Parental Monitoring and the Prevention of Problem Behavior: A Conceptual and Empirical Reformulation

Thomas J. Dishion and Robert J. McMahon

Research on parenting practices has revealed parental monitoring to be relevant to the safety of children (Peterson et al. 1993), the development of childhood antisocial behavior and substance use (Dishion, Li, Spracklen, Brown, and Haas, this volume), and academic achievement (Crouter et al. 1990). Parental monitoring, however, is not often the explicit target of even parent-focused prevention strategies. In this chapter, therefore, the authors focus exclusively on the construct of parental monitoring with respect to definition and developmental issues. In addition, measurement strategies and specific issues related to targeting monitoring in preventive intervention trials are discussed.

One of the appealing features of the parental monitoring construct is that it is a common denominator across diverse intervention and developmental models that focus on parenting practices. All models of parenting acknowledge and promote a natural hierarchy in the parent-child relationship, in which the adult assumes leadership. Indeed, parenting is a complex process, requiring responsiveness to the age and ecology of the child. Several constructs are used to describe this process, including relationship quality, limit setting, positive reinforcement, problemsolving, and involvement. Investigators often differ, however, on which of these constructs take priority with respect to family intervention.

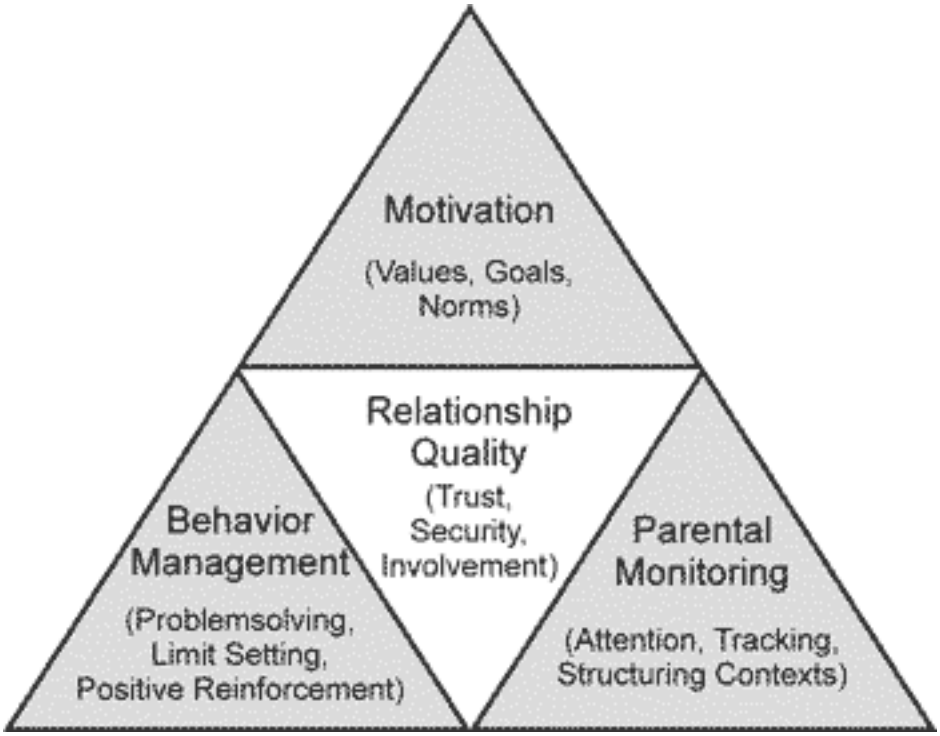
The data do not support a narrow view of the parenting process. Under close psychometric scrutiny, in fact, these constructs are found to be highly interrelated (e.g., Dishion, Li, Spracklen, Brown, and Haas, this volume; Patterson et al. 1992). Thus, schemes that presuppose orthogonal dimensions of parenting (e.g., warmth and control) may not be empirically or conceptually justified (Darling and Steinberg 1993).

From an applied perspective, parenting practices are seen as dynamically connected within a system of tasks and interactions that

are mutually dependent and hierarchically embedded. Behavioral interventions proceed hierarchically, beginning with definitions (e.g., focusing on "key events"; Dishion and Patterson, in press), and then moving on to tracking and monitoring (Patterson et al. 1975). Once behavior change is identified and the problem is assessed vis-a-vis monitoring, positive approaches to behavior change (e.g., the use of incentives) are suggested. SANE (a good consequence is Small, Avoids punishing the parent, is Nonabusive to the child, and is Effective) limit setting is suggested to reduce problem behaviors that do not respond to positive approaches or that threaten the health and safety of the child (Dishion, Kavanagh, and Kiesner, this volume; Dishion and Patterson 1996).

These three behavior change phases stimulate the conceptual model of parenting shown in figure 1, delineating three dynamically interrelated dimensions of parenting that are relevant to prevention: (1) motivation, which represents the parent's belief system (i.e., social-cognitive framework) including norms, values, and parenting goals; (2) parental monitoring, the tracking and structuring of child activities and ecology; and (3) behavior management, the parent's active attempt to shape positive child outcomes by using incentives, scaffolding, limit setting, and negotiation.

The foundation of parental motivation, monitoring, and behavior management is the quality of the parent-child relationship. It is difficult to extricate the emotional quality of the relationship from belief systems or the specifics of parent-child interactions. Relationship quality within the family is critical to children's well-being and social development (Belsky and Nezworski 1988). A positive parent-child relationship enhances parents' motivation to monitor their child and to use healthy behavior management practices. For example, the parent-child relationship may become stressed when the child becomes an adolescent and demands autonomy (Galambos 1992; Gjerde 1986; Steinberg 1987). This, in turn, may lead to a deterioration in parenting practices due to the disruptive impact of negative emotions (Forgatch 1989). Conversely, monitoring children's activities is essential to establishing and maintaining a positive parent-child relationship. In the event that child behavior problems emerge, the parent-child relationship becomes undermined (Patterson 1986; Patterson and Dishion 1988). A negative report from the school about behavior problems may eventually lead to parent rejection, rendering the parent recalcitrant to change.



It is in this sense that specific parenting practices and the quality of the relationship are dynamically related. Parental monitoring is particularly relevant to prevention science because of its critical role in the behavior change process and the fact that it is a potentially malleable parenting behavior. The authors propose that adequate parental monitoring is a necessary but not sufficient condition for effective parenting and for improved adaptation for the child. In addition, parental monitoring may serve as a protective factor for children living in high-risk settings.

EMPIRICAL RATIONALE

There are at least four areas of child and adolescent research in which some aspect of parental monitoring is considered to play an important role: safety and injury, antisocial behavior, substance use, and academic achievement. Whereas there has been some cross-fertilization and collaboration among researchers in the antisocial behavior and substance use areas, there has been relatively little communication between these researchers and those working in the other areas.

Two aspects of injury prevention research concerning parental monitoring distinguish it from similar research in antisocial behavior, substance use, and academic achievement. First, injury prevention research involves younger children (infancy to age 4 or 5), with occasional examples of studies done with school-age children. Second, much of the research has addressed issues related to parental attitudes and beliefs about monitoring. For example, Peterson and colleagues (1993) assessed beliefs about the appropriate levels of parental monitoring required for children of different ages (infancy through age 10) and in different settings of varying risk. Mothers, child protection service workers, and physicians indicated the amount of time children should be left unsupervised in different settings within the home, the yard, the street, the neighborhood, and in a parked car. All three groups of respondents indicated the need for increased parental monitoring with increased risk in the setting and less parental monitoring with increasing child age. However, there was tremendous variation in the actual time estimates required for appropriate parental monitoring, especially for school-age children.

In a study by Garling and Garling (1993), mothers rated the degree of risk and anticipated injuries to their 1- to 3-year-old children under four levels of parental monitoring: (1) child plays alone while mother is in another room, (2) child plays alone while the mother attends to her work in the same room, (3) child helps mother with her work in the same room, and (4) mother plays with child in the same room. In general, mothers reported lower perceived levels of risk to their children in situations that allowed more parental monitoring, although this was more the case for younger, rather than older, children.

Lack of sufficient parental monitoring has been implicated in accidental poisonings (Brayden et al. 1993), exposure to household safety hazards (Glik et al. 1993), playground accidents (Buck 1988), and handling of hazardous substances in grocery stores (Harrell and Reid 1990). Thus, interventions that target parental beliefs and practices regarding the supervision of young children are likely to reduce the rate of injury.

There is a long history of interest in the parental monitoring construct within psychology (conduct problems) and sociology (juvenile delinquency) (Loeber and Dishion 1983; Patterson 1982). Research in this area has traditionally focused on adolescents, and researchers have typically employed the term “supervision” to describe parental monitoring (Craig and Glick 1968; Glueck and Glueck 1959; McCord et al. 1963; West and Farrington 1973). Parenting practices that fall within the realm of parental monitoring

have demonstrated empirical validity in several longitudinal studies. Parental supervision during childhood, as measured by home visitor impressions, was one of the better predictors of male adolescent delinquency across several classic delinquency studies (Loeber and Dishion 1983; Loeber and Stouthamer-Loeber 1987). In fact, a constellation of family factors relevant to parental monitoring (i.e., family disorganization and poor parental supervision) consistently provided the best predictions of adolescent problem behavior, even in comparison with problem behavior in childhood.

The label change from parent supervision to parental monitoring was made to facilitate the translation to intervention strategies for parents with troubled children (Patterson 1982). Using a multiagent, multimethod approach to measure parental monitoring proved to be an important addition to an emerging developmental model of antisocial behavior. Patterson and Stouthamer-Loeber (1984) found that as children approached adolescence, more of their time was spent in unsupervised activities. Individual differences in parents' monitoring practices correlated with levels of antisocial behavior in boys. Patterson and Dishion (1985) used structural equation modeling to test a model for the impact of poor parental monitoring on delinquent behavior. Parental monitoring was found to have both a direct and an indirect effect on delinquent behavior. Dishion and colleagues (1991) found poor parental monitoring to be a significant factor in children's development of a deviant peer network in early adolescence, after controlling for prior levels of peer rejection and antisocial behavior.

Stoolmiller (1994) has identified a "wandering" construct to describe the tendency of some preadolescents and adolescents to actively avoid adult supervision by spending time in unsupervised community contexts. Patterson (1993) found that wandering and deviant peer involvement accounted for growth in problem behavior throughout adolescence, and poor parental monitoring and limit setting accounted for the initial levels of antisocial behavior serving as the starting point for adolescent problem behavior.

There are longitudinal data suggesting that serious antisocial behavior can be an outcome of a progression from relatively trivial behaviors to increasingly dangerous behaviors (Patterson et al. 1992). Inadequate parental monitoring has been implicated in fire setting in children (Kolko and Kazdin 1986, 1990). Parents of children ages 6 to 13 who set fires reported significantly less monitoring than parents of children who did not set fires. Parents of children who engaged in

match play only did not differ from either of the other two groups of parents.

Several investigators have linked low levels of parental monitoring to early substance use (e.g., Baumrind et al. 1985; Brown et al. 1993; Fletcher et al. 1995). Dishion and Loeber (1985) found that parental monitoring was both directly and indirectly correlated with young adolescents' alcohol and marijuana use. In a subsequent study, parental monitoring was associated with children's drug sampling as early as 9 or 10 years of age (Dishion et al. 1988). Programmatic studies by Chilcoat and colleagues (1995) have extended these findings in several important ways. They have provided a replication of the relationship between children's report of monitoring rules and early drug experimentation at ages 9 and 10, using logistic regression techniques that included only new initiations. Working with a multiethnic urban sample, Chilcoat and Anthony (1996) documented that poor monitoring was prognostic of early initiations through late childhood. In general, the relation between monitoring and early drug experimentation held across neighborhoods and ethnic groups. Parental monitoring did not vary significantly by ethnic status; it did, however, vary as a function of the child's gender. Girls are monitored more than boys, a finding consistent across several studies (Dishion, Li, Spracklen, Brown, and Haas, this volume).

A low level of parental monitoring after school is critical to early-onset substance use. Several investigators found that in early adolescence, poor monitoring after school is associated with smoking (Radziszewska et al. 1996; Steinberg 1987). High-risk settings for substance use, or "hot spots," vary across communities. In less than a 1-hour exposure to a community hot spot, young adolescents can initiate a substance use career, often beginning with cigarette smoking. One hot spot particularly prevalent and troublesome to middle-school youth is the home of an unsupervised child. Friedman and colleagues (1985) found that over 80 percent of smoking initiation episodes occurred in friends' houses without a supervising adult.

The relationship between parental monitoring and child academic achievement has recently been explored, albeit with somewhat contradictory findings. For example, in a study by Crouter and associates (1990), lower levels of parental monitoring were associated with lower grades for boys only (ages 9 through 12). Kurdek and colleagues (1995) reported a curvilinear relationship between parental monitoring and child grade point average in their sample of sixth graders. Moderate levels of monitoring were associated with the highest grade point averages. Alternatively, parental monitoring was

positively associated with achievement test scores only in conjunction with low levels of parent autonomy-granting. Similarly, Coley and Hoffman (1996) reported that, in two-parent families, lower levels of parental monitoring were associated with higher standardized math achievement scores in their sample of third- and fourth-grade students. However, children in two-parent families who were monitored scored higher than children in single-parent families with comparable levels of monitoring. This pattern of findings was not obtained for reading or language achievement scores. These studies suggest the necessity of considering a variety of potential moderating variables (e.g., neighborhood risk, single parent, maternal employment status, parent education) in explaining the relationship of parental monitoring to child academic achievement.

Despite the theoretical appeal, potential malleability, and empirical support for the parental monitoring construct, there has been a lack of attention to relevant definition and measurement that is critical to integration within prevention trials that target parenting practices. Discussion of these issues follows.

Parental Monitoring Defined

Definitions in the areas in which parental monitoring has been of particular interest (i.e., safety and injury, antisocial behavior, substance use, and academic achievement) have tended to be idiosyncratic. For example, researchers in the antisocial behavior and substance use areas typically have limited their definition of monitoring or supervision to parental awareness of a youth's peer group and his or her whereabouts in the neighborhood. Populations of interest have usually been adolescents (exceptions include Chilcoat et al. 1995 and Dishion et al. 1988). Researchers in the injury prevention area have focused on the extent to which parents supervise their children in the home, and much of this research (often conducted with samples of infants and young children) has focused on beliefs and values rather than practices. Researchers in the academic achievement area have tended to focus on samples of school-age children (third to sixth grade). Definitions of parental monitoring have varied, but have tended to be more operationalized than in the other areas. For example, Coley and Hoffman (1996) distinguished between in-person proximal contacts with the child (which they termed "supervision") and distal parental influence via telephone contact or by rules (termed "monitoring").

The authors propose that parental monitoring, broadly defined, is a skill that is important throughout the developmental period, from infancy through adolescence, and perhaps even into young adulthood.[1] While the specific methods and foci of monitoring will change at different developmental periods, the function of these activities is essentially the same: to facilitate parental awareness of the child's activities and to communicate to the child that the parent is concerned about, and aware of, the child's activities.

One reason for preferring the term "monitoring" over "supervision" is that the former encompasses a larger set of critical parent activities. Parental monitoring practices involve both structuring of the child's environment and "tracking."

Relative emphasis on these behaviors has also tended to vary as a function of the area of research. All have focused on tracking of the child; however, the extent to which this tracking has referred to an awareness of the child's location and activity at a particular moment has varied, even within areas. Structuring the child's environment to facilitate tracking can be done by actual physical modification (e.g., placing a baby monitor in the child's room, enrolling the child in an after-school recreation program, keeping the TV turned off while homework is being done) and by the use of verbal mediators, such as rules (e.g., "You may not go off the block," "Homework is done immediately after dinner."). While the use of rules is promoted by all areas, environmental structuring has tended to occur more frequently in the injury prevention area.

Clearly the child's ecologies vary with age and the context within which the family functions. The authors consider it essential that the definition and measurement of parental monitoring reflect these developmental and ecological variations. For infants and toddlers, the home setting is most common. Once children enter school, monitoring of the child's attendance, behavior (in the classroom, on the playground, on the bus, etc.), and academic achievement become important goals. As the peer group assumes increasing importance in the later elementary school years, it is essential that monitoring also include a focus on children's peer associates and their activities and whereabouts in the community. There are also cross-contextual aspects of monitoring. For example, parental monitoring at home should also include supervision of the child's homework.

Other contextual influences, such as family structure, the safety of a particular neighborhood, and cultural/ethnic variation must be considered. Parental monitoring may vary as a function of the

number and availability of parental figures. Monitoring may be less effective in a family headed by an isolated single parent who is socioeconomically disadvantaged than in a middle-class family with two parents or a single-parent family with sufficient income and a supportive parenting network (Dumas and Wahler 1983). If extended family members play an active role in childrearing (as is found in many ethnic groups and cultures), the extent and quality of their monitoring must be taken into account. A sole focus on the monitoring of the biological parent would drastically underestimate the amount of monitoring that the child is actually receiving. Finally, the relative safety/danger of a particular neighborhood may play a role in the extent to which high levels of monitoring may be warranted (Richters and Martinez 1993). The evidence suggests that monitoring may be a protective factor related to lower rates of delinquency in high-risk environments (Wilson 1980).

Another limitation of research on parental monitoring has been the focus on monitoring practices or behaviors, to the near exclusion of parent motivation, which includes a complex set of social cognitions (i.e., beliefs and values) related to monitoring (Harris and McMahon 1998). There is increasing recognition of the role that beliefs and values play in affecting various parenting practices (Holden and Edwards 1989; Johnston 1996). Much like parent-child relationships, beliefs and values regarding parenting are dynamically related to monitoring practices and could play a role in the extent to which parents consider monitoring to be an important, or even necessary, parenting practice. Parental social cognitions may serve to motivate or drive parental behavior and may also moderate the effect of external factors such as life stressors on child behavior (Johnston 1996).

Patterson (in press) proposes a mediation model suggesting that social cognitions influence the performance of monitoring practices, which in turn impact children's outcomes. The extent to which parents themselves were monitored as children or adolescents may play a role in determining whether they believe that monitoring is important; parental beliefs as to what constitutes appropriate levels of effective monitoring might influence the extent to which they engage in monitoring behavior. With respect to the moderation of external factors, Wahler and Dumas (1989) have suggested that stressors such as maternal depression, daily hassles, and unemployment or health problems may serve to disrupt parental attention to child behavior. This could then lead to difficulties in parents' abilities to monitor their children effectively.

A broader conceptualization of parental monitoring is required. An adequate model of parental monitoring must include the following:

- Structuring of the environment and tracking by parents.
- Consideration of the entire span of the developmental period (i.e., infancy, childhood, adolescence, and into young adulthood).
- Assessment of various ecological contexts that are developmentally relevant for children of a particular age (e.g., home, school, and neighborhood).
- A distinction between monitoring values (parental social cognition) and practices (parenting behavior). Motivation to monitor is therefore seen as a necessary, but not sufficient, condition for actual monitoring.

Given these considerations, the authors propose the following definition of parental monitoring:

Monitoring of the child by parents is one component in the constellation of effective childrearing practices. Parental monitoring includes both structuring the child's home, school, and community environments and tracking the child's behavior in those environments. Parental monitoring plays an important role from infancy into young adulthood and should be developmentally, contextually, and culturally appropriate. Positive parental social cognitions concerning monitoring are a necessary but not sufficient prerequisite for the successful implementation of parental monitoring practices.

Some of the key measurement issues to consider when incorporating parental monitoring within intervention research are discussed below. These issues have emerged in the context of clinical and developmental research involving the measurement of parenting practices, parental monitoring, and change as a function of intervention.

Measurement Issues

Parental strategies for tracking the child and structuring supervised contexts vary with the age of the child. Table 1 provides a measurement framework for studying parental monitoring from infancy through adolescence. Parental tracking and structuring of

child behavior vary as a function of the developmental status of the child and the ecology of the family. As shown in table 1, the majority of parental monitoring in infancy and early childhood occurs in the home setting. Initially, it involves basic caretaking of the infant's physical and emotional needs. Once the child becomes mobile, it also involves tracking the toddler's behavior and whereabouts to ensure safety. Scaffolding is a parent tactic that provides the appropriate level of support for young children to share in routine tasks that promote cognitive development and competence. To provide such scaffolding, parents need to monitor the child's competence and adjust tasks to fit within the zone of proximal development (Rogoff and Wertsch 1984). Measurement techniques during early childhood depend on direct observations and adult (parent and significant others) reports, as well as home visitor impressions. These measurement methods carry forward into childhood and adolescence, but the content shifts relative to the developmental status of the child. Children and adolescents are verbally interactive; therefore, much of parental monitoring is verbally mediated through the use of basic parent-child discussion of the child's whereabouts, activities, and with whom they spend time.

In all human cultures, parental monitoring is accomplished to some extent by arranging for surrogate care. In Western cultures, surrogate care is often formal, not involving extended family or community members. In infancy and early childhood, this formal care is associated with the economic resources to pay for an inhome caregiver or a
day-care center. In childhood and early adolescence, babysitting is arranged to care for children when adults are away. Children and adolescents are often involved in structured activities that include adults (e.g., organized sports, church or school groups). As discussed previously, it is important to measure after-school monitoring. In general, the nature of such surrogate care and involvement in structured activities would be an important index of monitoring throughout development.

TABLE 1. *Ecologically focused measurements of parental monitoring from infancy through adolescence.*

Developmental Period	Key Ecologies	Observable Processes	Measurement Strategies
Infancy	Home Surrogate care[b]	Sychronicity[a] Caretaking[a] Safety[a] Response to separation[a]	Parent Home visitor[c] Significant others Structured tasks
Early childhood	Home Surrogate care	Scaffolding Compliance[a]	Parent Home visitor Significant others Structured tasks
Childhood	Home School Surrogate care Neighborhood	Monitoring rules[a] School adaptation Unsupervised time with peers[a] Supervised activities[a]	Parent Home visitor Significant others Neighbors Teachers Child Peers Structured tasks
Adolescence	Home School Neighborhood Community	Exposure to "hot spots" Wandering Transit time Routine activities Communication and problemsolving	Parent Home visitor Significant others Neighbors Teachers Child Peers Structured tasks

[a]These are basic monitoring processes that may change form but carry forward through adolescence via the principle of hierarchical integration.

[b]Surrogate care is a dominant structuring strategy that varies in form with the development of the child, beginning with infant care, preschool, babysitting, and extended family care.

[c]Home visitor is a general strategy that relies on professional interviewers who render impressions.

When assessing parental monitoring, changes in the developmental status and the expanding ecologies of the child must be considered. The home setting is the first and primary context for assessment in early childhood. The beginning of school involves a qualitative shift in the nature of parental monitoring; school is the second universal context in which monitoring takes place. Monitoring becomes more distal, in that parents must track and structure to determine and influence the child's adaptation within school. Successful adaptation refers to both academic and social success. This includes the child's

attendance at school, acquisition of age-appropriate academic skills, the development of appropriate classroom behavior (e.g., listening to instructions, focusing on seatwork), and interactions with peers and teachers in various school-related settings (e.g., classroom, playground, school bus). Academic and social success are especially important to subsequent parental monitoring by establishing a developmental trajectory that is both salutary for the child and easier to monitor for the adults. Neighborhood activity and peer groups are also quite relevant to the child and adolescent. In fact, selection of antisocial friends from the neighborhood is a characteristic of antisocial youth, and therefore suggests that some neighborhoods are an especially important context for monitoring (Dishion et al. 1995; Wilson 1980). Finally, tracking and structuring the young person's involvement in community settings are relevant to late childhood and adolescence (Richters and Martinez 1993; Stoolmiller 1994).

The quest for increasing levels of independence and autonomy characterizes adolescence and challenges many parents whose strategies for monitoring served well during the early childhood years. Negotiation and problemsolving are critical communication skills in adolescence, as are basic listening skills (Forgatch 1989). Conflict during problemsolving discussions can lead to the "flight to peer" phenomenon, a bidirectional distancing process in which family conflict leads to the child spending more time with peers away from home (Elder 1980; Forgatch and Stoolmiller 1994). Good communication and problemsolving skills can serve to maintain the parent-adolescent relationship as well as refresh adult guidance in routine activities. As pointed out by Patterson and colleagues (1992), a history of failure in parenting is likely to undermine the parent-child relationship and reduce motivation for monitoring, which may be reflected in lax norms. What the parents do not know, they do not have to change. Furthermore, the more deviant the child, the more likely he or she will avoid attempts to monitor and will seek out settings where adults are absent (Stoolmiller 1994).

The development of parental monitoring from infancy through adolescence fits the principle of hierarchic integration. Experiences within the parent-child relationship build toward a parent-adolescent relationship within which monitoring practices are embedded. Trust, involvement, and shared activities are integral to monitoring.

Table 1 reveals that, in principle, many of the monitoring practices of infancy and early childhood carry forward to adolescence. Caretaking of the adolescent's needs is an important component of parental monitoring; however, the form and function change

dramatically from infancy and childhood. For example, parents still need to attend to clothes, transportation needs, and the emotional well-being of the adolescent when caretaking. The ways in which this caretaking is carried out differ dramatically from when the adolescent was younger, with emphasis on increased responsibility of the adolescent and greater reciprocity between the parent and adolescent. Parent-child synchronicity has now evolved into parent-child communication processes, a critical feature of successful adaptation to the adolescent transition. Thus, there is a sense that parents are aware of the emotional atmosphere of the family and the child and modulate behavior, activities, and communication accordingly.

This discussion of the changing ecology of parental monitoring with development provides a basis for considering which measures to select at each age. However, there are important measurement issues that span developmental periods. Although the development of adequate measurement models and instruments concerning parental monitoring is in its infancy, some previous efforts (discussed below) highlight various measurement issues. These include the degree of specificity of parental monitoring items, reporting agents, observational measures of parental monitoring, and validity and reliability.

Specificity

Issues of specificity pertain to (1) the response format of the measure, (2) identification and assessment of specific risk situations, and (3) the extent to which the measure addresses parental monitoring practices or social cognitions.

Measures of parental monitoring have varied with respect to the response format that is employed. Many measures have utilized global reports on questionnaires; others have employed more behaviorally and temporally specific formats (e.g., "How often has this occurred in the past 24 hours?"). The Alabama Parenting Questionnaire (APQ) (Frick 1991) is a set of measures of parenting practices that has been developed for use with elementary school-age children 6 to 13 years old. The APQ consists of 42 items, 10 of which constitute a "Poor Monitoring/Supervision" scale. Items on the APQ are presented in both global report (i.e., questionnaire) and telephone interview formats, and there are separate versions of each format for parents and children. Thus, there are four different versions of the APQ. The questionnaire format employs a five-point Likert-type frequency scale and asks the informant how frequently each of the various parenting practices typically occurs (e.g., never,

always). Four telephone interviews are conducted, and the informant is asked to report the frequency with which each parenting practice has occurred over the previous 3 days.

Preliminary data concerning the psychometric properties of the APQ (with a sample primarily composed of clinic-referred children and their mothers) indicated that both parent report versions showed expected correlations with child age (i.e., poorer monitoring with older children), and neither appeared to be influenced by a social desirability response set (Shelton et al. 1996). The Poor Monitoring/Supervision scale of the parent questionnaire demonstrated adequate internal consistency (alpha = 0.67). However, the same scale on the parent telephone interview version lacked internal consistency (alpha = 0.21) and had low temporal stability (alpha = 0.66) across the four telephone interviews over a 2- to 4-week period. Shelton and colleagues (1996) suggested that the telephone interview format, which assessed occurrence of behaviors across a 3-day time window, may not be adequate for assessing the low base rate behaviors included in the Poor Monitoring/Supervision scale. However, others have successfully used 24-hour recalls on unsupervised time in parent and child telephone interviews (Dishion, Li, Spracklen, Brown, and Haas, this volume).

Additional research is needed to further examine the adequacy of more behaviorally specific response formats to resolve such discrepant findings. It may also be the case that the purpose of a particular research project may guide the selection of a particular response format (Shelton et al. 1996). For example, to be most useful for family-based intervention research, measures of parental monitoring may need to limit recall to a specific time period. Although more global recall periods may be less likely to be sensitive to change in response to such interventions, they may be preferable in descriptive or developmental research.

A second aspect of specificity has to do with the extent to which parental monitoring is assessed generally as opposed to particular risk situations or contexts. Developmental and ecological research can guide the measurement of monitoring toward identifying key risk situations. Research by Friedman and colleagues (1985) suggested that it was vital to assess monitoring routines among middle school youth immediately after school and to determine whether the parent limited the youth's exposure to homes without supervising adults. Similarly, Richters and Martinez (1993) reported that, in their sample, many parents greatly underestimated their children's exposure to violence

in the neighborhood. This lack of awareness of risk may inhibit adequate levels of monitoring.

Consideration of specificity also applies to whether the measure is assessing parental monitoring practices or social cognitions. Harris and McMahon (1998) are in the process of developing parallel instruments for the assessment of parental practices and values concerning monitoring. Preliminary analyses on a partial sample of mothers of
7th- to 12th-grade children show that the two constructs are moderately correlated ($r = 0.47$), suggesting that they are tapping somewhat different processes. As noted previously, injury-prevention researchers have often addressed issues related to the social-cognitive aspects of parental monitoring, such as parental attitudes and beliefs concerning appropriate levels of monitoring for children of different ages in different settings (Garling and Garling 1993; Peterson et al. 1993). The authors believe that it is essential that researchers make the distinction between parental monitoring practices and social cognitions, develop appropriate measures for each domain, and investigate the relationship between monitoring practices and social cognitions.

Reporting Agents

The most frequently employed sources of information concerning parental monitoring have been the parent (primarily the mother), the child, and home visitors/interviewers. Combinations of reports from multiple sources have also been employed as indices of parental monitoring (e.g., Crouter et al. 1990; Patterson and Dishion 1985). Parents are clearly the most appropriate source for information concerning the social-cognitive aspects of monitoring. However, the reliability, validity, and clinical utility of parent reports of monitoring practices are less clear, due to possible social desirability biases. It should be noted, however, that Shelton and associates (1996) failed to find evidence for such a bias on the Poor Monitoring/Supervision scale of the APQ.

The majority of the measures that have been used to study the relationship of parental monitoring to child problem behavior have utilized the youth's report of parent rules for structuring the youth's activities to ensure supervision. Child report of rules is obviously not an appropriate measure of parental monitoring in infancy or early childhood, and some research suggests that reliance on the reports of elementary school-age children regarding parental monitoring

practices may be ill advised (Shelton et al. 1996). Shelton and colleagues found evidence of a consistent response set bias on the child telephone interview format of the APQ (especially for 6- to 8-year-olds), and neither child version differentiated parenting practices of parents of children with disruptive behavior disorders (DBDs) from parenting practices of parents of children without DBD.

The use of other informants (e.g., interviewers, home visitors) or the combination of reports from multiple sources present other difficulties. Patterson and Dishion (1985) used interviewer impressions of supervision, child report of rules, and a parent-child difference score on deviant behavior to assess parental monitoring. Although promising empirically, these measurements are not conceptually pure. Interviewers' impressions may be subject to their own set of biases, in that they may be confounded with the deviance level of the child, where it is assumed, after witnessing the youth's report of drug and delinquent activities, that he or she is not well monitored. The parent-child difference score is also confounded with the deviance of the child, as children not engaging in problem behavior are more likely to agree with their parents' report of little problem behavior. The higher the degree of child problem behavior, the less likely the parent and child will agree on the exact level.

There are a number of collateral sources that may be considered for use in the assessment of parental monitoring. Teacher reports of the parents' awareness of the child's schoolwork and behavior have been shown to have convergent validity with other measures of monitoring (Dishion, Li, Spracklen, Brown, and Haas, this volume). Very few studies have relied on teachers' impressions as an auxiliary report on parental monitoring. One of the barriers to using significant others (spouse, extended family, family friend) is the heterogeneity of reporting agents, which may confuse results. The definition of families and the inclusion of caretakers has changed over time and varies across cultural and ethnic groupings. Joint-custody families, shared parenting with extended family members, and/or surrogate parenting strategies vary across families, and therefore become difficult to compare using a multiagent, multimethod strategy. Also underutilized are reports from the child's peers, as other children within the friendship network may be aware of the variation in parental monitoring across family homes.

Although the use of multiple reporting agents can produce both statistical and conceptual challenges, efforts to collect such data seem warranted. Information regarding overlapping perspectives (i.e., convergent validity) and predictive validity will guide new

conceptualizations regarding parental monitoring as well as suggest alternative intervention and prevention targets.

Direct Observation

Developmental and clinical research has benefited enormously from direct observation of the parent-child interaction process. Direct observations are process oriented, specific, and sensitive to change. In infancy through early childhood, the processes identified as precursors to parental monitoring are easily observed in the home setting. However, direct observation of parental monitoring in childhood through adolescence is more challenging. The authors and their colleagues (Antony et al. 1996; Dishion et al., in press; Reid 1993) have developed observation protocols for older school-age children (i.e., from fifth grade on) that employ structured parent-child interactions. The procedure developed by Reid involves a brief (5 minute) discussion of the child's activities at school, whereas in Antony and colleagues' (1996) adaptation of this procedure the parent and child discuss a recent period in which the parent and child were separated. Of interest in these tasks is the parent's awareness of the child's activities and the parent's communication skills as they pertain to monitoring. The Dishion and colleagues (in press) protocol also prompts the child to describe a recent period when he or she was with peers without adults present. The child (ages 12 and up) describes, from beginning to end, where they were, what they were doing, and with whom. After the child describes this activity, the parent(s) can clarify or discuss the events. This procedure attempts to assess the monitoring process, which includes listening and gathering information as well as constructive and clear communication of rules and guidelines. Quasi-naturalistic tasks such as these provide a promising basis for direct observations of the parent-child processes underlying parental monitoring from childhood through adolescence. The long-term utility of these strategies, however, awaits empirical validation.

There are also a number of analogs that have been developed to assess parental tracking of child behavior on a moment-to-moment basis and to assess detection or labeling biases. Parents have typically responded to either written or videotaped vignettes and labeled child behaviors as positive or negative as they occur (e.g., Holleran et al. 1982). The procedure developed by Wahler and Sansbury (1990) and by Sansbury and Wahler (1992), in which mothers rated videotaped interactions with their own children, seems especially promising.

Validity and Reliability

The previous discussion focused on the convergent and predictive validity of alternative reporting agents on parental monitoring practices. Intertwined with this discussion is the issue of reliability. Obviously, measures with low reliability will not be valid.

Dishion, Li, Spracklen, Brown, and Haas (this volume) looked at the retest stability of various indices of parental monitoring over a 3-month time interval, finding relatively high retest stability for interview assessments (test-retest correlations ranged from 0.68 to 0.70) and somewhat lower retest for telephone interviews (test-retest correlations ranged from 0.29 to 0.67). As noted previously, Shelton and colleagues (1996) reported a temporal stability coefficient of 0.66 across four telephone interviews for the Poor Monitoring/Supervision scale of the parent telephone interview version of the APQ. Telephone interviews provide a more discrete recall timeframe, so retest stability would be expected to be less. In the Dishion, Li, Spracklen, Brown, and Haas study (this volume), retest stability was quite low for coder impressions of monitoring (r = 0.20 to 0.26), primarily because the structured interaction tasks in this study did not elicit the parent-child interaction processes that would provide a solid basis for the staff to form impressions.

Another index of reliability is a measure of internal consistency such as Cronbach's (1951) alpha. Interview measures of monitoring to date have produced only moderate internal consistency. In the Dishion, Li, Spracklen, Brown, and Haas study (this volume), alpha coefficients were 0.67 for the child report and 0.61 for the parent's report, based on 8 and 12 items, respectively. Shelton and associates (1996) reported an alpha coefficient of only 0.21 for the Poor Monitoring/Supervision scale of the parent telephone interview version of the APQ.

Two strategies helped in increasing internal consistency indices of reliability: increasing the number and increasing the homogeneity of the items. It is the authors' impression that existing measurements of parental monitoring include both the tracking and structuring components of monitoring. Thus, internal consistency might be improved by separating the structuring and tracking components. Similarly, separation of items assessing parental practices from those assessing social cognitions may have similar effects on internal consistency. Harris and McMahon (1998) found alphas of 0.88 and

0.80 for separate measures of parental monitoring practices and values, respectively.

PREVENTION IMPLICATIONS

The appeal of the parental monitoring construct is that it has broad implications for prevention programs that aim to benefit children. Not only is parental monitoring essential in preventing childhood maladaptation and injury, it is also the basis for positive socioemotional development such as children's self-esteem (Patterson et al. 1992). Research also suggests that parental monitoring may be associated with academic success in children (Crouter et al. 1990; Kurdek et al. 1995).

In the following sections, the authors discuss future directions in targeting parental monitoring practices in prevention and intervention programs. This discussion is organized around the definition of parental monitoring, beginning with motivation to monitor.

Motivation To Monitor

Positive parental beliefs about the value of parental monitoring are necessary, but not sufficient, for effective supervision to take place (Harris and McMahon 1998). Some cases of lax monitoring may be the result of a parent simply not believing that monitoring is necessary (i.e., a values issue) or diverse values regarding children's independence and autonomy. Many of these values may function implicitly, outside of parents' direct awareness, such as differential treatment of boys and girls (Fagot 1978).

Parent interventions often target parent motivation explicitly. One tactic is to share assessment findings with families in an effort to stimulate change at the onset of a parent training program (Sanders and Lawton 1993). Dishion and colleagues have developed the Family Check-Up, a systematic approach to promote change in parenting practices (Dishion, Kavanagh, and Kiesner, this volume). The approach builds on innovations devised by Miller and Rollnick (1991), in which concepts of motivational interviewing are used to change problem-drinking patterns in adults. The Family Check-Up is a two- to three-session intervention. The first session includes an intense, structured, ecologically oriented assessment of the child and family using measures with normative comparisons. The second

session, carefully conducted to build motivation to change, begins with the therapist asking for the parents' sense of the family. Then assessment findings are reviewed with the parent, using lay language and visual prompts whenever possible. The therapist continually reviews the appropriateness of the assessment findings with the parent. A full assessment battery is always administered (in contrast to a problem- focused assessment approach), to provide a basis for discussing strengths and weaknesses in the family. The therapist endeavors to support the parents' confidence to change and collaborates to set realistic individual goals. Finally, the feedback session is used to generate a list of change options that are based on the parents' sense of family resources and the therapist's expertise. The Family Check-Up may thus serve as one method for enhancing parental motivation to engage in more appropriate monitoring practices.

Motivation to monitor can be affected by the pattern of relationships and conflicts within a family. Triangulation is a systemic concept that is very relevant to the task of building parent motivation. A bad marriage can lead to strong, inappropriate coalitions between parents and their children that are secondary to marital conflict. A mother who is rendered ineffective in the face of a strong father-son coalition, for example, may lose motivation to monitor. In the same vein, the father may lose motivation to monitor due to his inappropriate investment in maintaining a "sibling relationship" with his son. In this way, a distressed marriage interferes with both parents' motivation to assume the functions of a healthy parent.

Systemically oriented family interventions focus on such issues that disrupt the parents' tendencies to exercise leadership in a family. These approaches to family therapy produce reductions in substance use among high-risk adolescents that are significant and lasting (Szapocznik et al. 1988) and have been associated with improvements in family interchanges (Liddle 1995). Given that motivation is embedded within the parent-child relationship, it is not difficult to make the connection between ongoing family conflict and the lack of motivation to monitor. In this sense, parental monitoring is a construct of relevance to all family-based approaches to prevention and intervention.

Parental motivation to monitor can also be the target of universal intervention strategies. Biglan (1995) discussed in detail communitywide interventions that addressed constituent childrearing practices. A universal intervention strategy that targets parents' motivation to monitor provides parents with community norms

regarding children's unsupervised time. Such feedback can be given in school newsletters and homework assignments from school and through popular media such as radio and television. The media is potentially a very powerful tool for communicating norms and values regarding parental monitoring. Parents need to know that their attention and involvement are as necessary in the teenage years as in early childhood, a fact that seems to be neglected in popular renditions of the autonomous, rebellious teenager.

Parental Monitoring Skills

In some cases, ineffective parental monitoring may be due to a behavioral deficit (e.g., the parent does not know how to engage in effective monitoring practices even though he or she believes monitoring to be important). Other parents may display both cognitive and behavioral deficits vis-a-vis monitoring. There are clear implications for intervention, with problems in monitoring values and beliefs perhaps best addressed by cognitive-behavioral or educational interventions and problems with monitoring practices best addressed by a behavioral skills training approach.

Skills essential to parental monitoring vary with age. In infancy, reading signs of the baby's distress and discomfort are critical to the parents' ability to provide relief and comfort. In early childhood, behavior tracking becomes critical. Behaviorally oriented interventions at this age (see Dishion and Patterson, in press) provide parents with daily tracking exercises that involve the careful definition of key events. For example, many parents are reluctant to define a noncompliance as such in early childhood, and through frustration, berate children and pollute the family atmosphere through a process called "nattering." Developing tracking skills and redefining these key events is the critical step toward parents more effectively and constructively managing these normative events. When tracking skills are developed, parents may often be surprised that either the child is much more cooperative than they had thought or, conversely, that their child rarely cooperates with their requests.

Tracking and definition remain critical in intervention and prevention throughout adolescence. As the child matures, however, new monitoring skills are required. Interpersonal skills in communication with other adults is an example. In interventions with parents, Dishion and colleagues (in press) used roleplay exercises (e.g., parents phone other parents to request information relevant to monitoring). Listening, along with other communication skills, is

critical for parents to be aware of the life of their adolescent when he or she is away from home. Skill development is a strength of social learning-based interventions with families and is an important component of interventions that target parental monitoring.

Changing Ecologies

Interventions that target the ecology of the family may be the most far- reaching from a public health perspective (Biglan 1995). Two approaches can be considered from this perspective. The first is to design interventions that target the barriers to monitoring that directly impact parents. The second is to provide support systems that directly empower the parents' potential for accessing solid information about their children. An example of such a support system is telephone access to information regarding the child's attendance and school engagement (Dishion et al., in press).

Barriers interfere with parental monitoring regardless of motivation and skill level. Life stress (Forgatch 1989; Johnston 1996), poverty and unemployment (Elder et al. 1985; McLoyd 1990), extrafamilial insularity, and health problems (Wahler and Dumas 1984) can undermine parents' best intentions to monitor their children. An increased disparity between the rich and the poor in the United States suggests a double-edged sword for children. Changing economic and employment trends have measurable effects on the prevalence of problem behaviors secondary to disrupted parenting (Elder et al. 1985).

Even prosperity can have a toll on children's outcomes. Given that families work harder to achieve middle-class status, children raised in middle- to upper-class homes may be less monitored due to parent work schedules. Steinberg (1986) found increased risk associated with latchkey children. This "affluent neglect" could be targeted directly in prevention trials. Another level of prevention, however, is to address policies and customs that undermine monitoring and other parenting practices.

Another class of barriers to parental monitoring is the parents' own adjustment status (Wahler and Dumas 1989). Parent depression disrupts synchronous parent-infant interactions (Zahn-Waxler et al. 1982) and monitoring practices later in development (Patterson et al. 1992). Parents' use of other drugs and alcohol disrupts monitoring practices (Dishion and Loeber 1985; Dishion et al. 1988). A parent's experiences of monitoring as a child can affect his or her own

motivation to monitor; the antisocial parent is less likely to monitor (Patterson and Dishion 1988). Wahler and Sansbury (1990) have shown that mothers of clinic-referred children accurately identify positive child behaviors but underidentify negative child behaviors compared with trained observers. Furthermore, they found that this maternal bias in tracking negative child behavior was associated with a pattern of parent-child interaction in which the mother was more likely to give in to child noncompliance. In a similar vein, Patterson (1982) postulated that parents of children who steal may underidentify acts against property as deviant.

These data suggest that interventions that target the economic, social, and emotional ecology of the family may facilitate significant improvements in parental monitoring. A lifecycle view of prevention that goes beyond the individual child and family and spans time and contexts is clearly indicated.

Universal interventions that target school-family communication may be especially useful as a prevention strategy in early adolescence. Telephone lines that provide daily information regarding the academic performance, attendance, behavior, and homework completion of individual students would support parental attention to emerging difficulties (Reid 1993). Assessment of community and neighborhood hot spots and information to parents could prevent children from having contact with settings where substances can be used or purchased.

A more clinically focused study concerning family-school connections suggests that such an approach has promise (Bry and Canby 1986). These investigators provided direct support to parents for monitoring school progress and homework. The focus on school progress related to improvements in school, as well as decreases in substance use, suggested that increasing parents' monitoring in a specific area may produce generalized reductions in risk.

SUMMARY

Family-focused prevention that includes parental monitoring is a promising new direction relevant to the prevention of problem behavior and the promotion of the health and well-being of children. Existing research strongly supports this critical parenting practice as central to healthy parenting. The authors have defined parental monitoring as a complex set of social cognitions and behaviors that adjust to varying ecologies and the developmental status of the child. The goal of providing a clear definition and the discussion of the state of the art in measurement was to stimulate and guide future intervention research. The authors hope that through the iterative processes of science and action, prevention technology will grow to encompass interventions that directly support this parenting practice in conjunction with other critical dimensions of parenting.

NOTE

In June 1996, Dr. Rebecca Ashery of the National Institute on Drug Abuse organized a meeting of investigators working in the area of family research and interventions. The goal of this working group was to clarify issues of definition and measurement of parental monitoring. The definition and measurement sections in this chapter reflect these discussions.

REFERENCES

Antony, J.; Nelson, D.; and McMahon, R.J. *Fast Track Parent-Child Interaction Task Procedures Manual (Grade 5+)*. Unpublished manuscript, 1996.

Baumrind, D.; Moselle, K.; and Martin, J.A. Adolescent drug abuse research: A critical examination from a developmental perspective. *Adv Alcohol Subst Abuse* 4:41-67, 1985.

Belsky, J., and Nezworski, T. *Clinical Implications of Attachment.* Hillsdale, NJ: Erlbaum, 1988.

Biglan, A. *A Contextual Framework for Changing Cultural Practices.* Reno: Context Press, 1995.

Brayden, R.M.; MacLean, W.E.; Bonfiglio, J.F.; and Altemeier, W. Behavioral antecedents of pediatric poisonings. *Clin Pediatr* 32:30-35, 1993.

Brown, B.B.; Mounts, N.; Lamborn, S.D.; and Steinberg, L. Parenting practices and peer group affiliation in adolescence. *Child Dev*

64:467-482, 1993.
Bry, B., and Canby, C. Decreasing adolescent drug use and school failure: Long-term effects of targeted family problem-solving training. *Child Fam Behav Ther* 8:43-59, 1986.
Buck, D.J. Safe on playgrounds? The nature and causes of children's playground accidents and opportunities for prevention. *Public Health* 102:603-611, 1988.
Chilcoat, H., and Anthony, J.C. Impact of parent monitoring on initiation of drug use through late childhood. *J Am Acad Child Adolesc Psychol* 35:91-100, 1996.
Chilcoat, H.; Anthony, J.; and Dishion, T.J. Parent monitoring and the incidence of drug sampling in multiethnic urban children. *Am J Epidemiol* 141:25-31, 1995.
Coley, R.L., and Hoffman, L.W. Relations of parental supervision and monitoring to children's functioning in various contexts: Moderating effects of families and neighborhoods. *J Appl Dev Psychol* 17:51-68, 1996.
Craig, M.M., and Glick, S.J. School behavior related to later delinquency and non-delinquency. *Criminologica* 5:17-27, 1968.
Cronbach, L.S. Coefficient alpha and the internal structure of tests. *Psychometrika* 16:297-334, 1951.
Crouter, A.C.; MacDermid, S.M.; McHale, S.M.; and Perry-Jenkins, M. Parental monitoring and perceptions of children's school performance and conduct in dual- and single-earner families. *Dev Psychol*
26:649-657, 1990.
Darling, N., and Steinberg, L. Parenting style as context: An integrative model. *Psychol Bull* 113:487-496, 1993.
Dishion, T.J.; Andrews, D.W.; and Crosby, L. Antisocial boys and their friends in early adolescence: Relationship characteristics, quality, and interactional process. *Child Dev* 66:139-151, 1995.
Dishion, T.J.; Kavanagh, K.; and Soberman, L. *Adolescent Transitions Program: Assessment and Intervention Sourcebook.* New York: Guilford Press, in press.
Dishion, T.J., and Loeber, R. Male adolescent marijuana and alcohol use: The role of parents and peers revisited. *Am J Drug Alcohol Abuse* 11:11-25, 1985.
Dishion, T.J., and Patterson, S.G. *Preventive Parenting with Love, Encouragement and Limits: The Preschool Years*. Eugene, OR: Castalia, 1996.
Dishion, T.J., and Patterson, G.R. The timing and severity of antisocial behavior: Three hypotheses within an ecological

framework. In: Stoff, D.; Breiling, J.; and Maser, J., eds. *Handbook of Antisocial Behavior*. New York: Wiley, in press.
Dishion, T.J.; Patterson, G.R.; Stoolmiller, M.; and Skinner, M.L. Family, school, and behavioral antecedents to early adolescent involvement with antisocial peers. *Dev Psychol* 27:172-180, 1991.
Dishion, T.J.; Reid, J.B.; and Patterson, G.R. Empirical guidelines for a family intervention for adolescent drug use. *J Chem Depend Treat* 1:189-222, 1988.
Dumas, J.E., and Wahler, R.G. Predictors of treatment outcome in parent training: Mother insularity and socioeconomic disadvantage. *Behav Assess* 5:301-313, 1983.
Elder, G.H. *Family Structure and Socialization*. New York: Arno Press, 1980.
Elder, G.H.; Nguyen, T.V.; and Caspi, A. Linking family hardship to children's lives. *Child Dev* 56:361-375, 1985.
Fagot, B.I. Reinforcing contingencies for sex role behavior: Effect of experience with children. *Child Dev* 49:30-36, 1978.
Fletcher, A.C.; Darling, N.; and Steinberg, L. Parental monitoring and peer influences on adolescent substance use. In: McCord, J., ed. *Coercion and Punishment in Long-term Perspectives*. New York: Cambridge University Press, 1995. pp. 259-271.
Forgatch, M.S. Patterns and outcome in family problem-solving: The disrupting effect of negative emotion. *J Marriage Fam* 51:115-124, 1989.
Forgatch, M.S., and Stoolmiller, M. Emotions as contexts for adolescent delinquency. *J Res Adolesc* 4:601-614, 1994.
Frick, P.J. "The Alabama Parenting Questionnaire." Unpublished rating scale. University of Alabama, 1991.
Friedman, L.S.; Lichtenstein, E.; and Biglan, A. Smoking onset among teens: An empirical analysis of initial situations. *Addict Behav* 10:1-13, 1985.
Galambos, N.L. Parent-adolescent relations. *Curr Dir Psychol Sci* 1:146-149, 1992.
Garling, A, and Garling, T. Mothers' supervision and perception of young children's risk of unintentional injury in the home. *J Pediatr Psychol* 18:104-114, 1993.
Gjerde, P. The interpersonal structure of family interaction settings: Parent-adolescent relations in dyads and triads. *Dev Psychol* 22:297-304, 1986.
Glik, D.C.; Greaves, P.E.; Kronenfeld, J.J.; and Jackson, K.L. Safety hazards in households with young children. *J Pediatr Psychol* 18:115-131, 1993.
Glueck, S., and Glueck, E. *Predicting Delinquency and Crime*. Cambridge, MA: Harvard University Press, 1959.

Harrell, W.A., and Reid, E.E. Safety of children in grocery stores: The impact of cart seat use in shopping carts and parental monitoring. *Accident Anal Prev* 22:531-542, 1990.

Harris, G.A., and McMahon, R.J. "Parental Supervision Practices and Values and Child Behavior Problems." Unpublished manuscript, 1998.

Holden, G.W., and Edwards, L.A. Parental attitudes toward child rearing: Instruments, issues, and implications. *Psychol Bull* 106:29-58, 1989.

Holleran, P.A.; Littman, D.C.; Freund, R.D.; and Schmaling, K. A Signal Detection approach to social perception: Identification of negative and positive behaviors by parents of normal and problem children. *J Abnorm Child Psychol* 10:547-558, 1982.

Johnston, C. Addressing parent cognitions in interventions with families of disruptive children. In: Dobson, K.S., and Craig, K.D., eds. *Advances in Cognitive-Behavioral Therapy*. Thousand Oaks, CA: Sage, 1996. pp. 193-209.

Kolko, D.J., and Kazdin, A.E. A conceptualization of firesetting in children and adolescents. *J Abnorm Child Psychol* 14:49-61, 1986.

Kolko, D.J., and Kazdin, A.E. Matchplay and firesetting in children: Relationship to parent, marital, and family dysfunction. *J Clin Child Psychol* 19:229-238, 1990.

Kurdek, L.A.; Fine, M.A.; and Sinclair, R.J. School adjustment in sixth graders: Parenting transitions, family climate, and peer norm effects. *Child Dev* 66:430-445, 1995.

Liddle, H.A. Conceptual and clinical dimensions of multidimensional, multisystems engagement strategy in family-based adolescent treatment. *Psychotherapy* 32:39-58, 1995.

Loeber, R., and Dishion, T. Early predictors of male delinquency: A review. *Psychol Bull* 94:68-99, 1983.

Loeber, R., and Stouthamer-Loeber, M. Prediction. In: Quay, H.C., ed. *Handbook of Juvenile Delinquency*. New York: Wiley, 1987. pp. 325-382.

McCord, J.; McCord, W.; and Howard, A. Family interaction as antecedent to the direction of male aggressiveness. *J Abnorm Soc Psychol* 66:239-242, 1963.

McLoyd, V.C. The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Dev* 61:311-346, 1990.

Miller, W.R., and Rollnick, S. *Motivational Interviewing: Preparing People to Change Addictive Behavior*. New York: Guilford Press, 1991.

Patterson, G.R. *Coercive Family Process*. Eugene, OR: Castalia, 1982.

Patterson, G.R. Performance models for antisocial boys. *Am Psychol* 41:432-444, 1986.
Patterson, G.R. Orderly change in a stable world: The antisocial trait as a chimera. *J Consult Clin Psychol* 61:911-919, 1993.
Patterson, G.R. Performance models for parenting: A social interactional perspective. In: Grusec, J., and Kuczynski, L., eds. *Parenting and the Socialization of Values: A Handbook of Contemporary Theory*. New York: Wiley, in press.
Patterson, G.R., and Dishion, T.J. Contributions of families and peers to delinquency. *Criminology* 23:63-79, 1985.
Patterson, G.R., and Dishion, T.J. Multilevel family process models: Traits, interactions, and relationships. In: Hinde, R., and Stevenson-Hinds, J., eds. *Relationships Within Families: Mutual Influences*. Oxford, England: Clarendon, 1988. pp. 283-310.
Patterson, G.R.; Reid, J.B.; and Dishion, T.J. *Antisocial Boys*. Eugene, OR: Castalia, 1992.
Patterson, G.R.; Reid, J.B.; Jones, R.R.; and Conger, R. *A Social Learning Approach to Family Intervention, I. Families with Aggressive Children*. Eugene, OR: Castalia, 1975.
Patterson, G.R., and Stouthamer-Loeber, M. The correlation of family management practices and delinquency. *Child Dev* 55:1299-1307, 1984.
Peterson, L.; Ewigman, B.; and Kivlahan, C. Judgments regarding appropriate child supervision to prevent injury: The role of environmental risk and child age. *Child Dev* 64:924-950, 1993.
Radziszewska, B.; Richardson, J.L.; Dent, C.W.; and Flay, B.R. Parenting style and adolescent depressive symptoms, smoking, and academic achievement: Ethnic, gender, and SES differences. *J Behav Med* 19:289-305, 1996.
Reid, J.B. Prevention of conduct disorder before and after school entry: Relating interventions to development findings. *Dev Psychopathol* 5:243-262, 1993.
Richters, J.E., and Martinez, P. The NIMH Community Violence Project: I. Children as victims of and witnesses to violence. *Psychiatr Interper Bio Process* 56:7-21, 1993.
Rogoff, B., and Wertsch, J.V. *New Directions for Child Development.* San Francisco, CA: Jossey-Bass, 1984.
Sanders, M.R., and Lawton, J. Discussing assessment findings with families: A guided participation model of information transfer. *Child Fam Behav Ther* 15:5-33, 1993.
Sansbury, L.E., and Wahler, R.G. Pathways to maladaptive parenting with mothers and their conduct disordered children. *Behav Modif* 16:574-592, 1992.

Shelton, K.K.; Frick, P.J.; and Wootton, J. Assessment of parenting practices in families of elementary school-age children. *J Clin Child Psychol* 25:317-329, 1996.

Steinberg, L. Latchkey children and the susceptibility to peer pressure: An ecological analysis. *Dev Psychol* 22:433-439, 1986.

Steinberg, L. Impact of puberty on family relations: Effects of pubertal status and pubertal timing. *Dev Psychol* 23:451-460, 1987.

Stoolmiller, M. Antisocial behavior, delinquent peer association and unsupervised wandering for boys: Growth and change from childhood to early adolescence. *Multivariate Behav Res* 29:263-288, 1994.

Szapocznik, J.; Perez-Vidal, A.; Brickman, A.L.; Foote, F.H.; Santisteban, D.; and Hervis, O. Engaging adolescent drug abusers and their families in treatment: A strategic structural systems approach. *J Consult Clin Psychol* 56:552-557, 1988.

Wahler, R.G., and Dumas, J.E. Family factors in childhood psychopathology: Toward a coercion neglect model. In: Jacob, T., ed. *Family Interaction and Psychopathology*. New York: Plenum, 1984. pp. 115-132.

Wahler, R.G., and Dumas, J.E. Attentional problems in dysfunctional mother-child interactions: An interbehavioral model. *Psychol Bull* 105:116-130, 1989.

Wahler, R.G., and Sansbury, L.E. The monitoring skills of troubled mothers: Their problems in defining child deviance. *J Abnorm Child Psychol* 18:577-589, 1990.

West, D.J., and Farrington, D.P. *Who Becomes Delinquent?* New York: Crane, Russak, 1973.

Wilson, H. Parental supervision: A neglected aspect of delinquency. *Br J Criminol* 20:203-235, 1980.

Zahn-Waxler, C.; Iannetti, R.; and Chapman, M. Peers and prosocial development. In: Rubin, K.H., and Ross, H.S., eds. *Peer Relationships and Social Skills in Childhood.* New York: Springer- Verlag, 1982. pp. 133-162.

ACKNOWLEDGMENTS

This chapter was prepared with support from the National Institute on Drug Abuse Epidemiology and Prevention Group: James Anthony, Rebecca Ashery, William Bukoski, Howard Chilcoat, Linda Collins, Hyman Hops, Karol Kumpfer, Zili Sloboda, and Richard Spoth.

This project was supported by National Institute on Drug Abuse grant no. DA-07031 to Thomas J. Dishion, by National Institute of Mental

Health grant no. MH-37940 to John Reid, and by National Institute of Mental Health grant no. MH 46690 to Gerald R. Patterson.

Correspondence regarding this research may be addressed to Thomas J. Dishion, Oregon Social Learning Center, 207 East Fifth Avenue, Suite 202, Eugene, OR 97401.

AUTHORS

Thomas J. Dishion, Ph.D.
Principal Investigator
Oregon Social Learning Center
207 East Fifth Avenue, Suite 202
Eugene, OR 97401

Robert J. McMahon, Ph.D.
Professor
Department of Psychology
University of Washington
Box 351525
Seattle, WA 98195-1525

Click here
to go to
next section