

They Love Me Not: A Meta-Analysis of Relations Between Parental Undifferentiated Rejection And Offspring's Psychological Maladjustment

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Abstract

Extensive cross-cultural evidence supports the conclusion that children and adults everywhere understand themselves to be cared about (accepted) or not cared about (rejected) by the people most important to them (e.g., parents) in four ways. These four ways include the perception of warmth/affection (or coldness/lack of affection), hostility/aggression, indifference/neglect, and undifferentiated rejection. In addition, extensive cross-cultural evidence supports the conclusion that psychological adjustment of children and adults everywhere tends to be affected in the same way when they feel their attachment figures do not care about or love them (i.e., reject them). About 11 prior meta-analyses have documented these conclusions about the relationship between psychological maladjustment and the experiences of parental coldness/lack of affection, hostility/aggression, and indifference/neglect, among offspring. However, the cross-cultural link between psychological maladjustment and undifferentiated rejection has not heretofore been explored via meta-analysis. That is the purpose of this study. It examined relations among children's current perceptions and adults' remembrances of parental undifferentiated rejection in childhood, and offspring's psychological adjustment. The meta-analysis was based on 102 studies (89 published and 13 unpublished) from 17 countries involving 24,003 respondents. Results showed that both maternal and paternal undifferentiated rejection correlated significantly in all countries with overall psychological maladjustment of both children and adults. However, *maternal* undifferentiated rejection had a significantly stronger relationship with both children's and adults' psychological maladjustment than did perceived paternal undifferentiated rejection. Perceived maternal undifferentiated rejection also had a significantly stronger relationship with children's psychological maladjustment than with adults' psychological maladjustment.

Keywords

meta-analysis, maternal acceptance, paternal acceptance, undifferentiated rejection, psychological adjustment, interpersonal acceptance–rejection theory

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Parental warmth and love have received long-standing theoretical and empirical attention (Bowlby, 1969; Rohner, 1975; Rohner & Lansford, 2017). The reason for this attention is clear: The consequences of parental love, warmth, and affection (i.e., perceived parental acceptance) or their absence (i.e., perceived parental rejection) have a profound impact on the social, emotional, cognitive, and physical well-being of children and adults (Bowlby, 1973; Rohner, 1975, 1986). Historically, though, somewhat greater research emphasis has been placed on the absence or withdrawal of parental love (i.e., on parental rejection) than on parental acceptance because its effects are more pronounced, and often produce seriously damaging consequences for growing children as well as for adults who were rejected as children (Baumeister & Leary, 1995; Bowlby, 1973; Rohner, 1986, 2018).

For example, rejected children tend to develop a constellation of seven to 10 personality dispositions known as the parental acceptance–rejection syndrome (Rohner, 2004; Rohner & Lansford, 2017). Personality dispositions within this syndrome include anxiety; insecurity; anger, hostility, aggression, passive aggression, or problems with the management of hostility and aggression; dependence or defensive independence, depending on the form, intensity, and duration of rejection; impaired self-esteem; impaired self-adequacy; emotional instability; emotional unresponsiveness; negative worldview; and cognitive distortions. Collectively these dispositions are predicted in interpersonal acceptance–rejection theory (IPARTheory) to be among the pancultural consequences of perceived parental rejection. As such they are said in the theory to constitute a major expression of psychological maladjustment.

IPARTheory is an evidence-based theory that attempts to formulate a lifespan developmental perspective on issues surrounding interpersonal acceptance and rejection. It especially attempts to explain and predict major consequences and other correlates of interpersonal acceptance–rejection worldwide (Rohner, 2018; Rohner & Lansford, 2017). In doing this it draws extensively from every major ethnic group in the United States as well as from sociocultural settings internationally.

According to IPARTheory all humans can be placed someplace along the acceptance–rejection continuum (i.e., the warmth dimension) because all humans have experienced more or less love and acceptance, or rejection from the people most important to them—especially parents in childhood. According to the theory, the warmth dimension forms a continuum where rejection stands in opposition to acceptance on a continuous scale. Perceived parental warmth and affection (acceptance) stand at one end, with the absence or withdrawal of warmth and affection, and other hurtful behaviors defining the other end. More specifically, parental acceptance is defined as the warmth, care, comfort, nurturance, emotional support, or simply love that parents can give their children. Parental rejection, however is a form of parental behavior that is characterized by one or a combination of four major forms of behavior: (a) emotional coldness and lack of affection, that is by the absence or withdrawal of emotionally expressed affection; (b) hostility and aggression, including feelings and expressions of enmity, anger, or resentment leading to hurtful verbal and physical behaviors toward children; (c) indifference and neglect, including lack of concern for children’s physical, psychological, emotional, and social needs; and (d) undifferentiated rejection, that is based on children’s subjective beliefs that their parents or primary caregivers do not really care about, want them, appreciate them, or love them—even though there may be no obvious *behavioral* markers that the parents are unaffectionate, aggressive, neglectful, or rejecting in other ways (Khaleque & Rohner, 2002a; Rohner, 1986, 2018; Rohner & Khaleque, 2010; Rohner & Smith, in press).

Previous meta-analyses derived from IPARTheory support the conclusion that perceived parental emotional coldness and lack of affection, hostility and aggression, and indifference and neglect have cross-culturally significant relationships with offspring’s psychological maladjustment (Khaleque & Ali, 2017). But undifferentiated rejection has yet to be subjected to meta-analysis.

It is important to note at this point that interpersonal acceptance–rejection can be studied from either of two perspectives, that is, as perceived or subjectively experienced by the individual (the phenomenological perspective), or as reported by an outside observer (the behavioral perspective). These two modes of studying acceptance–rejection usually, though not always, result in similar conclusions. However, IPARTheory research suggests that if the conclusions are very discrepant, one should generally trust information derived from the phenomenological perspective. This is true because an individual may feel unloved but outside observers may fail to detect any explicit indicators of interpersonal rejection (as in undifferentiated rejection). Alternatively, observers may report a significant amount of interpersonal aggression or neglect, but the target person may not feel rejected. This sometimes happens in reported cases of child maltreatment. Thus, the concept of undifferentiated rejection is crucial, but seriously understudied. The present meta-analysis on undifferentiated rejection will help correct that deficiency.

Research Question Addressed

More specifically, the purpose of this meta-analysis is to address the following two questions: (a) Are both maternal and paternal undifferentiated rejection associated cross-culturally with children's and adult offspring's psychological maladjustment? And, (b) does the perception of one parent's (i.e., mothers' versus fathers') undifferentiated rejection have a greater impact on children's or adults' psychological maladjustment than does undifferentiated rejection by the other parent?

Method

Literature Search Strategy

To search for relevant studies, we adopted several strategies, as suggested by Johnson and Eagly (2000). These strategies included both electronic search engines and manual search. Specifically, we reviewed past literature from 1976 through 2016. The start date of 1976 was selected because it was the earliest date when all relevant studies met the selection criteria for this study, as specified below. We conducted computerized literature searches using PsycINFO, Dissertation Abstracts International (DAI), and Proquest (for unpublished dissertations), National Council on Family Relations (NCFR), Educational Resources Information Center (ERIC), Social Science Index, Sociological Abstracts (SOCA), Anthropological Literature, Child Development Abstracts, and Social Work Abstracts databases. Keyword searches included the terms “*perceived maternal acceptance*,” “*perceived paternal acceptance*,” “*undifferentiated rejection*,” “*perceived parental acceptance*,” “*perceived parental rejection*,” and “*psychological adjustment*.”

Moreover, relevant studies archived in the Rohner Center for the Study of Interpersonal Acceptance and Rejection at the University of Connecticut were sought. In addition, we employed a “backward reference” search procedures where we examined references cited in other articles. Unpublished studies were especially sought because published research might tend to be biased toward significant results (Wolf, 1986). To obtain unpublished studies that might not have been identified through other means we also reviewed all previous conference proceedings from the International Congress on Interpersonal Acceptance Rejection (ICIAR). We emailed all corresponding authors and dissertation supervisors to request copies of these studies. Finally, we requested additional studies from the Rohner Center's peer relations listserv.

Selection of Studies

All studies had to meet two criteria. First, they had to investigate relations between perceived parental (either maternal and/or paternal) undifferentiated rejection and offspring's (either

children's and/or adults') psychological adjustment, as defined in IPARTheory. Second, they had to report appropriate statistics for calculating effect size (e.g., Pearson correlation). Studies could be reported in any language, although only English language reports were found.

Studies were excluded if (a) the measures used were not IPARTheory-related, (b) the study was qualitative in nature, or (c) we could not obtain enough statistical information to calculate effect size, even after contacting the principal investigator of the study. Measures that were found to be relevant to this meta-analysis include the child and adult versions of the Parental Acceptance–Rejection Questionnaire for mothers and fathers (Child and Adult PARQ: Mother and Father; Rohner, 2005), and the child and adult versions of the Personality Assessment Questionnaire (Child and Adult PAQ; Rohner & Khaleque, 2005). These measures are described later.

Coding the Studies

The following information from every study was coded: (a) size of the sample, (b) location where the study was conducted, (c) mean age and/or age range of participants, (d) effect sizes, and (e) the publication status of the study (i.e., published or unpublished). The studies were coded by two independent raters. The initial intercoder agreement was 93%. Discrepancies were examined and discussed with a third coder until consensus was reached.

Study Sample

A total of 102 studies conducted between 1976 through 2016 met the selection criteria. These are marked by an asterisk in the References. Among these, 89 were published and 13 were unpublished. These studies included an aggregated sample of 24,003 respondents, of whom 16,983 were children and 7,020 were adults. The mean age of children was 15 years; the mean age of adults was 26 years. The meta-analysis consisted of respondents from 17 nations, including Bangladesh, Barbados, Czechoslovakia (now Czech Republic and Slovakia), Estonia, India, Iran, Jamaica, Korea, Kuwait, Mexico, the Netherlands, Nigeria, Pakistan, St. Kitts, Sweden, Turkey, and the United States. Demographic characteristics of the sample studies are shown in Tables 1 and 2. We should note that this meta-analysis adheres to guidelines reported in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (Moher, Liberati, Tetzlaff, Altman & PRISMA, 2009). The PRISMA flowchart provides details about the systematic search for studies at every step. It produced a transparent and reproducible account of our literature search and coding procedures. Figure 1 shows a PRISMA flowchart of the literature search and identification process used in this study.

Effect-size calculation and analysis

Effect-size calculation. Because all effect sizes in this study were based on Pearson's r , the computational method recommended by Rosenthal (1994) was used. As suggested by him, we used Fisher's z transformation because as correlations increase in magnitude the distribution of r s becomes skewed (Fisher, 1928). After converting the r s into z scores, we computed weighted means, and then back-converted the z s into r s' weighted effect sizes. That is, we computed the weighted mean effect sizes by adjusting the z scores in proportion to the sample sizes, as suggested by Hedges and Olkin (1985). We then back-converted the z s into corresponding r s (weighted effect sizes). We used both random-effects and fixed-effects models, but found no difference. Thus, here we report results using the random-effects model when calculating effect size (Bornstein, Hedges, Higgins, & Rothstein, 2015).

Heterogeneity in effect sizes. Variations in sample demographics, measures, and other defining characteristics can produce heterogeneity in effect sizes that result in erroneous findings.

Table 1. Studies Regarding Correlations Between the Parental Undifferentiated Rejection and the Total PAQ for Children.

Author (year)	PARQ: Version	PS	<i>n</i>	Age <i>M</i>	Age range	Effect size (<i>r</i>)	Country
Ahmed (2007)	Mother	u	892	16	11-21	.55***	Kuwait
Ahmed (2007)	Father	u	892	16	11-21	.54***	Kuwait
Barahmand (2006)	Mother	u	145	10	9-11	.58***	Iran
Barahmand (2006)	Father	u	145	10	9-11	.37***	Iran
Chaki-Sirkar (1981)	Mother	u	52	9	1-12	.18*	India
Chaki-Sirkar (1981)	Mother	u	35	10	10-12	.15*	India
Chaki-Sirkar (1981)	Mother	u	35	15	—	.21**	India
Chaki-Sirkar (1981)	Father	u	35	10	6-12	.19*	India
Erkman (2010)	Mother	u	1457	—	—	.28***	Turkey
Erkman (2010)	Father	u	1457	—	—	.29***	Turkey
Erkman and Rohner (2006)	Mother	p	1821	13	10-19	.54***	Turkey
Erkman and Rohner (2006)	Father	p	1821	13	10-19	.27***	Turkey
Grannum (2007)	Mother	u	319	13	11-15	.45***	Barbados
Grannum (2007)	Father	u	319	13	11-15	.39***	Barbados
Granum and Starkey (1976)	Mother	u	119	—	9-11	.41***	USA
Granum and Starkey (1976)	Mother	u	101	—	9-11	.44***	USA
Granum and Starkey (1976)	Mother	u	220	—	9-11	.46***	USA
Granum and Starkey (1976)	Mother	u	220	—	9-11	.42***	USA
Hahn (1978)	Mother	u	30	10	—	.78***	USA
Hahn (1979)	Mother	u	171	11	—	.51***	USA
Khaleque, Rohner, and Tania (2007)	Mother	u	50	12	8-9	.80***	Bangladesh
Khaleque et al. (2007)	Father	u	100	13	10-16	.80***	Bangladesh
Kim, Cain, and McCubbin (2006)	Mother	u	106	13	11-14	.60***	USA
Kim and Rohner (2006)	Father	u	106	13	11-14	.45***	USA
Matejcek (1978)	Mother	u	151	—	16-17	.57***	Czechoslovakia
Matejcek (1979)	Mother	u	228	13	11-12	.39***	Czechoslovakia
Matejcek (1979)	Mother	u	228	13	11-12	.21**	Czechoslovakia
Reddy (1981)	Mother	u	100	12	7-14	.51***	India
Reddy (1981)	Mother	u	50	13	8-15	.71***	India
Reddy (1981)	Mother	u	57	14	7-15	.35**	India
Reddy (1981)	Mother	u	57	12	—	.71***	India
Reddy (1981)	Mother	u	55	12	7-14	.31**	India
Reddy (1981)	Mother	u	50	12	—	.16*	India
Reddy (1982)	Mother	u	37	14	—	.71***	India
Reddy (1982)	Mother	u	52	14	—	.1	India
Reddy (1982)	Mother	u	55	15	—	.30**	India
Rohner (1980)	Mother	p	316	9	8-12	.59***	USA
Rohner (1986)	Mother	p	764	—	9-11	.53***	USA
Rohner (1986)	Mother	p	86	—	7-14	.53***	India
Rohner (1986)	Mother	p	106	—	7-12	.58***	USA
Rohner (1986)	Mother	p	171	—	6-12	.63***	India
Rohner (1986)	Mother	p	50	—	6-14	.29**	USA
Rohner (1987)	Mother	u	349	14	6-18	.46***	St. Kitts
Rohner (1995)	Mother	u	281	12	8-19	.41***	USA
Rohner (1995)	Father	u	281	12	8-19	.47***	USA

(continued)

Table 1. (continued)

Author (year)	PARQ: Version	PS	<i>n</i>	Age <i>M</i>	Age range	Effect size (<i>r</i>)	Country
Rohner and Rohner (1979)	Mother	u	101	9.5	6-11	.43***	USA
Rohner and Rohner (1979)	Mother	u	112	8.3	6-11	.43***	USA
Rohner and Rohner (1979)	Mother	u	227	8.4	6-11	.46***	USA
Rohner and Rohner (1977)	Mother	u	174	9	8-12	.63***	USA
Rohner and Rohner (1977)	Mother	u	142	9	8-12	.56***	USA
Rohner and Granum (1980)	Mother	u	764	9	7-11	.53***	USA
Rohner and Khaleque, (2007)	Mother	u	200	13	12-15	.31**	Bangladesh
Rohner and Khaleque, (2007)	Father	u	200	13	12-15	.27**	Bangladesh
Roll (1977)	Mother	u	173	11	8-15	.47***	Mexico
Roll (1977)	Mother	u	100	11	8-12	.37**	Mexico
Roll (1977)	Mother	u	73	11	8-12	.61***	Mexico
Steely and Rohner (2006)	Father	p	97	12	7-18	.37**	Jamaica
Tulviste and Rohner (2010)	Mother	p	224	15	11-14	.52***	Estonia
Tulviste and Rohner (2010)	Father	p	224	12	11-14	.43***	Estonia

Note. PAQ = Personality Assessment Questionnaire; PARQ = Parental Acceptance–Rejection Questionnaire; PS = publication status; *n* = number of respondents; u = unpublished; p = published.

p* < .05. *p* < .01. ****p* < .001.

Table 2. Studies Regarding Correlations Between the Parental Undifferentiated Rejection and the Total PAQ for Adult Offspring.

Author (year)	PARQ: Version	PS	<i>n</i>	Age <i>M</i>	Age Range	Effect Size (<i>r</i>)	Country
Aurino, Auricchio, Senese, and Rohner (2016)	Mother	u	301	38	20-68	.27***	Italy
Aurino et al. (2016)	Father	u	301	38	20-68	.53***	Italy
Blom and Molaver (2016)	Mother	u	117	31	18-77	.15*	The Netherlands
Blom and Molaver (2016)	Father	u	117	31	18-77	.36**	The Netherlands
Campo and Rohner (1992)	Mother	u	80	20	16-32	.64***	USA
Campo and Rohner (1992)	Father	u	80	20	15-33	.58***	USA
Carrasco (2006)	Mother	u	99	16	14-99	.44***	USA
Chaki-Sirkar (1981)	Mother	u	51	36	20-70	.57***	India
Chaki-Sirkar (1981)	Mother	u	20	39	21-53	.29**	India
Chaki-Sirkar (1981)	Mother	u	50	20	19-30	.35**	India
Chaki-Sirkar (1981)	Mother	u	35	20	—	.36**	India
Chaki-Sirkar (1981)	Mother	u	35	29	—	.54**	India
Chaki-Sirkar (1981)	Father	u	35	29	—	.53**	India
Chaki-Sirkar (1981)	Mother	u	50	35	20-70	.27**	India
Chyung and Lee (2008)	Mother	p	133	23	19-35	.54**	Korea
Chyung and Lee (2008)	Father	p	133	23	19-35	.41***	Korea
Haque (1981)	Mother	u	301	22	17-29	.41***	Nigeria
Haque (1981)	Mother	u	228	—	19-20	.42***	Nigeria
Haque (1981)	Mother	u	73	22	—	.43***	Nigeria
Haque (1981)	Father	u	228	24	19-20	.47***	Nigeria
Hahn (1978)	Mother	u	25	38	—	.74***	USA
Hussain (2016)	Mother	u	165	30	20-44	.34**	Pakistan

(continued)

Table 2. (continued)

Author (year)	PARQ: Version	PS	<i>n</i>	Age M	Age Range	Effect Size (<i>r</i>)	Country
Hussain (2016)	Father	u	165	30	20-44	.41***	Pakistan
Kitahara (1981)	Mother	u	71	20	—	.32**	Sweden
Khaleque, Rohner, and Lukkala (2008)	Mother	p	169	28	19-66	.23**	Finland
Khaleque, Rohner, and Patel (2008)	Mother	u	85	26	—	.87***	India
Khan and Rohner (2007)	Mother	u	235	22	18-37	.52***	Bangladesh
Khan, Rohner, and Khaleque (2007)	Father	u	235	22	18-37	.43***	Africa
Molaver (2016)	Mother	u	112	29	18-68	.15*	USA
Molaver (2016)	Father	u	122	29	18-68	.40***	USA
Parmar and Rohner (2008)	Mother	p	79	23	19-33	.30**	India
Reddy (1981)	Mother	u	106	37	30-40	.24**	India
Reddy (1981)	Mother	u	51	30	20-37	.11	India
Reddy (1981)	Mother	u	55	32	29-38	.31**	India
Rising (1999)	Mother	u	127	24	17-54	.24**	USA
Rising (1999)	Father	u	127	24	17-54	.31**	USA

Note. PAQ = Personality Assessment Questionnaire; PARQ = Parental Acceptance-Rejection Questionnaire; PS = publication status; *n* = number of respondents; u = unpublished; p = published.

* $p < .05$. ** $p < .01$. *** $p < .001$.

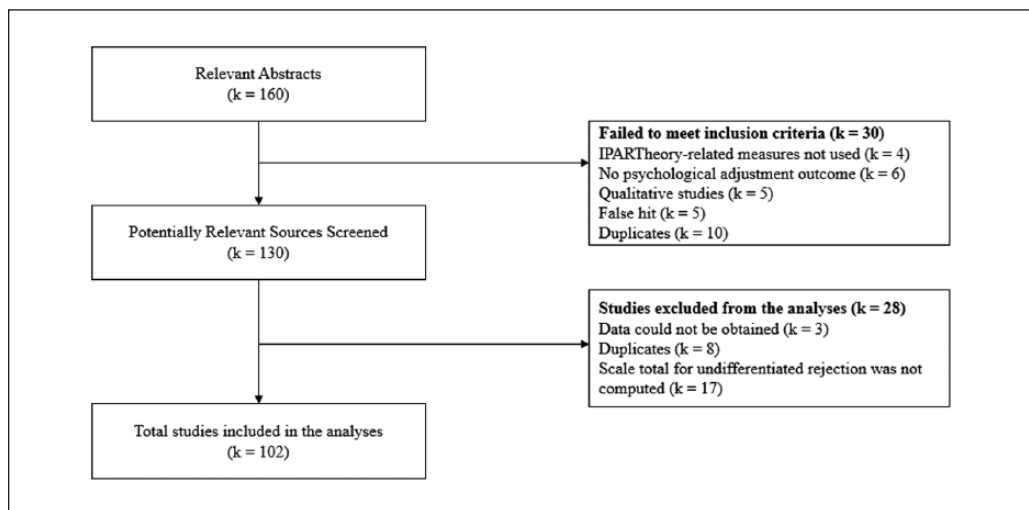


Figure 1. PRISMA flowchart showing study retrieval, review, exclusion, and inclusion.

Note. False hits were characterized if the keywords were mentioned only in the reference section or in the introduction of the article (e.g., stated in the literature that there is a relationship between rejection and psychological adjustment).

However, effect sizes are meaningful only if they provide a reasonably homogeneous estimate of population effect sizes (Hedges & Olkin, 1985). Therefore, we did a heterogeneity test to identify any outliers (Rosenthal, 1984).

Publication bias. Published studies are often biased toward significant results. To test for this bias in the meta-analysis, we computed the failsafe *N* test suggested by Cooper (1979) and Rosenthal (1979). Failsafe *N* estimates the minimum number of additional studies, *all*

with nonsignificant results, that would be required to reject statistically significant meta-analytic results as being nonsignificant (Durlak & Lipsey, 1991). According to Rosenthal (1995), results of a meta-analytic study are robust if the failsafe number exceeds five times the number of studies, plus 10.

Measures. As already noted all the studies in this meta-analysis used the (a) Child and Adult PARQ: Mother and Father versions (Rohner, 2005), and the (b) Child and Adult PAQ. Rohner and Khaleque (2005) provide extensive evidence demonstrating that these measures are reliable and valid for use in cross-cultural research. More recent confirmatory factor analyses by Gomez and Rohner (2011), Gomez and Suhaimi (2014), and Senese, Bacchini, Miranda, Aurino, and Rohner (2016) confirm the measurement invariance of the PARQ across cultures. Additional details about these measures are provided below.

Parental Acceptance–Rejection Questionnaire (PARQ). Children reflect on their parents' (mothers' and fathers') current behavior toward them in the Child PARQ. Adults reflect on their remembrances of childhood experiences of maternal and paternal acceptance–rejection in the Adult PARQ. The two versions are identical except for verb tense: The present tense is used in the Child PARQ (e.g., *my mother does . . .*), whereas the past tense is used in the Adult PARQ (e.g., *my mother did . . .*). Both versions assess respondents' perceptions of maternal and paternal warmth/affection, hostility/aggression, indifference/neglect, and undifferentiated rejection.

Because this meta-analysis focused exclusively on the 10-item undifferentiated rejection scale, only that scale is described here. Sample items on the mother version of the Child PARQ include the following: “*my mother does not really love me*” and “*my mother seems to dislike me.*” Individuals respond to items such as these on a 4-point Likert-type scale from (4) “almost always true” through (1) “almost never true.” Possible scores on the undifferentiated scale range from 10 (minimum perceived undifferentiated rejection) through 40 (maximum perceived undifferentiated rejection). Scores at or above 25 indicate the perception of qualitatively more undifferentiated rejection than acceptance.

Personality Assessment Questionnaire (PAQ). Both the Child PAQ and the Adult PAQ contain seven scales that assess the seven personality dispositions most often discussed in IPARTheory's personality subtheory. These are described below. The child version contains 42 items; the adult version contains 63 items. Sample items on the Child PAQ include the following: “I want to hit something or someone” (hostility/aggression), “I like my parents to give me a lot of love” (dependence), “I think I am a good person and other people should think so too” (positive self-esteem), “I feel I can do the things I want as well as most people” (positive self-adequacy), “I have difficulty showing people how I feel” (emotional responsiveness), “I feel bad or get angry when I try to do something and I cannot do it” (emotional instability), and “I feel life is nice” (positive worldview). Individuals respond to items such as these on a 4-point Likert-type scale ranging from (4) “almost always true of me” through (1) “almost never true of me.”

A composite score of an individual's psychological adjustment is achieved by calculating the sum of the seven scale scores, after reverse scoring the required items. Scores on the Child PAQ range from 42, indicating healthy psychological adjustment, through 168, indicating severe psychological maladjustment. Scores on the Adult PAQ range from 63, revealing healthy psychological adjustment, through 252, revealing serious psychological maladjustment. Scores at or above the test's midpoint of 105 on the child version and 157 on the adult version reveal that individuals experience themselves to be more psychologically maladjusted than adjusted.

Existing evidence shows that both versions of the PAQ are reliable and valid for use in cross-cultural research. A prior meta-analysis of 51 cross-cultural studies provided a mean weighted coefficient alpha on the Child PAQ of .83. On the Adult PAQ, the mean weighted alpha

Table 3. Summary of Meta-Analysis of the Relation Between *Children's* Perceptions of Parental Undifferentiated Rejection and Children's Psychological Maladjustment.

Summary measures	UR and PAQ		
	Mother	Father	Combined
Unweighted mean effect size (<i>r</i>)	.48***	.35***	
Confidence Interval (95%)	[.466-.494]	[.327-.373]	
Weighted mean effect size (<i>r</i>)	.48***	.35***	
Confidence Interval (95%)	[.466-.494]	[.327-.373]	
Total heterogeneity (χ^2)	7.50	0.96	
Probability level (<i>p</i>)	ns	ns	
Failsafe <i>N</i> (N_{fs})	5,331	336	
Number of effect sizes (<i>r</i>)	47	12	59
Sum of sample sizes	11,306	5,677	16,983

Note. UR = Undifferentiated Rejection; PAQ = Personality Assessment Questionnaire; ns = nonsignificant. ****p* < .001.

coefficient was .86 (Khaleque & Rohner, 2002b). Test–retest reliability across time periods ranging from 1 through 18 months for the Child PAQ was .61; test–retest reliability across time periods of 6 through 12 months for the Adult PAQ was .76.

Results

Table 3 contains results regarding the relation between children's perceptions of parental undifferentiated rejection and children's psychological maladjustment. The table shows that the study yielded a total of 59 effect sizes dealing with correlations between perceptions of parental undifferentiated rejection and *children's* psychological maladjustment. Totally, 47 of these effect sizes dealt with the association between *maternal* undifferentiated rejection and psychological maladjustment, whereas, 12 dealt with the association between *paternal* undifferentiated rejection and children's psychological maladjustment.

The mean overall weighted effect size of the correlation between perceived maternal undifferentiated rejection and children's psychological maladjustment was .48; for fathers, it was .35. Both correlations were in the range of large effect sizes according to Cohen's criteria (Cohen, 1969, 1992) However, the results also showed that perceived maternal undifferentiated rejection had a significantly stronger effect on children's psychological maladjustment than did perceived paternal undifferentiated rejection ($z = 8.00, p < .001$). Heterogeneity test results showed no significant outliers. Failsafe *N* test-results showed that 5,331 and 336 additional studies, respectively—all with nonsignificant results—would be needed to reject the conclusion that perceived maternal and paternal undifferentiated rejection were significantly associated with children's psychological maladjustment. These failsafe numbers are higher than the critical limit proposed by Rosenthal (1995). Critical limits in this case would be 245 and 70, respectively (five times the number of studies plus 10). These results indicate robust relationships between perceived parental undifferentiated rejection and children's psychological maladjustment.

Table 4 displays relations between adults' remembrances of parental undifferentiated rejection in childhood and adults' current psychological maladjustment. This portion of the study yielded 43 effect sizes. Totally, 31 effect sizes deal with the relation between remembered maternal undifferentiated rejection and adults' psychological maladjustment; 12 deal with the relation between remembered paternal undifferentiated rejection in childhood and adults' psychological maladjustment. The overall mean weighted effect size of these correlations was .39 the for

Table 4. Summary of Meta-Analysis of the Relation Between *Adult Offspring's* Remembrances of Parental Undifferentiated Rejection and Adults' Current Psychological Maladjustment.

Summary measures	UR and PAQ		
	Mother	Father	Combined
Unweighted mean effect size (<i>r</i>)	.41***	.40***	
Confidence Interval (95%)	[.382-.437]	[.372-.427]	
Weighted mean effect size (<i>r</i>)	.39***	.37***	
Confidence Interval (95%)	[.362-.418]	[.341-.398]	
Total heterogeneity (χ^2)	5.36	0.18	
Probability level (<i>p</i>)	ns	ns	
Failsafe <i>N</i> (N_{fs})	2,031	344	
Number of effect sizes (<i>r</i>)	31	12	43
Sum of sample sizes	3,513	3,507	7,020

Note. UR = Undifferentiated Rejection; PAQ = Personality Assessment Questionnaire; ns = nonsignificant.
 *** $p < .001$.

relation between remembered *maternal* acceptance and adults' psychological maladjustment. The overall mean weighted effect size was .37 for the relation between remembered *paternal* acceptance and adults' maladjustment. These correlations were within the range of large effect sizes according to Cohen's criteria. Unlike the same correlations among children, these correlations were not significantly different from each other.

Failsafe *N* was 2,031 and 344 respectively for maternal and paternal undifferentiated rejection. These results indicate robust findings in that they exceed Rosenthal's (1995) critical-limit criterion of 165 and 70, respectively. Heterogeneity test results showed no significant outliers. Finally, we should note that the comparison of mean weighted effect sizes of maternal versus paternal undifferentiated rejection and offspring's (adults' versus children's) psychological maladjustment showed that maternal (but not paternal) undifferentiated rejection had a significantly stronger effect on children's psychological maladjustment than it did on adults' maladjustment ($z = 5.50, p < .001$).

Discussion

The aim of this meta-analysis was to systematically analyze available literature to investigate whether children's and adults' perceptions of parental undifferentiated rejection are significantly associated with offspring's current psychological maladjustment. Results of analyses suggest that both maternal and paternal undifferentiated rejection are panculturally related to both children's and adults' maladjustment. Moreover, heterogeneity tests show no significant cross-cultural or ethnic heterogeneity among effect sizes, as shown in Tables 3 and 4.

This evidence in conjunction with the findings from prior meta-analyses dealing with IPARTheory (especially, Ali, Khaleque, & Rohner, 2015; Khaleque, 2013, 2015, 2016) strongly support the theory's postulate that each of the four major expressions of perceived and remembered parental acceptance–rejection is panculturally associated with children's and adults' overall psychological adjustment. These expressions of parental acceptance–rejection include perceived or remembered warmth/affection (or emotional coldness/lack of affection), hostility/aggression, indifference/neglect, and of course, undifferentiated rejection. Prior evidence (e.g., Khaleque & Rohner, 2002a) also shows that when combined into a single measure of overall acceptance–rejection, the four expressions of interpersonal acceptance–rejection measured on the PARQ are particularly robust predictors of a variety of developmental outcomes. These

include not only overall psychological adjustment but also prosocial behavior, conduct problems, substance use, fear of intimacy, loneliness, and many others (Rohner & Buehler, 2017).

Results of this meta-analysis also show that children's perceptions of *maternal* undifferentiated rejection tend to have a significantly stronger association with their psychological maladjustment than do children's perceptions of *paternal* undifferentiated rejection. This gender difference, however, becomes nonsignificant in adulthood. That is, the influence of remembrances of maternal undifferentiated rejection on adults' maladjustment is no longer significantly different from remembrances of paternal undifferentiated rejection. Moreover—as expected in IPARTheory—the influence of adults' remembrances of *maternal* undifferentiated rejection in childhood on adults' current psychological maladjustment is significantly less than it was in childhood. These results may not be surprising because children everywhere are usually in closer (more proximal) contact with their mothers than with their fathers. But by the time they reach adulthood, children have had many other interpersonal experiences that can diminish the impact of perceived parental (both maternal and paternal) undifferentiated rejection.

Despite the extensive literature reviewed and synthesized in this meta-analysis, the study does have limitations that should be noted. For example, all studies are cross-sectional and correlational in nature. Therefore, it is not possible to make causal inferences about relations between parental undifferentiated rejection and offspring's psychological adjustment. Inferences about causality must await longitudinal studies in a sampling of societies worldwide. However, this need for longitudinal studies is satisfied in part by Putnick et al. (2014). These authors found in a 3-year longitudinal study of 1,247 families from China, Colombia, Italy, Jordan, Kenya, the Philippines, Sweden, Thailand, and the United States that children's perceptions of maternal and paternal acceptance–rejection have nearly universal effects on multiple aspects of children's adjustment and development. In particular, greater perceived parental rejection predicted increases in internalizing and externalizing behavior problems, as well as decreases in academic achievement, and in prosocial behavior. Finally, future research should investigate issues about the possible contribution of genetic transmission, and neurobiological underpinnings of the relation between perceived parental rejection and individuals' psychological maladjustment.

It is important to note that studies using two sets of self-reports are at times criticized because the same individual responds to both questionnaires. Therefore, it sometimes happens that reported relations between the measures are an artifact of response bias. Although the PARQ and the PAQ are highly reliable and valid for use both cross-culturally and intraculturally, it is still possible that correlations between them are partly due to a response bias. However, findings from a variety of other sources reduce this likelihood. For instance, a cross-cultural survey (holocultural study) of 101 societies worldwide found a pancultural association between parental acceptance–rejection and offspring's psychological adjustment, as postulated in IPARTheory (Rohner, 1975, 2016). A second holocultural study of 186 societies (Rohner, 1986, 2016) confirmed these results. Other sources of evidence also support these results (see, for example, Rohner & Chaki-Sircar's 1988 community study of parental acceptance–rejection in West Bengal, India).

Finally, we should acknowledge the possibility of an acquiescence response bias in these data because the undifferentiated rejection scale contains no reverse-scored items. Acquiescence tends to be countered when reverse-scored items are present in a measure. It is unlikely, however, that acquiescence response bias is a serious problem in the undifferentiated scale. If it were, one might expect the pattern of coefficient alphas for that scale to be significantly different from what it is in the PARQ's indifference/neglect scale, where almost half the items are reverse-scored. Here we note, however, that a meta-analysis of 51 studies assessing the pancultural reliability of the undifferentiated rejection scale showed a mean weighted effect size (coefficient alpha) of .81, and an almost identical alpha of .80 for the indifference/neglect scale (Khaleque & Rohner, 2002b).

It is also worth noting that the pattern of correlations (mean weighted effect sizes) between the undifferentiated rejection scale and children's overall psychological maladjustment in the current meta-analysis was $r = .48$ ($p < .001$) for perceived maternal rejection and $.35$ ($p < .001$) for perceived paternal rejection. A similar pattern of correlations was reported by Khaleque (2015) for the mean weighed effect sizes of correlations between children's perceptions of both maternal and paternal indifference/neglect and psychological maladjustment ($r = .50$, $p < .001$). Thus, we conclude that the absence of reverse scoring of the undifferentiated rejection scale is not associated with significant acquiescence response bias.

Despite its limitations, this meta-analysis does provide new insights into relations between parental undifferentiated rejection and offspring's psychological maladjustment. Most importantly, the study supports the conclusion that both children's and adults' perceptions of parental (both maternal and paternal) undifferentiated rejection in childhood tend to be panculturally associated with the form of psychological maladjustment predicted by IPARTheory to be produced in the context of perceived parental rejection.

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