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ABSTRACT

Major obstacles to conducting process research with parent education programs exist; new directions for studying how programs interact with participants are needed. In particular, intervention research is time consuming and expensive. The small number of subjects involved are often at risk and under considerable social stress. Self-selection and nonrandom attrition erode the sample. Comparing results from different programs is difficult because of (1) lack of clarity about program goals and effects to be measured, (2) wide within-program variations in program implementation, and (3) inadequate process and outcome measures. An ecological, experimental study of educational support groups for adolescent mothers illustrates these problems, and suggests an approach to learning from them. To explore the role of supportive education groups in the development of maternal and infant competence, 48 pregnant, low-income adolescents were interviewed and assigned to parenting group or control conditions. At 1- and 8-months postpartum, mothers were interviewed, mothers and infants were observed, and infants' developmental status was assessed. Results showed different patterns of participation were based on needs and resources of mothers. Future research should focus on attrition as a nonrandom variable, while studying a broader range of programs, directly comparing alternative forms of programs, and utilizing theoretical concepts of how context affects development. (RH)

NEW DIRECTIONS FOR STUDYING THE INTERACTION BETWEEN PARENT EDUCATION AND FAMILY CHARACTERISTICS

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ABSTRACT

To understand the reciprocal influences between families, their social environments, and parent education, three basic process questions must be addressed: (1) Who participates in the program and how are they involved? (2) What is the structure and content of the program and how does it vary with different leaders and participants? (3) How does the program affect different participants? This paper outlines major obstacles to process research with parent education programs and suggests some directions which would facilitate our understanding of the processes by which parent education programs interact with characteristics of participants.

In most parent education evaluations, the erosion of small, high-risk samples makes a generalizable analysis of the interaction between a program and family characteristics questionable. An exploratory analysis of a parent education program for adolescent mothers is presented to illustrate the problems common to parent education evaluations and ways to learn from them.

The advantages of studying community-sponsored programs for increasing research generalizability, increasing quality of community programs, and decreasing research costs are outlined. The conceptual focus of evaluations of parent education programs needs to be sharpened. Some promising conceptualizations of process questions are presented. The potential of process analyses and parent education programs is emphasized.

Recently, Clarke-Stewart (1981) reviewed parent education programs of the 1970s and lamented that they have yielded no new information about the processes of child development or the relationships between variation in programs, subjects, and delivery. She argues,

> "The reason for our ignorance is that evaluations of parent programs have generally been gross and global. The vast majority of program planners, motivated by conviction, zeal, or enviable assurance, have not empirically assessed their effects at all, and those who have done evaluations have used the simplest possible design: tests of children's performance before the program begins and after it ends with no control or comparison groups ....
>
> "... they have not examined effects according to variation on program dimensions (length, intensity and instructional method), subject dimensions (age, ability, background) or delivery dimensions (time, place, target)."
>
> (Clarke-Stewart, 1981, pp. 53-54)

The weaknesses of most parent education evaluations are undeniable. Yet, as this paper will discuss, even the best of experimental evaluation designs may collapse in the onslaught of complexities faced by parent education programs. In addition to the problems common to longitudinal developmental research (attrition, changing measures and constructs), are the hazards of community research (getting and maintaining individual and agency participation, contamination of conditions, service-research conflicts). Cowen's (1978) conclusions about the realities of community research are relevant to evaluations of parent education programs.

> "Communities are many things. One thing they are not is an ideal laboratory for antiseptic psychological studies. Their extraordinary complexity, omnipresent flux, action-

> service orientation, and susceptibility to day-to-day pressures present real and formidable barriers to 'Mr. Clean' evaluation studies. These factors place major contraints on the design of studies, the types of criteria that can be used, and the rigor of sophistication of the control that can be exercised .... The vulnerability of findings from any single community evaluation study points to the importance both of replication and of tolerance for a slow acretive process, in which small pieces in a puzzle gradually accumulate toward weight-of-evidence conclusions about major new programming approaches."
>
> (Cowen, 1978, pp. 803-804)

When we accumulate the evidence from parent education evaluations, we can learn that a variety of high quality programs that provide support and education for parents can positively influence parent-child interaction or child development (Levenstein, 1970; Dickie & Gerber, 1980; Field, Widmayer, Stringer & Igratoff, 1980; Whitt & Casey, 1982). However, especially when resources are limited, we need to understand what kinds of programs work in which situations. Realistic evaluation strategies need to be developed that combine developmental reserarch questions with program effect questions.

At least three basic process questions need to be addressed to understand how interventions interact with people and their environments: (1) Who participates in the program and how are they involved? (2) What is the structure and content of the intervention and how does it vary with different leaders and participants? (3) How does the intervention affect different kinds of participants? By using basic concepts from developmental and other theories, we can develop approaches to studying these questions that add to our understanding of the contextual influences on development while increasing our understanding of how interventions interact with families.

The panelists in the symposium discuss different strategies for studying the processes by which supportive educational interventions interact with the characteristics of the families who participate. Each approach promises new glimpses into the reciprocal influences between families, their social environments, and parent education programs. Each approach also faces a myriad of methodological, analytical and ethical problems that have no simple solutions. The purpose of this paper is: (1) to outline major obstacles to process research with parent education programs, and (2) to suggest some directions which would facilitate our understanding of the processes by which parent education programs interact with characteristics of participants.

The Problems

The basic problem is that intervention research is time-consuming and expensive so that even high quality intervention projects generally study, in depth, a small number of subjects who are often at risk and under considerable social stress. Self-selection and non-random attrition erode the sample so that it becomes difficult to systematically study variation or to generalize results (e.g., White, Kaban & Attannuci, 1979; Bromwich, 1981).

Comparing results from different programs is difficult because of: (1) lack of clarity about program goals and effects to be measured; (2) wide within-program variations in program implementation; and (3) inadequate process and outcome measures (Zigler & Trickett, 1978; Gray & Wandersman, 1980; Harman & Brim, 1980; Clarke-Stewart, 1981; Wandersman, 1982). From limited outcome measures, evaluations cannot separate effects of the program from

the effects of resources and strengths of the participants who are attracted to and maintained in the program.

My research on educational support groups for adolescent mothers illustrates the problems and an approach to learning from them. While programs for teenaged mothers have proliferated recently, their claims of long-term benefits for babies and young mothers have not been widely substantiated by solid research findings (Harman & Brim, 1980). The aim of our project was to conduct an ecological experiment to explore the role of supportive education groups on the development of maternal and infant competence.

Prenatal interviews were conducted with 48 pregnant, low-income adolescents to assess their knowledge, attitudes, social support and health prior to randomly assigning them to parenting group or control conditions. At one and eight months postpartum, mothers were interviewed and mothers and babies were observed at home to assess subjective satisfaction, attitudes toward parenting, social support, knowledge about babies, observed parenting competence [HOME, Home Observation for Measurement of the Environment (Caldwell and Bradley, 1978)], and the infant's developmental status (Bayley, 1969).

While mothers were randomly assigned to parenting group or control, mothers actually selected their own levels of participation (Table 1). Of the 48 mothers who were interviewed prenatally, 20 could not be contacted or refused to participate for the postpartum assessments prior to the intervention. Of the 19 mothers who were randomly assigned to the parenting groups, 9 mothers attended at least 3 sessions ($\bar{x}$ = 6.5 sessions) and 7 mothers attended 0 to 2 sessions ($\bar{x}$ = 0.4 sessions). Twelve control mothers participated only in data collection of each point.

Table 1 summarizes the exploratory analyses significant at $p < .10$ or less based on Fisher's exact 2 x 2 tests of median splits comparing two groups, or chi square tests comparing the whole sample. Results showed different patterns of participation were based on needs and resources of mothers. Compared to the mothers who were invited to the parenting groups but did not come, parenting group participants were younger, had less knowledge about babies, and were rated by the prenatal interviewers as showing high promise of being good mothers. In other words, group participants were young and scared, in need of information about babies, and motivated to be good mothers. White mothers were more than twice as likely to drop out of the project as black mothers. Dropouts had lower support from their families than those who stayed in the project.

The mothers who came to the group sessions rated their satisfaction with the group and their learning from the group very highly. Group participants showed gains on the HOME and on knowledge of babies that were more than double the gains in the control group. Parenting group participants tended to rate their overall satisfaction with life higher than other mothers.

The case study illustrates many problems which are commonly faced by evaluations of parent education programs, including: (1) control groups which become non-random; (2) varying levels of involvement of parents in the program; (3) attrition of families under stress; (4) program variations and (5) extensive measures on a sample which becomes too small to answer process questions. Nevertheless, it emphasizes that using a conceptual foundation to analyze the interaction of the program with the resources and

support systems of participants, even in a small sample, can formulate useful hypotheses for further testing. Our preliminary results suggest that parenting groups can be effective in increasing knowledge and improving the parenting interaction of very young, black, adolescent mothers with adequate family support. Other approaches are needed to effectively reach and maintain participation in older and white adolescents and those with low family support.

New Directions

It is not true that we have learned nothing about child development from evaluations of parent education programs. Although the processes by which the programs affect families is unclear, a range of programs positively influence children's development (Lazar, Hubbell, Murray, Rosche & Royce, 1977; Beller, 1979; Ramey, Sparling, Bryant & Wasik, 1982). In fact, the finding that such a diversity of programs can positively affect parent-child interaction and children's development suggests that the key to success lies less in specific curricula or structure and more in shared characteristics. Successful parent education programs share a belief in: (1) the parents' desire to do the best for their children; (2) the importance of the parents' behaviors for their children's development; and (3) the importance of children's behavior. Rescorla & Zigler conclude:

> "It would seem that a crucial effect of interventions is that the recipients come to believe that the service providers value them as people and consider their development and achievement as an important goal worth striving for. Perhaps of equal importance, the intervention helps parents to see that their own behaviors are important in influencing the course of their children's educational, social, and emotional development."
>
> (Rescorla & Zigler, 1981, p. 12)

While we know that high quality, intense parent education programs can positively influence interaction and development, we know very little about the interaction between family and program characteristics. In the symposium, promising approaches to studying the interaction between families and programs will be presented. The small samples, post-hoc analyses, or non-random control groups limit the generalizability of their conclusions. They do represent valuable first steps in the acretion of empirical data of how programs interact with participants.

Studying a broader range of existing parent education programs can complement the in-depth study of model programs that the symposium presents. Many community agencies have instituted programs for families based on these and other models (Evans, ND). It may be more productive for researchers to study existing interventions than to continue trying to design the one best intervention model. An evaluation of community-sponsored programs has the advantages of: (1) comparing contrasting types of programs; (2) increasing the number and variability of families and the generalizability of results; (3) increasing the time and resources available for studying interaction between program and family; and (4) increasing the objectivity of the evaluators and decreasing the unrealistic optimism of demonstration projects. Studying community programs may involve some loss of quality control and increased process variation. In this time of limited funding resources, working cooperatively with community agencies can facilitate high quality community-sponsored programs as well as decreasing the cost and increasing the generalizability of evaluation research. Direct comparison of alternative forms of parent education programs can provide essential evidence

on effectiveness (Ramey et al., 1982) and on which programs work best for which kinds of participants.

Most evaluation research has been an atheoretical search for significant results. Researchers need to conceptualize how programs interact with families. Promising conceptualizations of the three basic process questions include: (1) How do qualities of coping abilities, stress, and social network and support of parents affect their participation, involvement and parenting competence? (2) What can interventions do to increase parents' confidence in their abilities, involvement with their children, and internal control? (3) What kinds of parent resources are necessary for parents to benefit from program participation? While no one evaluation can answer all these questions, using concepts of how context affects development (Bronfenbrenner, 1977; Cochran & Brassard, 1979) to guide evaluations can increase our understanding of the process of how interventions interact with families (Ramey et al., 1982).

Supportive parent education programs can facilitate development in families as well as increase understanding of the process of development. Evaluation research will continue to be frustrated by the variations in program design, curricula, and measures that are an inevitable part of the interaction with families with diverse strengths and needs. For too long we have viewed variations in program delivery, parent involvement and family effects as annoying noise that distracts from main effects. Heroic efforts have been made to reduce program variations and attrition. Of course, programs must make every effort to maintain program quality and parent involvement. Rigid experimental controls, however, can obscure the message that

families try to communicate through their varying types of involvement and response to the program. Variations in program delivery, parent involvement and family effects are not likely to be random. Attrition appears random when we look at insensitive measures (e.g., SES, IQ) which do not explain why a participant drops out. We need to study how variations in programs and parent participation relate to the patterns of needs, strengths, stresses, resources and attitudes of families. Then the noise will become a message that will teach us about how our programs interact with the lives of families.

The challenge is to find ways to read the messages that the families we work with are communicating to us. Ultimately, our goal is to have a diversity of supportive parent education programs so that programs can be matched to the needs and strengths of particular families.

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TABLE 1

Description of Participants' Characteristics and Group Effects

Means	Parenting group < 3 sessions N = 9	Parenting group 0-2 sessions N = 7	Control data only N = 12	Drop out, no contact after 1 mo N = 20
Age	16.90[a]	17.60[b]	17.50	17.10
% White	11.00[a]	14.00[a]	25.00[a]	50.00[b]
Baby knowledge (range 1-15)	8.70[a]	9.90[b]	10.90	9.20
Observer rating (1-4)	3.30[a]	2.70[b]	3.30	3.00
Family support (8-24)	21.70[b]	22.40[b]	21.80[b]	19.80[a]
HOME gain	8.30[a]	7.90	3.45[b]	—
Baby knowledge gain	2.90[a]	1.10	1.20[b]	—

[a,b] Different lettered groups are significantly different, at $p < .10$ or less, from each other based on Fisher's exact 2 x 2 tests of median splits (for 2 groups), or chi square tests (for all subjects).