

# Psychological Maladjustment Mediates the Relation Between Remembrances of Parental Rejection in Childhood and Adults' Fear of Intimacy: A Multicultural Study

Cross-Cultural Research  
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## Abstract

This study assesses interpersonal acceptance-rejection theory's (IPARTheory's) prediction that adults' (both men's and women's) remembrances of parental

(both maternal and paternal) rejection in childhood are likely to be associated with adults' fear of intimacy, as mediated by adults' psychological maladjustment and relationship anxiety. The study also assesses the prediction that these associations will not vary significantly by gender, ethnicity, language, culture, or other such defining conditions. To test these predictions a sample of 3,483 young adults in 13 nations responded to the mother and father versions of the Adult Parental Acceptance-Rejection Questionnaire (short forms), Adult Personality Assessment Questionnaire (short form), the Interpersonal Relationship Anxiety Questionnaire, the Fear of Intimacy Scale, and the Revised Personal Information Form. Results of multigroup analyses showed that adults' remembrances of both maternal and paternal rejection in childhood independently predicted men's and women's fear of intimacy in all 13 countries.

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However, remembered maternal rejection was a significantly stronger predictor of adults' fear of intimacy than was remembered paternal rejection. Results also confirmed the prediction in all 13 countries and across both genders that both maternal and paternal rejection independently predicted adults' psychological maladjustment and relationship anxiety, which in turn predicted fear of intimacy. In addition, psychological maladjustment partially mediated the relation between remembrances of maternal and paternal rejection, and adults' fear of intimacy in all 13 countries and both genders.

### **Keywords**

parental rejection, fear of intimacy, psychological maladjustment, interpersonal anxiety, interpersonal acceptance-rejection theory (IPARTheory), gender

Perceptions of parental rejection in childhood are associated with the development of cognitive distortions such as the tendency to personalize and to be hypervigilant and hypersensitive—and to overreact—to real, threatened, or imagined rejection (Downey, Lebolt, Rincon, & Freitas, 1998; Ibrahim, Rohner, Smith, & Flannery, 2014). In addition, the experience of parental rejection in childhood is known to be associated with emotional unresponsiveness, impaired self-esteem, and negative worldview, where rejected persons tend to perceive the world and interpersonal relationships as being psychologically and emotionally unsafe, untrustworthy, and negative in other ways (Rohner & Lansford, 2017). Because of these and other negative personality dispositions known to be linked worldwide to the experience of parental rejection in childhood (Khaleque & Rohner, 2012), interpersonal acceptance-rejection theory (IPARTheory; Rohner, 1986; Rohner & Lansford, 2017) predicts that adults' (both men's and women's) remembrances of parental (both maternal and paternal) rejection in childhood are likely to be associated with the fear of intimacy in adulthood, as mediated by the adults' current level of psychological maladjustment, including relationship anxiety. IPARTheory is an evidence-based theory of socialization and life span development that attempts to predict and explain pancultural consequences, causes, and other correlates of interpersonal acceptance-rejection—especially parental acceptance-rejection (Rohner, 1986, 2018).

The concept of fear of intimacy refers in IPARTheory to the condition where individuals are anxious about forming a personal or intimate relationship with another person, especially a person who is important to them. More specifically, the concept refers in IPARTheory to an individual's reluctance or

anxiousness about exchanging thoughts and feelings of a deeply personal nature with someone, especially with a significant other—that is, a person with whom the individual has a significant emotional tie, who is uniquely important to the individual, and who is felt to be interchangeable with no one else (Rohner, 2005). Self-disclosure of deeply personal information leaves the individual vulnerable or at risk for being hurt emotionally or in some other way by the other person.

This definition of the fear of intimacy is consistent with Descutner and Thelen's (1991) and Sherman and Thelen's (1996) assertion that fear of intimacy involves three essential elements: (a) *content*, which refers to the communication of personal information, (b) *emotional valence*, which is understood as strong feelings about the personal information exchanged, and (c) *vulnerability*, which is understood as high esteem for the other person. The authors proposed that the coexistence of these three elements is necessary for the existence of intimacy. The authors also pointed out that individuals might be vulnerable or at risk for being hurt emotionally only if they share their thoughts and feelings with people who are highly valued by them. In support of these conclusions, Emmons and Colby (1995) found that individuals with a fear of intimacy had difficulty sharing personal information, intimate feelings, or feelings of distress—all of which prevented them from forming close or intimate bonds with others.

Beyond this, Sherman and Thelen (1996) and Descutner and Thelen (1991) reported that people who scored high on their measure of the fear of intimacy were at greater risk than respondents who scored low on the measure to experience negative self-esteem, depression, anxiety, and overall psychological maladjustment. Because of all this emotional pain known from prior research to be brought about by the experience of interpersonal rejection (Khaleque & Ali, 2017; Rohner, 1986; Rohner & Britner, 2002; Rohner & Lansford, 2017), people with a fear of intimacy are likely to have difficulty developing and maintaining satisfying relationships with others (Martin & Ashby, 2004; Sobral, Teixeira, & Costa, 2015). In further support of these conclusions, Doi and Thelen (1993) found that individuals with a strong fear of intimacy often acknowledge that their partners feel they are difficult to be close to in the relationship.

According to Sherman and Thelen (1996), people with a strong fear of intimacy do want intimacy, but their fear of rejection prevents them from developing and maintaining close, meaningful relationships. From an IPARTheory perspective this is not only understandable, but is a theoretically expectable consequence of rejection by an attachment figure—especially the experience of parental rejection in childhood. That is, according to the theory, adults who were rejected in childhood by one or both parents are apt to

develop distorted mental representations about themselves, about significant others, and about the world around them (Rohner & Lansford, 2017). Moreover, rejected persons are likely to perceive situations and relationships in ways that are consistent with their distorted mental representations. And they are likely to reinterpret experiences that are inconsistent with their distorted representations (Dodge et al., 2003). In this context—as already noted—rejected persons often anxiously construct mental images of personal relationships as being untrustworthy, unsafe, unpredictable, or hurtful in other ways (Rohner & Buehler, 2017; Zimmer-Gembeck, Trevaskis, Nesdale, & Downey, 2014). That is, they are likely to develop a fear of intimacy. This body of evidence is also consistent with research results that deal with *attachment transference* in adult attachment theory (Brumbaugh & Fraley, 2006, 2007). Attachment transference refers to the process by which mental representations of significant others (e.g., parents or prior intimate partners) resurface to influence new social relationships (Andersen & Cole, 1990).

At this time only three studies appear to be broadly relevant to the postulated relation between parental rejection in childhood and adults' fear of intimacy. Repić (2007), for example, found that adults who had been physically abused in childhood by their parents, step-parents, or guardians had higher scores on a measure of fear of intimacy than did adults who had not been abused. The precise relation between physical abuse and remembered parental rejection in this study was unclear, however.

A second study, by Espeleta, Palasciano-Barton, and Messman-Moore (2017), also dealt with the relation between abuse in childhood and issues related to fear of intimacy in adulthood. More specifically, the authors found that the experience of serious childhood abuse—especially psychological abuse, including spurning, terrorizing, isolating, and other forms of parental rejection—was associated with attachment-related anxiety and avoidance in adult romantic relationships. These forms of anxiety and avoidance are related to the fear of intimacy in that they include measures of the fear of rejection and abandonment (anxiety) and discomfort with closeness in personal relationships (avoidance). Much of the relation between child abuse and attachment-related anxiety and avoidance in this study was mediated by emotion dysregulation, a concept that includes emotional instability which is known to be associated worldwide with the experience of parental rejection (Khaleque & Rohner, 2012). Generalizability of the results in this study is limited, however, because all participants were White European American women, mostly from upper-middle class backgrounds.

Finally, the work of Phillips et al. (2013) comes closer than the work of Repić (2007) or Espeleta et al. (2017) to matching IPARTheory's

expectations about the relation between childhood rejection and adult fear of intimacy. In that study, Phillips et al. (2013) reported that recalled parental care (acceptance) in childhood was negatively correlated with fear of intimacy in a sample of young adults. That is, individuals who reported having a warm, caring relationship with at least one parent (especially mothers) in childhood were significantly less likely to develop a fear of intimacy than were those adults who did not have such a relationship. As was true of the Espeleta et al. (2017) study, this study is limited in its generalizability by the fact that members of the sample were also primarily White, non-Hispanic females. Consequently, it was not possible to assess possible gender of offspring by gender of parent effects. In addition, the study was limited by the tendency to split the sample (median split) into high versus low fear-of-intimacy groups. Moreover, the study was limited by an absence of a clearly articulated theoretical rationale for expecting a relation to exist between fear of intimacy and adults' remembrance of parental rejection in childhood. Guided by IPARTheory, the current multicultural study attempts to correct these limitations by assessing relations among adults' (males versus females) remembrances of parental (maternal versus paternal) acceptance-rejection in childhood, and the level of adults' fear of intimacy, as mediated by adults' self-reported psychological adjustment—including the level of self-reported anxiety about close, personal relationships.

## Aims of the Research

This study is based on a multigroup statistical analysis of respondents from 13 nations including Australia, Bangladesh, China, Croatia, Greece, Guatemala, Iran, Italy, Korea, Pakistan, Poland, Portugal, and Turkey. Drawing stimulus from IPARTheory, the study was conducted to address three general questions:

**Research Question 1:** Are adults' (men's and women's) remembrances of parental (maternal and paternal) acceptance-rejection in childhood significantly linked to the level of adults' fear of intimacy?

**Research Question 2:** To what extent are overall psychological maladjustment and anxiety about interpersonal relationships important generative mechanisms that help explain why remembered childhood acceptance-rejection tends to predict varying levels of fear of intimacy among both men and women in adulthood?

**Research Question 3:** Are the same general relations found across both genders and all nations studied?

**Table 1.** Sample Characteristics, by Country.

Country	<i>n</i>	Age		Gender ( <i>n</i> )	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>F</i>
Australia	206	21.28	2.50	79	127
Bangladesh	542	21.78	1.91	237	305
China	272	25.01	3.79	95	177
Croatia	215	23.11	1.51	89	126
Greece	350	21.75	1.93	184	166
Guatemala	87	21.15	3.27	18	69
Iran	187	19.75	1.76	21	166
Italy	360	24.95	4.23	178	182
Korea	226	21.56	4.34	132	94
Pakistan	165	30.36	5.95	61	104
Poland	313	22.13	1.95	152	161
Portugal	360	21.43	1.64	211	149
Turkey	200	20.74	1.45	100	100

## Method

### Sample

Altogether 3,483 young adults (1,557 males and 1,926 females) from 13 countries participated in the research. Average ages of respondents in the various countries ranged from 20 through 25 years, though the average age of Pakistani respondents from the remote Gilgit region was 30 years. In addition, the majority of respondents in each country were in universities or vocational colleges. Specific details about the participants in each country, along with mean (*SD*) ages and gender distribution, are shown in Table 1.

Specific information about the level of education of participants in each country is provided in Table 2.

### Procedures

To achieve the goals of this research in a uniform way across all countries, researchers were urged to follow to the greatest extent possible a specific set of guidelines: (a) Include at least 200 or more college-age adults in the sample, balanced as evenly as possible by gender. (b) Administer five self-report questionnaires and a demographic form in the following sequence: Adult Parental Acceptance-Rejection Questionnaire: Mother (short form); Interpersonal Relationship Anxiety Questionnaire; Adult Parental Acceptance-Rejection

**Table 2.** Educational Level, by Country.

Country	%	Level of education
Australia	50	High school or less
	35	Business/trade school diploma, or up to 4 years of college
	14	College graduate or advanced degree
Bangladesh	100	Up to 4 years of college
China	2	High school or less
	47	Vocational college or up to 4 years of college
	50	Advanced degree
Croatia	100	Up to 4 years of college
Greece	100	Up to 4 years of college
Guatemala	48	High school or less
	32	Vocational college or up to 4 years of college
	7	College graduate or advanced degree
	2	Missing data
Iran	19	High school
	77	Up to 4 years of college
	4	College graduate or advanced degree
Italy	21	High school or less
	44	Business/trade school diploma, or up to 4 years of college
	35	College graduate or advanced degree
Korea	100	College students, including graduate students
Pakistan	30	High school or less
	70	College students
Poland	19	High school or less
	47	Business/trade school diploma, or up to 4 years of college
Portugal	34	College graduate or advanced degree
	2	High school
	93	Up to 4 years of college
Turkey	5	College graduate
	100	Up to 4 years of college

Questionnaire: Father (short form); Fear of Intimacy Scale; Adult Personality Assessment Questionnaire (short form); and the Revised Personal Information Form. Finally, researchers were instructed to follow the ethical guidelines for behavioral science used in their own country (e.g., get informed consent and institutional review board [IRB] approval, as required). All measures were



administered in the most appropriate language relevant to sample-members within each country.

## Measures

*Adult Parental Acceptance-Rejection Questionnaire (PARQ; short form) for mothers and fathers.* The adult version (short form) of the PARQ (Rohner, 2005) is a 24-item self-report questionnaire designed to assess adults' remembrances of parental acceptance-rejection experienced in childhood. The mother and father forms of the measure are identical except that one assesses respondents' remembrances of mothers' behavior and the other assesses respondents' remembrances of fathers' behavior. Both instruments are subdivided into four scales measuring adults' remembrances of parental warmth/affection (e.g., "My mother [father] said nice things about me"), hostility/aggression (e.g., "My mother [father] punished me severely when she or her was angry"), indifference/neglect (e.g., "My mother [father] paid no attention when I asked for help"), and undifferentiated rejection (e.g., "My mother [father] seemed to dislike me").

Items are scored on a 4-point Likert-type scale from (4) *almost always true* through (1) *almost never true*. The sum of the four scales (with the warmth/affection scale reverse scored to create a measure of coldness/lack of affection) constitutes a measure of overall perceived maternal and paternal acceptance-rejection. Scores on the PARQ (short form) spread from a low of 24 (maximum perceived parental acceptance) through a high of 96 (maximum perceived parental rejection). Scores at or above 60 indicate the perception of qualitatively more rejection than acceptance. Mean coefficient alphas for the PARQ in the International Father Acceptance-Rejection Project (Rohner, 2014) completed in 13 countries was .93 and .90 for the mother and the father versions, respectively. Alphas for the total scores and for each country in the present study are reported in Table 3, and alphas for individual subscales and for each country are presented in Table 4.

*Adult Personality Assessment Questionnaire (PAQ; short form).* The Adult PAQ (Rohner & Khaleque, 2005) is a 42-item self-report questionnaire designed to assess seven personality dispositions known to be panculturally associated with the experience of parental acceptance-rejection. These include (a) hostility/aggression, passive aggression, or problems with the management of hostility and aggression; (b) dependence or defensive independence depending on form, frequency, severity, timing, and longevity of perceived rejection; (c) feelings of positive or impaired self-esteem; (d) feelings of positive or impaired self-adequacy; (e) emotional (un)responsiveness; (f) emotional (in)

**Table 3.** Descriptive Statistics and Alphas for Total Scores of the Measures Used, by Country.

Country	PARQ mother			PARQ father			PAQ			IRAQ			FIS		
	M	SD	$\alpha$	M	SD	$\alpha$	M	SD	$\alpha$	M	SD	$\alpha$	M	SD	$\alpha$
Australia	39.67	13.22	.89	44.46	17.34	.87	80.45	15.78	.91	17.83	5.86	.91	81.56	24.20	.94
Bangladesh	40.00	9.66	.86	40.86	11.90	.91	94.74	15.80	.88	21.72	6.23	.87	81.69	19.11	.85
China	44.54	13.48	.84	46.07	13.71	.83	96.63	15.82	.87	21.06	5.80	.91	86.91	23.82	.94
Croatia	30.65	8.78	.83	37.45	13.30	.85	82.40	15.03	.86	14.28	4.87	.89	75.51	21.52	.90
Greece	35.70	11.88	.86	39.61	12.14	.82	87.62	14.22	.84	18.92	4.45	.77	85.10	18.41	.84
Guatemala	40.82	11.73	.84	48.07	13.98	.87	81.49	12.35	.84	20.31	4.05	.72	88.00	14.22	.88
Iran	37.62	11.07	.87	39.05	12.54	.88	101.93	10.84	.80	22.73	5.36	.86	99.21	12.36	.77
Italy	36.95	11.63	.86	40.78	13.96	.82	93.41	15.87	.85	22.64	5.17	.82	78.27	21.18	.88
Korea	37.64	10.39	.81	41.50	12.05	.81	85.90	15.53	.81	17.52	5.95	.88	83.59	19.88	.89
Pakistan	46.95	14.32	.83	47.54	13.52	.82	97.01	12.80	.82	20.67	4.51	.81	91.07	21.49	.76
Poland	38.20	12.03	.93	44.85	15.90	.95	95.77	15.87	.89	16.31	5.31	.86	77.91	22.14	.92
Portugal	35.64	8.01	.81	38.90	10.23	.81	105.22	10.24	.85	20.44	4.93	.85	75.24	19.64	.85
Turkey	39.87	11.35	.88	42.18	11.94	.85	92.79	15.44	.82	20.20	4.87	.87	84.34	19.60	.89

Note. PARQ = Parental Acceptance-Rejection Questionnaire; PAQ = Personality Assessment Questionnaire; IRAQ = Interpersonal Relationship Anxiety Questionnaire; FIS = Fear of Intimacy.

**Table 4.** Descriptive Statistics and Alphas for the Subscales of PARQ, by Country.

Country	Coldness			Indifference/ Neglect			Hostility/ Aggression			Undifferentiated rejection		
	M	SD	α	M	SD	α	M	SD	α	M	SD	α
PARQ mother												
Australia	13.04	4.88	.92	10.95	3.75	.83	9.30	3.69	.86	6.38	2.50	.89
Bangladesh	12.85	3.76	.76	9.49	3.12	.73	11.50	3.34	.67	6.16	2.08	.62
China	17.72	5.70	.91	11.02	3.42	.80	11.62	4.11	.84	6.18	2.62	.83
Croatia	10.56	3.60	.93	7.71	2.39	.86	7.90	2.86	.82	4.49	1.47	.80
Greece	12.78	4.52	.86	9.21	3.33	.79	9.33	3.28	.77	5.38	2.12	.76
Guatemala	15.75	6.80	.82	11.40	3.59	.73	9.12	2.90	.70	5.15	1.96	.70
Iran	23.10	4.19	.88	19.32	2.36	.72	20.63	3.52	.80	13.80	2.32	.72
Italy	12.93	4.69	.86	8.90	3.22	.80	9.91	3.24	.73	5.21	2.27	.82
Korea	13.58	4.76	.87	8.44	2.69	.74	10.52	3.53	.74	5.33	1.92	.70
Pakistan	14.47	4.85	.83	11.86	4.55	.87	12.16	4.97	.89	8.47	2.95	.81
Poland	14.02	5.05	.87	9.58	3.51	.83	9.07	3.19	.75	5.53	2.19	.70
Portugal	11.20	3.65	.87	10.79	2.15	.71	8.76	2.76	.71	4.88	1.53	.70
Turkey	15.57	2.94	.80	9.11	3.47	.80	9.30	3.79	.83	5.90	2.99	.85
PARQ father												
Australia	15.70	7.02	.96	12.19	4.71	.88	9.89	4.67	.91	6.67	3.34	.89
Bangladesh	13.83	4.85	.85	10.17	3.63	.78	10.81	3.88	.77	6.05	2.18	.62
China	17.55	5.77	.90	11.64	3.92	.86	10.82	3.98	.83	6.06	2.58	.85
Croatia	14.18	5.91	.87	9.90	3.84	.72	8.46	3.27	.82	4.91	2.05	.80
Greece	14.79	5.03	.86	10.69	3.68	.79	9.38	3.48	.80	5.40	2.28	.82
Guatemala	20.77	7.65	.90	12.72	4.14	.77	9.19	3.60	.82	5.60	2.61	.80
Iran	25.15	5.48	.85	18.81	2.99	.81	21.43	3.43	.81	14.10	2.33	.75
Italy	15.80	6.16	.82	10.35	4.20	.81	9.33	3.65	.91	5.30	2.36	.86
Korea	15.93	5.67	.89	9.61	3.34	.77	10.54	3.73	.77	5.59	2.17	.70
Pakistan	15.58	4.88	.83	11.70	3.96	.78	11.95	4.84	.89	8.31	2.81	.82
Poland	11.65	6.62	.93	11.82	4.78	.89	9.32	3.80	.82	6.06	2.91	.84
Portugal	13.87	5.32	.92	11.28	2.55	.79	8.64	3.06	.77	5.11	1.91	.76
Turkey	17.28	3.58	.86	9.86	3.86	.85	9.24	4.06	.85	5.81	2.71	.84

Note. PARQ = Parental Acceptance-Rejection Questionnaire.

stability; and (g) positive or negative worldview. Sample items on the PAQ include, “I think about fighting or being unkind” (hostility/aggression); “I like my friends to feel sorry for me when I feel ill” (dependence); “I feel I am no good and never will be any good” (negative self-esteem); “I think I cannot do things well” (negative self-adequacy); “It is hard for me to show the way I really feel to someone I like” (emotional unresponsiveness); “I am cheerful and happy one minute and gloomy and unhappy the next” (emotional instability); and “For me the world is an unhappy place” (negative worldview).

Items are scored on a 4-point Likert-type scale ranging from (4) *almost always true of me* through (1) *almost never true of me*. A profile of individuals' overall self-reported psychological adjustment is achieved by summing the seven scale scores after reverse scoring appropriate items. Scores on the Adult PAQ (short form) spread from a low of 42, indicating healthy psychological adjustment through a high of 168 indicating serious psychological maladjustment. Scores at or above the test's midpoint of 105 indicate that the adults experience themselves to be more psychologically maladjusted than adjusted. Mean coefficient alphas for the PAQ in the International Father Acceptance-Rejection Project (Rohner, 2014) completed in 13 countries spread from 81 through .91. Alphas for the total score and for each country in the present study are reported in Table 3, and alphas for individual subscales and for each country are presented in Table 5.

*Interpersonal Relationship Anxiety Questionnaire (IRAQ)*. The IRAQ (Rohner, 2013) is a nine-item questionnaire designed to assess symptoms of anxiety that individuals may experience in the context of interpersonal relationships. Sample items include "I feel apprehensive" and "I feel fearful for no good reason." Items such as these are scored on a 4-point Likert-type scale ranging from (4) *almost always true of me* through (1) *almost never true of me*. Previous studies have reported a Cronbach's alpha reliability of .87 in the United States (Brown, 2014), .88 in China (Li, 2013), and .88 in Pakistan (Naz & Kausar, 2015). Alphas for each country in this study are reported in Table 3.

*Fear of Intimacy Scale (FOS)*. The FOS (Descutner & Thelen, 1991) is a 35-item measure designed to assess the fear of intimacy in close dating relationships, whether or not the individual is currently in such a relationship. The first part of the scale is composed of 30 statements about a current or imagined partner relationship, and the second part is composed of five statements on past partner relationships. Items are scored on a 5-point Likert-type scale ranging from (1) *not all characteristic of me* to (5) *extremely characteristic of me*. Sample items include, "I might be afraid to confide my innermost feelings to O"; "I would be comfortable with having a close emotional tie between us"; "I would probably feel nervous showing O strong feelings of affection"; and "I have held back my feelings in previous relationships." "O" refers to the individual who is/was or would be in an imagined relationship with the person completing the scale. Scores are obtained by summing all responses after reverse scoring the required items. The higher the score, the higher the fear of intimacy or anxiety about close relationships. Descutner and Thelen (1991) reported that the scale is valid and reliable, with a

**Table 5.** Descriptive Statistics and Alphas for the Subscales of PAQ, by Country.

Country	PAQ																				
	Hostility		Dependence		Negative self-esteem		Negative self-adequacy		Emotional unresponsiveness		Emotional instability		Negative worldview								
	M	SD	α	M	SD	α	M	SD	α	M	SD	α	M	SD	α						
Australia	11.76	3.55	.76	15.02	3.48	.81	14.08	2.45	.82	15.58	1.98	.86	12.00	3.86	.81	15.48	3.64	.80	12.10	3.99	.87
Bangladesh	12.10	3.20	.58	16.82	3.52	.76	11.83	3.18	.65	13.30	3.38	.73	12.54	3.13	.62	16.24	3.64	.70	11.90	3.83	.78
China	13.10	3.75	.76	17.91	3.53	.74	13.61	2.18	.79	12.31	3.33	.86	12.30	3.22	.81	16.51	3.57	.80	12.26	3.64	.87
Croatia	11.67	3.08	.64	14.17	3.06	.71	11.04	3.30	.80	9.84	2.99	.75	11.23	3.21	.78	14.19	3.60	.77	10.30	3.53	.84
Greece	12.58	3.38	.67	14.71	2.97	.60	10.60	3.01	.76	10.87	3.23	.80	12.60	3.55	.74	15.49	3.18	.61	10.92	3.22	.78
Guatemala	10.41	3.47	.74	14.61	2.77	.61	15.36	1.66	.79	13.62	2.19	.61	17.52	2.51	.72	14.13	2.70	.58	15.57	1.84	.84
Iran	17.53	3.21	.69	14.37	3.55	.75	16.02	2.26	.69	18.35	3.51	.78	18.64	3.24	.70	13.22	3.20	.67	16.98	3.72	.80
Italy	12.41	3.58	.70	18.67	3.32	.82	10.74	3.31	.75	11.95	3.70	.81	11.96	3.87	.78	15.55	3.48	.73	12.14	3.84	.80
Korea	10.10	3.01	.73	14.99	3.25	.75	11.24	3.09	.75	11.43	3.12	.80	12.05	3.46	.73	14.41	3.20	.71	11.90	3.70	.83
Pakistan	13.45	2.74	.65	16.49	2.80	.62	13.86	2.08	.84	12.43	3.10	.66	12.97	2.89	.63	16.04	2.66	.55	11.76	3.19	.68
Poland	13.45	3.64	.72	15.60	3.46	.73	12.12	3.38	.78	12.13	3.83	.85	12.50	3.82	.79	17.60	3.42	.70	12.38	3.93	.84
Portugal	11.59	3.29	.68	16.27	2.85	.68	15.07	1.86	.73	14.99	1.81	.68	16.81	1.97	.66	15.13	2.67	.60	15.32	2.17	.76
Turkey	12.51	3.66	.71	16.32	3.72	.77	12.77	2.42	.62	11.14	3.65	.78	12.18	3.70	.73	16.25	3.28	.62	11.62	3.85	.80

Note. PAQ = Personality Assessment Questionnaire.

**Table 6.** Kendall-Tau Correlations Among PARQ, PAQ, IRAQ, and FIS.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1. PARQ																			
Total Mother																			
2. PARQ	.46**																		
Total Father																			
3. PARQ	.43**	.45**																	
Coldness Mother																			
4. PARQ	.41**	.64**	.42**																
Coldness Father																			
5. PARQ	.61**	.46**	.46**	.28**															
Indifference Mother																			
6. PARQ	.46**	.64**	.31**	.51**	.47**														
Indifference Father																			
7. PARQ	.60**	.43**	.40**	.24**	.45**	.32**													
Aggression Mother																			
8. PARQ	.67**	.56**	.29**	.36**	.35**	.45**	.50**												
Aggression Father																			
9. PARQ	.57**	.43**	.42**	.23**	.49**	.34**	.55**	.41**											
Rejection Mother																			
10. PARQ	.45**	.58**	.30**	.40**	.37**	.50**	.40**	.59**	.54**										
Rejection Father																			
11. PAQ	.27**	.28**	.21**	.19**	.30**	.27**	.27**	.26**	.25**	.26**									
Total																			
12. PAQ	.26**	.27**	.20**	.19**	.24**	.24**	.26**	.28**	.27**	.28**	.49**								
Hostility																			
13. PAQ	.10**	.10**	.10**	.10**	.09**	.10**	.10**	.10**	.09**	.08**	.43**	.35**							
Emotional Instability																			

(continued)

**Table 6.** (continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
14. PAQ	.23**	.25**	.20**	.19**	.30**	.25**	.17**	.18**	.22**	.22**	.51**	.22**	.17**					
Negative Self-esteem																		
15. PAQ	.25**	.26**	.19**	.17**	.32**	.27**	.22**	.22**	.25**	.25**	.53**	.22**	.19**	.54**				
Negative Self-adequacy																		
16. PAQ	.23**	.26**	.20**	.19**	.28**	.26**	.21**	.22**	.21**	.21**	.56**	.26**	.20**	.47**	.45**			
Negative worldview																		
17. PAQ	.21**	.23**	.18**	.17**	.29**	.25**	.16**	.17**	.16**	.18**	.47**	.21**	.12**	.41**	.40**	.42**		
Emotional Unresp.																		
18. IRAQ	.25**	.20**	.18**	.12**	.23**	.18**	.25**	.20**	.21**	.20**	.36**	.24**	.26**	.23**	.26**	.27**	.22**	
Anxiety																		
19. FIS	.27**	.22**	.22**	.17**	.23**	.19**	.25**	.24**	.24**	.25**	.23**	.18**	.05**	.22**	.22**	.21**	.30**	.24**
Fear of Intimacy																		

Note. Multiple Imputations approach was applied to handle missing values. Correlation coefficients were pooled across 50 imputed samples using Rubin's rules (1987). PARQ = Parental Acceptance-Rejection Questionnaire; PAQ = Personality Assessment Questionnaire; IRAQ = Interpersonal Relationship Anxiety Questionnaire; FIS = Fear of Intimacy Scale.

\*\* $p < .01$ .

Cronbach's coefficient alpha of .90. Alphas for each country in the present study are reported in Table 3.

*Personal Information Form-Revised (PIF-R)*. The PIF-R (Rohner, 2015) elicited information from respondents about their age, gender, and level of education.

## Analytical Approach

In the first step, using multigroup confirmatory factor analysis (CFA) in Mplus v.8 (Muthén & Muthén, 1998-2017), we evaluated the equivalence of measures between genders and countries to establish whether meaningful cross-group comparisons of relations among constructs could be made (Byrne & Watkins, 2003). Equivalence of measure means that the cross-group score-differences on the indicators of the particular construct correspond to differences in the underlying trait or ability (van de Vijver & Leung, 1997). Three levels of measurement equivalence have been distinguished in the literature: configural, metric, and scalar (Milfont & Fischer, 2010). *Configural equivalence* implies validity of the underlying psychological constructs across groups. *Metric equivalence* implies that people in different groups understand the questions similarly. Finally, *scalar equivalence* indicates that the measures have the same metric and the same origin across groups and assumes completely bias-free instruments.

To conduct valid cross-group comparisons of relations among constructs, configural and metric equivalence must be established. Scalar equivalence represents a necessary condition for valid mean comparisons across the groups. Given that the aim of this study was to compare relations among constructs across groups (not mean comparisons), configural and metric invariances were tested. This included two steps: (a) evaluation whether or not factorial structures were the same across groups (configural invariance), and (b) evaluation whether or not factor loadings were equivalent across groups (metric invariance). To support metric equivalence at least two factor loadings per latent construct must be equal across groups. This represents partial equivalence (Steenkamp & Baumgartner, 1998).

In the next step, we analyzed hypothesized relations among the constructs. First, we examined correlations among all measures. Given that the data were not normally distributed we applied Kendall-tau correlation coefficient (see Table 6). Next, the hypothesized model of relations among latent constructs was tested via structural equation modeling, also in Mplus. The SEM analyses were carried out in three steps: (a) test of direct relations between remembered parental rejection in childhood and current fear of intimacy, (b) test of indirect relations between parental rejection and fear of intimacy via two



parallel mediators: psychological maladjustment and relationship anxiety, and (c) test of possible moderating effects by gender and country. To test for possible moderating effects by culture or gender, the multigroup SEM approach was applied to test equivalence of regression coefficients between genders and among the 13 countries.

For all analyses, we employed multiple linear regression (MLR) estimator, which produces standard errors and fit indices that are robust in relation to non-normality of observations (Beauducel & Herzberg, 2006). The chi-square goodness-of-fit statistic, the comparative fit index (CFI), the root mean square error of approximation (RMSEA) with 90% CIs, and the standardized root mean square residual (SRMR) indices were used to evaluate model fit. For *acceptable* fit, the chi-square test should be nonsignificant ( $p > .05$ ), and the RMSEA and SRMR should be  $< .08$ , with CFI  $> .90$  (Bollen & Lang, 1993; Hu & Bentler, 1999; Maccallum, Browne, & Sugawara, 1996). For a *very good* model fit, the chi-square test should be nonsignificant ( $p > .05$ ), the SRMR should be  $< .08$ , the RMSEA should be  $< .05$ , and the CFI should be  $> .95$  (Bollen & Lang, 1993; Hu & Bentler, 1999; Hu & Bentler, 1999; Maccallum et al., 1996). Greater weight was given to the incremental/approximate fit indices than to the significance of the chi-square because chi-square values are known to be sensitive to sample size (Cheung & Rensvold, 2002). For multi-group comparisons—following Cheung and Rensvold (2002)—the nonsignificant chi-square test for comparisons between configural and constrained models, and the change in CFI  $\leq .01$  indicated metric invariance and/or structural path-invariance across groups. As with the overall model fit, we gave more weight to the change in CFI than to chi-square because of the large sample and sensitivity of the chi-square test. If the difference in fit between the constrained and unconstrained multiple-group models did not meet this criterion, we examined modification indices and iteratively released loadings or paths. The chi-square difference test ( $\Delta\chi^2$ ) was computed using formulas developed for scaled chi-square with MLR estimator (Satorra & Bentler, 1994). Finally, to test for mediation effects we used the bootstrap method with 2,000 samples (Shrout & Bolger, 2002). Following Preacher and Kelly (2011), we calculated kappa squared ( $\kappa^2$ ) coefficients as a measure of the effect size for indirect effects. According to these authors, a small effect size is .01, a medium effect size is .09, and a large effect size is .25.

## Results

### Data Screening

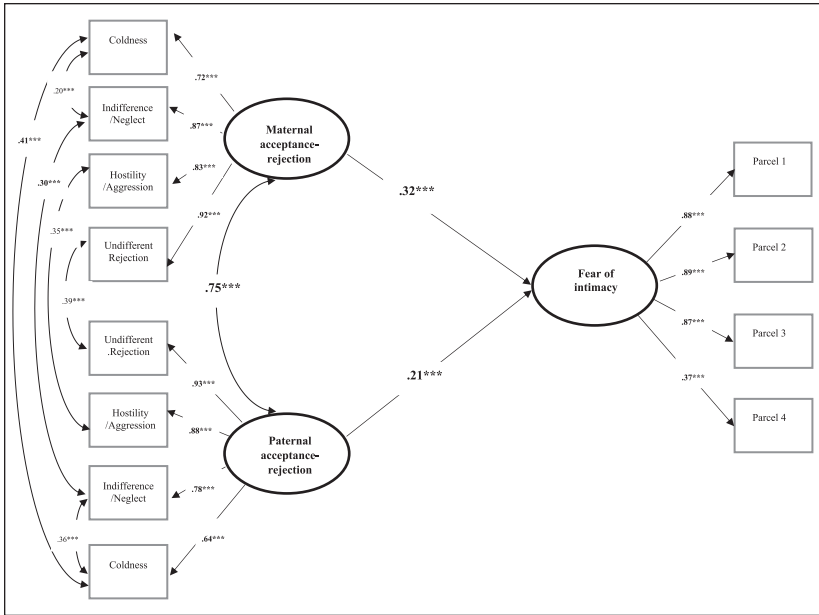
Less than 1% of the data were missing. But the full information maximum likelihood (FIML) procedure was used to handle the small amount of data

that was missing for CFA and SEM. A Multiple Imputations procedure with 50 imputations was applied for the evaluation of associations among constructs via Kendall's tau coefficients. Both FIML and Multiple Imputations procedures have been shown to outperform traditional approaches for treating missing values (Enders, 2010). In terms of distribution characteristics, the data showed significant multivariate skewness and kurtosis (multivariate skewness of 82,806,  $p < .001$  and of 157.38,  $p < .001$ ).

### *Measurement Models*

First, configural and metric equivalence were assessed for the measures. Given the fact that all measures used in the study were lengthy, we formed item-parcels as indicators of latent constructs to control for inflated measurement errors and to improve the psychometric properties of the variables (Little, Cunningham, Shara, & Widaman, 2002). Item-parcels for the PARQ and PAQ represent the individual scales that these measures consist of. Item-parcels for the IRAQ and FIS represent an average of individual items within each parcel. For the IRAQ and FIS, the parceling was conducted with the aim of obtaining more than three item-parcels loading on a latent factor. This procedure is required for adequate model identification (Kline, 2011).

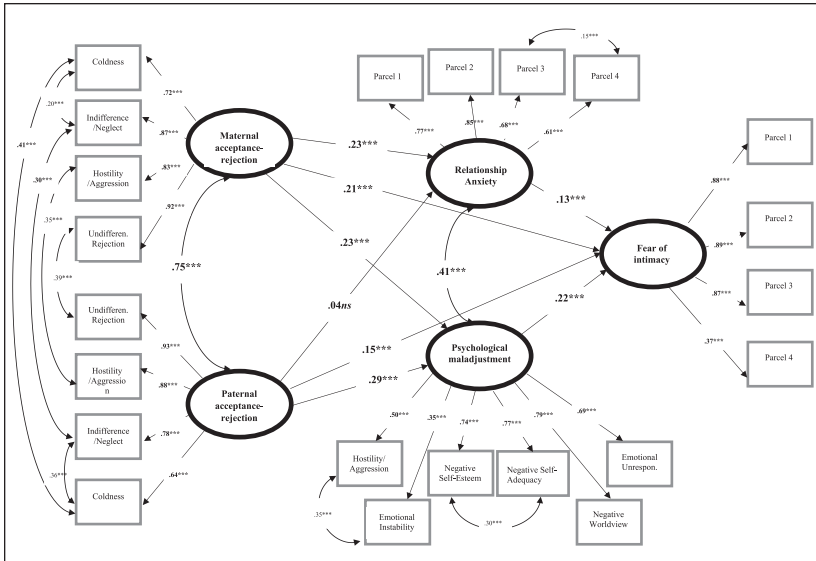
**PARQ.** A measurement model of the mother and father versions of the PARQ was fit, with the four mother-PARQ scales (hostility/aggression, undifferentiated rejection, indifference/neglect, and coldness/lack of affection) loading on a Mother factor, and the four father-PARQ scales loading on a Father factor. A correlation was modeled between the two factors, accounting for the similar view of parents within families. Residual covariances were modeled between matching mother and father scales to account for scale-specific shared variance. This model did not fit the data,  $\chi^2(15) = 754.61$ ,  $p < .001$ , CFI = .95, RMSEA = .12 with 90% confidence interval (CI) = [.11, .13], SRMR = .04. Modification indices indicated that maternal coldness/lack of affection, and indifference/neglect, and paternal coldness/lack of affections and indifference/neglect shared additional variance that was not accounted for by the latent variable. These two constructs may share similar indicators (i.e., emotionally cold parents may be viewed as indifferent), so residual covariances were added to the model. This model showed good fit,  $\chi^2(13) = 209.95$ ,  $p < .001$ , CFI = .99, RMSEA = .06, 90% CI = [.05, .07], SRMR = .03. All PARQ scales loaded significantly on their latent factors. Standardized loadings spread from .64 through .93, and the correlation between the mother and father latent factors was .75, as shown in Figure 1 discussed later.



**Figure 1.** Direct effects of remembered maternal and paternal rejection on fear of intimacy.

Note.  $\chi^2(45) = 406.06, p < .001$ . CFI = .98. RMSEA = .05, 90% CI = [.04, .06]. SRMR = .03. Standardized coefficients. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual. \*\*\* $p < .001$ .

In the next step, configural and metric invariance between genders and countries was tested. The difference in fit between the configural invariance model and the metric invariance model for gender indicated metric equivalence,  $\Delta\chi^2(8) = 146.11, p < .001, \Delta CFI = .008$ . However, for country the difference in fit between the configural invariance model and the constrained model indicated some mis-fit,  $\Delta\chi^2(96) = 510.31, p < .001, \Delta CFI = .043$ . The modification indices suggested that the loadings of maternal coldness/lack of affection and indifference/neglect, as well as paternal coldness/lack of affection and indifference/neglect, differed significantly among all countries. Releasing these loadings resulted in an acceptable change in model fit from the configural invariance model to the constrained model,  $\Delta\chi^2(48) = 175.86, p < .001, \Delta CFI = .01$ . This provided evidence about partial metric equivalence among the countries.



**Figure 2.** Indirect effects of remembered maternal and paternal rejection on fear of intimacy via relationship anxiety and psychological maladjustment. Note.  $\chi^2(190) = 3,622.61, p < .001$ . CFI = .92. RMSEA = .07, 90% CI = [.06, .08]. SRMR = .07. Standardized coefficients. CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual. \*\*\* $p < .001$ .

**PAQ.** A measurement model of the PAQ was fit with the seven PAQ scales loading on a single latent factor. This model did not fit the data,  $\chi^2(14) = 938.85, p < .001$ , CFI = .86, RMSEA = .14 with 90% CI = [.13, .15], SRMR = .08. Inspection of factor loadings indicated that the dependence scale did not load significantly on the latent factor ( $\beta = -.01, p = .548$ ). Hence it was removed. Furthermore, examination of modification indices revealed that the hostility/aggression and emotional instability scales, and the negative self-esteem and negative self-adequacy scales shared additional variance that was not accounted for by the latent factor. These constructs may share similar indicators (i.e., aggressive people may also view themselves as emotionally unstable, and people with low self-esteem may see themselves as inadequate). Hence, residual covariances between these scales were added to the model. The revised model showed good fit with the data,  $\chi^2(7) = 57.91, p < .001$ , CFI = .99, RMSEA = .05 with 90% CI = [.04, .06], SRMR = .02. All six scales loaded significantly on the latent factor. Standardized loadings spread from .35 through .81, as shown in Figure 2 discussed later.

Next, configural and metric equivalence was examined for gender and country. The difference in fit between the configural and constrained models for gender:  $\Delta\chi^2(6) = 104.026, p < .001, \Delta CFI = .014$ ; and country:  $\Delta\chi^2(72) = 674.96, p < .001, \Delta CFI = .097$  indicated some mis-fit. For gender, the examination of modification indices indicated that the factor loadings of hostility and emotional instability differed significantly between males and females. Releasing these loadings resulted in an acceptable change in model fit from the configural invariance model to the constrained model,  $\Delta\chi^2(4) = 17.652, p < .01, \Delta CFI = .002$ . For country, the modification indices suggested that the loadings of negative self-esteem and negative self-adequacy needed to be released because they differed significantly among all countries. In addition, the factor loading of emotional unresponsiveness was higher in Australia and lower in Portugal than in the other countries (but still significant, with standardized loadings of .40 in both countries). In addition, the factor loading of negative worldview was higher in Poland and lower in Portugal and Guatemala than in the other countries (but still significant, with standardized loadings of .60 and .47 for the two countries, respectively). Releasing these loadings resulted in an acceptable change in model fit from the configural invariance model to the constrained model,  $\Delta\chi^2(42) = 103.25, p < .001, \Delta CFI = .007$ . Hence, partial metric invariance for both gender and country was shown to be supported.

*FIS.* The measurement model for the FIS was fit with four item-parcels loading on a single latent factor. For the first part of the scale (30 items), three item-parcels were created, each representing an average of the items.<sup>1</sup> For the second part of the scale, one item-parcel was created representing an average of five items. This model showed good fit with the data,  $\chi^2(2) = 40.06, p < .001, CFI = .99, RMSEA = .07, 90\% CI = [.06, .09], SRMR = .01$ . All four item-parcels loaded significantly on the latent factor. As shown in Figure 2, standardized loadings spread from .37 through .89.

Next, configural and metric invariances were tested. The difference in fit between the configural model and the constrained model for gender indicated full metric invariance,  $\Delta\chi^2(4) = 32.63, p = .036, \Delta CFI = .005$ . However, the difference in fit between the two models for country showed mis-fit:  $\Delta\chi^2(48) = 354.09, p < .001, \Delta CFI = .063$ . The modification indices suggested that the loadings of item-parcels 3 and 4 differed significantly among all countries. Furthermore, the factor loading of item-parcel 1 was higher in China, Pakistan, and Poland than it was in other countries. Moreover, the factor loading of item-parcel 2 was higher in Bangladesh and Italy than in the other countries. Releasing these loadings resulted in an acceptable change in model fit from the configural invariance model to the constrained model,  $\Delta\chi^2(19) =$

52.20,  $p < .001$ ,  $\Delta\text{CFI} = .007$ . This provided evidence about partial metric equivalence among the countries.

*IRAQ.* The measurement model for the IRAQ was fit with four item-parcels loading on a single latent factor. Parcels 1-3 represented an average of two individual items per parcel, and Parcel 3 represented an average of three individual items.<sup>2</sup> This model did not fit the data,  $\chi^2(2) = 61.49$ ,  $p < .001$ ,  $\text{CFI} = .98$ ,  $\text{RMSEA} = .09$  with 90% CI = [.07, .11],  $\text{SRMR} = .02$ . Inspection of modification indices indicated that item-parcels 3 and 4 shared additional variance that was not explained by the latent factor. Both of these parcels contained items measuring the levels of fearfulness and nervousness in intimate relationships making the covariance theoretically understandable. The revised model showed excellent fit with the data,  $\chi^2(1) = 2.23$ ,  $p = .135$ ,  $\text{CFI} = 1.0$ ,  $\text{RMSEA} = .02$  with 90% CI = [.0, .05],  $\text{SRMR} = .01$ . All four item-parcels loaded significantly on the latent factor. Standardized loadings spread from .61 through .85.

Next, configural and metric equivalence were examined for gender and country. The difference in fit between the configural model and constrained model for gender indicated full metric invariance ( $\Delta\chi^2[4] = 10.29$ ,  $p = .036$ ,  $\Delta\text{CFI} = .001$ ). However, the difference in fit between the two models for country showed mis-fit ( $\Delta\chi^2[48] = 268.07$ ,  $p < .001$ ,  $\Delta\text{CFI} = .052$ ). The modification indices suggested that the loadings of item-parcels 1 and 4 differed significantly among all countries. Furthermore, the factor loading of item-parcel 2 was lower in Croatia, Greece, and Pakistan than in the other countries (but still significant with standardized loadings of .64). Furthermore, the factor loading of item-parcel 3 was higher in China than in the other countries. Releasing these loadings resulted in an acceptable change in model fit from the configural invariance model to the constrained model,  $\Delta\chi^2(19) = 52.22$ ,  $p < .001$ ,  $\Delta\text{CFI} = .008$ . This provided evidence about the partial metric equivalence among the countries.

To conclude, full or partial metric invariance between genders and among countries was supported for all measures. This allowed for valid evaluation of differences in relations among constructs across genders and countries.

### *Structural Models*

In the first step, we investigated correlations among all the constructs of interest by computing Kendall's tau correlation coefficients. As can be seen in Table 6, all relationships were in the expected direction. Overall maternal and paternal rejection as well as maternal and paternal coldness/lack of

affection, indifference/neglect, hostility/aggression, and undifferentiated rejection correlated significantly and positively with all measures of personality maladjustment (i.e., with the total score on the PAQ, as well as with the individual subscales). All measures of remembered rejection also correlated significantly and positively with both relationship anxiety and fear of intimacy. Furthermore, both psychological maladjustment (total score as well as all six individual subscales) and relationship anxiety correlated significantly and positively with each other. Finally, both psychological maladjustment (the total score and the six individual subscales) and relationship anxiety correlated significantly and positively with the fear of intimacy.

In the next step, the hypothesized model of relations among constructs was tested. Here, we evaluated the direct relations between remembrances of maternal and paternal rejection and adults' fear of intimacy, as described in the first general research question that asked: Are adults' (men's and women's) remembrances of parental (maternal and paternal) acceptance-rejection in childhood significantly linked to the level of adults' fear of intimacy? This model showed good fit to the data,  $\chi^2(45) = 406.06, p < .001$ . CFI = .98. RMSEA = .05, 90% CI = [.04, .06]. SRMR = .03. The model is depicted in Figure 1. There one can see that remembrances of both maternal and paternal rejection in childhood did significantly and independently predict adults' (both men's and women's) fear of intimacy—but remembered maternal rejection was more strongly related to the fear than was remembered paternal rejection,  $\Delta\chi^2(1) = 5.64, p = .018$ .

Next, the full mediation model was tested. This was done to explore the second general question that asked: To what extent are anxiety about interpersonal relationships and overall psychological maladjustment important generative mechanisms that help explain why remembered childhood acceptance-rejection tends to predict varying levels of fear of intimacy among both men and women in adulthood? The model showed good fit with the data,  $\chi^2(190) = 3,622.61, p < .001$ . CFI = .92. RMSEA = .07, 90% CI = [.06, .08]. SRMR = .07. It is depicted in Figure 2. There one can see that remembrances of both maternal and paternal rejection significantly and independently predicted psychological maladjustment, which in turn predicted fear of intimacy. The indirect effect of remembered maternal rejection on the fear of intimacy mediated by psychological maladjustment was significant,  $\beta = .07, p < .001$ , 95% Bootstrap CI [.04, .10],  $\kappa^2 = .07$ . So too was the indirect effect of paternal rejection,  $\beta = .06, p < .001$ , 95% Bootstrap CI [.04, .09],  $\kappa^2 = .06$ . Furthermore, remembered maternal rejection significantly predicted relationship anxiety, which in turn predicted fear of intimacy. This indirect effect of remembered maternal rejection on fear of intimacy mediated by relationship anxiety was significant,  $\beta = .03, p < .001$ ,

95% Bootstrap CI [.02, .05]),  $\kappa^2 = .06$ . Remembered paternal rejection, on the contrary, did not predict relationship anxiety. After adding the mediation effects, remembrances of both maternal and paternal rejection also directly predicted fear of intimacy, suggesting that psychological maladjustment and relationship anxiety partially mediated the association between remembered parental rejection and fear of intimacy. The collective set of predictors explained 32% of variability in fear of intimacy among college aged students.

### *Moderation by Gender and Country*

The model in Figure 2 was tested for moderation across genders and all 13 countries—as specified in the third general research question that asked: Are the same general relations found cross both genders and all nations studied? After carrying over the fully or partially constrained factors from the measurement models, the structural paths in Figure 2 were found to be invariant across both genders,  $\Delta\chi^2(8) = 62.57, p < .001, \Delta CFI = .001$ , and across all countries,  $\Delta\chi^2(138) = 257.07, p < .001, \Delta CFI = .004$ . Furthermore, the indirect effect of remembered maternal and paternal rejection on adults' fear of intimacy mediated by psychological maladjustment and the indirect effect of maternal rejection on fear of intimacy mediated by relationship anxiety were significant in all countries.

## **Discussion**

Informed by IPARTheory, this research focuses on relations among adults' (males versus females) remembrances of parental (maternal versus paternal) acceptance-rejection in childhood, and the level of adults' fear of intimacy, as mediated by adults' psychological maladjustment and relationship anxiety. Specifically, we asked three general research questions in this study: (a) Are adults' (men's and women's) remembrances of parental (maternal and paternal) acceptance-rejection in childhood significantly linked to the level of adults' fear of intimacy? (b) To what extent are anxiety about interpersonal relationships and overall psychological maladjustment important generative mechanisms that help explain why remembered childhood acceptance-rejection tends to predict varying levels of fear of intimacy among both men and women in adulthood? (c) Are the same general relations found across both genders and all nations studied?

Results showed, as expected, that adults' remembrances of both maternal and paternal rejection in childhood independently predict men's and



women's fear of intimacy in all 13 countries. The similarity in factor structure of remembered paternal and maternal acceptance-rejection in childhood and their respective influences on the overall psychological adjustment of adult offspring provides further evidence about the possibly similar mechanisms of fathers' and mothers' influence on child development (Biblarz & Stacey, 2010; Lamb, 2012). However, evidence provided here also suggests that remembered maternal rejection is more strongly related to adults' fear of intimacy than is remembered paternal rejection. This finding aligns with conclusions by Li and Meier (2017) who reported that offspring's perceptions of mothers' acceptance is often more strongly associated with children's *socio-emotional* outcomes than are perceptions of fathers' acceptance.

Results of this study also confirm that psychological maladjustment partially mediates the relation between both maternal and paternal rejection and adults' (both men's and women's) fear of intimacy in all 13 countries. Finally, results of the multigroup analyses show that relationship anxiety partially mediates the relation between remembered *maternal* (but not paternal) rejection and adults' (both men's and women's) fear of intimacy in all 13 countries. Thus, it appears that the association between adults' remembrances of parental rejection in childhood—as partially mediated by adults' psychological maladjustment and relationship anxiety—is stable across cultures and genders. These results are consistent with conclusions drawn by Phillips et al. (2013) who found that adults' recollections of parental care (acceptance) in childhood were negatively correlated with fear of intimacy in adulthood.

Overall, results of this research are fully consistent with IPARTheory's universalist perspective (Rohner, 1986), where the theory predicts—and research confirms—that adults' remembrances of parental rejection in childhood tend to be panculturally associated with many aspects of adults' psychological functioning (Rohner, 2018; Rohner & Lansford, 2017). This study adds adults' fear of intimacy (relational anxiety about intimacy) to the growing list of consequences of perceived parental rejection that may prove to be invariant across cultures and genders worldwide.

Finally, we should note that the results of this study have implications for clinical practice and intervention. Within the context of emotionally focused therapy (EFT), for example, Johnson (2004) argued that couples who have a secure bond of attachment are likely to have a sense of connectedness that allows them to be emotionally accessible and responsive to each other. However, we speculate that it is unlikely that if one member of the dyad has a significant fear of intimacy, it is also unlikely that both members of the couple will be securely attached. That is, one or both individuals may develop an insecure attachment relationship that could lead to low relationship satisfaction (Wiebe et al., 2016). One of the principal goals of EFT, however, is to

assist each member of the couple to recognize and express his or her own needs for closeness, comfort, and respect from the other person (Wong, Greenman, & Beaudoin, 2018). Meeting this goal could be challenging in couples where one member has serious fear-of-intimacy problems. Considerable research is needed to focus on clinical speculations such as this.

Considerable research is also needed to explore the relation between attachment transference (Andersen & Cole, 1990) and adults' fear of intimacy that has its origin in early parent-child relations. That is, adult attachment theory emphasizes the role of working models or mental representations on the way that people perceive and respond to significant others. These working models are thought by adult attachment theorists (Brumbaugh & Fraley, 2006, 2007) to operate at different levels of specificity, ranging from global attachment representations (i.e., generalized views of close relationships) to relationship-specific representations of particular significant others such as parents and intimate partners. According to Brumbaugh and Fraley (2007), people construct more differentiated and relationship-specific working models as they develop over time, and as they become familiar with a variety of significant others. The social cognitive mechanisms associated with attachment transference in these global versus relationship-specific contexts, however, are not yet clear. Apropos of these issues regarding intimate partners and couples relationships, it could be useful if future research would explore in a multicultural study possible differences in results among individuals recently in an intimate relationship versus those who have not been in an intimate relationship. Such a study could help shed additional light not only on the relation between remembered childhood acceptance-rejection and adults' fear of intimacy, but also on the issue of attachment transference.

### *Strengths and Limitations*

This study has several strengths and limitations that should be noted. In terms of the strengths, the sample size was large—providing adequate power to detect small effects. Moreover, both men and women were sampled from across a plurality of countries, increasing the culture and gender generalizability of results. In addition, well-validated measures were used.

Several limitations have to be noted, however. First, our analyses revealed partial rather than full metric equivalence. Full measurement invariance is rarely found in cross-cultural studies. Hence, it has become a common practice to accept some violations of measurement invariance and to continue with the testing of group differences. More studies are needed to determine the size and direction of bias in estimation of regression parameters when the assumptions of full measurement equivalence are not met (Putnick &

Bornstein, 2016). Finally, we should note that the final mediation model showed good, though not perfect, fit to the data, and the effect sizes for indirect effects tended to be of medium size. This suggests that future studies should investigate the effects of other variables related to parenting and to psychological maladjustment that could help explain variability in adults' fear of intimacy.

Beyond this, we should also note that results of this research could have been inflated somewhat because of shared method variance. It is unlikely, though, that shared method variance had a serious effect on the results, at least with respect to the relation between remembered parental acceptance-rejection and offspring's psychological adjustment. We draw this conclusion because the relation between parental acceptance-rejection and offspring adjustment has been a central interest within IPARTheory for almost six decades. Over the course of this time, tens of thousands of children and adults on every continent (except Antarctica) have participated in IPARTheory research, using a variety of methodological approaches such as ethnographic (e.g., participant observation) research, quantitative psychological studies, holocultural research (i.e., the cross-cultural survey approach), and others. Most of these paradigms of research have used multiple measurement procedures such as self-report questionnaires, interviews, and behavior observations. So far, all studies—regardless of which overall methodology or specific research procedure was used—tend to converge on similar conclusions drawn in this study, which relied exclusively on self-report questionnaires (Rohner, 2018). Therefore, we conclude that this research strongly suggests the possibility that adults' recollections of parental rejection in childhood—along with the expected development of psychological maladjustment and relationship anxiety—are panculturally associated with adults' fear of intimacy.

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### **Notes**

1. For the FIS, item-parcel 1 included items 1 to 10; item-parcel 2 included items 11 to 20; item-parcel 3 included items 21 to 30. Finally, item-parcel 4 included items 31 to 35.

2. For the IRAQ, item-parcel 1 included Items 1 and 2, item-parcel 2 included Items 3 and 4, item-parcel 3 included Items 5 and 6, and item-parcel 4 included Items 7 to 9.

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