in accurate encoding of social cues and help children establish a more advanced catalogue of attributions. PSCs may teach accurate encoding skills through facial recognition exercises such as making faces for children and asking them to interpret what the counselor may be feeling, and having children make faces while imagining how someone else might be feeling. This exercise can complement interventions on perspective taking and flexible thinking by asking children to imagine “why” someone may be feeling a certain way. PSCs can explain to aggressive children that although it is not possible to know exactly what another person is thinking or feeling, it is often helpful to guess what other people are thinking and feeling, and then try to determine what another person is thinking and feeling.

Discussions with aggressive children regarding their assessments about the perceptions and emotions of children with whom they are in conflict may illuminate

cognitive distortions, or errors in thinking, such as making assumptions about what others are thinking and overgeneralizations that lead to hostile attributions. PSCs can use cognitive restructuring techniques such as having the child identify the situation of concern (“he was looking at me and laughing”), analyze a mood (“I was angry/embarrassed”), identify automatic thoughts (“he was making fun of me” or “he thinks I’m stupid”), find objective evidence to support his or her thoughts (“he was laughing at me”), and find evidence that does not support his or her thoughts and come up with alternative thoughts (“other kids were not looking at me,” “they were not pointing at me,” “maybe they were laughing at a joke”).

Throughout the early steps of SIP, aggressive children who demonstrate difficulties filtering social information tend to focus on peripheral details, namely physical characteristics, rather than attribution of social meaning (Bauminger, 2002). For example, reactively aggressive children tend to filter out pertinent social information and fixate on one cue (facial expression, laughter, etc.) that they interpret as hostile (Crick & Dodge, 1996). Interventions to improve focused attention and enhance interpretation skills can diminish hostile attribution biases that reinforce the use of aggressive responses. Interventions to improve focused attention include computerized visual stimulation tests and interpretation of pictured social situations. An example of a child demonstrating a deficit in discriminating peripheral versus central social stimuli would be if they identify the physical proximity in a picture of two children sharing, rather than interpret that they are friends.

Interventions may be designed to increase children’s awareness of central social stimuli through recognition of cues and relevant stimuli training. For example, when

working with students who struggle with focused attention problems, PSCs may ask questions about the overall social situation in a broader context (“what were other children doing?,” “what was going on around you?,” "what do you think the other person was feeling?," or "how do you know they were likely feeling that way?") to help them to include additional relevant social information in their interpretations. Aggressive children should be encouraged to consider the likely reciprocal nature of a relationship conflict. PSCs may ask students to consider the pattern of events in a relationship, asking such question as "what happened next," "how did you respond," or "what did you the person do following your response." Aggressive children can be taught flexible thinking by suggesting alternative hypotheses to hostility such as “they are having a bad day,” “they did not mean to bump into you,” or “they were attempting to joke around with you.” Furthermore, having flexible thinking skills may help reactively aggressive children to identify with perpetrators in a positive way by uncovering similarities and shared experiences. The focus of interventions in the earlier SIP steps should be to change the way the aggressive child processes social information. When focused attention is improved, SIP becomes more deliberate, which improves social cognitive abilities, attribution of benign intent in ambiguous situations, and accurate representation of others' emotions. At the conclusion of such discussions, the PSC can help the aggressive child by summarizing the results of these in-depth analyses of social interactions. For example, the PSC might state, "So if I understand you correctly, you were really angry at Mike for walking away at recess, but when you think more about it, not only were you angry, but you were also hurt that he did not seem like he wanted to

talk to you. The more you think about it, you think Mike was upset that at lunch you did not save him a spot at the table."

During SIP, children are presented with social stimuli and are tasked with making inferences and selecting behavioral responses to match the social goal identified in response to the demands of the situation, which requires adequate cognitive control of focused attention and inhibition (van Nieuwenhuijzen et al., 2015). In order to respond competently, children must possess the ability to filter out irrelevant information and consider different possible behavioral responses and outcomes of responses, which requires inhibition of the urge to react impulsively and draw immediate conclusions about social scenarios. Inhibition is also helpful to prevent maladaptive schemas from negatively influencing SIP in ambiguous social scenarios. Intervention with reactively aggressive children who exhibit deficits in producing prosocial responses should focus upon impulse control to delay their responses, and on the development of social cognitive education to identify prosocial responses.

PSCs can teach children who display deficits in emotional regulation to identify emotions and develop strategies to inhibit their emotional intensity. Children who react with aggression to peer rejection are more likely to attempt to conceal their emotional expression, which is associated with increased arousal, leaving them at greater risk for emotional dysregulation (Cortez & Bugental, 1994). Aggressive children are more likely to react impulsively in order to quickly eliminate their negative emotion, and thus fail to consider how the action may be inconsistent with their social goals (Gratz & Roemer, 2004). Children’s attempts to reduce negative emotions should be redirected to modify, rather than eliminate emotional experiences (Cortez & Bugental, 1994). Providing such

children with tools for self-regulation provides them with a sense of power over their emotional experience. Interventions designed to increase awareness and understanding of emotions are beneficial at this step, given that research suggests that response modification is dependent upon the monitoring and evaluating of emotional experience (Gratz & Roemer, 2004).

The PSC must first establish trust in order to create an environment in which the child is willing to explore and express emotions. Typically, such children are more likely to express anger; however, the PSC can gradually help the children identify and express the more vulnerable emotions that often underlie anger, such as sadness, hurt, and loneliness by reframing such emotions as helpful. Emotional validation from a trusted adult can help children to accept their emotional experience and reduce the maladaptive tendency to experience negative emotions in response to one's emotional reaction (Gratz & Romer, 2004). Aggressive children are more likely to seek to eliminate a negative emotion by using aggression, rather than by using experience, and thereby decreasing their emotional intensity through internal mechanisms (Cole, Michel, & Teti, 1994). Initially a child may rely upon a counselor's assistance in managing their emotional intensity; however, with time the PSC can assist children in developing internal resources (Cole et al., 1994). PSCs may ask children to identify triggers for negative emotions such as anger, sadness, and embarrassment and ask them how they experience the onset of these emotions (e.g., "my fists tighten" or "my body temperature rises"). When children become aware of their emotions, they can employ techniques such as deep breathing, positive self-talk, and taking breaks. The PSC may ask children which tools they have successfully used in the past to manage their emotions. Most

students can identify strategies for managing their emotions, and the school counselor's prompting may help them to recall their strengths and resources. Mindfulness techniques may also help with anxious and intrusive thoughts that lead to impulsive aggressive responses. PSCs should form supportive bonds with aggressive children so that they are motivated to delay their responses with the promise of gratification by processing negative emotions with the counselor. When possible, PSCs should provide immediate positive feedback when children are able to employ prosocial responses to conflict. As aggressive children develop the ability to manage their emotional intensity, they can subsequently be encouraged to learn to accept these emotions. Accepting one's emotions helps aggressive youth realize that they can tolerate emotions and provides them with greater insight regarding their wants/goals. Upon learning to tolerate and understand the more vulnerable emotions associated anger, aggressive children hopefully gain a better understanding of their goals/wants and can develop a plan that help them achieve their wants/goals. For example, the aggressive child may realize their goal is to maintain a friendship and threatening to end the relationship with a friend who does not acquiesce to their demand is not likely to be an effective long-term strategy for achieving their goal.

In intervening with reactive aggressors, given that their responses are typically impulsive and highly emotional, PSCs may ask children when they are ready to receive feedback and process the events, giving children time to return to a state of calm where they can better process feedback. Interventions that exercise the working memory, such as verbal rehearsals, can help children plan for challenges and have immediate access to prosocial responses (Scholte, Engels, Overbeek, Van de Kemp, & Haselager, 2007).

PSCs may prepare children by asking them to identify alternative strategies to aggression and have them verbally rehearse prosocial language to manage conflict.

Intervening with proactively aggressive children who exhibit deficits in response generation should include the development of prosocial versus instrumental goals. While proactively aggressive children may have greater cognitive empathy than their less aggressive peers (Arsenio & Gold, 2006; Arsenio & Lemerise, 2001), there is some evidence to suggest that they are lacking in emotional empathy (Matli & Keller, 2009). PSCs could ask such students what they think their victim felt and what were the indicators of their victim's feelings, given that the goal is to encourage the perpetrator to develop a healthy sense of guilt.

Some experts consider guilt to be an appropriate emotion, as it is indication of a violation of prosocial values (Greenberg, 2015). However, it is important for the PSC to assess whether the student is experiencing a sense of shame, which is not considered to be a healthy emotion, as it associated with negative views of self (Greenberg, 2015). With proactively aggressive children who display extreme self-interest, the PSC could assist them in recognizing the benefits of prosocial responses but assume a long-term approach in helping them internalize societal rules, including empathic concern for others (Frey et al., 2005). There are several ways in which PSCs can promote the emotional empathy of proactively aggressive children. Since research suggests emotional empathy is associated with prosocial behavior (Ongley, Nola, & Malti, 2014), PSCs should engage proactively aggressive children in moral evaluations of their aggressive responses to sharpen their empathic reasoning and replace instrumental goals with prosocial goals. PSCs may engage children in the process of empathic

reasoning by asking them to describe their emotions (“how did you feel?”) and by having them evaluate the interpersonal consequences of their aggressive response (“how might they feel?”). Moral reasoning can be promoted by asking children to reflect on their aggressive responses (“was it right?”). PSCs may also reinforce proactive aggressors' displays of emotional empathy. Long-term approaches to promote the emotional empathy of proactive aggressors includes assigning their formalized helping roles, such as serving as peer tutors or mentors. Such formal helping roles may appeal to proactively aggressive children's desire for social status.

PSCs may teach proactively aggressive children empathy by focusing on interpersonal consequences. Interventions should avoid general criticisms of behavior and instead should highlight the proactive aggressor’s emotions attributed to aggressive behavior. Restorative dialogue can be facilitated between victim and perpetrator, which may provide a proactive aggressor with the opportunity to formulate a meaningful apology. PSCs can also model the benefits of prosocial behavior through their working relationship with proactive aggressors by making the interpersonal relationship central to their work. One way of doing this may be accomplished by employing transparency of interpersonal consequences when delivering interventions (“I was disappointed you resorted to pushing him when I know you are a very charismatic speaker”).

Another way to promote emotional empathy would be to generate conversations about sympathy (Decety & Jackson, 2004). PSCs may ask children to identify a character of interest from television or books that he or she felt sympathetic toward and ask how that character may have felt. Proactively aggressive children can be encouraged to be more aware of commonalities between themselves and the victim by

pointing out shared experiences (“do you recall when you had a bad day when you failed your test/were fighting with your friend/ in trouble at home, etc.?”). Furthermore, PSCs may encourage perspective taking (“how would you feel if someone took your lunch money/cut in front of you in line/threw your books, etc.?”). This process of moral reasoning may help proactively aggressive children to validate and internalize moral principles that can be spontaneously accessed when generating potential behavioral responses.

Both proactive and reactive aggressors disengage themselves from moral reasoning in order to justify aggression (Bandura, 1999). While proactively aggressive children may need empathy training, reactively aggressive children seem to have an intact moral compass, but demonstrate deficits in social reasoning, often making hostile attributions to ambiguous social situations (Arsenio & Gold, 2006). Given their experiences of victimization, reactively aggressive children will more readily access aggressive responses by evaluating their aggressor negatively, simultaneously relieving themselves of the interpersonal consequences of their own aggressive behavior. Social skills training can help reactively aggressive children develop a repertoire of prosocial responses to challenging social encounters.

Both proactive and reactive aggressors can benefit from social skills training in order to learn prosocial strategies for challenging social situations, expand their repertories of non-aggressive responses, and increase their efficacy judgments using prosocial behavioral strategies. Aggressive children may be instructed to use the sequential steps of the social problem solving (SPS), which is an approach that sometimes has been confused with the SIP model (Li et al., 2013). Typically, SPS

interventions involve training in problem-solving skills using the following the five-step approach: (a) identifying the problem; (b) brainstorming solutions; (c) selecting, planning, and trying the solution; (d) evaluating if the solution worked; and (e) deciding what to do next (Frey, Hirschstein, & Guzzo, 2000). Sequential problem-solving approaches may be particularly relevant for reactive aggressors for whom research suggests are more likely to impulsively respond to perceived provocation. The PSC should first encourage the reactively aggressive child to use a memory strategy to recall the problem-solving steps, and then model the use of the steps when discussing a social interaction.

The principal objective in working with children who primarily identify aggressive response options regarding social dynamics is to increase their social problem-solving. This may be accomplished by helping them to consider the potential consequences of aggressive actions and teach them prosocial alternatives. Dodge (1991) recommended that both behavioral and social cognitive interventions are helpful approaches for aggressive children, with special considerations for each subtype of aggression. Cognitive behavioral interventions that help proactively aggressive children learn problem-solving skills, accurately assess positive negative outcomes for enacting aggressive behavior, and consider the benefits of using prosocial strategies to attain goals, may be beneficial when coupled with behavioral interventions such as appropriate negative consequences for enacting aggression and positive reinforcement of the use of prosocial strategies.

Proactively aggressive children may use aggression intentionally to acquire or maintain social dominance and some proactively aggressive children may express a

greater desire for dominance (Olthof, Goossens, Vermande, Aleva, & van der Meulen, 2011). With such children it can be helpful to explore the potential long-term consequences of aggression and more effective ways to pursue influence, which are sometimes referred to as eminence-oriented strategies. Although proactive aggression has been found to associated with high social status, as indicated by perceived popularity (Reijntjes et al., 2013), proactively aggressive children who continue to be aggressive towards others for several years are considerably more disliked than peers who were aggressive towards others for a limited time period (Scholte et al., 2007). Vaillancourt and Hymel (2006) found that “there are two different pathways to achieving status (visibility and influence) within the peer group, one through the explicit use of aggressive behavior, the other through the possession of peer-valued characteristics” (p. 398). The PSC may interact directly with a progressively aggressive student by using various statements ("I know that it can be exciting to be involved in the rumors, but how do you think it will impact your long-term relationship with Susie? Is it possible that Susie will not share these things with you, that she is likely to pull away from you? How would that be for you?").

Guerra and Huesmann (2004) suggest a cognitive-ecological model for the basis of understanding the development of aggression. In using the cognitive-ecological model, theorists posit that schemas are deeply embedded, complex concepts that can be understood by contextual factors including observational learning, reinforcement, and normative behavior. PSCs should be aware of the observations that children make and help them to uncover the inferences behind their observations. Consideration of inferential association of observations may be particularly beneficial for reactive

aggressors who interpret ambiguous social stimuli as hostile. Intervention design should consider the types of reinforcement (social status, tangible rewards, etc.) children experience as a result of using aggression to meet social demands. The PSC can increase the reactively aggressive child's ambivalence about the use of aggression, by helping them to realize that, while it may provide the child a sense of power or control, the use of aggression may interfere with their goal of developing closer relationships.

For both proactive and reactive aggressors, interventions should incorporate the modification of maladaptive schemas and address the context that supports them (Fontaine, 2006; Saveliev, 2010). Aggression-supporting schemas, partnered with a low internal locus of control, are thought to be predictors of favorable evaluation and decision of aggressive behavior, including efficacy of aggressive responses, valuing aggression, and positive outcomes expectations (Saveliev, 2010). Children’s latent mental structures (schemas) are continually being appraised and adjusted as they accumulate and make meaning of new experiences (Crick & Dodge, 1996). For example, a proactively aggressive child may possess a schema for aggression that represents a low risk means to instrumental goal fulfillment, reconstructing this schema after an experience in which aggression leads to meaningful consequences such as detention. The counselor may identify and process the negative outcome while revising the child’s schema to an idea that aggression is neither risk-free nor does it lead to a desired outcome.

Revisions of schemas occur both during real-time processing and after enactment. PSCs should consider children’s SIP deficits when determining the timing of interventions. Highly emotional, impulsive children (reactive aggressors) will likely

demonstrate difficulty in real-time revisions, whereas more controlled or instrumental peers (proactive aggressors) may have the capacity to engage in real-time processing. For reactively aggressive children, intervention may be best implemented following enactment of aggression and processed during reflection with the counselor. PSCs may help aggressive children to uncover latent maladaptive schemas that support the use of aggression and identify their relationship to deficits in executive functioning. For reactively aggressive children, this intervention should focus upon reducing hostile attribution bias, while for proactively aggressive children, the discussion of latent mental structures that support aggression can increase the awareness of social attitudes held toward peers.

Summary

The SIP model is a comprehensive framework that offers numerous ideas for developing counseling approaches according to the deficits exhibited by aggressive youth. The SIP approach, while complex, is within the skill set of professional school counselors, as it is essentially a form of cognitive behavioral therapy. Based upon empirically supported evidence, school counselors may rely on the SIP model as an evidence-based approach when working with aggressive students.

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