

Parents' Divorce Proneness: The Influence of Adolescent Problem Behaviors and Parental Efficacy

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Moore, M. J., & Buehler, C. (2011). Parents' divorce proneness: The influence of adolescent problem behaviors and parental efficacy. *Journal of Social and Personal Relationships*, 28(5), 634-652. doi: 10.1177/0265407510386991

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Abstract:

Early adolescents' problem behaviors were examined as predictors of parents' divorce proneness in a community-based sample of 416 families across a 4-year time span. Using family systems theory, it was hypothesized that adolescents' problems are linked to parents' divorce proneness through parents' lower perceived parenting efficacy. Results indicated that adolescents' externalizing problems were associated with wives' increased divorce proneness, but not directly with husbands' increased divorce proneness. Adolescents' problem behaviors were linked with husbands' increased divorce proneness through lower paternal efficacy. In terms of crossover effects, adolescents' problem behaviors were linked with spouses' increased divorce proneness through their spouses' lower parenting efficacy. These results specified the family systems precept of interdependence by explicating transmission patterns across family members and subsystems.

Keywords: adolescent problem behaviors | divorce proneness | family systems | marital instability | parental efficacy

Article:

Recent estimates highlight that 1.5 million children's parents divorce each year (Kreider & Fields, 2005). Children whose parents later divorce have exhibited behavioral problems up to 12 years prior to the divorce (Amato & Booth, 1996). Few studies, however, have focused on the influence of adolescents' behavior problems on parents' marital dynamics while parents are married. The present study used longitudinal data from 416 families to test the hypothesis that adolescents' problem behaviors during the transition into adolescence are associated with parents' increased divorce proneness. This study makes an important contribution to the literature by addressing the possibility that children's socioemotional behavior influences

parents' marital functioning, supplementing the existing robust findings that marital dynamics affect children's future adjustment difficulties (Cui, Conger, & Lorenz, 2005).

Adolescent problem behaviors and parents' divorce proneness

Theoretical foundation

This examination of the association between adolescents' problem behaviors and parents' divorce proneness was guided by family systems theory. Key to family systems theory is the recognition that subsystems within the family are interdependent (Cox & Paley, 1997). The concept of interdependence suggests that behavior and emotion from one family member or subsystem can influence functioning for other family members and subsystems. A well-developed understanding of marital processes can be strengthened by situating spouses within the broader context of the family and recognizing the interdependence among family members. Examining the longitudinal association between marital disagreements and marital satisfaction, current research has demonstrated that changes in marital conflict related to parenting adolescents correspond with changes in marital satisfaction (Cui & Donnellan, 2009). Thus, theoretically, when adolescents experience difficulties, the effects are not only personal, but also may affect their parents' marital relationship.

Given that a systems perspective suggests that the effects of individual transitions reverberate through family subsystems (Steinberg, 1990), early adolescence is a critical period to examine the effects of children's behavior on parents' marriages. Due to the concurrent nature of the changes that occur in the lives of adolescents, including pubertal development, cognitive changes, school transitions, and broadening peer networks, early adolescence can be a vulnerable time for young people (Reitz, Dekovic, & Meijer, 2005). The demands that these changes potentially make on family functioning should not be overlooked (Steinberg et al., 2006).

The prevalence of problem behaviors increases during early adolescence such that over 60% of young people are involved in some type of problem behavior during the course of adolescence (Reitz et al., 2005.; Siegel & Scovill, 2000). Recent prevalence data indicate that 1 in 12 adolescents have experienced an episode of major depressive disorder, often resulting in severe functional impairment at home, school, or in family relationships. A minority of adolescents have also struggled with non-clinical levels of depressive symptoms that have disrupted social, emotional, and relational functioning (Substance Abuse and Mental Health Services Administration, Office of Applied Studies, 2008). Even with these relatively high prevalence rates, families experience variation in the severity of adolescents' problem behaviors as they develop across this transition period (Steinberg et al., 2006). It is critical, as such, to situate youth within the context of their broader family environment by recognizing that adolescents' behavior problems can impair family functioning and place marital and coparental relationships at risk for distress as parents try to address adolescents' problems and support their children during difficult adjustment periods.

Divorce proneness

Rather than viewing divorce as a discrete event, scholars have highlighted the importance of conceptualizing divorce as a process (Demo & Fine, 2009). Gottman (1994) suggested that divorce proneness is an important part of the divorce process and that it is an intermediate step between declining marital satisfaction and separation. Divorce proneness has both cognitive and behavioral elements and includes thinking one's marriage might be in trouble, contemplating marital dissolution or separation, discussing with one's spouse or friend the possibility of divorce, or meeting with a divorce attorney (Amato, Johnson, Booth, & Rogers, 2003).

Although important theoretically, research on marital processes has left relatively unstudied the influence of adolescent maladjustment on parental divorce proneness. Related literature on marital conflict, however, helps document empirical support for our focus. Jenkins, Simpson, Dunn, Rasbash, and O'Connor (2005) examined the association between children's (aged 4 to 17) externalizing problems and increases in parents' child related conflicts two years later. They found significant effects, particularly in families in which the level of externalizing problems across siblings was higher than average for the sample. Similarly, Cui and colleagues assessed marital dissatisfaction, conflict over childbearing, and adolescents' problem behaviors (delinquency and depressive symptoms in separate models) using three waves of annual data during early adolescence (Cui, Donnellan, & Conger, 2007). They documented reciprocal effects such that adolescent problem behavior was associated with increased marital conflict over childrearing, controlling for the effects of previous child-related conflict on adolescent problems. The present study extends this literature by focusing on divorce proneness rather than on marital disagreement or conflict. This shift to a focus on divorce proneness is critically important because it is further along in Gottman's (1994) cascade model of marital dissolution than is either decreased marital satisfaction or increased marital conflict. As such, the first hypothesis tested in this study was that early adolescents' problem behaviors are associated with parents' increased divorce proneness. A second major contribution of the current study is the distinction between wives' and husbands' divorce proneness. This is a critical distinction because divorce proneness is an individual-level construct that has implications for marital functioning.

Parental efficacy as a linking mechanism

The interdependence proposition in family systems theory suggests an important connection between functioning in the marital subsystem and appraisals of role competence in the parenting subsystem. Accordingly, we propose that one of the reasons adolescents' problem behaviors are associated with parents' increased divorce proneness is that adolescents' problems may be associated with decreases in parental efficacy. Parental efficacy refers to parents' perceptions of how capable they are to handle offsprings' problem behavior (Coleman & Karraker, 1997). Bandura (1997) suggested that the beliefs individuals hold regarding their ability to carry out actions necessary to achieve their goals influence their sense of psychological well-being. Parents' self-perceptions of their ability to parent young people effectively during the early adolescent transition may minimize parents' worry and distress that, if experienced, could disrupt marital functioning via spillover processes.

Although we were unable to find research focused on the link between parental efficacy and youths' internalizing problems, higher levels of adolescent delinquency have been linked with lower parental efficacy (Perrone, Sullivan, & Pratt, 2004). Research on parental efficacy suggests

that efficacy tends to decline over time for families with “problem” children, whereas parental efficacy tends to increase over time for parents of “non-problem” children (Mash & Johnston, 1983). With repeated disruptive behavior, parents may question their ability to respond appropriately and support their children’s behavioral change. A large body of research documents that parenting difficulties can function as mediators of family instability and that there is a connection between parenting stress and adolescents’ problem behaviors (Conger, Patterson, & Ge, 1995; Fauber, Forehand, Thomas, & Wierson, 1990; Foreman & Davies, 2003; Ge, Conger, Lorenz, & Simons, 1994). In addition, lower parental efficacy has been linked with concurrent divorce proneness (Swick, 1987). Thus, the second hypothesis tested in this study was that parental efficacy partially mediates the prospective association between adolescent problem behaviors and parents’ divorce proneness.

Spousal crossover effects

A family systems perspective highlights a distinction between spillover and crossover effects. Spillover effects are the intra-individual transmission of stress or strain from one subsystem or functional domain to another, such as the spillover from maternal efficacy into wives’ divorce proneness. Crossover effects refer to dyadic, inter-individual transmission of stress or strain from one family member’s functional domain to another family member’s functional domain (Demerouti, Bakker, & Schaufeli, 2005; Westman, 2001), such as the crossover from paternal efficacy to wives’ divorce proneness. Interdependence, the concept that one partner’s experiences influence the other partner’s reality, is a defining feature of the marital relationship (Thibaut & Kelly, 1959). Given the interactive nature of the coparenting relationship and the overlap between the parental and the marital subsystems, it is important to consider each parent’s perceived efficacy on his or her spouse’s divorce proneness. The more demanding an adolescent’s behavior becomes, the more likely one parent is to desire a strong coparenting relationship with his or her spouse, as indicated by prior research on the importance of spousal support in the context of youth problem behavior (Suarez & Baker, 1997). However, if the other parent is not feeling adequate with regard to the demands of parenting an adolescent with problem behaviors and leaves the responsibility of parenting to his or her spouse, the other parent may feel alone and overly burdened as a parent and as a spouse. These feelings of functional isolation may precipitate thoughts that the marriage is in trouble (Amato, Booth, Johnson, & Rogers, 2007).

Crossover effects have been found in the marital relationship in the presence of stress. Research has suggested that, when one spouse experiences elevated stress, the other spouse is more likely to report increases in depression, psychological distress, and decreases in relationship satisfaction (Katz, Monnier, Libet, Shaw, & Beach 2000; Neff & Karney, 2007; Rook, Dooley, & Catalano, 1991; Tompson & Bolger, 1999; Westman, 2001). Under stress, spouses have reported greater levels of marital problems and were more likely to blame their spouse (Neff & Karney, 2004). The more stressful adolescent problem behaviors are perceived to be, the more likely parents are to experience declines in parental efficacy. In the face of this stress, crossover effects in the marital relationship are important to consider.

Thus, two hypotheses tested in this study addressed crossover effects. First, we proposed that fathers’ parenting efficacy partially mediates the prospective association between adolescents’

problem behaviors and wives' increased divorce proneness. We also proposed that mothers' parenting efficacy partially mediates the prospective association between adolescents' problem behaviors and husbands' increased divorce proneness.

In terms of possible gender differences, although today's fathers are more involved in everyday parenting tasks when compared with previous generations of fathers, mothers continue to bear the responsibility for the majority of parenting tasks (Hart & Kelly, 2006). Given the additional responsibilities associated with parenting adolescents exhibiting problem behaviors, mothers may be more likely to resent lower levels of father involvement and to feel unsupported and isolated from their spouse. This resentment could influence not only to how wives see their spouse as a father but also how they see him as a husband, decreasing wives' marital satisfaction and increasing divorce proneness.

Present study

Drawing on family systems theory, we situated wives' and husbands' considerations of separation or divorce within the broader context of family functioning. Relying on longitudinal data from 416 families, the influence of adolescent problem behaviors on parents' divorce proneness was examined. We have taken a unique approach to studying marital processes by focusing on adolescent effects on parents' divorce proneness while also considering the partial mediating effects of parental efficacy. The four-year longitudinal design allowed for an examination of these patterns during the transition into adolescence. Rather than focusing solely on wives or husbands, the present study examined the influence of adolescents' externalizing and internalizing problem behaviors on both wives' and husbands' self-perceptions of divorce proneness. Additionally, crossover effects between parental efficacy and spousal divorce proneness were examined.

Method

Sampling procedures

In order to study the influence of early adolescents' problem behaviors on parents' divorce proneness, a sample of sixth-grade adolescents and their married parents was drawn from a larger survey study of 2346 adolescents that examined the effects of family life on the transition from childhood into adolescence (Benson, Buehler, & Gerard, 2008). Participants in the larger study were selected from 13 middle schools in a county located in a southeastern state. The county included rural, suburban, and urban areas. Sixth graders received a letter during homeroom informing them about the study, and were instructed to share this information with their parents. Follow-up letters were mailed to individual households to facilitate obtaining parental consent. Of the 71% of families who returned the consent form, 80% agreed to take part in the study. The first criterion for inclusion in the present study was that the adolescents' parents be either married or long-term cohabitants. The parent providing consent checked one of eight boxes that described their current relationship status (e.g., never married, married to this child's parent). Although long-term cohabitants were not excluded from the sampling frame, none of the families in the present study were long-term cohabitants. A second inclusion criterion was that there could be no stepchildren in or outside of the home. The relationship between step-parents

and stepchildren potentially differs from that of a biological or adopted parent and research has suggested that the marital dynamics surrounding step-parenting are different from those of biological or adopted parents (Coleman, Ganong, & Fine, 2000; Hetherington & Kelly, 2002). Of those families in the larger study meeting these two criteria, 37% agreed to participate. The main reasons eligible families chose not to participate were worry over the amount of time it would take to participate and concern about the videotaping that took place during the home visit (observational data were not used in the present study). This response rate was similar to rates in other studies involving three family members and intensive data collection protocols (e.g., National Survey of Families and Households: 37%; Updegraff et al., 2004: 34%). Importantly, the 416 families who agreed to participate were similar on all variables when compared to the eligible, non-participating families, indicating minimal selection bias.

Following data collection in year one, families were asked to complete questionnaires once a year for three more years. The sample size was 366 families at wave 2 (W2), 340 families at wave 3 (W3), and 320 families at wave 4 (W4; 77% retention). There were no significant differences on study variables between families who dropped out and families who stayed in the study, indicating minimal attrition bias.

Sample characteristics

About 91% of participants were of European descent and 3% were of African descent. This percentage is slightly different from the county demographics in that married African American families who live with their own children comprised 5% of the county population and 7.8% of the national population (U.S. Census, 2000a). On average, parents in the study had an associate's degree or 2 years of college education. In terms of education, the sample was comparable to that of European American county residents older than 24 years of age (average was some college, U.S. Census, 2000b). The median level of 2001 household income for families in this study was slightly under \$70,000, which was higher than the median 1999 income for married-couple families in the county (\$59,548, U.S. Census, 2000c; \$64,689 inflation-adjusted dollars through 2001). Fifty-one percent of the young people were female. At the time of initial data collection, adolescents were aged 11 through 14 years old ($M = 11.86$, $SD = .69$).

Data collection

Written consent was obtained from the parents of the sixth graders. Assent also was obtained from young people who had received parental consent. Data were collected using a series of questionnaires administered once a year for four consecutive years. Adolescents and both parents independently completed questionnaires that were mailed to their households. Each year a home visit occurred during which the mailed questionnaires were collected and a second in-home questionnaire was completed. The in-home questionnaire contained questions that required the greatest level of privacy (e.g., adolescent delinquency). During the home visit, family members also confirmed that mailed questionnaires were completed independently. Families received \$100 at W1, \$120 at W2, \$135 at W3, and \$150 at W4.

Measures

Independent variables: Adolescents' externalizing and internalizing problem behaviors

Adolescents' problems behaviors were assessed at W1, W2, and W3 using the Child Behavior Checklist-Youth Self-Report (CBCL-YSR, Achenbach, 1991). This measure was comprised of various statements examining adolescents' behavior during the previous six months. The measure included 30 items that assessed externalizing problems. Sample items included: "I lie or cheat" and "I disobey at school" (W1 $\alpha = .85$). The measure also consisted of 31 items that assessed internalizing problems. Examples of these items included the following statements: "I feel worthless or inferior" and "I am unhappy, sad, or depressed" ($\alpha = .88$). The response format was: 0 (not true), 1 (somewhat or sometimes true), or 2 (very often or often true). Raw scores were used, as recommended by Achenbach. Items were summed for each measure of problem behavior, and higher scores indicated greater problem behaviors. This measure of adolescents' problem behaviors has been used with a wide range of ages and ethnic groups and has extensive evidence of adequate reliability and validity (Achenbach, 1991; McConaughy, 1993).

Dependent variable: Parents' divorce proneness

Divorce proneness was assessed at W1 and W4 by having wives and husbands each respond to four questions that examined thoughts and attitudes relating to marital difficulty and possible separation or divorce. These items were selected from the Marital Instability Index (Booth, Johnson, & Edwards, 1983). Items were "Have you thought your marital relationship might be in trouble?," "Have you discussed separation from your spouse with a close friend?," "Has the thought of separating from your spouse crossed your mind?," and "Have you seriously suggested to your spouse the idea of ending the relationship?." The response format ranged from 1 (not in the last year) to 4 (yes, within the last three months). Items were averaged to create the summary score, and higher scores indicated greater divorce proneness. Cronbach's alphas at W1 were .89 for wives and .80 for husbands. Cronbach's alphas at W4 were .90 for wives and .82 for husbands. A slightly longer version of this measure has demonstrated good internal consistency reliability ($\alpha = .91$) and strong construct validity (Amato & Cheadle, 2005).

W1 and W4 assessments of divorce proneness were used so that baseline divorce proneness at W1 could be controlled and so that changes in parents' divorce proneness could be modeled across three years during early adolescence. This was an important feature of the study because of our focus on family patterns during the developmental transition from childhood into adolescence. W1 divorce proneness captured marital dynamics toward the beginning of the transition and W4 divorce proneness captured marital dynamics toward the end of early adolescence.

Linking mechanism: Parental efficacy

Parental efficacy was assessed at W2, W3, and W4 using the Parent's Self-Agency Measure (Dumka, Stoerzinger, Jackson, & Roosa, 1996). Sample items included: "When things are going badly between this child and me, I keep trying until things begin to change," and "I can solve most problems between this child and me." Responses were given on a 5-point Likert-type scale that ranged from 1 (rarely) to 5 (always). Each parent self-reported his or her own efficacy. Items

were averaged to create summary scores, and higher scores indicated greater levels of parental efficacy. Cronbach's alphas ranged from .79 through .81 for mothers and .82 through .85 for fathers. Dumka et al. demonstrated good construct validity for this measure, as well as measurement equivalence across Anglo and Mexican immigrant mothers. Efficacy data from W2 through W4 were used to create a longitudinal model given that the youth problem behavior predictors were assessed W1 through W3.

Analytic procedures

Hypotheses were tested using structural equation modeling (SEM; AMOS 7.0). The adequacy of each SEM model was evaluated using the chi-square statistic, the comparative fit index (CFI; Bollen & Long, 1993), and the root mean square error of approximation (RMSEA; Browne & Cudeck, 1993). There was little missing data within each wave (less than 3%). Missing data within and across waves (i.e., attrition) were addressed using full information maximum likelihood estimation methods (FIML). FIML was used because it produces less biased estimates than other methods such as imputing the sample mean or dropping cases for data missing within and across waves (Acock, 2005; Newman, 2003).

Results

Descriptive statistics and zero-order correlations are in Table 1. Associations among variables were in the expected directions. The W1 to W4 stability coefficient for divorce proneness was .38 ($p < .01$) for wives and .34 ($p < .01$) for husbands. In terms of occurrence, 45% of wives and 38% of husbands reported some indication of divorce proneness during the four years of the study. Given that this is a new area of study and that behavior problems might create redundant effects because of co-occurrence, youths' externalizing and internalizing problems were examined in separate models.

Adolescents' externalizing problems

The first hypothesis was that early adolescents' problem behaviors are associated with parents' increased divorce proneness. As hypothesized, externalizing problems during early adolescence were associated with increases in wives' divorce proneness. The estimate was small in magnitude ($\beta = .12$, $p = .046$). Contrary to our hypothesis, adolescents' externalizing problems were not associated directly with husbands' divorce proneness ($b = .01$, ns). The model fit was adequate ($\chi^2 = 29.92.40$, $df = 11$, $p = .002$; CFI = .97; RMSEA = .064). The second hypothesis was that early adolescent problem behaviors are linked to parents' increased divorce proneness through parenting efficacy. As hypothesized, adolescents' externalizing problems were associated inversely with mothers' parenting efficacy (Figure 1; $\beta = -.36$, $p < .01$). Contrary to the hypothesis, however, mothers' parenting efficacy was not associated with their divorce proneness ($\beta = -.11$, ns). Thus, lower levels of maternal efficacy did not help explain the prospective link between early adolescents' externalizing problems and wives' increased divorce proneness. Crossover effects, however, were found. Mothers' parenting efficacy was associated inversely with husbands' divorce proneness. As such, lower levels of maternal efficacy were associated with husbands' increased divorce proneness during early adolescence. The statistical significance of the pathway, adolescents' externalizing problems \rightarrow mothers' parenting efficacy

→ husband's divorce proneness, was tested using Sobel's formula with a one-tail probability because negative values were not expected. The indirect pathway was significant ($t = 2.87, p = .002$). The SEM model fit was good ($\chi^2 = 58.93, df = 29, p = .001; CFI = .98; RMSEA = .05$).

The third hypothesis was that early adolescent problem behaviors are linked to spouse's increased divorce proneness through fathers' self-appraisals of parenting efficacy. The results from the test of this hypothesis are also shown in Figure 1 (estimates in parentheses), and the model fit was good ($\chi^2 = 36.11, df = 17, p = .004; CFI = .98; RMSEA = .05$). As hypothesized, adolescents' externalizing problems were associated inversely with fathers' parenting efficacy ($\beta = -.20, p < .01$). Also as hypothesized, lower levels of fathers' parenting efficacy were associated with wives' increased divorce proneness, providing additional evidence of crossover effects ($\beta = -.15, p < .01$). The pathway, adolescents' externalizing problems → fathers' parenting efficacy → wives' divorce proneness, was statistically significant using Sobel's test ($t = 2.01, p = .02$). Given the direct effect between adolescents' externalizing and wives' increased divorce proneness, this finding can be interpreted as husbands' lower parental efficacy mediating the prospective association between adolescents' externalizing problems and wives' increased divorce proneness.

Table 1. Zero-order correlations and descriptive statistics (N = 416)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. W1 wives' divorce proneness	–															
2. W1 husbands' divorce proneness	.58	–														
3. W4 wives' divorce proneness	.37	.35	–													
4. W4 husbands' divorce proneness	.20	.35	.59	–												
5. W1 adolescents' externalizing	.15	.04	.20	.03	–											
6. W1 adolescents' internalizing	.11	.11	.14	.10	.54	–										
7. W2 adolescents' externalizing	.07	.00	.07	-.01	.51	.28	–									
8. W2 adolescents' internalizing	.02	.02	.05	.06	.28	.50	.66	–								
9. W3 adolescents' externalizing	.07	.05	.16	.04	.48	.25	.73	.45	–							
10. W3 adolescents' internalizing	.08	.10	.14	.13	.24	.45	.46	.67	.58	–						
11. W2 mothers' parental efficacy	-.17	-.21	-.18	-.20	-.17	-.08	-.23	-.20	-.31	-.32	–					
12. W2 fathers' parental efficacy	-.14	-.20	-.18	-.21	-.03	-.02	-.10	-.12	-.16	-.19	-.43	–				
13. W3 mothers' parental efficacy	-.11	-.18	-.13	-.19	-.13	-.05	-.23	-.20	-.31	-.33	.66	.34	–			
14. W3 fathers' parental efficacy	-.10	-.21	-.21	-.33	-.10	-.04	-.13	-.10	-.19	-.15	.42	.74	.39	–		
15. W4 mothers' parental efficacy	-.11	-.16	-.17	-.23	-.11	-.05	-.19	-.16	-.25	-.28	.66	.32	.66	.40	–	
16. W4 fathers' parental efficacy	-.15	-.16	-.23	-.28	-.14	-.11	-.19	-.15	-.20	-.20	.38	.74	.36	.78	.45	–
Mean	1.24	1.12	1.27	1.20	9.45	10.96	8.78	9.48	8.66	8.32	4.15	4.14	4.13	4.08	4.12	4.07
Standard deviation	.56	.43	.62	.50	5.98	7.50	6.96	8.32	7.35	7.63	.41	.43	.41	.47	.41	.48

Note: Bold coefficients indicate $p < .05$.

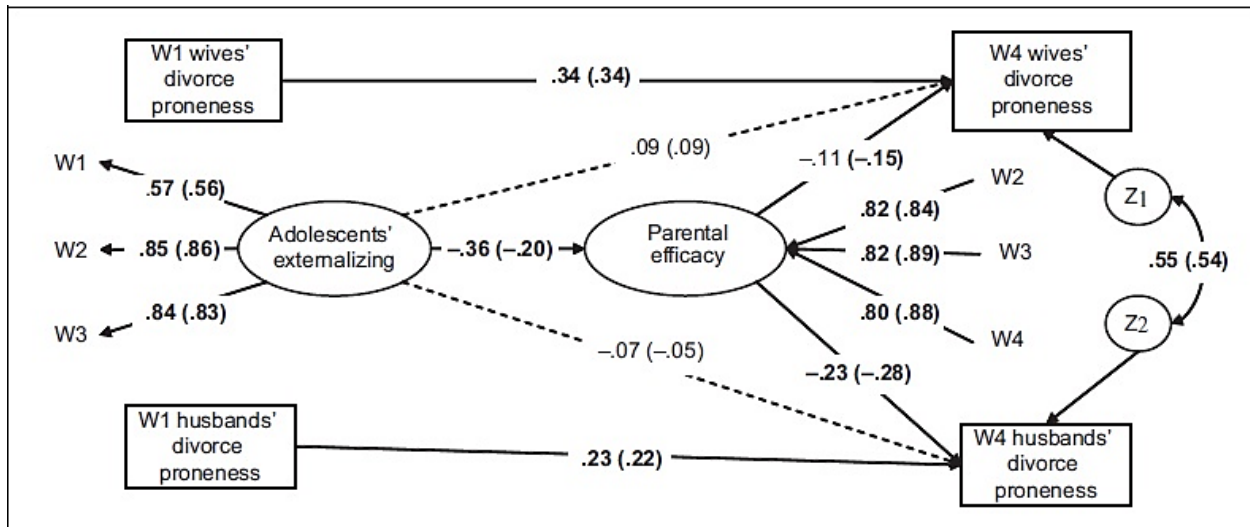


Figure 1. Adolescents' externalizing problem behavior, parental efficacy, and spouses' increased divorce proneness. Standardized regression coefficient (b) are shown for each model. First estimates displayed are from the model with maternal efficacy. Standardized coefficients in parentheses are from the model with paternal efficacy. The respective significant covariances between W1 wives' and husbands' divorce proneness were .59 and .59.

Note: Bold structural coefficients indicate $p < .05$. $N = 416$.

Fathers' parenting efficacy also demonstrated spillover effects. Fathers' efficacy was associated with their own divorce proneness ($\beta = -.28$, $p < .001$). In addition, the entire pathway, adolescents' externalizing problems \rightarrow fathers' parenting efficacy \rightarrow husbands' divorce proneness, was statistically significant using Sobel's test ($t = 2.55$, $p = .005$).

Adolescents' internalizing problems

Youths' internalizing problems during early adolescence were not associated directly with either wives' or husbands' increased divorce proneness. Although mediation of this association was no longer an issue because of the nonsignificant direct effect, we continued with the consideration of parental efficacy by focusing on potential indirect effects rather than mediating effects (Holmbeck, 1997).

As with adolescents' externalizing problems, internalizing problems were inversely associated with maternal efficacy ($\beta = -.36$, $p < .01$; Figure 2). In this model, however, lower levels of maternal efficacy also were associated with wives' increased divorce proneness ($\beta = -.12$, $p = .049$). In addition, the entire pathway, adolescents' internalizing problems \rightarrow mothers' parenting efficacy \rightarrow wives' divorce proneness, was statistically significant using Sobel's test ($t = 2.81$, $p = .035$). Lower levels of maternal efficacy were also associated with husbands' increased divorce proneness ($\beta = -.19$, $p < .01$). The indirect pathway, adolescents' internalizing problems \rightarrow mothers' parenting efficacy \rightarrow husbands' divorce proneness, was statistically significant using Sobel's test ($t = 2.47$, $p = .007$). The SEM model fit was adequate ($\chi^2 = 62.58$, $df = 29$, $p < .001$; CFI = .97; RMSEA = .053).

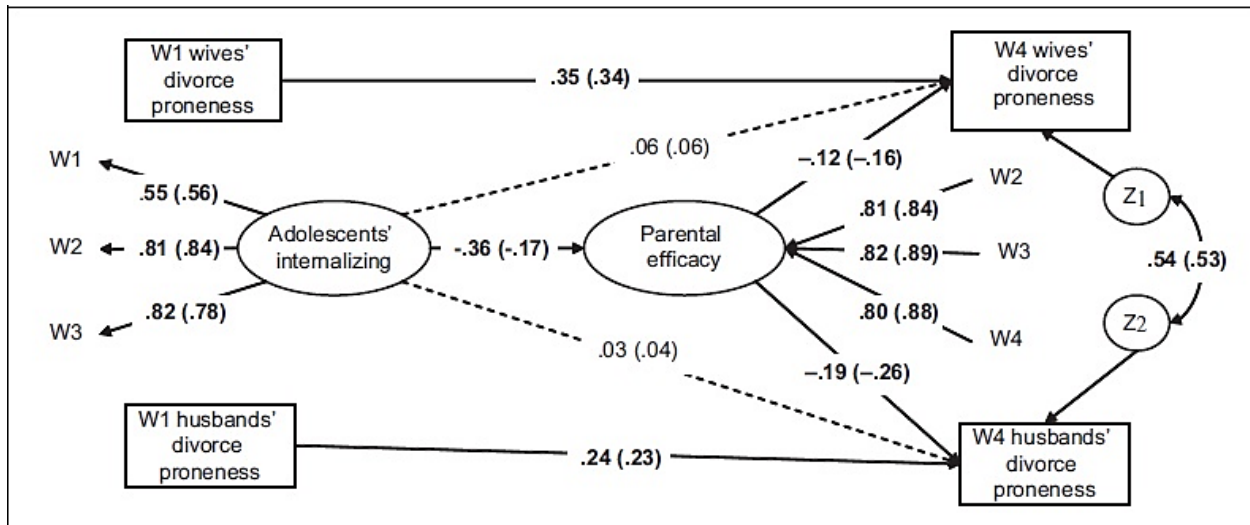


Figure 2. Adolescents' internalizing problem behavior, parental efficacy, and spouses' increased divorce proneness. Standardized regression coefficient (b) are shown for each model. First estimates displayed are from the model with maternal efficacy. Standardized coefficients in parentheses are from the model with paternal efficacy.

Note: Bold structural coefficients indicate $p < .05$. $N = 416$.

Also consistent with adolescents' externalizing problems, adolescents' internalizing problems were inversely associated with paternal efficacy ($\beta = -.17$, $p < .01$; Figure 2), and paternal efficacy was associated inversely with wives' divorce proneness ($\beta = -.16$, $p < .01$) and with husbands' divorce proneness ($\beta = -.26$, $p < .01$). Thus, adolescents' internalizing problems were linked with wives' (Sobel $t = 2.08$, $p = .02$) and husbands' (Sobel $t = 2.50$, $p = .006$) increased divorce proneness through lower paternal efficacy. The model fit was adequate ($\chi^2 = 63.30$, $df = 29$, $p < .001$; CFI = .97; RMSEA = .053).

Summary of findings

The first hypothesis was that early adolescents' problem behaviors are associated with parents' increased divorce proneness. Support for the first hypothesis was found only between externalizing problems during early adolescence and wives' increased divorce proneness. This relationship was not significant for husbands' divorce proneness. Adolescents' internalizing problem behaviors was not associated with increases in either wives' or husbands' divorce proneness during early adolescence.

The second hypothesis was that early adolescent problem behaviors are linked to parents' increased divorce proneness through parents' own self-appraisals of parenting efficacy. Complete support for this hypothesis was found for husbands, and partial support was found for wives. For fathers, adolescents' externalizing and internalizing problems were linked with husbands' increased divorce proneness through lower paternal efficacy. For mothers, adolescents' externalizing behaviors were not linked with wives' increased divorce proneness through lower maternal efficacy because of the nonsignificant association between maternal efficacy and wives' divorce proneness.

The third and fourth hypotheses examined crossover effects and suggested that early adolescent problem behaviors are linked to parents' increased divorce proneness through spouses' self-appraisals of parenting efficacy. For mothers, the association between adolescents' externalizing problem behaviors and wives' increased divorce proneness was mediated by lower levels of paternal efficacy. In addition, adolescents' internalizing problems were linked with wives' increased divorce proneness through lower paternal efficacy. For fathers, adolescents' externalizing and internalizing problems were linked with husbands' increased divorce proneness through lower maternal efficacy. Thus, the crossover hypotheses were supported.

Discussion

The findings from the present study illustrate the interdependent nature of family systems by highlighting that adolescents' problem behaviors take place within the broader context of family functioning and can influence parents' appraisals of their marriages. By addressing the relationship between these different subsystems within families, the present study relied on a family systems framework to extend the literature on family processes. Previous research has suggested that one of the primary mechanisms by which adolescents' problem behaviors influence parents' marital relations is by creating distress that transfers from adolescents' behavior and emotional functioning to parents' marital interactions and expectations (Cui & Donnellan, 2009).

All parents experience some level of stress as it relates to parenting (Crinc & Greenberg, 1990). Parents whose children engage in externalizing problem behaviors, however, report significantly greater levels of parenting stress than parents whose children do not engage in externalizing problem behaviors (Morgan, Robinson, & Aldridge, 2002). The findings from this study extend the understanding of how children's maladjustment affects marital relations by indicating that adolescents' externalizing problems increase wives' but not husbands' feelings that their marriage might be in trouble and thoughts related to ending their marriages. As such, adolescents' externalizing problems can be a risk factor for marital distress and instability. These gender differences are congruent with research documenting significant gender differences in marital satisfaction and divorce initiation: women tend to report lower levels of marital satisfaction and are twice as likely to initiate divorce when compared to husbands (Amato & Irving, 2006).

Given that internalizing behaviors are less observable, they are often not as immediately demanding or stress provoking as externalizing problem behaviors are for parents. Yet, research suggests that internalizing behaviors, such as depression or anxiety, eventually may provoke parents to worry about their adolescent and increase parental stress (Cheah & Rubin, 2004). Parental stress brought on by adolescents' depressed mood, anxiety, and social withdrawal, could spill over into the marital relationship and lead to decreases in marital satisfaction, and over time divorce proneness as parents struggle to support their emotionally distressed child. This process-oriented explanation that includes additional variables in Gottman's (1994) cascade model will need to be examined in future research. This research also needs to consider the interplay among parents' emotional distress, adolescents' emotional distress, and divorce proneness given the association between parents' psychological functioning and marital problems (Proulx, Helms, & Buehler, 2007).

Parental efficacy as a linking mechanism

We tested the hypothesis that the interdependencies between adolescents' behavior problems and parents' divorce proneness were shaped by linkages with parents' feelings of efficacy. Bandura (1989) does not conceptualize efficacy as a fixed, unchanging trait but rather conceptualizes efficacy as a malleable aspect of the individual that is subject to the changing demands associated with a task. Thus, with increases in or repetition of their adolescent's problem behavior, parents are likely to question their ability to parent their adolescent effectively as previous research on adolescent delinquency suggests (Perrone et al., 2004). Given the connections between proficiency, competency, and satisfaction in parenting on the one hand and parental efficacy on the other, it is not surprising that, in the face of persistent and severe adolescent externalizing problem behaviors, parental efficacy is weakened (Coleman & Karraker, 1997).

Lower parental efficacy has been associated with decreased parental involvement (Swick & Broadway, 1997), whereas higher levels of parental efficacy have been linked with marital stability (Swick, 1987). This body of research highlights the interconnection between family subsystems specifically suggesting that the parenting and marital subsystems are intertwined. The current findings partially support this hypothesis in that fathers' efficacy was linked to husbands' divorce proneness. Prior research has not examined the connection between paternal efficacy and husbands' divorce proneness but these findings are consistent with related research on fathering which suggests that father involvement is associated with a range of non-parenting outcomes such as overall life satisfaction (Eggebeen & Knoester, 2001). This interconnection between parental efficacy and husbands' divorce proneness is also consistent with previous research that has found a stronger connection between marital conflict and fathers' ineffective parenting than with mothers' parenting (Almeida, Wethington, & Chandler, 1999; Cox, Paley, & Harter, 2001).

Contrary to our hypothesis, mothers' lower efficacy was not significantly linked to wives' divorce proneness although the relationship was in the expected direction. It may be that other factors associated with parenting, such as parenting stress or attachment, are more salient to the relationship between adolescent problem behaviors and wives' divorce proneness. Future research should examine these possible predictors.

We also tested the hypothesis that the interdependencies between adolescents' behavior problems and parents' divorce proneness were shaped by spouses' parental efficacy. This was supported for both wives' and husbands' divorce proneness. These findings are consistent with previous research on crossover effects which reinforce the understanding of the interconnectedness of the family subsystems (Cinamon, Weisel, & Tzuk, 2007). In the face of parenting challenges, knowing that one's spouse is supportive, willing, and able to assist in dealing with the adolescent's problem behaviors can strengthen the parenting unit and buttress the marital bond. Having a spouse as a parenting ally can increase feelings of parenting efficacy. Feelings of isolation or increased marital distress may ensue when this needed support and competent involvement is not available. The findings from the present study regarding crossover effects shed new light onto the related nature of multiple family roles, such as parent and spouse, and highlight the connection between the different subsystems or domains within the family.

Strengths, limitations, and contributions of the study

Strengths. Numerous methodological strengths are associated with the present study. The study benefits from the longitudinal nature of the data that were gathered from a large sample comprised of multiple informants within each family. This allowed for time ordering between adolescent problem behavior and parental efficacy, as well as the ability to control for baseline levels of divorce proneness. The sample was representative of eligible but non-participating families, and attrition bias was minimal. The sample was representative of the county families, from which the sample was drawn, on parental education, and had only slightly higher levels of annual household income. In the present study adolescents self-reported their externalizing and internalizing problem behaviors and mothers and fathers self-reported their feelings of parental efficacy and divorce proneness. The use of multiple informants increases construct validity and minimizes problems associated with shared method variance (Kumar, Stern, & Anderson, 1993).

Limitations. There also were limitations that need to be considered when interpreting the findings from this study. Although using the school system to recruit families has numerous strengths, one limitation is that school-based samples are biased in that they may not include adolescents who are the most at risk for problem behaviors. Adolescents who had dropped out of school or were suspended during the week of data collection were not included in the sample. Future research may seek to further explore the relationship between adolescents' problem behaviors, divorce proneness, and parental efficacy using clinical samples of severely delinquent or depressed youth.

Given the study emphasis on the marital relationship, the present sample lacks diversity with regard to family structure. Future research should examine the relationship between adolescents' problem behaviors and divorce proneness using a sample comprised of complex family structures such as families in which there are step-parents or stepchildren present in the home. Other factors related to family structure that were not addressed by the current research design may be relevant for future research, such as number of children present in the home, and the problem behaviors of older and younger siblings. This study also was limited in its representation of families living below the poverty line and ethnic minority families. Thus, moderating analyses by income and race were not possible and need to be conducted in future studies that have larger, more diverse samples.

Contributions of the study. With these limitations in mind, the findings from this study have elaborated some of the interdependencies between adolescents' behavior problems, parents' feelings of parental efficacy, and their divorce proneness. This study makes several important contributions to the understanding of family functioning: (a) with its grounding in family systems theory, the study design incorporated several ways to examine interdependence through its reliance on multiple family members and an emphasis on the interconnection between various family members and subsystems; (b) the findings illuminated a previously understudied aspect of family life by examining child effects on parents' divorce proneness; and (c) the crossover effects found by examining the relationship between spouses' parental efficacy and divorce proneness reinforce the necessity of examining complex linkages among child well-being, parenting, and marital functioning.

Acknowledgements

We thank the staff of the Family Life Project for their unending contributions to this work and the youth, parents, teachers, and school administrators who made this research possible.

Conflict of interest statement

The author(s) declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding statement

This research was supported by Grant R01-MH59248 from the National Institute of Mental Health to Cheryl Buehler.

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