### A Public Health Perspective for Research on Family-Focused Interventions

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#### INTRODUCTION

The ultimate goal of drug abuse prevention research is a reduction in the prevalence of the abuse of drugs. Keeping this goal squarely in front of researchers can play an important role in organizing an agenda for research. This chapter examines the implications of this research agenda for family factors influencing young people's substance abuse or other problem behaviors.

Focusing on the prevalence of a problem in a defined population is the essence of a public health perspective (Winett et al. 1989). Such an orientation has its roots in medicine's efforts to control epidemics. An epidemic of an infectious disease, such as influenza or polio, is a dramatic event that naturally leads to a focus on the goal of reducing the number of people who are stricken or die. As the role of behavior in health has become clearer, however, the public health community has increasingly adopted goals of reducing the prevalence of unhealthy behaviors, such as smoking, inactivity, and fat consumption (Luepker et al. 1994).

Although the two need not be in conflict, the public health perspective can be contrasted with a clinical perspective. In a clinical perspective, the focus is on a family interventionist's ability to "cure" or ameliorate cases that come to his or her attention. Historically, the natural tendency has been for the clinical perspective to predominate, largely because researchers were confronted with persons in need of treatment long before understanding how problems might be prevented or more efficiently ameliorated through nonclinical means. An important side effect of this history is that many more organizational resources are committed to clinical interventions than might be the case if a fresh start were made and the authors began with the question of how to most efficiently reduce the prevalence of specific problems.

Both the clinical and public health perspectives are to be found in efforts to address youth problem behavior. Increasingly, data are available on the incidence and prevalence of problems such as substance use (Johnston et al. 1985) and juvenile crime. Progress and failure are measured in terms of changes in these population-based statistics. Efforts to reduce these problems include universal and selective interventions (Mrazek and Haggerty 1994), such as media that target large numbers of people and clinical interventions that target individual youths or small groups.

Nonetheless, the majority of family-focused interventions are clinical, involving individual families or small groups of families. This is understandable. It is in the nature of science to begin with problems it can address. Figuring out how to assess and affect parent-child interactions in beneficial ways was the appropriate first step.

However, a great deal of progress has been made on these fronts. As a result, it is not too early to devote scientific resources to research on how to increase the number of families that nurture their children to become successful and productive adults.

This chapter outlines a research agenda that would contribute to researchers' ability to reduce the prevalence of substance abuse and other problem behaviors through family-focused interventions. Such an agenda would include further improvements in the efficacy of clinical interventions, such as increasing involvement with hard-to-engage families in treatment; ensuring that interventions are appropriate and effective with diverse populations; and overcoming barriers to successful outcome, such as insularity and depression. This research agenda would also involve assessing and improving the cost-effectiveness of clinical interventions.

If researchers are going to reduce the prevalence of these problems, however, they must go beyond research on clinical interventions. Systematic research is needed on how to increase the number of organizations that provide validated family interventions and on whether the prevalence of effective parenting practices can be increased through other channels such as media and school-prompted parent-child activities. Researchers also need to examine whether communities can be assisted in supplementing limited parental resources by, for example, developing better supervised recreation or creating mentoring programs for youth whose parents are not likely to provide adequate guidance and supervision. Finally, systematic research is needed on the effects of public policies on parenting practices and family functioning.

## ROLE OF THE FAMILY IN PREVENTING SUBSTANCE ABUSE AND OTHER PROBLEM BEHAVIORS

Studies described in the literature, including those in the other chapters of this monograph, document the critical role that specific parenting practices play in the development of children and adolescents. The evidence can be summarized in terms of two generalizations.

First, there is increasing evidence that drug abuse among young people is associated with engagement in diverse problem behaviors (Barnes 1984; Biglan et al. 1990; Brennan 1979; Donovan and Jessor 1985; Donovan et al. 1988; Dryfoos 1990; Elliott and Morse 1987; Epstein and Tamir 1984; Farrell et al. 1992; Hawkins et al. 1986; Jessor 1987a, b; Jessor and Jessor 1977a, b; Loeber and Dishion 1983; Malcolm and Shephard 1978; Miller and Simon 1974; Osgood et al. 1988; Vingilis and Adlaf 1990; Wechsler and Thum 1973; Welte and Barnes 1987; Zabin 1984; Zelnik et al. 1981). Multivariate analyses have shown that a single common factor can account for the relationships among the behaviors (Donovan and Jessor 1985; Donovan et al. 1988; Farrell et al. 1992; Osgood et al. 1988). Where sex differences have been investigated, these interrelationships have been found to hold for both males and females (Donovan and Jessor 1985; Farrell et al. 1992).

Second, there is now considerable evidence about the kinds of parenting practices that influence the development of youth problem behavior. This evidence constitutes a prescription for family-focused prevention efforts. Perhaps the most consistently identified parenting practice influencing youth problem behavior is monitoring. Preadolescent and adolescent youth whose parents keep track of their activities are significantly less likely to engage in problem behavior (Biglan et al. 1994, 1995; Dishion et al. 1996; Patterson 1996).

Another important parenting practice involves effective discipline. In a recent review of the work at Oregon Social Learning Center, Patterson (1996) presented data from three samples indicating that parents who ranked high on the "inept discipline" construct were significantly more likely to have children who engaged in antisocial behavior. Inept discipline involves the use of harsh and inconsistent discipline, in which parents often criticize or "natter" at the their

children but do not follow through with nonharsh consequences for inappropriate behavior.

A final category of parenting practice that may be important involves parents' positive involvement with their children. It seems natural to assume that parents who have enjoyable and mutually reinforcing interactions with their children are more likely to have children who become socially skilled and continue to be influenced by their parents. Surprisingly, there is less clear evidence of the value of such parent-child bonding than there is of the harm of inadequate monitoring and discipline (Patterson et al. 1992). Positive involvement between parents and children is likely to facilitate more effective monitoring and discipline practices but may itself have a more distal relationship to child problems. Certainly, promotion of positive parent-child interaction has been viewed as an essential component of family interventions in the service of more effective family functioning.

In summary, the evidence identifies a set of parenting practices that is critical to ensuring children's successful development. In the absence of these practices, children are more likely to develop a range of problem behaviors, including substance abuse and antisocial behavior. It is time to examine whether the prevalence of youth problem behaviors can be reduced by increasing the prevalence of effective parenting practices.

#### EFFICACY OF FAMILY INTERVENTIONS

There is a great deal of evidence supporting the efficacy of familyfocused interventions. The chapters in this monograph document much of this evidence. There is growing evidence that parenting skills training programs can benefit parents and children, for parents of both preschool and elementary school-age children (Kumpfer 1996; Webster-Stratton 1981a, b, 1982a, b, 1984; Webster-Stratton et al. 1988, 1989) and middle school children (Dishion and Andrews 1995). Szapocznik's (1996) line of research has shown that both family functioning and child substance abuse are affected by strategic structural family interventions. Henggeler and colleagues (1986) have shown that a family intervention that addresses the multiple factors affecting family functioning leads to reductions in youth problem behavior and improvements in family functioning. Olds and Pettitt (1996) have shown that a program of prenatal and early childhood home visitations to mothers of at-risk children can reduce the risks of substance abuse and antisocial behavior among children.

In short, sufficient evidence exists about the value of family interventions that it is appropriate to turn to the question of how existing knowledge can be translated into increases in the prevalence of effective parenting practices. There are a number of natural next steps that need to be taken by family intervention researchers.

# Efficacy of Parenting Skills Training for Diverse Cultural Groups

Most of the existing research has been done with white, largely middle-class samples that were not even representative of that cultural group. One cannot be sure that such programs will be effective with other cultural groups, although the work of Szapocznik and colleagues (1996) at the University of Miami (1996) indicates that interventions targeting family interactions are beneficial with Hispanic families. Research that adapts and evaluates programs with other cultural groups is a necessary step in shaping the ability of family interventionists to increase the prevalence of important parenting practices.

#### Participation

One of the most important barriers to increasing the prevalence of good parenting practices is the fact that many parents who would benefit from family interventions do not participate in them. Indeed, some of the same factors that put families at risk for youth problem behavior are also factors associated with nonparticipation in family-focused interventions. For example, single parents and parents with lower incomes, lower educational levels, less social support, more family conflict, and more extrafamilial conflict are more likely to have children with behavior problems (Dumas 1986; Patterson 1982, 1996; Wahler 1980). Families with these characteristics are also less likely to enter parent training or parent support programs (Fontana et al. 1989; Hawkins et al. 1987; Herzog et al. 1986; Weber and Stoneman 1986) or to continue in parent training once they have begun (Albin et al. 1985; Holden et al. 1990; McMahon et al. 1981; Powell 1984).

Spoth and his colleagues have made some promising beginnings on this problem. Spoth and Redmond (in press) and Spoth and colleagues (1995) found that level of attendance at parenting programs predicted later child management behaviors. Spoth and associates (in press) applied methods from marketing to identify preferences of parents for different types of family-focused programs. Spoth and Redmond (1994) compared two methods of recruiting parents to family-focused prevention programs. One method involved asking families to commit to the entire project (i.e., pretest assessment, treatment, postassessment) at the outset. In the other method, families were first asked to participate in the pretest and only later were asked to be in the treatment component. The former method of recruitment led to fewer families dropping out of the study.

In perhaps the most interesting study, Spoth and others (submitted) examined the factors that predicted nonparticipation in a family program. Among the factors influencing nonparticipation were time and scheduling issues, parents' perceptions that their children were at low risk, and concerns about assessment and privacy. These findings point to ways that programs and their recruitment procedures might be designed to enhance participation.

In a very promising study, Szapocznik and colleagues (1988) also evaluated a method of increasing family participation in treatment. They compared a strategic structural system (SSS) approach to achieving family engagement with the usual method of engaging families (limited to phone contact prior to the first treatment session). The SSS engagement procedure involved analyzing the structure of the family that might indicate which family members were likely to resist and which family members would control the family's decision to get involved in treatment. Then the family therapist attempted to achieve rapport with the key family members, helping the family member who had called to involve other family members. The therapist would visit the family in the home, if necessary. They found that, compared with traditional limited efforts to recruit families, the SSS approach was much more effective (58 percent in traditional approach did not get involved versus 7 percent in the SSS method).

Even with substantial improvement in the ability of family interventionists to engage families, it is unlikely that it will be possible to engage every family that needs assistance—even if sufficient treatment resources were available. Thus, additional methods of promoting effective parenting practices need to be explored.

## Identifying and Overcoming Barriers to Successful Outcomes

The efficacy of family-focused interventions will be enhanced by research on how barriers to the efficacy of such programs can be overcome. Among the barriers that have been identified are maternal insularity and stressful events such as aversive encounters with family members (McMahon et al. 1981) and service providers (Wahler 1980). Parenting programs that address these problems can be expected to be more effective than those that do not, although experimental evaluations of this question are presently lacking. In addition, research is needed on other factors that may interfere with families' success in parenting programs.

#### DISSEMINATION OF VALIDATED FAMILY INTERVENTIONS

Given the existence of validated family interventions, a portion of research resources should be directed toward identifying the most effective ways to ensure that these programs are widely adopted. Across most areas of social interventions, this problem receives little systematic attention. Dissemination is often seen simply as a process of informing others about an efficacious program. Even when the originators of a validated program organize themselves to train others in its use and to monitor the quality of implementation, they are unlikely to conduct systematic research on the efficacy of their dissemination efforts.

This is understandable. There is little reason to expect that family intervention researchers, who have spent years struggling with how to design and refine effective programs, will have the background, experience, or interest to learn how to influence other organizations to adopt such programs. They may be well versed in how to train interventionists, but they are unlikely to be well informed about the kinds of factors that influence organizations to adopt or maintain programs.

Several research questions in this area need to be pursued. The first, and most obvious, involves how best to train change agents to implement the family intervention so that the same results are achieved in dissemination as have been obtained in research studies. As just suggested, many family interventionists are well equipped to provide training to would-be providers. However, systematic

experimental evaluations of training and quality monitoring procedures are seldom conducted.

If parent training and other family-focused interventions are to become widely available, research on organizations is also needed. The types of organizations that are most able to provide validated family interventions need to be identified. For example, schools, voluntary and government-funded family welfare agencies, churches, child care providers, and fee-for-service private practitioners are all potential providers of these programs. Research is needed on which types of organizations are currently providing family intervention programs and whether those programs are based on the best available evidence about efficacy. Such information would form the groundwork for systematic efforts to increase the availability of efficacious interventions.

Research is also needed on how to influence organizations to adopt and maintain effective programs. That is, Which factors would influence each of the types of organizations listed in the preceding paragraph to adopt and maintain a family-focused intervention? Biglan (1995) has analyzed some of the factors that appear to influence the actions of organizations. In general, the outcomes of an organization's actions appear to be the most important factors influencing those actions over the long term. For most types of organizations, the most important of these outcomes are economic. Organizations that do not achieve economic results that allow them to continue to operate will cease to exist or will change their activities in the interest of survival. This is obvious in the case of business organizations, but it is just as applicable to nonprofit organizations.

The focus on the consequences of program adoption might be contrasted with the tendency to think in terms of the antecedents of an organization's adoption of a program. Researchers are accustomed to emphasizing factors such as the belief of the decisionmakers about the value of the program and its consistency with the organization's mission. In the short run, these factors are indeed pivotal. However, if the program to be adopted does not contribute to the long-term well-being of the organization, it is unlikely to be adopted or maintained.

Thus, analyses are needed of the economic consequences to organizations for their adoption and maintenance of family-focused interventions. Because much of the money for family-focused interventions comes from charitable and public sources, analyses of

the economic contingencies for provider organizations will, in turn, beget analyses of the contingencies influencing organizations that fund them, such as school districts, foundations, and governments. Here, too, it will be necessary to understand what influences the funding organizations' initial and continued support. Thus, a thoroughgoing analysis of the context for program adoption must examine the factors influencing the organizations and collectivities (e.g., voters) that decide on funding.

In summary, research is needed on (1) the types of organizations that are providing, or might be willing to provide, family-focused interventions; (2) the consequences to organizations for their adoption and maintenance of such programs; and (3) influences on organizations and collectivities that determine whether provider organizations will be funded to provide such programs.

Such a line of research may seem onerous to those who are already working very hard on the development and evaluation of family interventions. But it is difficult to see how the fruits of the outstanding work that has been done will be realized if researchers do not begin to study the larger social context that influences program adoption and maintenance.

#### **COST-BENEFIT ANALYSIS**

Dissemination of efficacious parent and family interventions will be facilitated by better evidence about their costs and benefits. Presumably, organizations will be less willing to adapt programs that are very costly (though many will probably not be sensitive to issues of their proven efficacy). Werthamer-Larsson (1996) has provided a useful analysis of the evidence and methodological issues relevant to assessing the costs and benefits of family interventions.

Comparison of the costs of family interventions with the costs of other social interventions intended to prevent youthful problem behaviors are also valuable. For example, Greenwood (1995) has shown that parenting skills training is a far less expensive method of preventing crime than is incarceration.

#### METHODOLOGICAL CONSIDERATIONS

The same standards that have led to effective family interventions are needed for dissemination research. Specifically, experimental

evaluations of the efficacy of dissemination strategies are needed. These evaluations are needed for the same reason that they are needed in any other area of research: Without them, researchers will not identify the most effective ingredients in dissemination efforts.

Experimental designs need not be randomized controlled trials. Such designs would be quite costly, as they would require the randomization of numerous organizations to receive or not receive the dissemination program. Rather, at this stage of researchers' knowledge, it would seem appropriate and feasible to conduct repeated time-series experiments, in which baseline data on organizational practices are obtained from several organizations and the effects of the dissemination strategy are evaluated on one organization at a time (Biglan 1995).

It is not too early to begin research of this sort. Webster-Stratton (personal communication, January 1996) is already assisting the State of Delaware in implementing its parenting skills program throughout the State. Systematic research on such efforts will ultimately contribute a higher likelihood of success in such important undertakings.

#### **BEYOND CLINICAL INTERVENTIONS**

Even if researchers were to become extraordinarily skilled in disseminating effective family interventions, it is unlikely that this development, by itself, will produce sufficient reductions in the prevalence of poor parenting practices. Resources are not available to pay for programs for everyone who needs them, and even if they were, many families would be unwilling to participate.

This situation parallels that in tobacco control research 15 years ago (see Lichtenstein et al. 1991). At that time, most research focused on developing effective smoking cessation programs. It eventually became clear that the majority of those who wanted to quit smoking would not participate in such programs. Moreover, many people could be influenced and assisted in quitting through other means, such as advice from physicians, media, and smoking policies and programs at the worksite. Because lowering the prevalence of smoking was the clear goal for tobacco control research, it was only natural to begin to explore these other means of reducing its prevalence.

The field of family-focused prevention intervention has not been as clear about its goal. Can there be any doubt, however, that the

ultimate success of researchers' efforts should be measured in terms of the degree to which they reduce the *number* of young people in society who develop any of the costly problem behaviors of youth such as substance abuse or delinquency.

To move toward this goal, researchers need to systematically explore all of the ways in which family functioning can be enhanced.

#### Media

There is persuasive evidence that mass media can influence important health and social behaviors. Warner (1977, 1989) described how the 1964 Surgeon General's report and the requirement for television ads recommending smoking cessation were associated with reductions in the prevalence of smoking. Flay (1987a, b) reviewed evidence that media campaigns influence smokers to stop smoking or attempt to stop. Media effects have also been reported in studies of crime prevention (O'Keefe and Reid 1990), alcohol consumption (Barber et al. 1989), and drunk driving (Niensted 1990).

There has been surprisingly little research, however, on how media might influence parenting practices. Hawkins and colleagues (1987) made extensive use of media in recruiting parents to a parenting program. However, they did not assess the effects of the media on parenting practices, nor did they experimentally evaluate the effects of media in recruiting parents. Pentz and associates (submitted) reported that a school and community intervention that included media had a significant impact on substance use. Given the design of the study, however, the unique effects of media on parenting practices could not be determined.

The primary use of media would likely be to influence parenting practices. Media could also be an important means of motivating parents to participate in formal programs. The media channels that might be used include radio, television, direct mail, videotapes, and the Internet.

Media interventions may not remediate serious and longstanding deficits in parenting practices in many families. They do have the potential, nevertheless, to influence much larger numbers of families at a much smaller cost per family than clinical interventions. Research is needed to determine whether the effects that could be achieved through media are sufficient to influence the prevalence of youth problem behavior.

Here, too, systematic experimental evaluation is needed. As noted, repeated time-series experiments provide a more efficient means for evaluating media interventions than randomized controlled trials (Biglan 1995).

#### School Influences on Parents

It may also be possible to influence parenting practices through activities that are assigned in school. Biglan and colleagues (in press) tested the effects of a school-prompted quiz about tobacco that middle school students gave to their parents. The activity significantly increased the proportion of parents who were exposed to antitobacco messages, improved parents' knowledge about tobacco, increased their support for community efforts to prevent youth tobacco use, and increased parent-child communication about tobacco use.

Schools could do a great deal more to influence parenting practices. First, they could routinely screen children to identify those whose parents might benefit from parenting skills training or other family interventions (e.g., Walker et al. 1994). Second, schools could provide parenting skills programs or other family-focused interventions. Increasingly, schools are becoming a hub for the delivery of a range of services to children and their families. Third, they could provide a "steady drumbeat" of information to parents about effective parenting, through newsletters, handouts, and workshops. Fourth, they could publicly recognize parents' successful efforts.

#### The Neighborhood or Community in Locus Parentis

Due to increases in the prevalence of single parenting and the increased tendency in two-parent families for both parents to be working (Marshall 1991), society has developed a parental labor shortage. As a result, there are limits to how much can be accomplished solely by trying to influence parents to spend time with their children, to monitor their activities, and to set effective limits on problem-promoting activities. In addition, a greater amount of parental involvement is needed to prevent problem behavior in neighborhoods and communities that have a high density of criminal behavior (Sampson 1993). Thus, it is in the interest of communities to supplement parental monitoring and supervision. There are at least three actions that communities can take to augment parental efforts: supervised recreation, mentoring, and policy change.

Supervised Recreation. Supervised recreational activities show potential for preventing youth problem behaviors, through reducing the amount of time that young people have available to engage in problem behavior and through fostering skill development that increases their opportunities to achieve reinforcement from prosocial activities.

Unfortunately, very little empirical evaluation of supervised recreation has occurred. The only study the authors found was conducted by Jones and Offord (1989), a quasi-experimental evaluation of organized recreational activities for young people in a low-income housing project. Compared with a similar project in which no programs were provided, the incidence of antisocial behavior was reduced in the project receiving the recreational program. Mendel (1995) cites evidence that the initiation of a midnight basketball program was associated with a decrease in drugrelated crime but acknowledges that the effects of such programs have not been formally evaluated. Mendel also cites a study indicating that housing projects with Boys and Girls Clubs had less crime than projects that did not have such clubs. However, this may be because projects with more law-abiding people in them are more likely to institute and maintain such clubs.

Thus, experimental evaluations of the effects of supervised recreation on youth problem behavior are needed. Large sums of money are being spent on recreation in U.S. communities (Smith 1991); one of the justifications for these expenditures is that they are assumed to prevent youth problem behavior. These assumptions are based on little research, however. If experimental evaluations indicate the value of such programs, research will then be needed on how communities can be assisted in generating resources to support them.

Youth supervision might also be increased by increasing adult monitoring of the activities of youth in public places. Every community has some times and locations where at-risk young people congregate and engage in problematic behavior. Communities that identify those places and times and develop systematic ways of discouraging problem behavior or encouraging prosocial behavior in those settings may reduce the rates of problem behaviors. Activities may include targeting supervised recreation for the times that youth are most likely to congregate in problem places and providing police and civilian patrols of problem places at problem times.

Mentoring. If parenting practices cannot be influenced, other members of the community may be able to supplement parents' efforts. Davidson and colleagues (Davidson and Basta 1989; Davidson and Redner 1988; Davidson et al. 1987) have developed and carefully evaluated a program of mentoring that is delivered to young people who have been arrested for a criminal offense. The program involves intensive training of college undergraduates who commit to spending 6 to 8 hours a week with a single youth for 18 weeks. The mentor functions as a friend and as a change agent, helping the youth to establish goals and organizing social support and access to community resources for the youth. In two experimental evaluations of the program, Davidson and colleagues (Davidson and Basta 1989; Davidson et al. 1987) compared youth who were randomly assigned to the program with youth who were randomly assigned to usual care. In both studies, the program significantly reduced the rearrest rate.

Policy Change. The policy arena is another area where family interventionists might emulate tobacco control efforts. Increasingly, tobacco control advocates are relying on changes in law and policy to achieve reductions in the prevalence of tobacco use (U.S. Department of Health and Human Services 1993a, 1994). Evidence suggests that increased taxation on tobacco reduces its use (U.S. Department of Health and Human Services 1994). Worksite policies to curtail smoking and to encourage employees to quit have had beneficial effects (Fisher et al. 1990). As evidence for the harm of passive smoking has mounted (U.S. Department of Health and Human Services 1993b, 1986), laws and regulations prohibiting smoking in public places have increased dramatically (U.S. Department of Health and Human Services 1993a). Evidence that most smokers become addicted as adolescents has led to extensive Federal, State, and local efforts to reduce illegal sales of tobacco to young people (U.S. Department of Health and Human Services 1994). In essence, the tobacco control community has attempted to change any policy or law that seemed likely to influence the prevalence of smoking or smokeless tobacco use.

Increasing the prevalence of good parenting is undoubtedly a more complex problem. Yet there are key policy areas where changes in law or policy might improve outcomes for children. These include welfare, divorce and custody laws, family leave, provision of child care, and mandatory parent training under certain circumstances.

An important question in all of these policy arenas is, To what extent is good research available and being used to guide policy changes? For example, welfare reform is currently a matter of much discussion.

Many argue that the current welfare system promotes dependency and undermines two-parent families. Whether welfare policies are revised in ways that benefit parenting remains to be seen. Certainly there is no evidence to suggest that increasing the economic hardship of families by cutting off welfare for them will decrease their risk, and such approaches as 2-year limits on cash benefits and withdrawal of benefits for children born out of wedlock are entirely untested (Aber et al. 1995). The counterargument, however, is that such tightening of welfare will increase the likelihood that families will become self-sufficient and that women will avoid single parenting (Frum 1994). Although there have been "experiments" with welfare reform, few have systematically examined the effects of these policies on parenting and on children.

One notable exception was the federally funded Teenage Parent Welfare Demonstration (Aber et al. 1995), which found that a comprehensive welfare-to-work program for teenage parents (including education, job training, and/or employment requirements, in addition to child care, parenting supports, and case management assistance) was moderately effective in increasing the mothers' self-sufficiency activities, although it appeared to have little short-term effect on their economic well-being, parenting, or their children's development.

Other important policy areas include ensuring family leave after the birth or adoption of a child, ensuring the availability and quality of child care, and reducing the negative impact of divorce on children. Policies to reduce the negative impact of divorce may include mandatory mediation, parent education on the effects of divorce on children, and custody arrangements based on the best interests of the child. Even when the child's best interest is the statutory standard for custody decisions, such decisions are often uninformed by research or even clear delineation of important factors to consider when determining the best interests of the child (such as quality of the parent-child relationship, parenting skill, etc.). Clear statutory criteria that delineate these factors, based on the best available evidence, and appropriate judicial education in child-related research could improve the quality of child custody decisions (Kelly 1994).

A recent policy development in some communities is a requirement that parents whose children are found to have committed a juvenile offense can be required to take a parenting skills class. Silverton, OR, reported a 44-percent reduction in juvenile crime after introducing such a law. It remains to be seen whether the law will continue to

have an impact or whether this effect was primarily due to the normative impact of publicity about the law.

Another policy area important to family functioning is the funding of effective interventions, such as those described in this chapter, to assist families in the task of childrearing (e.g., home visiting programs of the families of newborns, other family support programs for at-risk families, parenting skills programs, mentoring programs). Limited public funds must be prioritized across the spectrum of social needs. The priority placed on public funding of effective family-focused interventions will determine, in part, their potential for broad dissemination.

Thus, researchers concerned with the prevalence of effective parenting practices must examine the effects of public policies on family functioning. An organizing question for policy research might be, "What impact will a given policy have on the prevalence of effective parenting or on factors that are known to influence effective parenting?" As areas where revised law or policy might influence families are identified, systematic research on the effects of proposed policies is needed. One type of study would simply correlate existing policy in different locations with the measures of family functioning. Hierarchical analyses might be able to tease out the impact of policy variability while controlling for other factors such as poverty.

Ultimately, however, researchers need experimental evaluations of the impact of policies. Unfortunately, there are only a few precedents for evaluating the effects of policy prior to its widespread adoption (Aber et al. 1995; Danziger and Weinberg 1986). Science could be a much more influential guide to policy development than it currently is in this area, but only if policymakers are held accountable for basing their policies on empirical evidence.

## A COMMENT ON THE ETHICS OF INFLUENCING CHILDREARING PRACTICES

Adoption of the goal of influencing the prevalence of certain childrearing practices raises ethical issues. When family researchers conduct clinical research, each of the participants has the opportunity for informed consent about the procedures that will be used and their likely impact on parents' and children's behavior. Presumably, nonresearch clinical interventions with families also provide for informed consent. However, research that focuses on changing the

prevalence of parenting practices may involve interventions that do not present the opportunity for fully informed consent. For example, a media campaign to increase parental monitoring would be hard-pressed to obtain informed consent from each family that it reached.

It is important, therefore, to articulate guidelines that would minimize the risks to families and give populations that might be targeted in such research a voice in what happens. The issue has been discussed in some detail by Kelly (1988), Fawcett (1990), and Biglan (1995). Perhaps the single most important dictum is that researchers should forge a collaborative relationship with representatives of the communities involved in the research. Fawcett (1990) has advocated that the goals and methods of the research be appropriate to the goals and needs of the community, that interventions be designed to be replicable by other communities, that the results of research be openly communicated to those who are its intended beneficiaries, and that research should benefit people of marginal status by empowering them.

The communication of research findings bears further comment. Family researchers have an ethical responsibility to articulate research findings about beneficial parenting practices and family interventions. At the same time, existing evidence is limited about the extent to which research findings are replicable across different cultural or ethnic groups. These limitations must also be communicated. As Fawcett (1990) has advocated, the ultimate decision about whether to promote a particular parenting practice or family intervention in a given community should be in the hands of representatives of that community. However, the community will be served best if its members have a clear summary of what practices and programs have been found to be of value in other communities.

#### **ADVOCACY**

The tobacco control movement has one more lesson for those who are trying to enhance family functioning: Simply articulating the empirical evidence about the costs and benefits of a cultural practice can affect that practice. Warner (1977, 1989) concluded that the issuance of the 1964 Surgeon General's report on the carcinogenic effects of smoking led to a downturn in the prevalence of smoking. As the tobacco control community has become more aware of the potential to improve health practices through advocacy, advocacy efforts have become more extensive and sophisticated (Wallack et al.

1993). For example, the compilation of the evidence on the effects of passive smoking in the 1993 Surgeon General's report was intended to provide widespread publicity for evidence of the harm of passive smoke. The report and the publicity that the report generated influenced organizations around the Nation to push for greater control on smoking in places where others would be exposed.

The Center for Substance Abuse Prevention is playing an important role in articulating what is known relevant to preventing substance abuse. The Prevention Enhancement Protocol System project is systematically reviewing the evidence in specific areas and articulating what State and local agencies can do, in light of that evidence, to more effectively prevent substance abuse.

Nonetheless, there is a role for the National Institute on Drug Abuse (NIDA). In the area of family functioning, NIDA should have a strategic plan that indicates (1) the kinds of family practices and organizational practices and policies that need to change if the Nation is going to reduce the prevalence of substance abuse and other problems of youth and (2) the kinds of practices that will promote successful youth development.

A system of media has developed in this country that brings news of health-related research directly to everyone. For example, the public's knowledge of the value of low-fat diets has been widely reported. A pronouncement from the National Cancer Institute (NCI) regarding the benefit or harm of a practice is immediately and widely reported. Take, for example, the issue of whether women between the ages of 40 and 50 should have mammograms. In 1993 NCI withdrew its support for the consensus guidelines, which recommended that women ages 40 to 49 have a mammogram every 1 to 2 years. NCI did so because it concluded that the evidence was not clear that mammography among women in this age range would save lives. The issue was hotly debated ("NCI drops . . ." 1993), because it was generally understood that the Institute's position would influence whether physicians recommended mammography and whether women sought them.

There is no reason why NIDA could not similarly articulate the implications of well-established findings for policy and practice. In some cases, the pronouncement would need to be made jointly by several institutes, such as NIDA and the National Institute of Mental Health and the National Institute of Child Health and Human Development. An NIH consensus conference is an appropriate vehicle for arriving at such statements.

The value of parental monitoring is one area in which it may be time to articulate a consensus about the evidence. Other chapters in this monograph review the evidence that parental monitoring influences young people's associations with deviant peers and their engagement in diverse problem behaviors (Dishion et al. 1996). It should be possible to state the importance of this parenting practice and the ways in which monitoring might be encouraged or supplemented. A clear statement about monitoring could influence the practices of many parents and influence schools and communities to develop policies and practices that encourage monitoring.

## EXPANDING THE AGENDA FOR RESEARCH ON FAMILY-FOCUSED INTERVENTIONS

Imagine a society in which well-validated family-focused interventions (e.g., Henggeler et al. 1986; Olds and Pettitt 1996; Szapocznik 1996; Webster-Stratton 1981a, b, 1982a, b, 1984; Webster-Stratton et al. 1988, 1989) were widely available. Suppose that most families were frequently exposed to media that promoted effective family practices. What if schools systematically identified children who were at risk for the development of problem behaviors and ensured that they and their families received the programs that would reduce their risk? Suppose that research identified optimal approaches to supervised recreation that increased the likelihood that at-risk children developed prosocial competencies and positive relationships with prosocial peers. Communities could develop mentoring programs (e.g., Davidson and Basta 1989) that reduce recidivism among offenders.

Communities that develop all of these practices are more likely to have a high prevalence of effective parents and a low prevalence of youth who engage in serious problem behavior.

How likely is it that society will achieve such cultural practices? That is unclear. But society is more likely to do so if family researchers expand their agenda to explore all of the ways in which the prevalence of effective childrearing practices can be increased. The specific lines of research that need to be pursued include the following:

• Experimental research evaluating methods of increasing at-risk families' participation in parenting skills training programs

- Systematic research on the dissemination of validated family interventions
- Analysis of the characteristics of organizations that are associated with the adoption and maintenance of validated family interventions
- Analysis of the consequences that influence organizations to provide validated family interventions
- Experimental evaluations of programs to influence organizations to adopt and maintain validated family interventions
- Systematic research on nonclinical means of influencing parenting practices
  - Experimental evaluations of media interventions to influence parenting practices
  - Development and experimental tests of school-based interventions to affect parenting practices
- Research on how communities might supplement parental childrearing efforts
  - Experimental evaluations of the efficacy of supervised recreation in reducing youth problem behaviors
  - Further development and evaluation of mentoring programs
- Systematic research on the influence of policies regarding parenting practices and child outcomes

NIDA and other institutes that are concerned with childrearing practices should also become better organized to advocate for better childrearing practices. They should articulate what is already known about effective childrearing practices and should organize to influence both policymakers and parents to adopt "best practices." Such advocacy is well within the public health mission of the institutes. It would focus the efforts of millions of Americans who are very concerned about the problem behaviors of youth, but who lack information about what are more and less useful strategies for addressing these concerns.

#### REFERENCES

- Aber, J.L.; Brooks-Gunn, J.; and Maynard, R.A. Effects of welfare reform on teenage parents and their children. *Future Child* 5(2):53-71, 1995.
- Albin, J.; Lee, B.; Dumas, J.; Slater, J.; and Witmer, J. Parent training with Canadian families. *Can Ment Health* December: 20-24, 1985.
- Barber, J.G.; Bradshaw, R.; and Walsh, C. Reducing alcohol consumption through television advertising. *J Consult Clin Psychol* 57(5):613-618, 1989.
- Barnes, G.M. Adolescent alcohol abuse and other problem behaviors: Their relationships and common parental influences. *J Youth Adolesc* 13(4):329-348, 1984.
- Biglan, A. Changing Cultural Practices: A Contextualist Framework for Intervention Research. Reno, NV: Context Press, 1995.
- Biglan, A.; Ary, D.V.; Duncan, T.E.; Black, C.; and Smolkowski, K.
- A randomized control trial of a community intervention to prevent adolescent tobacco use. *Am J Community Psychol*, in press.
- Biglan, A.; Duncan, T.; Irvine, B.; Ary, D.; Smolkowski, K.; and James, L. "A Drug Abuse Prevention Strategy for Rural America." Paper presented at Rural Substance Abuse: State of Knowledge and Issues Conference, Washington, DC, April 26-27, 1994.
- Biglan, A.; Duncan, T.E.; Ary, D.V.; and Smolkowski, K. Peer and parental influences on adolescent tobacco use. *J Behav Med* 18(4):315-330, 1995.
- Biglan, A.; Metzler, C.A.; Wirt, R.; Ary, D.; Noell, J.; Ochs, L.; French, C.; and Hood, D. Social and behavioral factors associated with high-risk sexual behavior among adolescents. *J Behav Med* 13(3):245-262, 1990.
- Brennan, T. Patterns of Multiple Drug Use in a National Adolescent Sample: A Multivariate Approach. Behavioral Research Institute, Boulder, CO, 1979.
- Danziger, S.H., and Weinberg, D.H., eds. *Fighting Poverty*. Cambridge: Harvard University Press, 1986.
- Davidson, W.S., II, and Basta, J. Diversion from the juvenile justice system: Research evidence and a discussion of issues. In:
  Lahey, B.B., and Kazdin, A.E., eds. *Advanced Clinical Child Psychology*. Annual Review. 12. New York: Plenum Press, 1989. pp. 85-111.
- Davidson, W.S., II, and Redner, R. The prevention of juvenile delinquency: Diversion from the juvenile justice system. In: Price, R.; Cowen, E.; Lorion, R.; and Ramos-McKay, J., eds.

- Fourteen Ounces of Prevention. American Psychological Association, 1988. pp. 123-137.
- Davidson, W.S., II; Redner, R.; Blakely, C.H.; Mitchell, C.M.; and Emshoff, J.G. Diversion of juvenile offenders: An experimental comparison. *J Consult Clin Psychol* 55(1):68-75, 1987.
- Dishion, T.J., and Andrews, D.W. Preventing escalation in problem behaviors with high-risk young adolescents: Immediate and 1-year outcomes. *J Consult Clin Psychol* 63:538-548, 1995.
- Dishion, T.J.; Li, F.; Spracklen, K.; Brown, G.; and Haas, E. "The Measurement of Parenting Practices in Research on Adolescent Problem Behavior: A Multimethod and Multitrait Analysis." Paper presented at the National Institute on Drug Abuse Technical Review on Drug Abuse Prevention Through Family Interventions, Gaithersburg, MD, January 25-26, 1996
- Donovan, J.E., and Jessor, R. Structure of problem behavior in adolescence and young adulthood. *J Consult Clin Psychol* 53(6):890-904, 1985.
- Donovan, J.E.; Jessor, R.; and Costa, F.M. Syndrome of problem behavior in adolescence: A replication. *J Consult Clin Psychol* 56(5):762-765, 1988.
- Dryfoos, J.G. *Adolescents at Risk: Prevalence and Prevention*. New York: Oxford University Press, 1990.
- Dumas, J. Parental perception and treatment outcome in families of aggressive children: A causal model. *Behav Ther* 17:420-432, 1986.
- Elliott, D.S., and Morse, B.J. "Delinquency and Drug Use as Risk Factors in Teenage Sexual Activity and Pregnancy." Unpublished manuscript, 1987.
- Epstein, L., and Tamir, A. Health-related behavior of adolescents: Change over time. *J Adolesc Health Care* 5:91-95, 1984.
- Farrell, A.D.; Danish, S.J.; and Howard, C.W. Relationship between drug use and other problem behaviors in urban adolescents. *J Clin Consult Psychol* 60:705-712, 1992.

- Fawcett, S.B. Some emerging standards for community research and action: Aid from a behavioral perspective. In: Tolan, P.; Keys, C.; Chertok, F.; and Jason, L., eds. *Researching Community Psychology. Issues of Theory and Methods.* Washington, DC: American Psychological Association, 1990. pp. 64-75.
- Fisher, K.J.; Glasgow, R.E.; and Terborg, J.R. Work site smoking cessation: A meta-analysis of long-term quit rates from controlled studies. *J Occup Med* 32(5):429-439, 1990.
- Flay, B.R. Mass media and smoking cessation: A critical review. *Am J Public Health* 77(2):153-160, 1987*a*.
- Flay, B.R. Evaluation of the development, dissemination and effectiveness of mass media health programming. *Health Educ Res* 2(2):123-129, 1987b.
- Fontana, C.A.; Fleischman, A.R.; McCarton, C.; Meltzer, A.; and Ruff, H. A neonatal preventive intervention study: Issues of recruitment and retention. *J Primary Prev* 9(3):164-176, 1989.
- Frum, D. Dead Right. New York: Basic Books, 1994.
- Greenwood, P.W. "The Cost-effectiveness of Early Intervention as a Strategy for Reducing Violent Crime." Paper prepared for the University of California Policy Seminar Crime Project, Santa Monica, CA, Rand Corporation, 1995.
- Hawkins, J.D.; Catalano, R.F.; Jones, G.; and Fine, D. Delinquency Prevention Through Parent Training: Results and Issues from Work in Progress. Children to Citizens: Families, Schools, and Delinquency Prevention. New York: Springer-Verlag, 1987. pp. 186-204.
- Hawkins, J.D.; Lishner, D.M.; Catalano, R.F.; and Howard, M.O. Childhood predictors of adolescent substance abuse: Toward an empirically grounded theory. *Child Chem Abuse* 18(1-2):11-18, 1986.
- Henggeler, S.W.; Rodnick, J.D.; Borduin, C.M.; Hanson, C.L.; Watson, S.M.; and Urey, J.R. Multisystemic treatment of juvenile offenders: Effects on adolescent behavior and family interaction. *Dev Psychol* 22:132-141, 1986.
- Herzog, E.; Cherniss, D.; and Menzel, B. Issues in engaging high-risk adolescent mothers in supportive work. *Infant Ment Health J* 7(1):59-68, 1986.
- Holden, G.W.; Lavigne, V.V.; and Cameron, A.M. Probing the continuum of effectiveness in parent training: Characteristics of parents and preschoolers. *J Clin Child Psychol* 19:2-8, 1990.

- Jessor, R. Problem-behavior theory, psychosocial development, and adolescent problem drinking. *Br J Addict* 82:331-342, 1987*a*.
- Jessor, R. Risky driving and adolescent problem behavior: An extension of problem-behavior theory. *Alcohol Drugs Driving* 3(3-4):1-11, 1987b.
- Jessor, R., and Jessor, S. The conceptual structure of problembehavior theory. In: Jessor, R., and Jessor, S., eds. *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth.* New York: Academic Press, 1977a. pp. 19-67.
- Jessor, R., and Jessor, S.L. *Problem Behavior and Psychosocial Development: A Longitudinal Study of Youth.* New York: Academic Press, 1977b.
- Johnston, L.D.; Bachman, J.G.; and O'Malley, P.M. Monitoring the Future: Questionnaire Responses from the Nation's High School Seniors. Ann Arbor, MI: Institute for Social Research, 1985.
- Jones, M.B., and Offord, D.R. Reduction of antisocial behavior in poor children by nonschool skill-development. *J Child Psychol Psychiatry* 30(5):737-750, 1989.
- Kelly, J.B. The determination of child custody. *Future Child* 4(1):121-142, 1994.
- Kelly, J.G. A Guide to Conducting Prevention Research in the Community: First Steps. New York: The Haworth Press, 1988.
- Kumpfer, K.L. "Selective Preventive Interventions: The
  Strengthening Families Program." Paper presented at the
  National Institute on Drug Abuse Technical Review on Drug
  Abuse Prevention Through Family Interventions,
  Gaithersburg, MD, January 25-26, 1996.
- Lichtenstein, E.; Nettekoven, L.; and Ockene, J.K. Community intervention trial for smoking cessation (COMMIT):
  Opportunities for community psychologists in chronic disease prevention. *Am J Community Psychol* 19(1):17-39, 1991.
- Loeber, R., and Dishion, T. Early predictors of male delinquency: A review. *Psychol Bull* 94(1):68-99, 1983.
- Luepker, R.V.; Murray, D.M.; Jacobs, D.R., Jr.; Mittelmark, M.B.; Bracht, N.; Carlaw, R.; Crow, R.; Elmer, P.; Finnegan, J.; Folsom, A.R.; Grimm, R.; Hannan, P.J.; Jeffrey, R.; Lando, H.; McGovern, P.; Mullis, R.; Perry, C.L.; Pechacek, T.; Pirie, P.; Sprafka, J.M.; Weisbrod, R.; and Blackburn, H. Community education for cardiovascular disease prevention:

- Risk factor changes in the Minnesota Heart Health Program. *Am J Public Health* 84(9):1383-1393, 1994.
- Malcolm, S., and Shephard, R.J. Personality and sexual behavior of the adolescent smoker. *Am J Drug Alcohol Abuse* 5(1):87-96, 1978.
- Marshall, R. *The State of Families: Losing Direction*. Milwaukee, WI: Family Service America, 1991.
- McMahon, R.; Forehand, R.; and Griest, D. Effects of knowledge of social learning principles on enhancing treatment outcome and generalization in a parent training program. *J Consult Clin Psychol* 49:526-532, 1981.
- Mendel, R.A. Prevention or Pork? A Hard-Headed Look at Youth-Oriented Anti-Crime Programs. Washington, DC: U.S. Dept. of Education, 1995.
- Miller, P.Y., and Simon, W. Adolescent sexual behavior: Context and change. *Soc Probl* 22:58-76, 1974.
- Mrazek, P.J., and Haggerty, R.J., eds. *Reducing the Risks for Mental Disorders*. Washington, DC: National Academy Press, 1994.
- "NCI drops . . ." *The Cancer Letter*. Vol. 19, no. 48, December 10, 1993.
- Niensted, B. The policy effects of a DWI law and a publicity campaign. In: Surette, R., ed. *The Media and Criminal Justice Policy: Recent Research and Social Effects*. IL: Charles C Thomas, Publisher, 1990. pp. 193-203.
- O'Keefe, G., and Reid, K. Media public information campaigns and criminal justice policy—beyond "McGruff." In: Surette, R., ed. *The Media and Criminal Justice Policy: Recent Research and Social Effects.* IL: Charles C Thomas, Publisher, 1990. pp. 209-223.
- Olds, D., and Pettitt, L. "Reducing Risks for Substance Abuse with a Program of Prenatal and Early Childhood Home Visitation." Paper presented at the National Institute on Drug Abuse Technical Review on Drug Abuse Prevention Through Family Interventions, Gaithersburg, MD, January 25-26, 1996.
- Osgood, D.W.; Johnston, L.D.; O'Malley, P.M.; and Bachman, J.G. The generality of deviance in late adolescence and early adulthood. *Am Soc Rev* 53:81-93, 1988.
- Patterson, G.R. *Coercive Family Process*. Eugene, OR: Castalia Publishing, 1982.
- Patterson, G.R. Some characteristics of a developmental theory for early-onset delinquency. In: Lenzenweger, M.F., and Haugaard, J.J., eds. *Frontiers of Developmental Psychopathology*. New York: Oxford University Press, 1996. pp. 81-124.

- Patterson, G.R.; Reid, J.B.; and Dishion, T.J. *Antisocial Boys: A Social Interactional Approach*. Vol. 4. Eugene, OR: Castalia Publishing Company, 1992.
- Pentz, M.A.; Dwyer, J.H.; Johnson, C.A.; Flay, B.R.; Hansen, W.B.; MacKinnon, D.P.; Chou, C.P.; Rohrbach, L.A.; and Montgomery, S.B. Long-term follow-up of a multicommunity trial for prevention of tobacco, alcohol, and drug abuse. *JAMA*, 1996. Manuscript submitted for publication.
- Powell, D. Social network and demographic predictors of length of participation in a parent education program. *J Community Psychol* 12:13-20, 1984.
- Sampson, R. Family management and child development: Insights from social disorganization theory. In: McCord, J., ed. Facts, Frameworks and Forecasts. Vol. 3. Advances in Criminological Theory. New Brunswick, NJ: Transaction Publishers, 1993. pp. 63-91.
- Smith, C. Overview of Youth Recreation Programs in the United States. Washington, DC: Carnegie Council on Adolescent Development, 1991.
- Spoth, R.; Ball, A.D.; Klose, A.; and Redmond, C. Illustration of a market segmentation technique using family-focused prevention program preference data. *Health Educ Res*, in press.
- Spoth, R., and Redmond, C. Effective recruitment of parents into family-focused prevention research: A comparison of two strategies. *Psychol Health* 9:353-370, 1994.
- Spoth, R., and Redmond, C. A theory-based model of protective parenting processes incorporating intervention attendance effects. *Fam Relat*, in press.
- Spoth, R.; Redmond, C.; Haggerty, K.; and Ward, T. A controlled parenting skills outcome study examining individual difference and attendance effects. *J Marriage Fam* 57(May):449-464, 1995.
- Spoth, R.; Redmond, C.; Hockaday, C.; and Shin, C.Y. Barriers to participation in family skills preventive interventions and their evaluations: A replication and extension. Manuscript submitted for publication.
- Szapocznik, J. "Scientific findings that have emerged from family intervention research at the Spanish Family Guidance Center and the Center for Family Studies." Paper presented at the National Institute on Drug Abuse Technical Review on Drug Abuse Prevention Through Family Interventions, Gaithersburg, MD, January 25-26, 1996.

- Szapocznik, J.; Perez-Vidal, A.; Brickman, A.L.; Foote, F.H.; Santisteban, D.; Hervis, O.; and Kurtines, W.M. Engaging adolescent drug abusers and their families in treatment: A strategic structural systems approach. *J Consult Clin Psychol* 56:552-557, 1988.
- U.S. Department of Health and Human Services. *The Health Consequences of Involuntary Smoking: A Report of the Surgeon General.* Pub. No. CDC 87-8398. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, 1986.
- U.S. Department of Health and Human Services. *Major Local Tobacco Control Ordinances in the United States*. NIH Pub. No. 93-3532. Bethesda, MD: National Cancer Institute, 1993a.
- U.S. Department of Health and Human Services. *Respiratory Health Effects of Passive Smoking: Lung Cancer and Other Disorders.* NIH Pub. No. 93-3605. Bethesda, MD: National Cancer Institute, 1993b.
- U.S. Department of Health and Human Services. Preventing Tobacco Use Among Young People: A Report of the Surgeon General. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. Washington, DC: Supt. of Docs., U.S. Govt. Print. Off., 1994.
- Vingilis, E., and Adlaf, E. The structure of problem behavior among Ontario high school students: A confirmatory-factor analysis. *Health Educ Res* 5(2):151-160, 1990.
- Wahler, R. The insular mother: Her problems in parent-child treatment. *J Appl Behav Anal* 13:207-220, 1980.
- Walker, H.M.; Severson, H.H.; Nicholson, F.; Kehle, T.; Jenson, W.R.; and Clark, E. Replication of the systematic screening for behavior disorders (SSBD) procedure for the identification of at-risk children. *J Emot Behav Disord* 2(2):66-77, 1994.
- Wallack, L.; Dorfman, L.; Jernigan, D.; and Themba, M. Media advocacy and public health. *Power for Prevention*. Newbury Park, CA: Sage Publications, 1993.
- Warner, K.E. The effects of the anti-smoking campaign on cigarette consumption. *Am J Public Health* 67(7):645-650, 1977.
- Warner, K.E. Effects of the antismoking campaign: An update. *Am J Public Health* 79(2):144-151, 1989.

- Weber, J., and Stoneman, Z. Parental nonparticipation in program planning for mentally retarded children: An empirical investigation. *Appl Res Ment Retard* 7(3):359-369, 1986.
- Webster-Stratton, C. Modification of mothers' behaviors and attitudes through video-tape modeling group discussion. *Behav Ther* 12:634-642, 1981a.
- Webster-Stratton, C. Videotaping modeling: A method of parenting education. *J Clin Child Psychol* 10:93-97, 1981b.
- Webster-Stratton, C. Long-term effects of a videotape modeling parent education program: Comparison of immediate and 1-year follow-up results. *Behav Ther* 13:712-714, 1982a.
- Webster-Stratton, C. Teaching mothers through videotape modeling to change their children's behaviors. *J Pediatr Psychol* 7:279-294, 1982b.
- Webster-Stratton, C. Randomized trial of two parent-training programs for families with conduct-disordered children. *J Consult Clin Psychol* 52:666-678, 1984.
- Webster-Stratton, C.; Hollinsworth, T.; and Kolpacoff, M. The long-term effectiveness and clinical significance of three cost-effective training programs for families with conduct-problem children. *J Consult Clin Psychol* 57(4):550-553, 1989.
- Webster-Stratton, C.; Kolpacoff, M.; and Hollinsworth, T. Self-administered videotape therapy for families with conduct-problem children: Comparison with two cost-effective treatments and a control group. *J Consult Clin Psychol* 56(4):558-566, 1988.
- Wechsler, H., and Thum, D. Teen-age drinking, drug use, and social correlates. *Q J Stud Alcohol* 34:1220-1227, 1973.
- Welte, J.W., and Barnes, G.M. Youthful smoking: Patterns and relationships to alcohol and other drug use. *J Adolesc* 10:327-340, 1987.
- Werthamer-Larsson, L. "Methods for Investigating Costs and Benefits of Drug Abuse Prevention." Paper presented at the National Institute on Drug Abuse Technical Review on Drug Abuse Prevention Through Family Interventions, Gaithersburg, MD, January 25-26, 1996.
- Winett, R.A.; King, A.C.; and Altman, D.G. *Health Psychology and Public Health*. New York: Pergamon Press, 1989.
- Zabin, L.S. The association between smoking and sexual behavior among teens in U.S. contraceptive clinics. *Am J Public Health* 76:261-263, 1984.
- Zelnik, M.; Kantner, J.; and Ford, K. Sex and Pregnancy in Adolescence. Beverly Hills, CA: Sage Publishing, 1981.

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