

Promoting fathers' engagement with children: Preventive interventions for low-income families¹

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ABSTRACT

Few father involvement programs have been systematically evaluated, especially in low-income minority populations. In this study, 289 couples from primarily low-income Mexican American and European American families were randomly assigned to one of three conditions and followed for 18 months: 16-week groups for fathers, 16-week groups for couples, or a one-time informational meeting. Curricula for both interventions were based on a 5-domain family systems risk model. The ongoing interventions produced short-term positive effects on symptoms of anxiety and depression and earned income. Longer-term positive effects were found in fathers' engagement with their children, couple relationship quality, fathers' social support, and children's problematic behaviors. Participants in the Couples groups showed more consistent longer-term positive effects than those in the Fathers groups.

who gave so generously of their time and effort over the period of the project. Finally, a host of loyal undergraduate students at Berkeley worked diligently to enter the voluminous data.

INTRODUCTION

Father involvement has been defined in many ways but measured primarily in terms of quantity of time spent with children. The expanding body of literature, which includes several extensive research reviews, concludes that fathers' involvement with their children is associated with positive cognitive, social, and emotional outcomes for offspring from infancy to adolescence (P. Cowan, Cowan, Cohen, Pruett, & Pruett, 2008; Lamb, 2000; K. Pruett, 2000; Tamis-LeMonda & Cabrera, 2002). What these studies show clearly is that the quality of fathers' involvement rather than the sheer quantity of contact is associated with positive outcomes for children (e.g., Amato, 1998).

We use the term "engagement" rather than involvement in discussing the affiliation between father and child in order to highlight the active and qualitative aspects of the relationship. Fathers who are engaged with their children in a warm and responsive way -- who provide structure and set limits, respond at levels that match the developmental capabilities of the child, and provide appropriate challenges and demands for maturity -- are more likely to have children who are academically, socially, and emotionally competent (Baumrind, 1989; Parke, 2002; Steinberg, 2001). Conversely, children of disengaged or negatively engaged fathers are at risk for a host of cognitive, social, and emotional difficulties. Given these correlational findings, our study was based on the assumption that preventive interventions designed to reduce fathers' disengagement and promote their active involvement with their children would provide important benefits to the children and the family as a whole.

Two models of father (dis)engagement

The emerging field of prevention science specifies that intervention curricula should ideally be based on theoretical models that reduce known risks or increase recognized buffers with respect to the desired outcomes (Coie, Watt, West, & Hawkins, 1993). A widely-accepted “deficit model” (Hawkins & Dollahite, 1997) of father involvement assumes that the pervasive social problem of “fatherlessness” in America has resulted from a decline in “family values” and a lack of motivation on the part of men to maintain relationships with their spouse and child (Blankenhorn, 1995; Popenoe, 1996). Furthermore, the deficit model assumes that many fathers have inadequate parenting skills. This model of fathers’ disengagement has provided a persuasive argument for the increasing number of social programs for fathers, with curricula devoted to increasing men’s parenting motivation and proficiency. Although there has been extensive documentation of historical changes in the demography of family dissolution and mother-only custody, evidence to support the deficit model of father involvement is lacking. We are not aware of any studies showing that men’s motivation to take an active fathering role has declined over the years, or that motivation plays a role in explaining variations in father involvement. In fact studies suggest that in intact families, men’s involvement has increased substantially over the past decades (Coltrane, 2004).

In contrast with the deficit model, other investigators and program developers have adopted risk-outcome models in which it is assumed that there are multiple systemic factors that affect the amount and quality of fathers’ engagement with their children. Some of these factors are located in men’s internal vulnerabilities, but many can be found in men’s family relationships and in external barriers that pose difficult challenges, even for men who are highly motivated to take an active role in their children’s lives. In studies of married, cohabiting, divorced, and single parents, a central correlate of fathers’ engagement with children is the quality of the fathers’

relationship with the mother of his children (McLanahan & Carlson, 2001). Given these findings, it is puzzling that almost all interventions to promote father involvement are targeted toward men and led by male staff. The relationship between men and their partners is either absent or, at best, a small part of the printed message, presentation, or curricula.

Multidimensional ecological (Belsky, 1984; Bronfenbrenner, 1979) or family risk-outcome models (C. Cowan & Cowan, 2000; M. Pruett, Insabella, & Gustafson, 2005) were originally proposed to explain variations in children's adaptation and well-being. The model adopted for the present study includes five aspects of family life that function as risk and/or protective factors that affect children's development.

- (1) The level of adaptation of each family member, his or her self-perceptions, and indicators of mental health and psychological distress;
- (2) The patterns of both couple and parent-child relationships transmitted across the generations from grandparents to parents to children;
- (3) The quality of the relationship between the parents, including communication styles, conflict resolution, problem-solving styles, and emotion regulation;
- (4) The quality of the mother-child and father-child relationships;
- (5) The balance between life stressors and social supports outside the immediate family.

In studies of father-child relationships, the same factors predict men's positive engagement with their children (Doherty, Kouneski, & Erickson, 1998). Not surprisingly, fathers are more likely to be engaged in a positive way with their young children when they have few symptoms of poor mental health, are securely attached to their own parents, communicate well with the child's mother, are under less external life stress, and experience more social support. Similar factors in multidomain ecological models have identified children at risk for abuse and neglect

(Rosenberg & Wilcox, 2006). The present intervention study, which is designed to support fathers' positive engagement with their young children, addressed all five family domains in both the intervention curricula and the assessment protocols.

Existing father engagement interventions

Before planning the interventions for the Supporting Father Involvement study, we searched the extensive research literature on interventions to foster fathers' engagement (P. Cowan et al., 2008; Doherty et al., 1998; Hawkins, Christiansen, Sargent, & Hill, 1995; Mincy & Pouncy, 2002). We examined both government and fatherhood organization accounts of programs. Federal and State governments, local family agencies, and fatherhood organizations produce written materials that provide information about the importance of fatherhood and the availability of support services for fathers (e.g., <http://www.fatherhood.org>). More direct single event contact with fathers begins with the staging of fatherhood workshops or mass motivational meetings attended by men, often with an explicitly religious perspective (e.g., <http://www.promisekeepers.org>). Other programs have a structure in which there is ongoing contact between professional or paraprofessional staff and fathers, one-by-one or in groups. Family agencies at the local level and national Headstart and Early Headstart programs have added components that reach out to fathers at home and at center-based programs (<http://fatherhood.hhs.gov/Parenting/hs.shtml>). Home visiting programs for parents of young children have focused almost entirely on mothers, but a few are now attempting to include fathers in their purview. A Marriage Moments program in two middle class samples, added to a monthly home-visiting program at 3 months postpartum, produced relatively strong but marginally significant effects on mothers' but not fathers' views of fathers' engagement in daily childcare tasks (Hawkins, Lovejoy, Holmes, Blanchard, & Fawcett, 2008), even though it did not

increase relationship satisfaction, the main target of the program (Hawkins, Fawcett, Carroll, & Gilliland, 2006). The program was administered in the form of videos and workbooks for each partner. The authors speculated that a group interaction format might have resulted in a greater direct impact on the marriage and a stronger indirect effect on father engagement.

Other family agencies and fatherhood organizations offer ongoing groups for men, led by men, usually meeting up to 3 or 4 times over a period of a month, although a few extend over a three month period. These programs have been addressed to fathers who are teens (Klinman, Sander, Rosen, & Longo, 1986), low-income and single parents (Baltimore Responsible Fatherhood Project: <http://www.cfuf.org/BRFP>), married (Fagan & Hawkins, 2001), and divorced (Cookston, Braver, Griffin, De Luse, & Jonathan, 2007). The focus of the meetings varies widely, from addressing men's individual physical health and mental health, including substance use and abuse, to parenting motivation, parenting skills, and job skills; a few also attempt to teach men new relationship skills in order to enhance collaboration with the children's mothers. Very occasionally, individual case management services were provided to supplement group meetings. Although many of these programs focus on strengths rather than deficits and assume that there are barriers to men's engagement with their children, only a handful of University-based programs, such as "Dads for Life" for divorced fathers (Cookston et al., 2007) and "Parenting Together" for new fathers (Doherty, Erickson, & La Rossa, 2003), created curricula based on the kind of ecological family systems risk-outcome model described above. Dads for Life had positive effects on fathers' relationship with their children and ex-wives. The Parenting Together program has not yet demonstrated effects on the couple relationship in its short-term follow-up.

Unfortunately, most programs receive no systematic evaluation beyond documentation of the number and characteristics of clients served and surveys of consumer satisfaction. Reports of these programs, usually on websites rather than journal publications, balance positive testimony from staff and participants with sober reflection on the challenges and obstacles involved in mounting the program. The few with pre- and post-intervention evaluations gather post-intervention data almost immediately after the group meetings end, so we do not know whether the effects are maintained over time. Most important, with the exception of several studies cited above, we do not know of published studies that have evaluated father engagement interventions using a randomized clinical trial design. Without this procedure, we cannot know whether observed changes in the intervention participants are more positive than those in similar families without intervention, nor can we draw definitive conclusions about whether the program has had the desired effects.

Finally, many fatherhood programs target low-income, often minority, participants but we know of no systematic data that evaluate whether the same program is effective for both low- and middle-income participants, or for participants of different backgrounds. The current study evaluates the effectiveness of interventions for both European American and Mexican American families who range from poverty to middle-income.

The Supporting Father Involvement Preventive Intervention

The Supporting Father Involvement study followed a sample of predominantly low-income families, two-thirds Mexican American and one-third European American, for 18 months in a randomized clinical trial of two interventions. The study compared the impact of a 16-week group for Fathers, a 16-week group for Couples, and a Control condition in which both parents attend one three-hour group session; groups in all three conditions were led by the same trained

mental health professionals and all focused on the importance of fathers to their children's development and well-being. The one time meeting and the 16-week curriculum for both the Fathers and Couples groups were based on a family risk model of the central factors that research has shown are associated with fathers' positive involvement with their children.

The study also examined concomitant changes in agencies that typically serve mothers and children. Observers of "family" agencies (e.g., McAllister, Wilson, & Burton, 2004) describe staff attitudes ranging from benign neglect of fathers to outright hostility toward the male partners of the female clients, presumably because some have been known to be violent. We hoped that, in addition to enhancing fathers' engagement with their children and decreasing the risks for problem behaviors in the children, a by-product of housing the program in Family Resource Centers would be an improvement in the "father friendliness" of the agencies.

METHOD

Procedures and participants

The Supporting Father Involvement project (SFI) and staff were located within Family Resource Centers in four California counties (San Luis Obispo, Santa Cruz, Tulare, Yuba) in primarily rural, agricultural, low-income communities with a high proportion of Mexican American residents. Newly hired staff in each setting included a project director, 2 group leaders, 2 to 3 case managers, a data coordinator, and a county liaison who served as a link between the project and the County Health and Human Services administration.

At each site, project staff recruited participants through direct referrals from within the Family Resource Centers and other county service agencies, talks at community organizational meetings, ads in the local media, local family fun days, and information tables placed strategically at sports events, malls, and other community public events where fathers were in

attendance. Because the project was conceptualized as preventive - to help families early in the family formation years before smaller problems become intractable - the project targeted expectant parents and those with a youngest child from birth to age 7.

A brief screening interview administered by a case manager assessed whether the parents met four additional criteria: (1) both partners agreed to participate; (2) the father and mother were biological parents of their youngest child and raising the child together, regardless of whether they were married, cohabiting, or living separately; and (3) neither partner suffered from a mental illness or drug or alcohol abuse problems that interfered with their daily functioning at work or in caring for their child(ren). The third criterion was determined through a simple set of questions about whether there were mental or emotional conditions that seriously impeded the parent's ability to look after children or participate in the intervention groups. If either parent reported serious problems of this kind, the family was not offered one of the study interventions but referred for other appropriate services. Finally, (4) couples were not accepted into the study if there was a current open child or spousal protection case with Child Protective Services, or an instance within the past year of spousal violence or child abuse. This last criterion was designed to exclude potential participants whose increased participation in daily family life might increase the risks for abuse or neglect of the child.

Of 550 couples who were administered a screening interview, 496 (90.2%) met the criteria for eligibility. Each eligible couple was then scheduled for a joint 1.5-hour initial interview with the group leaders that covered topics in five aspects of family life (individual, couple, parent-child, three-generational, life stress and social support). The initial interview was used to acquaint couples with the issues they would be discussing in the study intervention and in the

assessments prior to and after the intervention. Of the 496 eligible couples, 405 (81.7%) completed the initial interview.

At the end of the initial interview, 397 of 405 couples agreed to accept random assignment to one of three conditions: a 16-week Fathers group or Couples group) or the informational one-time meeting (the Control condition described above). Couples were then scheduled for individually administered 1.5 to 2.5-hour Baseline assessments, comprised of 16 questionnaires, administered orally in English or Spanish by one of the site's case managers. Only 26 of the 397 fathers and mothers failed to complete the Baseline assessments. The most common reasons given to case managers for not carrying through with the initial interview or the Baseline assessment were lack of time, changes in work schedule making attendance at group meetings impossible, and lack of interest in participating.

Of the 371 couples who completed the Baseline assessments, just over two-thirds of the participants (67%) were Mexican American, 27% were European American, and 6% were Asian American, African American, Native American, or mixed race. On entering the study, 72% of the couples were married and living together, 22% were cohabiting, and 6% were living separately and raising a child together (separated, divorced, or never-married, never-cohabiting couples). Median household income was \$29,700 per year, with more than two thirds of the sample falling below twice the Federal poverty line (\$40,000 household income per year for a family of four). A large majority (79%) of the fathers and a minority (39%) of the mothers had worked for pay during the week prior to their Baseline assessment. About half of the participants had completed high school or beyond. At Baseline, the number of children in the household ranged from 0 (mother was pregnant with a first child) to 7, with a mean of 2.34 children; the median age of the youngest child was 2.25 years.

The assessments conducted by the case managers were repeated with partners in 286 couples (77% of the Baseline participants) two months after completion of the groups or 7 months after the one-session informational meeting (Post 1). A second assessment 11 months after the groups ended, or 18 months after they entered the study (Post 2) was completed by 289 couples (78% of the Baseline participants). Participants were not paid for attending groups or meetings, but each partner was paid \$50 for completing the Baseline, \$50 for completing the Post 1 assessment, and \$100 for completing the Post 2 assessment (a total of \$400 per family over a period of 18 months).

Fathers Groups and Couples Groups

After Baseline assessments were completed, the single meetings of the Control group parents and the 16-week Fathers and Couples groups began. All groups were led by male-female pairs of mental health professionals who were selected by project directors on the basis of clinical expertise, training, and experience with couples and/or groups, knowledge of family and child development, cultural fluency and sensitivity, and the ability to work collaboratively with other professionals and agencies.

The groups for 6-12 fathers or 5-9 couples met for two hours each week for 16 weeks and involved both a structured curriculum of exercises, discussions, and short presentations, and an open-ended time in which participants were free to raise their real-life issues and concerns for discussion and problem-solving. As the study proceeded, some sites conducted the interventions with a greater number of participants in their groups and some used a different number of sessions (from 11-14), but all preserved a total of 32 hours of face to face meetings between leaders and participants. In total, there were 20 single-session meetings (Control condition), 15

Fathers groups, and 18 Couples groups. Childcare was provided while the parents met to allow them to focus on their family issues (mostly) undisturbed.

The curriculum is detailed in a manual followed by the group leaders. The manual was adapted by Marsha Kline Pruett and Rachel Ebling from the original curricula used in the Cowans' earlier intervention projects (C. Cowan & Cowan, 2000; P. Cowan, Cowan, Ablow, Johnson, & Measelle, 2005) in order to accommodate the cultural and linguistic differences and the broader diversity of family forms represented in this project. All materials were translated into Mexican Spanish. In all, 21 of the Control group meetings, Fathers groups, and Couples groups were conducted in Spanish, 32 in English. The combination of structure and flexibility allowed group leaders to maintain lesson plans following the general model and goals for the groups while using their professional acumen in implementation. For example, the leaders could choose from an exercise that requires moving around the room and acting out scenarios to stimulate discussion of an issue, or a similar exercise that required more story telling and group responses. On a continuum of intervention styles ranging from open-ended group therapy (Yalom, 1995) to psychoeducational teaching of communication skills (Stanley, Blumberg, & Markman, 1999), our approach occupies a middle ground. In the open-ended check-ins and exercises, the leaders did not attempt to provide explicit solutions to couple or parenting issues, but drew participants out about their own goals and any impasses related to the issue. The structure was provided by leaders' agendas for each group meeting, the selection of exercises and tasks, and active guiding of the group discussions.

Mothers attended a portion of the first Fathers group meeting to see the group first hand and to enable staff to engage mothers in supporting the importance of fathers' attendance at the group. In both Couples groups and Fathers groups, two of the 16 sessions (weeks 4 and 14)

involved separate meetings of fathers with the male leader and of mothers with the female leader. The families' youngest child attended these two sessions with the fathers, where activities appropriate for children of different ages were offered and encouraged. The mothers and female group leaders focused their discussion on the women's views of their couple relationship and the fathers' relationships with the children. These sessions were the only direct contact with the intervention part of the project for mothers whose partners were in the Fathers-only groups.

Given the economic and social hardships experienced by many of the participants in this study, we did not expect that group meetings over a four-month period would be sufficient to encourage significant psychological change in each aspect of family life that the program focuses on. All study participants in both the intervention and control conditions received the services of a case manager who was available to make appropriate referrals for assistance with individual, family, medical, employment, or legal issues over the 18-months of each family's participation. The case managers also served as a link to other aspects of the study by following up with participants when they missed a group meeting and maintaining contact with parents in between the three individual assessments.

Because families with open cases of family violence were not included in the project, we did not expect to be able to measure the interventions' direct impact on child abuse and neglect, at least in the short run. Nevertheless, we hypothesized that the intervention would minimize the risk of parents' harsh treatment of their children if we could: affect parents' experience of anxiety or depression; help them with unresolved impasses in their couple relationship; modulate unduly harsh or extremely lax parenting; encourage them to become more conscious of intergenerational patterns of difficult relationships; and focus on obtaining support when life

stressors were high, since we know that children of parents stressed in these ways are at much higher risk of harsh physical punishment, abuse, or neglect (Cicchetti, 2004).

Measures

Demographic information. Each participant was asked to describe his or her age, household composition, number of children in the home, ethnicity, marital status, employment status, income level, and education.

Individual functioning. Two measures of symptomatic distress were employed in this study. The Center for Epidemiological Studies in Depression Scale (CES-D) (Radloff, 1977) is a well-established 20-item measure of symptomatic depression for non-clinical samples that discriminates between clinical and non-clinical levels of depression (Radloff, 1977). The total symptom score on the CES-D was used as one global index of each parent's psychological distress, with scores of 16 and above interpreted as signaling depressive problems. At baseline, 17.4% of fathers and 26.7% of mothers had scores above the cutoff. The Brief Symptom Inventory (BSI) (BSI, Derogatis & Melisaratos, 1983) asks for the occurrence and severity of a range of symptoms. We used the total score on the 5-item anxiety scale as a measure of current anxiety.

Couple relationship quality and stability. The Quality of Marriage Index (QMI) (Norton, 1983), a six-item questionnaire, with one global estimate and 5 specific questions about marital satisfaction, was used to measure each partner's satisfaction with the couple relationship. This single-factor scale has high overlap with longer, more traditional measures of marital quality (Heyman, Sayers, & Bellack, 1994).

Relations with family of origin. Family Relationships is a structured questionnaire (C. P. Cowan & Cowan, 1982) designed to assess adults' global perceptions of the relationships in their

families of origin -- with father, with mother, and between father and mother. Each adult in our study rated those relationships as they recalled them from childhood, using six 7-point bipolar scales (uninvolved-involved, high conflict-low conflict, unhappy-happy, distant-close, cold-warm, unsatisfying-satisfying). Alpha reliabilities for the six scales describing past relationships with mother, with father, and between parents were very high, ranging from .85 to .95. In order to reduce the number of variables, we constructed a composite relationship quality score for each participant's family of origin by combining the quality of relationship scores of the participant with mother, with father, and between the (grand)parents.

Life Stress and Social Support. Life Stress. We assessed stressful events occurring outside the family unit using a life events scale developed by Horowitz, Schaefer, Hiroto, Wilner, and Levin (1977), with items weighted not only for their potential stress value but also according to how recently they had occurred.

Social Support. Positive social support was assessed using an instrument developed by Curtis-Boles (1979), the Important People Questionnaire, which asks partners to name four people who are currently important in their lives as potential sources of support. A combination of multiple choice items and rating scales assessed how frequently and how satisfactorily these people provided information, advice, material benefits, and emotional support. A positive support index was created by combining frequency of support with rated satisfaction of all four important people chosen.

Father-child relationship. Psychological engagement. The Pie (C. Cowan & Cowan, 1991) was developed to represent an individual's psychological investment in various aspects of his or her life. Beside a circle 4" in diameter, each participant lists the main roles in his or her life right now, and divides the circle (Pie) so that each section reflects the salience or importance of that

aspect of self, not the amount of time spent in the role. A coding scheme from prior content analyses (Carolyn Pape Cowan & Cowan, 1992) includes: family roles such as parent and partner/lover; worker and student roles; leisure roles such as artist and gardener; and “core” aspects of the self such as “me” or “myself alone”. In this study, we focused on the size (degrees of the circle) labeled “father” or “parent” in the Pies filled out by the men.

Behavioral involvement. Fathers’ involvement in the daily care of the children was assessed by a Who Does What? questionnaire (P. A. Cowan & Cowan, 1990). Each parent rated a number of tasks representing the division of labor for care of the youngest child (feeding, taking the child to the doctor) using a 1-9 scale in which 1 means “she does it all,” 5 means “we do it about equally”, and 9 means “he does it all”. In this study, correlations between fathers’ and mothers’ descriptions at the three assessment points ranged from .62 to .74, suggesting that both partners described their division of family labor similarly, though not identically.

Parenting Stress. We measured each parent’s level of distress specifically related to parenting the target child with an 38-item revised version (Loyd & Abidin, 1985) of the original 150-item Parenting Stress Index. Parents indicated the extent of their agreement or disagreement with statements describing themselves as stressed, their child as difficult to manage, and a lack of fit between what they expected and the child they have. The scale has been validated by comparing parents who do and do not have known stressors in childrearing (children with developmental delay, oppositional defiance, or difficult temperaments) (Abidin, 1997).

Parenting Style Attitudes. The Ideas About Parenting questionnaire (Heming, 1991) combined items from scales by Baumrind (1971), Block (1971), and Cohler, Grunebaum, Weiss, and Moran (1971). Fathers and mothers indicate the extent of their own agreement or disagreement with each item, and what they believe are their partners’ opinions. One of three

factors, authoritarian parenting, was used in the present study; it describes punitive parenting with high structure and demands for conformity. The authoritarian parenting scale differentiated parenting in families of girls with both attention and hyperactivity disorders and girls diagnosed as inattentive but not hyperactive (Hinshaw, 2002).

Children's Behavior Problems. The Child Adaptive Behavior Inventory (P. Cowan, Cowan, & Heming, 1995), a 54-item adaptation of the 106-item Child Adaptive Behavior Inventory (CABI) was filled out by each parent. This instrument contains items selected from a 60-item Adaptive Behavior Inventory (Schaefer & Hunter, 1983), the downward extension of the Quay-Peterson Behavior Problem Checklist (O'Donnel, 1979), and Achenbach and Edelbrock's (1983) CBCL. It contains both positive and negative descriptors of cognitive and social competence (e.g., "is smart for his/her age," "has trouble concentrating on what he/she's doing," "is often sad", "breaks or ruins things"). Each item is rated on a 4-point scale ranging from (1) Not at all like this child, to (4) Very much like this child. To reduce the item-based scales to a manageable number of aspects of adaptation, we composited the scores into 4 dimensions based on a previous factor analysis of the scale (C. Cowan & Cowan, 1992): (1) externalizing-aggression; (2) externalizing-hyperactivity; (3) internalizing-social withdrawal, isolated; and (4) internalizing-psychological symptoms (anxiety, depression, tension). In previous studies (Gottman & Katz, 1989), the inter-item consistencies of these composite dimensions filled out by teachers were very high (alphas in the .80s and .90s), while those filled out by parents were moderate (.60s and .70s). In the present study, the alphas for parents' descriptions ranged between .71 (hyperactivity) to .85 (externalizing-aggression) for both mothers and fathers; all of the reliabilities for parents' ratings were higher than those for the corresponding scales in the earlier, middle class sample. Correlations of mothers' and fathers' descriptions of their children

on each of the four scales were consistently moderate to high at each assessment period; Baseline .35-.45; Post 1 .35-.54, Post 2, .35-.53.

Organizational self-assessment of father friendliness. Each staff member in the Family Resource Centers (staff ranging from secretaries, to staff in other units, to the FRC directors and Supporting Father Involvement staff) filled out a widely-used questionnaire about the inclusion of fathers in their agency (Vann & Nelson-Hooks, 2000) at the beginning of the study and again each year. Examples of the 70 items include: “Staff time and resources have been allocated for recruitment and outreach to fathers.” “Instead of simply encouraging father involvement, the agency establishes a clear expectation that fathers of children should and will participate.” “Positive and diverse images of men and fathers are displayed (photos, posters, notices).”

The 70 items are grouped into 10 scales: Organizational support for father involvement; Reputation for serving fathers; Father-inclusive policies and procedures; General staff prepared to provide services; Specific staff available to provide services to fathers; Positive approaches to mothers about fathers; Positive approaches to fathers; Consideration of couple and co-parenting issues in clients; Physical environment; and Positive treatment of fathers in the agency.

RESULTS

First, we present results pertaining to retention of the participants from their first screening for eligibility through the second posttest, 18 months after completing the pre-intervention Baseline assessments. Second, we examine the impact of groups for Fathers and for Couples on change in the parents and children over time. Third, we describe our search for potential moderators of the intervention effects – whether there were different findings depending on the demographic or psychological characteristics of the participants. Finally, we report the results of

the Organizational Self-Assessment, which documents shifts in father-friendly attitudes and practices in the agencies that housed the fatherhood project.

Factors Affecting Retention

Our first question was whether there was a different retention rate among those assigned to the single-meeting information condition, a Fathers group, or a Couples group. We found no differences in participants in the 3 intervention conditions in terms of the proportion of participants retained from condition assignment to Baseline completion ($\chi^2 = 1.06, p < .60$), from Baseline completion to the completion of Post 1 ($\chi^2 = 1.45, p < .50$), or from Post 1 to the completion of Post 2 ($\chi^2 = .53, p < .80$). Neither did χ^2 tests reveal differences in retention rate among the 3 conditions as a function of ethnic group membership (Mexican American vs. European American) or family status (married vs. cohabiting).

A mixed model GLM analysis (Sex of parent x Baseline measures x Retention) that included all but one of the measures used in the study¹ examined whether there were differences at Baseline in psychological characteristics between those who completed or failed to complete the Post 2 assessment. A statistically significant Baseline measure x Retention interaction, $F(15,299) = 3.31, p < .001$, was followed by univariate F-tests for each measure. There were no significant interactions involving the sex of the parents. On 7 of the 16 measures, the 82 couples who completed the Baseline but not the Post 2 assessment 18 months later were in more distress at the beginning of the study than the 207 couples who completed the Post 2 follow-up 18 months later. The non-completers initially showed more symptoms of anxiety on the BSI, $F(1,333) = 3.75, p < .05$, more symptoms of depression on the CES-D, $F(1,333) = 4.21, p < .05$, greater parenting stress on the PSI, $F(1,333) = 4.22, p < .05$, lower satisfaction with the couple

relationship on the QMI, $F(1,333) = 21.20, p < .001$, more conflict about disciplining the child on Ideas About Parenting, $F(1,333) = 8.04, p < .01$, more life stress events, $F(1,333) = 11.76, p < .001$, and lower levels of positive social support, $F(1,333) = 4.23, p < .05$. There were no significant retention effects as a function of fathers' initial level of involvement in the daily tasks of childcare, psychological involvement as parents as measured by the Pie, authoritarian ideas about parenting, or either parent's description of their child. Despite the fact that some of the more distressed participants dropped out, among the large majority who continued to the end of the study there was a full range of adaptation scores.

Attendance at group meetings was quite high. The median attendance in the groups for Fathers was 67%; once a father or couple actually attended the first or second group meeting, the median attendance rate was close to 90%. In the groups for Couples, the median attendance was 75% for fathers and 80% for mothers.

The impact of participation in the intervention groups

Table 1 presents the mean scores for the participants on the study questionnaires as a function of Time (Baseline, Post 1, Post 2), Condition (Control, Fathers group, Couples group), and Sex of parent.

Insert Table 1 about here

First, we present the results of three-way ANOVAs (Time x Condition x Sex) to identify significant intervention effects on each of 16 measures of individual and relationship functioning distributed across 5 family domains. There were no statistically significant intervention effects on changes in participants' perceptions of relationships with their parents or level of life stress.

The statistically significant changes occurred in the parents' descriptions of themselves, their relationship as partners, their relationship with their child (parenting stress), their perceived positive social support, and their child's problem behavior.

Seven of the 16 measures showed a statistically significant Time x Condition interaction (see Table 1). The intervention affected (i) men's psychological involvement with their children (The Pie) and (ii) both partners' views of men's involvement in daily childcare tasks (Who Does What?), (iii) Parenting Stress (PSI), (iv), satisfaction with the couple relationship (QMI), (v) symptoms of anxiety (BSI) and (vi) depression (CES-D), and (vii) family income. In addition, two statistically significant Time x Condition x Sex interactions showed that group participants reported (viii) fewer parental conflicts about discipline as reflected in fathers' but not mothers' reports, and (ix) mothers in the Control groups and fathers in Fathers groups increased in reported positive social support. In all then, 9 of 16 measures revealed statistically significant intervention effects.

Following these 9 interaction effects, we conducted post hoc tests with a Bonferroni correction for multiple tests, to determine the pattern of change in each condition from Baseline to Post 1 (short term effects), and from Baseline to Post 2 (longer-term effects). In order to simplify the presentation and keep to space limitations, we focus primarily on the longer-term effects, noting three exceptions in which the short term positive effects of the interventions were not maintained after the first posttest (symptoms of anxiety and depression, and family income).

Given that this is the first randomized clinical trial of these interventions, we also conducted exploratory post hoc tests with Bonferroni corrections on the 7 measures that did not show significant Time x Condition interactions. Although these exploratory tests revealed no intervention effects on parents' perceptions of relationships with their families of origin, ideas

about parenting, or life stress, there were very similar patterns for all four measures of children's adjustment (aggression, hyperactivity, social isolation, and depression). That is, there were significant increases in all four measures of problem behavior in children in the Control condition but stability over time in children from both the Fathers group and Couples group conditions. We realize that the choice to perform post hoc tests when there is no statistically significant interaction capitalizes on chance findings, but in a first randomized clinical trial of these interventions, we thought it important to identify trends that could be tested in later research. In all cases, we interpret the results of the exploratory post hoc tests with caution.

The overall result of couples participating in the Control condition was clear. Despite the fact that many parents said that the 3-hour informational meeting was useful, the one-time discussion of the importance of fathers' engagement with children produced very little in the way of benefits. Baseline to Post 2 changes revealed statistically significant negative changes in five measures for the Control participants (declines in couple relationship satisfaction, $t(94) = 3.46$, $p < .001$, and increases in children's aggression, $t(94) = 2.03$, $p < .05$, hyperactivity, $t(94) = 2.45$, $p < .01$, depression, $t(94) = 2.34$, $p < .05$, and social isolation, $t(94) = 2.35$, $p < .05$). No changes occurred in parents' symptoms or their view of their past relationships with parents or life stress. The only longer-term positive change for the Control participants was a significant increase in mothers' reports of positive social support, $t(94) = 2.21$, $p < .05$.

The picture over 18 months was more positive for Fathers group than Control group participants, but still mixed. Significant gains from Baseline to Post 2 were evident in fathers' engagement with children on psychological measures (Pie, $t(87) = 3.78$, $p < .001$) and behavioral measures (Who Does What?, $t(87) = 3.01$, $p < .01$), and fathers' but not mothers' perceived positive support from the 4 most important people in their lives, $t(88) = 2.92$, $p < .01$. In contrast

with the Control participants who reported increases in children's problem behavior, measures of children's aggression, hyperactivity, depression, and social isolation obtained from both parents in the Fathers group condition were stable over time. On the negative side, both mothers and fathers experienced a significant decline from Baseline in the quality of their relationship as a couple (QMI), $t(87) = 3.07, p < .01$. Furthermore, short-term gains from Baseline to Post 1 in terms of a reduction in symptoms of anxiety, and a decrease in authoritarian parenting ideas, had disappeared by Post 2, in contrast with stable scores in both Controls and Couples group parents..

With Couples group participants, as with those from the Fathers groups, both psychological, $t(76) = 1.99, p < .05$, and behavioral measures of fathers' engagement with the child, $t(92) = 4.35, p < .001$, increased over time, and descriptions of problem behavior in their children remained stable, whereas Control group parents described more problem behaviors in their children. Just as Fathers group participants showed a short-term decline in anxiety symptoms, Couples group parents showed a short-term decline symptoms of depression, but neither of these effects was maintained in the Post 2 followups 11 months later.

There were two noteworthy longer-term benefits of participating in a Couples group. For both parents, parenting stress declined significantly, $t(91) = 3.79, p < .001$, and satisfaction with the couple relationship remained stable over 18 months. One additional finding was mixed: at Post 2: fathers reported a significant increase in conflict since Baseline about disciplining their child, $t(92) = 1.97, p < .05$, whereas mothers reported a significant decrease, $t(92) = 2.23, p < .05$.

Over the course of the study, incomes rose significantly for families in all three conditions, but from Baseline to Post 1, income for the Control parents remained stable while income for

Fathers or Couples group parents increased significantly. However, by the 18-month followup, the Controls had caught up with the families in the other two conditions.

Organizational Change

In addition to providing services for families to encourage father involvement, part of our mandate from the California Office of Child Abuse Prevention was to promote a culture shift within family agencies to become more “father-friendly.” The need for this shift was evident from our first visits to the Family Resource Centers in which the new fatherhood project was to be located. Walls were painted in pastel colors, and pictures were of women, babies, and flowers. Women’s magazines were the only choice in the waiting room. Fathers’ names were rarely included on the case files even when the parents were married. Services were provided in daytime hours when most fathers would find it difficult to come.

Between 40-64 staff from the four Family Resource Centers (FRCs) filled out the Organizational Self-Assessment scale on father friendliness before the project was launched and again at 3 yearly intervals (n=43, 60, 62, and 64). Turnover in the staff meant that about half the respondents changed from one time period to the next. A Measure x Time ANOVA showed a significant time effect, $F(3,225) = 6.73, p < .001$. Post hoc tests revealed significant improvement in the FRCs’ father friendliness across each of the ten scales (see Method) during the first year. This improvement was maintained but not increased over the next two years.

DISCUSSION

Systematic evaluations of father involvement interventions are rare, randomized clinical trials are scarce, especially in low-income and non-white populations, and the comparison of interventions for Fathers alone or for Fathers and Mothers together is unique to this study. The Supporting Father Involvement interventions produced positive results in terms of families’

retention in the program, parents' and children's well-being, generalizability to families from different backgrounds and income levels, and father-friendliness of the Family Resource Centers in which the new project was housed.

Retention

There were no selection effects in this study based on the experimental conditions to which participants were assigned. Although some of the more psychologically distressed participants who initially agreed to participate dropped out after completing the Baseline assessments, there was a full range of adaptation scores among the large majority who continued to the end of the study. The high retention rate from the Baseline assessment over 18 months (76%) and high attendance over the 11 to 16 weeks of meetings is a testament to the attractiveness of the services to the participants, the skill of the group leaders, and the diligent work of the case managers in supporting participants' continuation through regular contact and referrals to other services.

Impact of the interventions

Fathers groups and Couples groups. A randomized clinical trial of a preventive intervention in the form of a Fathers group and a Couples group, led by the same trained mental health professionals, showed significant gains for participants in both types of groups -- in terms of fathers' engagement in the care of their young children and in their growing sense of self as Fathers. Although the impact of both Fathers and Couples group on fathers' active engagement in the day to day tasks of childrearing was equivalent at Post 2, the Couples group fathers showed increased engagement immediately after the groups ended, whereas men from the Fathers groups took a longer time to take on more of the care of their children. It may be that the absence of mothers in the Fathers groups led to a longer period of negotiation between the parents at home around how the men could become involved in their children's care. That men in

both ongoing interventions experienced a growing sense of themselves as fathers (on The Pie) seems noteworthy.

Participation in a Fathers or Couples group was associated with stable levels of children's problem behaviors as the parents perceived them, compared with increases in those behaviors in children of parents in the Control condition. In the absence of intervention effects on parenting ideas, and without measures of observed parenting behavior, we cannot conclude that intervention-induced changes in more effective parenting were responsible for these outcomes. Possibly, the group experience itself, the discussions of children's development, and the fact that the children were in childcare during the meetings, combined to protect the children against the rise in aggression, hyperactivity, depression, and social withdrawal reported by parents in the Control condition.

The group curricula addressed issues of coping with financial stress and balancing work and family pressures, but unless the issue was raised by group members, did not deal directly with issues of employment. Some specific employment problems were brought to case managers. The ongoing interventions produced reductions in depression and anxiety, and in other aspects of family adaptation that may have contributed to the fact that both Fathers and Couples group participants were able to mobilize more quickly to increase their incomes, but the rising economic tide during the period of the study appeared to have eliminated the longer-term income advantages of participating in an ongoing group.

Couples group advantages. Although the curricula for both Fathers and Couples groups contain almost identical units that focus on the couple relationship, the participants in the Couples groups were the only ones to maintain satisfaction with their relationships as couples over the period of the study—a finding that runs counter to well-established normative

downward trends in parents with children from birth through adolescence (Twenge, Campbell, & Foster, 2003). Given the similarity of the curricula, we conclude that the format, in which both partners were present, had a very specific impact on the couple domain. Although this was not psychotherapy per se, the therapeutic effects of having both key players and their enactments of communication dynamics “in the room” provides a more salient opportunity for reinforcing change between as well as within the partners. The Couples group parents, but not those from the Fathers groups, also showed significant declines in parenting stress. In light of the context of this study as an effort to prevent child abuse, this is a particularly welcome finding, since parents’ irritability and inability to feel effective as a parent are key risk factors for child maltreatment (Haskett, Ahern, Ward, & Allaire, 2006).

While fathers from the Couples groups reported a significant increase in conflict over child discipline from Baseline to Post 2, it is not clear whether the discussions in the groups promoted more involvement of both parents in discussions of parenting in general, or whether fathers became more sensitized to discipline issues in particular. Given that these fathers’ perceptions of increases in conflict were not accompanied by increases in either parent’s depression, anxiety, or dissatisfaction with the couple relationship, this finding may simply reflect the fathers’ greater involvement in discussions about how to discipline the children. Because the mothers reported less conflict about discipline over the same 18-month period, and because the children’s problematic behavior was not increasing for these parents, the increase in conflict about discipline that the men perceived may not be a negative outcome in the long run.

The interventions did not affect all of our measures. There were no direct effects of the interventions on parenting attitudes. Before concluding that the intervention did not affect parenting behavior, we must complete our analysis of videotaped father-child and mother-child

interactions from the final follow-up. Neither did the interventions change mothers' or fathers' perceptions of their relationships with their parents, the only one of the five risk domains that failed to show an intervention effect. It is possible that our measure of family relationship quality was too global to pick up the group leaders' perception of a softening of negative perceptions as some group members came to realize that their parents were doing the best they could under difficult circumstances. Finally, there were no detectable effects of the interventions on parents' reporting of stressful life events. Certainly the case managers' reports of the lives of many of the participants suggested that the families were continuing to face challenging family stressors. Some had inadequate basic resources such as food and shelter. Thus, in this primarily low-income sample, the positive intervention effects on fathers' engagement with their children, couple relationship quality, parenting stress, and children's problem behaviors occurred in spite of the fact that many parents' growing up years involved negative relationships with their parents, and that many continued to endure significant life stressors, often with less than adequate levels of support.

Moderators

None of the demographic and psychological factors that we tested qualified as moderators of the intervention effects. The positive intervention results held across participants who were Mexican American and European American, married and cohabiting, and low- and higher-income. It was also clear that indices of individual or marital adaptation at the beginning of the study were not associated with intervention outcomes. Thus, the intervention appears to be quite robust and generalizable within the parameters of our study -- primarily low-income, Mexican American and European American parents of young children, with a range of adaptation in terms of individual, couple, parent-child, family of origin, and life stress/social support at the outset.

Organizational Change: Family Resource Center issues

We have written elsewhere about the current state of Family Resource Centers in California (C. P. Cowan, Cowan, Pruett, & Pruett, 2007). From the research literature (McAllister et al., 2004), our own observations, and many anecdotal accounts, we conclude that the picture is not significantly different in other locales. At the same time that staff believe that fathers resist involvement in family services, the institutions that offer family services are not welcoming to men. Although this part of the Supporting Father Involvement study did not involve a randomized experiment, we were gratified to find that the presence of the project in Family Resource Centers resulted in significant improvements in the Centers' shifts toward becoming more deliberate in welcoming fathers across the spectrum of programs they offered.

Limitations/Next steps

We have noted a number of limitations to the present study. We have examined intervention effects only in Mexican American and European American families. It remains to be seen whether Latino families in other locales, and members of other ethnic groups, will benefit from these interventions. We have a trial underway in a fifth, predominantly African American community. Our intervention approach was intended to provide a safe environment for fathers and couples to explore how they want to strengthen their relationships as parents and partners, rather than to learn specific skills that suggest "right" answers to deal with complex family issues. This approach left room for cultural variations within and between intervention sites, one that we believe could provide a culturally sensitive framework for intervention in other ethnic groups. This, of course, remains to be tested empirically.

Like many randomized clinical trials, ours involved a multitude of variables in the contrast between control and intervention conditions. From our own observations and from the testimony of the participants, we infer that the group format had a powerful, normalizing, supportive effect on participants (see Hawkins et al., 2006, who failed to find a couple relationship effect in a program administered to couples at home), but contrasts of group versus couple-by-couple or individual administration of the present interventions would be needed to clarify this point.

As in other efficacy research projects, funding for all phases of the project was adequate to support the design, evaluation, and staffing. An obvious question from community family service providers is whether less costly or less labor intensive interventions would work as well. Our group leaders were clinically trained with the equivalent of a Master's level license or license eligibility; we do not know whether leaders with less clinical training or experience, or well-connected community paraprofessionals could produce the same results. Given the complexity of the issues raised in our bi-monthly telephone consultations with the staff, we doubt that less experienced leaders could handle the individual and couple distress that often spills over into the group process as effectively as our experienced clinicians.

There are two paths toward future investigation of the intervention features and psychological mechanisms responsible for the positive intervention outcomes. First, studies need to vary features of the intervention systematically – risk status of the participants, leader qualifications, number of contact hours, the contribution of case managers, compensation to participants, and the provision of food and childcare during group meetings – to address the practical policy issues of whether fewer resources could produce the same effects. Second, it will be important in subsequent publications to examine whether intervention-induced changes in the parents mediate the outcomes in the children.

To date, the evaluation of the impact of the interventions rests on mothers' and fathers' self-reports. Once we complete the coding of the videotaped parent-child interactions, we will be able to examine the fathers' and mothers' style of interacting with their child - and the child's behavior - from an observer's point of view. These data may add to our understanding of the interventions' potential to address the risks and buffers for children's adaptation and safety.

Finally, because this study has been funded by the Office of Child Abuse Prevention as a prevention project, open cases of abuse and neglect were referred out. This makes it a challenge to demonstrate that the interventions are effective in preventing child abuse, at least in the short run. Although we do not have objective data specifically about child abuse prevention at this point, there were no known cases of new reports to Child Protective Services for any of the more than 300 families in Phase I of the study. What we do know, consistent with our risk model, is that the positive effects of the Fathers groups and Couples groups involve improvements in family risk and protective factors (father engagement, parenting stress, couple relationship quality, and children's problem behavior) that are known to be associated with problematic outcomes for children such as emotional distress and child abuse and neglect (Cicchetti, Toth, & Maughan, 2000).

As with any first tests of a preventive intervention, more research is needed to test the generalizability of this approach. On the basis of the present results, we believe that the Supporting Father Involvement Project represents a promising preventive approach to encourage and maintain fathers' engagement with their young children and to enhance the well-being of both fathers and mothers, and their relationships as couples and co-parents.

| MEANS and F-TESTS FOR TIME x CONDITION x SEX GLM INTERVENTION ANALYSES | | | | | | | | | | | | | | | | | | | | |
|--|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|---------|------|----------------------|-----------------|
| | PRE | | | | | | POST 1 | | | | | | POST 2 | | | | | | F Time x Cond. | |
| | Control | | Fathers | | Couples | | Control | | Fathers | | Couples | | Control | | Fathers | | Couples | | | Control |
| | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M |
| FATHER ENGAGEMENT | | | | | | | | | | | | | | | | | | | | |
| Psychol. Inv (Pie) F only | 102. | - | 104. | - | 101. | - | 112. | - | 103. | - | 111. | - | 102. | - | 121. | - | 110. | - | | 2.48* |
| Who Does What? | 3.7 | 3.4 | 3.8 | 3.4 | 3.4 | 3.2 | 3.8 | 3.5 | 4.0 | 3.6 | 4.0 | 3.7 | 3.9 | 3.6 | 4.2 | 3.8 | 3.9 | 3.7 | | 2.99* |
| Ideas about parenting (authoritarian scale) | 67.6 | 68.4 | 68.4 | 66.8 | 68.9 | 65.3 | 67.0 | 67.3 | 65.8 | 64.6 | 69.0 | 64.6 | 67.5 | 69.1 | 66.8 | 65.7 | 67.8 | 64.4 | | |
| Parenting Stress | 66.4 | 68.4 | 68.0 | 67.2 | 72.5 | 73.2 | 68.0 | 69.0 | 66.1 | 66.6 | 70.3 | 68.8 | 68.0 | 67.5 | 66.5 | 67.2 | 70.4 | 65.1 | | 3.12* |
| MARITAL QUALITY | | | | | | | | | | | | | | | | | | | | |
| Couple. Sat (QMI) | 38.2 | 36.2 | 37.0 | 35.7 | 36.7 | 35.4 | 35.2 | 33.9 | 35.6 | 35.1 | 35.6 | 35.8 | 34.0 | 33.2 | 35.0 | 33.3 | 34.9 | 35.6 | | 2.78* |
| Conflict re disc. | 1.2 | 1.3 | 1.2 | 1.1 | 1.1 | 1.6 | 1.1 | 1.6 | 1.0 | 1.2 | 1.0 | 1.3 | 1.2 | 1.5 | 1.2 | 1.2 | 1.4 | 1.2 | | 3.52** TxCxS |
| PARENTS' ADJUSTMENT | | | | | | | | | | | | | | | | | | | | |
| Anxiety (BSI) | 0.3 | 0.5 | 0.4 | 0.6 | 0.5 | 0.7 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.6 | 0.5 | 0.5 | | 2.85* |
| Depr. (CES-D) | 7.7 | 10.5 | 9.5 | 11.4 | 9.7 | 12.3 | 10.4 | 10.4 | 7.8 | 10.2 | 10.3 | 10.9 | 9.0 | 9.8 | 9.0 | 12.2 | 11.2 | 10.8 | | 3.54** |
| REL. WITH PARENTS | | | | | | | | | | | | | | | | | | | | |
| Past family | 48.8 | 48.5 | 51.8 | 43.1 | 41.7 | 40.7 | 45.1 | 42.7 | 44.1 | 43.0 | 42.6 | 40.5 | - | - | - | - | - | - | | |
| OUTSIDE FAMILY | | | | | | | | | | | | | | | | | | | | |
| Income (1000s) | 29 | 13 | 29 | 11 | 26 | 8 | 31 | 14 | 30 | 14 | 29 | 11 | 34 | 16 | 32 | 14 | 28 | 10 | | 2.73* |
| Life Stress | 5.4 | 4.9 | 5.8 | 5.2 | 5.6 | 5.6 | 5.1 | 4.7 | 5.3 | 5.0 | 5.4 | 5.4 | 5.5 | 4.3 | 5.2 | 5.1 | 5.0 | 5.3 | | |
| Social Support | 14.2 | 13.7 | 13.7 | 14.1 | 13.7 | 13.8 | 14.2 | 14.1 | 13.9 | 14.3 | 13.9 | 14.1 | 14.3 | 14.3 | 14.4 | 13.9 | 13.9 | 13.9 | | 2.79* TxCxS |
| CHILD PROB. BEHAVIOR (CABI) | | | | | | | | | | | | | | | | | | | | |
| Aggression | 1.74 | 1.68 | 1.78 | 1.71 | 1.69 | 1.78 | 1.89 | 1.69 | 1.83 | 1.83 | 1.80 | 1.87 | 1.84 | 1.73 | 1.89 | 1.82 | 1.75 | 1.82 | | |
| Hyperactivity | 2.04 | 2.02 | 2.11 | 2.03 | 1.87 | 2.04 | 2.18 | 2.03 | 2.10 | 2.17 | 2.02 | 2.13 | 2.17 | 2.06 | 2.13 | 2.19 | 1.99 | 2.04 | | |
| Shy/Withdrawn | 1.41 | 1.68 | 1.29 | 1.00 | 1.23 | 1.08 | 1.11 | 1.72 | 2.30 | 1.87 | 1.09 | 1.59 | 1.58 | 2.62 | 2.00 | 2.21 | 1.51 | 1.21 | | |
| Anxiety/Depr | 1.50 | 1.44 | 1.46 | 1.42 | 1.43 | 1.41 | 1.55 | 1.45 | 1.52 | 1.48 | 1.48 | 1.48 | 1.58 | 1.52 | 1.52 | 1.52 | 1.53 | 1.48 | | |

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