

Drug Abuse Prevention Through Family-Based Interventions: Future Research

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The goal of prevention science is to prevent, delay the onset of, or moderate problems such as substance abuse, associated disorders, and psychopathologies. In the area of drug abuse, prevention research has focused on the study of risk and protective factors that may identify at-risk individuals or groups. In general, these factors are assumed to either increase or decrease the probability that problems will occur (Coie et al. 1993). The relationship between risk and protective factors and problem behaviors is complicated in that the salience of a risk factor may change depending on the cultural and physical context, the presence of other risk and protective factors, and the developmental status of the group or individual. Consequently, prevention researchers often rely on a systems perspective to aid in understanding the influences of multiple contexts on human behavior. This perspective helps elucidate how the individual both influences and is influenced by these contexts and the people and events in them over the course of development.

The major context for drug abuse prevention programs has been the school (Dusenbury et al. 1997; Gorman 1997). School-based interventions generally focus on increasing academic achievement and on skills training, including social, decisionmaking, communication, and refusal skills. Despite the prevalence of school-based interventions, research has also demonstrated that other contexts within the social ecology are appropriate and important points of contact for interventions. These include the family, recreational and religious settings, the community, and the workplace. This monograph focuses on family-based interventions.

Interventions designed for the family target risk and protective factors specific to the family context as well as interactions between the family and other contexts that may involve the child or have an impact on the child. Research has identified a number of family-level risk and protective factors associated with initiation of drug use (Kumpfer, Olds, Alexander, Zucker, and Gary, this volume). Specifically, studies show that the presence of substance abuse disorders among parents or other family members poses both genetic and social risks for children (Bry 1994; Dumka et al. 1995; Johnson and Montgomery 1989; Merikangas, Dierker, and Fenton, this volume; Van Hasselt et al. 1993). Other family

risk factors include parental or sibling use of alcohol, tobacco, and other drugs; positive family attitudes toward and acceptance of substance use; lack of attachment to parents at any developmental stage; sexual or physical abuse; economic instability; and poor family management (Hawkins et al. 1992, 1985). Protective factors in the family include consistent and contingent discipline; a strong parent-child bond; high levels of supervision and monitoring; and parental warmth, affection, and emotional support (Ge et al. 1996; Hawkins et al. 1992). Dishion and colleagues (1988) have demonstrated the importance of the family as an intervention context by showing, in longitudinal and cross-sectional analyses of prevention interventions, that enhancing parenting behaviors that have been shown to be protective can have a positive influence on the child. Specifically, they demonstrated that skill in parental monitoring can be taught and that this skill is a viable method of preventing early-onset drug use in children.

Additionally, research indicates that protective family factors can moderate the effects of risk factors. Specifically, Brook and colleagues (1990) found that the risk of associating with peers who use drugs was offset by protective family factors such as parent conventionality, maternal adjustment, and strong parent-child attachment. Their research stresses the importance of the ongoing role of the family in the socialization of children well into the adolescent years.

Family prevention interventions have successfully used behavioral, affective, and cognitive approaches to target a variety of family behaviors. Among them are parent-child interaction strategies, communication skills, child management practices, and family management skills (Bry, Catalano, Kumpfer, Lochman, and Szapocznik, this volume). A major factor that distinguishes family-based prevention interventions with positive outcomes from other parenting programs is that, similar to successful school-based programming, they concentrate on skill development rather than on simply educating parents about appropriate parenting practices. Effective programs use interactive teaching strategies to present skills to parents and their children, allow for practices and feedback, assign homework, and then help family members refine skills that work and modify those that do not.

Another factor that contributes to the success of family interventions is who participates. Family interventions may focus on the parents or child separately or on the family as a whole. Among the most innovative and effective are those interventions that include parents and children in individual and group training sessions. In these interventions, work is done individually with the parents and the children and then the entire family is brought together to practice the skills and strategies learned in

the individual sessions. This approach may be complicated if parents divorce and remarry. For example, Collins and Shanahan (this volume) found it necessary to collect data from three families (the original nuclear and two stepfamilies) to gain a full picture of the whole family for one child.

Although the number of research-based family prevention interventions is increasing, there are still relatively few that have been subjected to rigorous efficacy studies and even fewer that have subsequently been replicated with diverse populations under less controlled conditions. However, this is rapidly changing, and many advances are being made. Currently there are universal, selective, and indicated family-based programs in the field (Catalano, Kosterman, Haggerty, Hawkins, and Spoth, this volume; Institute of Medicine 1994; Kumpfer, this volume). Some programs that originally targeted one population have been modified for others. For example, the Strengthening Families Program was originally designed as an indicated intervention for parents on methadone maintenance (Kumpfer, this volume). It has now been adapted for universal audiences (Spoth, this volume) and for use in a variety of cultural and physical contexts.

In addition, the field is broadening the research scope beyond simply testing the efficacy and effectiveness of interventions to include other features important to the development and dissemination of successful family prevention interventions. For example, some researchers have begun to examine implementation methodology issues related to dosage, recruitment and retention (Spoth et al. 1996), and fit between interventionist and family members. Others are working to more carefully tailor interventions to meet the needs of specific family problems (Dishion, Kavanagh, and Kiesner, this volume) or to be culturally (Martin et al. 1996) or developmentally appropriate (Prinz 1994). Finally the emerging field of prevention services research is tackling issues such as describing what is currently available at the community level, how decisions are made about the provision of services, determining the cost-effectiveness of services, and how prevention services are financed, organized, and managed.

FOCUS ON FAMILY INTERVENTION

In recognition of the primary role of the family in preventing drug abuse and the desire of the National Institute on Drug Abuse (NIDA) to increase scientific understanding of that role, the Prevention Research Branch in the Division of Epidemiology and Prevention Research launched a program of work in the area of family prevention intervention research.

A broad definition of family was adopted: Family of origin; family of procreation; blood-, adoptive-, or marriage-related kin; or nonrelated persons who consider themselves to be part of the family through mutual commitment, whether living in one or different households. Three meetings were held to explore the issues.

The first meeting had dual objectives: (1) to review the state of scientific knowledge regarding the efficacy and effectiveness of family-based drug abuse prevention interventions and (2) to identify gaps in knowledge and suggest theory-based hypotheses and methodologies appropriate for advancing the field in those gap areas. Meeting participants included national experts involved in family-based drug abuse prevention research and related prevention areas. The meeting began with an overview of the contributions of family etiology and prevention research and continued with presentations of exemplary universal, selective, and indicated family-based prevention intervention models. Panelists discussed and elaborated on the information presented, explored what has been learned from other fields (Kumpfer, Alexander, McDonald, and Olds, this volume) and then discussed challenges for future research.

The topics for the second and third meetings emerged from this meeting. The second meeting focused on parental monitoring. Specifically, the task was to further clarify and operationalize the definition of this concept. This was deemed critical because research to date indicates that parental monitoring is an essential parenting role that plays an important part in reducing the risk of substance use initiation and escalation in youth (Dishion and McMahon, this volume). The third meeting focused on the identification of valid and reliable measures for use in prevention research (Collins and Shanahan, this volume; Dishion, Li, Spracklen, Brown, and Haas, this volume; Liddle and Rowe, this volume; McMahon and Metzler, this volume). An outcome of this meeting was the recommendation that, to the extent possible, family-based prevention researchers use a common set of measures to allow for comparisons across data sets. The chapters in this volume evolved from the proceedings of these three meetings.

RECOMMENDATIONS FOR FUTURE RESEARCH

Although this was not a goal, recommendations for future research directions emerged from the three meetings (Spoth, this volume). These were noted and are listed here. Time constraints prevented the discussion and formulation of a full research agenda, but the following items provide a starting point for such an activity. Points are divided into six subsections: etiology, prevention intervention content, research methodology, prevention methodology, dissemination, and prevention

services research. Some areas such as prevention services research and dissemination were less adequately discussed than others, while policy research was not addressed (Biglan and Metzler, this volume; Chatterji, Werthamer, Lillie-Blanton, and Caffray, this volume).

Etiology

- More research is needed to identify social, emotional, cognitive, and familial antecedents of substance abuse as they change during different developmental stages of individual family members and the family.
- Etiologic research should examine the multiple and overlapping pathways to drug abuse. This would include examining the interaction of factors such as developmental status, ethnic group membership, and geographic location.
- Studies are needed to examine how the environment, including the family environment, interacts with and influences individual vulnerability to substance abuse.
- Individual and family-linked psychopathologies should be examined as a major pathway to the development of drug abuse.

Prevention Intervention Content

- Parental monitoring should be a continuing emphasis of programming across the development of the child and the family.
- Research-based effective programs and program strategies from other fields should be adapted and replicated for use in preventing substance abuse.
- Replications of efficacious programs are needed to determine their potential generalizability to subpopulations not included in the original efficacy studies.
- Special attention should be paid to gender, particularly the differential impact of program content by gender.

Research Methodology

- Families are embedded in a social context. Measures and analyses should consider the impact of the broader context (neighborhood, school, and work) on the family and the effectiveness of prevention programming. To accomplish this, new measures and analysis strategies may need to be developed.
- Longitudinal studies of family interventions should use methods such as time series analysis to maximize understanding of family processes, dynamics, and changes over short and long periods of time.
- Interrelationships among variables such as parental monitoring, association with deviant peers, and academic achievement should be considered when designing a measurement plan for family-based prevention intervention research projects.
- Meta-analyses should be conducted to provide the statistical power necessary to identify various common components and pathways of successful family-based drug abuse prevention programs.
- Culturally sensitive measures should be employed in determining risk and protective factors specific to subpopulations with whom family prevention intervention are being used.

Prevention Methodology

- Adequate dosage is critical to the effectiveness of prevention programming. Family prevention intervention research should monitor and document dosage levels and use those data in assessing efficacy.
- Booster sessions following interventions have been shown to be effective in sustaining positive outcomes. More research is needed to better understand the type, number, developmental timing, interval between and duration of boosters that account for the continued positive effects.
- Family recruitment, especially the recruitment of hard-to-reach populations, and the factors influencing retention in interventions need to be subjected to detailed examination. In addition, the issue of recruitment bias needs to be tracked and accounted for in analyses of program outcome.
- Strategies and program components that appear to be particularly effective need to be examined in detail. Special attention should be given to determining for what level of intervention (universal, selective, indicated) they are most appropriate and effective.
- Strategies and components of family prevention intervention programs should be examined to determine both the impact of specific components and which ones account for program effectiveness. Special attention should be paid to program strategies, components, and content that may be harmful to families and family members.

Dissemination

- Programs that have been shown to be efficacious and effective should be made available to the public. The best strategies for accomplishing this need to be systematically studied.

Prevention Services Research

- Research is needed that examines the processes through which organizations adopt research-based family intervention practices.

SUMMARY

As the primary socialization unit of the child, the family is an important context for the prevention of many problem behaviors, disorders, and diseases, including substance abuse. Over the course of their development, children become less dependent on the family and more dependent on peers for social and emotional support and for cues regarding appropriate

or expected behaviors. However, research indicates that parents play a powerful role in determining their child's peer group and that the influence of parents on children's values, attitudes, and beliefs is enduring. Children and adolescents tend to choose peers who come from families with values similar to those of their family. Moreover, the areas in which peers are more influential tend to be those related to fashion, slang, and activities, whereas parents tend to have a greater influence on decisions that can have long-term effects.

The enduring influence of parents in the child's life points to the need for family-based drug abuse prevention programs that span the childhood and adolescent years. Obviously, identifying and working through family-based programs with children who exhibit early problem behaviors can be extremely beneficial in preventing later problems. However, there currently are few such programs that have been subjected to rigorous empirical testing. On the other hand, a number of excellent family-based programs have been demonstrated to be efficacious in preventing initiation or escalation of drug use in the early and later adolescent years.

One challenge that faces family based-prevention programs is determining how to make contact with and engage families. A number of new approaches are being tested, including programs that make contact with families at a universal level through the school and then channel those families in need of more services into selective and indicated programming (Dishion, Kavanagh, and Kiesner, this volume). Other approaches include engaging parents through programs or contexts in which they are already participating, for example, working with methadone maintenance program participants through their treatment center or contacting parents through their workplace.

Family-based prevention interventions have shown a great deal of promise for preventing drug use. Through research, scientifically based approaches with known efficacy can be developed. This monograph represents a first step, indicating the state of family-based prevention research and pointing to directions for future research. It is hoped that this monograph will stimulate researchers to conduct further research in family prevention interventions, including addressing the gaps identified and incorporating many of the suggestions made during the meetings.

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