

Parental, Child-Centered Attributions and Outcome: A Meta-Analytic Review with Conceptual and Methodological Implications

Thomas E. Joiner, Jr.,^{1,2} and Karen Dineen Wagner¹

Eight empirical studies which bear on the relation between parents' "child-centered" attributions for children's problems and parental satisfaction or child adjustment were meta-analyzed. The parental attributional dimensions of stability and globality garnered the most support as correlates of parental satisfaction and/or children's adjustment; the dimensions of intent, selfish motivation, and blame received initial support and warrant further study. Important methodological and conceptual issues were identified and improvements are suggested. The need for prospective designs aimed at determining the causal relation, if any, between parental attributions and outcome, thorough assessment of attributions and the events which impinge upon them, detailed measurement of symptom and satisfaction variables, a wider array of child diagnoses, and establishment of parental diagnoses, are emphasized.

Although the link between *self-focused* cognition and psychopathology has received increasingly intense scrutiny (e.g., Metalsky, Joiner, Hardin, & Abramson, 1993), the relation between *other-focused* cognition and psychopathology has not. Work on marital attributions represents an important exception. In a thorough review of this literature, Bradbury and Fincham (1990) concluded that negative attributions by one spouse regarding his/her spouse's behavior are cross-sectionally (Baucom, Sayers, & Duhe, 1989) and prospectively (Fincham & Bradbury, 1987b) associated with marital dis-

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¹Division of Child and Adolescent Psychiatry, Department of Psychiatry and Behavioral Sciences, University of Texas Medical Branch at Galveston, Galveston, Texas 77555.

²Address all correspondence to Thomas Joiner, Department of Psychiatry and Behavioral Sciences, D-25, 3.102 Graves Building, University of Texas Medical Branch at Galveston, Galveston, Texas, 77555-0425.

satisfaction. Marital dissatisfaction, in turn, is often associated with depression (Fincham, Beach, & Bradbury, 1989).

The purpose of the present effort is to assess whether similar processes may be operative among parent-child dyads. Recent work suggests that the attributions parents make with regard to their children's problems are linked to important outcomes, such as child health and relationship satisfaction. Like everyone, parents make a range of attributions, and it is important to distinguish between *self-focused* and *child-centered* parental attributions. Parents' attributions regarding negative child behavior may be *about the child* or *about the parent*. For example, if, in response to a child's breaking a valued vase, the parent thinks, "What a rotten kid," the parent has made a child-centered attribution. If, by contrast, the parent thinks, "What a rotten parent I am," the parent has made a "self-centered," not child-centered, attribution. Regardless of the parents' self-centered attributional style, to the extent that parents make dispositional, child-centered attributions about their children's negative behavior, a host of problems may ensue.

The quantity, form, and interrelations of the problems which may ensue is somewhat mind-boggling. For example, a dispositional, child-centered attribution about a negative child behavior may affect (1) the parent's attitude toward the child and toward the family (e.g., "a crazy kid from a crazy family"; cf. Azar, Robinson, Hekiman, & Twentymen, 1984; Azar & Rohrbeck, 1986); (2) the parent's attitude toward him-/herself (e.g., "My child is so problematic that my abilities as a parent are overwhelmed"; cf. Bugental et al., 1993; Bugental & Cortez, 1988; Teti & Gelfand, 1991); (3) the parent's behaviors toward the child (e.g., "It doesn't matter what I do, so I may as well do nothing"; Teti & Gelfand, 1991); (4) the parent's messages to the child (e.g., "You are no good"; Stark, Schmidt, & Joiner, in press); and (5) the parent's level of psychopathology (e.g., "It makes me depressed that my child is like this"). This is not to mention the effects that all of these variables may have on each other, as well as on the child's attitudes, behaviors, and symptoms.

An intricate, multimediated, and reciprocally determined model is thus implied, wherein parents' negative child-centered attributions are construed as source variables with wide-ranging effects culminating in negative outcomes for parents and children. As a first step toward evaluating this model, we review the studies that have examined the link between parental child-centered attributions on the one hand, and outcomes (e.g., child's symptoms, relationship satisfaction of children and parents) on the other. We summarize relevant studies meta-analytically, then discuss important conceptual and methodological issues, and make suggestions for improvements and for future work.

META-ANALYTIC LITERATURE REVIEW

Inclusion Criteria

All studies which examined associations between parents' child-centered attributions for children's behavior on the one hand, and parental satisfaction and/or child adjustment on the other hand, were included in this review. There are dozens of studies which have examined attributional styles, parent-child relations, or other related phenomena. However, to our knowledge, eight studies have examined parents' (usually mothers') child-centered attributions about childhood problems. Table I describes and summarizes the findings of these studies.

The studies in Table I possess considerable variability in the populations studied, the dimensions of attributional styles examined, and the measures of outcome employed. With respect to populations, the studies include conduct-disordered children and their mothers (Alexander, Waldron, & Barton, 1989; Baden & Howe, 1992), children with learning problems and their mothers (Compas, Friedland-Bandes, Bastein, & Adelman, 1981; Grace, Kelly, & McCain, 1993), enuretic children and their mothers (Butler, Brewin, & Forsythe, 1986), abused and neglected children and their mothers (Larrance & Twentyman, 1983), families in family therapy (Munton & Antaki, 1988), and public school students and their mothers (Fincham & Bradbury, 1987a). Measures of outcome and adjustment range from a one-item question about mothers' satisfaction with their relationship to their child (Fincham & Bradbury, 1987a), to response to family therapy (Munton & Antaki, 1988). Seven different dimensions of attributional style have been examined (internal, stable, global, controllable, intentional, selfishly motivated, and blameworthy; see Table I). We suggest that if attributional dimensions are related to measures of outcome across studies with differing populations and approaches, the viability and generalizability of the phenomenon will garner support.

Meta-Analytic Approach

Consistent with the recommendations of Rosenthal (1978, 1979), we computed the overall p of the studies by transforming results to standard normal deviates (Z s), averaging Z s across studies, and multiplying the average Z by the square root of the number of studies (see also Cochran, 1954). The result is itself a Z which provides an index of effect size across studies (combined Z). When the effect size of an individual study was designated as significant or nonsignificant but was not clearly specified, we

Table 1. Descriptive Information for Investigations of Parental Attributions and Outcomes

Study	Sample	Stimuli used to assess attribution	Attributional dimensions assessed	Findings
Grace, Kelly, & McCain, 1993	115 Mothers and 122 adolescents from a university laboratory school	8 Hypothetical conflict situations, similar to the MASQ ^a	Internal, stable, global, intentional, selfishly motivated, blameworthy	All dimensions related to mother-adolescent self-reported conflict
Baden & Howe, 1992	40 Clinic-referred conduct-disordered (CD) children and their mothers; 40 control dyads	4 Behaviors chosen by mothers from a menu of 12, rated on 5 point scale	External, stable, global, uncontrollable	Parents viewed causes of CD children's behaviors as stable, global, intentional, and uncontrollable
Alexander, Waldron, Barton, & Mas, 1989, Study 2	30 Families of delinquent adolescents	Each family member recalled 2 dissatisfying behaviors of other	Internal, stable, global	Parents more likely to make dispositional attributions for negative than positive events
Munton & Antaki, 1988	10 Families in family therapy	Rated-coded attributions	Internal, stable, global, controllable	Attributions of negative events to stable causes typified "no change" families
Fincham & Bradbury, 1987a, Study 1	56 Mothers and public-school children	24-Item self-report measure	Blameworthy	Mother-child satisfaction not highly related to blame attributions

Butler, Brewin & Forsythe, 1986	68 Clinic-referred enuretics and mothers	16 Common causes of enuresis	Internal, stable, global, controllable	Controllability, not other dimensions, related to intolerance
Larrance & Twentyman, 1983	30 Abusive mothers; 30 neglectful mothers; 30 control mothers clinic	6 Photographs of children in interpersonal situations	Internal, stable	Abusive/neglectful mothers made internal, stable attributions for negative but not positive photos
Compas, Friedland-Bandes, Bastein, & Adelman, 1981	116 Children and mothers from a psychoeducational clinic	Questionnaire about academic success and failure	Internal	Parents more likely to make internal than external attributions for child failures

^aMASQ = Marital Attributinal Style Questionnaire.

took a conservative approach and assigned $Z = 1.645$, the Z corresponding to $p = .05$, to significant effects, and $Z = 0$ to nonsignificant effects.

In addition, where appropriate, we followed Rosenthal's (1979) guidelines regarding tolerance for null results (i.e., "the file drawer problem"). The technique involves estimation of the number of unpublished null studies which would have to exist (presumably in file drawers) to bring the overall Z to a nonsignificant level (say, $p = .05$). As a rough guideline, Rosenthal suggested that combined results requiring more than five times the number of studies plus 10 to fall to nonsignificance are resistant to the file drawer problem.

Collapsing Across Studies and Across Attributional Dimensions

The number of dimensions of attributional style have proliferated to the point that at least 12 exist, seven of which have been examined in this area of work (internal, stable, global, controllable, intentionality, blame, and selfishness). Because these dimensions are at the same time interrelated and (at least theoretically) discriminable, we will first examine the relationships between composite attributional style indices (the average of all assessed attributional dimensions) and outcomes across studies, and then examine the relationships of individual attributional dimensions to outcomes across studies.

Table II lists the Z - and p -values for the attributional composites for each study, the statistic from which the Z was derived, the studies' numbers of subjects, and the individual attributional dimensions which comprise each composite.

The meta-analysis on all 491 subjects from all eight studies provide support for the notion that parental child-centered attributions for childhood problems affect relationship satisfaction and/or adjustment. The combined effect size is strong ($Z = 4.81$, $p < .000001$), and the tolerance for null results is reasonable (approximately 60 studies which reported null results would be required to bring p to $.05$). Furthermore, it must be remembered that these are quite conservative estimates, both with regard to Z and to tolerance for null results. Regarding Z , we inserted values of 1.645, which corresponds to $p = .05$, in three studies where $p < .05$, but effect sizes were not available. Were they available, Z would only increase. Regarding tolerance for null results, our findings meet Rosenthal's (1979) guideline. It thus seems reasonable to conclude, even at this early stage of the research in this field, that child-centered parental attributions for child problems are reliably related to important outcome variables.

Table II. Summary Table for Meta-Analysis of Composite Parental Attributions

Study	Z for attributional composite	p	Composite statistic from which Z derived	N	Dimensions that comprise the composite
1. Grace, Kelly, & McCain, 1993	2.90	<.001	r = .27	115	Internal, stable, global, intent, blame, selfish
2. Baden & Howe, 1992	3.58	<.0001	F = 14.56	80	Internal, stable, global, control, intent
3. Alexander, Waldron, Barton & Mas, 1989	1.645 ^a	= .05	—	30	Internal
4. Munton & Antaki, 1988	1.36	= n.s.	F = 1.86	10	Internal, stable, global, control
5. Fincham & Bradbury, 1987a	0 ^a	= n.s.	—	56	Blame
6. Butler, Brewin & Forsythe, 1986	0.85	= n.s.	r = .10	68	Internal, stable, global, control
7. Larrance & Twentyman, 1983	1.645 ^a	= .05	—	30	Internal and stable
8. Compas, Friedland-Bandes, Bastein, & Adelman, 1981	1.645 ^a	= .05	—	102	Internal
Totals	Averaged Z = 1.70 Combined Z = 4.81 ^b	< .000001		491	

^aEstimated Z.

^bCombined Z = (Σ no. of studies) ÷ (averaged Z).

It is interesting to note that, of the eight studies, only the Fincham and Bradbury (1987a) study reported no relationship between any attributional dimension and outcome. The study was designed to examine whether responsibility attributions mediate the relationship between causal and blame attributions, and made only passing reference to data which suggested that blame attributions were unrelated to mothers' satisfaction with the parent-child relationship. This result should be viewed with caution, however, because it was a somewhat tangential finding, the measure of satisfaction consisted of only one item, and the sole attributional dimension assessed (i.e., blame) was somewhat novel. Furthermore, because the sample was nonclinical, the range of negative child behaviors upon which parents based blame attributions may not have been sufficient. However, in keeping with our conservative approach, we have weighted this study and the others equally.

Collapsing Across Studies Within Attributional Dimensions

As noted above, a noteworthy feature of the eight studies is the wide range of attributional dimensions assessed. Not only are the standard dimensions of internality, stability, globality, and controllability included (cf. Weiner, 1986), but so are dimensions of blame, intent, and selfish motivation (cf. Antaki & Fielding, 1981). Table III lists the combined Z s, the tolerance for null results, and the number of studies and subjects involved for each of the seven dimensions.

As can be seen in Table III, of these seven dimensions, stability and globality garner the most support as correlates of adjustment and satisfaction (combined Z s of 4.22 and 4.26, respectively, both p s < .00001, tolerance for null results = 28 and 23, respectively). Both dimensions are assessed in several studies (five and four, respectively) on large numbers of subjects (303 and 273, respectively). That these two dimensions received the most support is an interesting finding, in that the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989) has specified the combination of stability and globality (i.e., generality) as the key self-centered attributional dimensions in predicting depression. Our findings suggest that they may be equally important with regard to the relationship between parental child-centered attributions and outcome indices. Indeed, the combined Z for the relation between the stability-globality composite and outcome is 4.16 (p < .0001), despite there only being three studies which assessed both dimensions (recall that combined Z is a function of the number of studies).

Table III. Summary Table for Meta-Analysis of Individual Parental Attributional Dimensions

Attributional dimension	Combined Z	<i>p</i>	Tolerance for null results	Number of studies	Combined <i>N</i>
1. Stability	4.22	<.00001	28	5	303
2. Globality	4.26	<.00001	23	4	273
3. Internality	2.94	<.001	15	7	435
4. Controllability	1.59	n.s.	—	3	158
5. Intentional	4.86	<.00001	15	2	195
6. Blame	2.05	<.05	2	2	171
7. Selfish motivation	3.54	<.0001	3	1	115

Internality was moderately supported as a correlate of satisfaction and adjustment in seven studies and 435 subjects (combined $Z = 2.94$, $p < .01$). However, the number of studies required to reduce this effect to non-significance is somewhat low (15), which suggests that judgment be postponed on this dimension until more data are collected. From a psychometric standpoint, it is interesting to note that internality has encountered the most measurement problems of the seven dimensions (e.g., Baden & Howe, 1992, obtained an internal consistency coefficient of $-.19$ for a version of the internality scale, which they therefore eliminated from their study), which may have weakened findings for this dimension.

Of the four "traditional" attributional dimensions, controllability is the only one to gain little support as a correlate of outcome. Three studies on 158 subjects produced a nonsignificant combined Z (1.58). Therefore, although it is too early to conclude that controllability is unimportant as a correlate of outcome, other dimensions, particularly stability and globality, probably deserve more attention. Interestingly, in the vulnerability to depression literature, some studies have claimed that controllability is a more important attributional dimension than stability and globality (Anderson & Arnoult, 1985). However, consistent with the prevailing view in the depression literature (Abramson et al., 1989), our findings regarding child-centered parental attributions suggest the opposite.

The dimensions of intent and blame were assessed in only two studies (i.e., Baden & Howe, 1992; Grace et al., 1993), and selfish motivation in only one study (i.e., Grace et al., 1993). While the findings are preliminary, each of these three dimensions received at least some support as a correlate of satisfaction/adjustment. For intentionality, combined Z was 4.86, $p < .000001$, tolerance for null results = 15, in two studies with 195 subjects. Corresponding values for blame were: $Z = 2.05$, $p < .05$, tolerance = 2, studies = 2, subjects = 171; for selfish motivation: $Z = 3.54$, $p < .0001$, tolerance = 3, studies = 1, subjects = 115.

To summarize, the stable and global dimensions of parental child-centered attributions were well supported as predictors of parental satisfaction/child adjustment. Internality received moderate support, whereas controllability did not. The dimensions of intent, selfish motivation, and blame received preliminary support, and deserve continued empirical attention.

Limitations

We will defer until a later section discussion of methodological and conceptual limitations of the field as a whole, and focus for now on limi-

tations of our meta-analysis. First, the field is in its younger stages, and accordingly the number of studies available for review is low. It must be noted, however, that all of the statistics we report (i.e., Z and tolerance for null results) are functions of the number of studies, and thus, in a sense, we “control” for this problem throughout our analyses. A second issue is that we do not account for variations between studies (e.g., in sample, methodological rigor, and so on), which may qualify our findings. We suggest that, at this stage of the work, a broad-brush approach is appropriate. However, as more studies become available, future reviews should consider such between-study differences.

CURRENT PROBLEMS AND FUTURE DIRECTIONS

Causality

A crucial methodological issue which urgently needs attention is the lack of studies which can draw conclusions about the *causal* nature of the relation between parental attributions and satisfaction/adjustment. With the possible exception of Munton and Antaki's (1988) study of families in therapy, all of the studies we reviewed were cross-sectional. As Baden and Howe (1992, p. 209) pointed out, the possibility that the parental attributions—satisfaction/adjustment relationship is an artifact of a third variable, such as depression or communication skills, must be addressed.

Of course, the direction of any causal link between parental attributions and satisfaction/adjustment also must be determined (i.e., parental attributions may cause satisfaction/adjustment, or vice versa). This latter possibility is particularly important in light of Alexander et al.'s (1989, Study 2) finding that manipulation of “satisfied” versus “unsatisfied” interactional sets influenced whether parents made positive or negative attributions regarding their delinquent adolescents.

Characteristics of the Samples

Five of the seven supportive studies utilized clinical samples (two conduct-disordered; one each of learning-disordered, enuretic, and abuse/neglect victims). Obviously, there is an urgent need for research which examines other patient populations (e.g., mood, anxiety, and eating-disordered patients) and which delineates differences, if any, in attributional processes in families of children and adolescents diagnosed with various mental disorders.

Notably, no study which examines family attributional processes has established the diagnostic status of the parents. This is a glaring omission for at least two reasons. First, most disorders run in families (e.g., Rice et al., 1987). Thus, clinical samples of children imply elevated rates of psychopathology in other family members. That the attributional processes of distressed parents differ from those of nondistressed parents is not difficult to imagine. Second, families with distressed parents are likely to experience more stress than other families (e.g., Hammen et al., 1987), and increased stress may exacerbate the symptoms of all concerned regardless of attributional processes.

Conceptualization and Measurement of Attributions

With the exception of Munton and Antaki (1988), who used observer ratings, all of the studies we reviewed employed variations of self-report measures of attributions. As similar measures in the vulnerability to depression literature (e.g., Metalsky & Joiner, 1992) and the marital attribution literature (e.g., Fincham & Bradbury, 1987b) possess adequate reliability and validity, this is not in and of itself problematic. Nonetheless, this area of research has yet to fully capitalize on the hopelessness theory of depression's (Abramson et al., 1989) diathesis-stress logic and the derivative measurement implications (this criticism also applies to marital attribution work; see Metalsky, Laird, Heck, & Joiner, 1995).

Specifically, parental attributions which are "activated" by the recent occurrence of negative child behaviors are probably more potent predictors of satisfaction/adjustment than less activated attributions. Notice that observer-rating schemes and self-report measures which utilize previously assessed negative child behavior incorporate this approach to some degree, in that attributions for actual negative events are assessed. However, a more pointed assessment of the presence and frequency of negative child behaviors would allow for tests of whether the interactions between parental attributions and negative child behaviors would enhance predictability of satisfaction/adjustment. One caution: As with negative life events measurement more generally, the assessment of negative child behaviors must be circumscribed; it should be limited to items which assess *occurrence* of behavior, as opposed to interpretations of or dissatisfaction with behavior, because the latter are confounded with attributional processes.

From a conceptual standpoint, the interrelations of attributional dimensions deserve attention. For example, it is interesting to note that attributions of intent, selfish motivation, and blame frequently *entail* attributions of internality (cf. Fincham & Jaspers, 1980; Shultz & Schleifer,

1983). In the two studies that assessed all of these dimensions (Baden & Howe, 1992; Grace et al., 1993) internality was not related to satisfaction/adjustment, whereas the dimensions of intent, selfish motivation, and blame were. Internal attributions may be unrelated to satisfaction/adjustment *unless* such attributions also contain elements of intent, selfish motivation, and blame. If so, there may be a “main-effect” relation between intent, selfish motivation, and blame attributions on the one hand and satisfaction/adjustment on the other, which may be amplified by the presence of internality attributions (i.e., an Intent/Selfish Motivation/Blame Attribution \times Internality Attribution interaction). The interrelationships among attributional dimensions represent an important area for future work.

Measures of Satisfaction/Adjustment

There was considerable variability in the measures of outcome used in the eight studies in our review. Grace et al.’s (1993) use of well-validated measures of parent–child issues and conflict represents the most rigorous approach. Munton and Antaki (1988) used observer ratings of degree of positive change in family therapy. Butler et al. (1986) assessed maternal tolerance of the specific clinical problem under study (i.e., enuresis). Fincham and Bradbury (1987a) included one item from a marital satisfaction scale reworded to apply to parent–child dyads.

The remaining four studies compared the attributional processes of dyads who have experienced problems (e.g., conduct-disordered children, Baden & Howe, 1992; abusive parent, Larrance & Twentyman, 1983) to those of dyads who have not—an approach which examined the cross-sectional relationships between a categorical index of adjustment and attributional processes. Of course, as with much cross-sectional work, these studies are vulnerable to the criticism that they reveal little about causal relationships. However, an advantage of these studies is that they provide information about the relationships between parental attributional processes and specific clinical phenomena (as opposed to general satisfaction/adjustment).

The issue of the *scope* of outcome measures deserves attention. The Butler et al. (1986) study stands in contrast to the others with regard to its tight focus. Butler et al.’s purpose was to assess enuresis-related maternal attitudes, whereas the other studies examined more general indices of satisfaction. Both levels of analysis provide useful information; investigators should be clear about the level in which they are interested and choose instrumentation accordingly.

With the possible exception of Munton and Antaki (1988), satisfaction on the family level has not been examined, although the instrumentation to do so is clearly in place (e.g., the Family Environment Scale; Moos & Moos, 1981). Because families with a distressed member report less satisfying family environments (e.g., Kaslow, Rehm, & Siegel, 1984), the effects of family-wide attributions about a distressed child on family satisfaction also represent an important area for future work.

OTHER RELEVANT LINES OF RESEARCH

Two other lines of research which are relevant to parental attributional processes deserve mention. First, Fincham, Bradbury, and colleagues have thoroughly documented the relationship—probably causal in nature—between attributions and satisfaction among marital dyads (e.g., Bradbury & Fincham, 1990). This body of work has been quite instructive in formulating the issues facing the parental attributions area. Second, the large literature on expressed emotion in families (e.g., Hooley, 1985) has demonstrated that critical and/or hostile messages from family to patient worsens prognosis. Several authors have speculated that attributional processes underlie expressed emotion (e.g., Hooley, 1987), and Brewin, MacCarthy, Duda, and Vaughn (1991) have obtained empirical support for this notion. This conceptualization is very similar to that put forth here, in that we view family attributional processes as the initial link in a chain that leads to an array of negative consequences.

SUMMARY

As a first step toward establishing and evaluating a theoretical model wherein parental child-centered attributions lead to problematic parental behaviors and attitudes, which in turn, heighten risk for dissatisfaction and maladjustment, we have provided a meta-analytic review of eight empirical studies which examined the link between parental attributional processes and parental satisfaction or child adjustment. The attributional dimensions of stability and globality garnered the most support as correlates of satisfaction/adjustment; the dimensions of intent, selfish motivation, and blame received initial support and warrant further study. Important methodological and conceptual issues were identified and improvements suggested. The need for prospective designs with relevance to the causal nature of the parental attributions–outcome relationship, a wider array of child diagnoses, the establishment of parental diagnoses, a thorough assessment of at-

tributions *and* the events which impinge upon them, and the detailed measurement of symptom and satisfaction variables were emphasized. Attention to these issues will contribute to an enhanced understanding of the complicated interrelationship among parental and child attributions, feelings, and behaviors.

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