Parental Acceptance–Rejection and Child Prosocial Behavior: Developmental Transactions Across the Transition to Adolescence in Nine Countries, Mothers and Fathers, and Girls and Boys

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Promoting children's prosocial behavior is a goal for parents, healthcare professionals, and nations. Does positive parenting promote later child prosocial behavior, or do children who are more prosocial elicit

more positive parenting later, or both? Relations between parenting and prosocial behavior have to date been studied only in a narrow band of countries, mostly with mothers and not fathers, and child gender has infrequently been explored as a moderator of parenting–prosocial relations. This cross-national study uses 1,178 families (mothers, fathers, and children) from 9 countries to explore developmental transactions between parental acceptance–rejection and girls' and boys' prosocial behavior across 3 waves (child ages 9 to 12). Controlling for stability across waves, within-wave relations, and parental age and education, higher parental acceptance predicted increased child prosocial behavior from age 9 to 10 and from age 10 to 12. Higher age 9 child prosocial behavior also predicted increased parental acceptance from age 9 to 10. These transactional paths were invariant across 9 countries, mothers and fathers, and girls and boys. Parental acceptance increases child prosocial behaviors later, but child prosocial behaviors are not effective at increasing parental acceptance in the transition to adolescence. This study identifies widely applicable socialization processes across countries, mothers and fathers, and girls and boys.

Prosocial behavior—actions intended to help, share with, and show caring toward others—is a critical component of healthy adolescent socioemotional development. A low level of prosocial behavior is often considered a defining characteristic of callous-unemotional traits (Hawes & Dadds, 2007), which lead to antisocial behavior and conduct disorders (Frick & White, 2008; Pardini, Lochman, & Powell, 2007). Children who engage in more prosocial behaviors display more social competence and lower levels of aggression and delinquency (Eisenberg, Spinrad, & Morris, 2013). Adults who engage in more prosocial behaviors report greater life satisfaction (Caprara & Steca, 2005) and well-being (Weinstein & Ryan, 2010).

Parenting and Prosocial Behavior

Most theories of child development propose that parents play a major role in socializing their children. Social learning theory suggests that parents model prosocial behavior for their children by behaving in warm, sensitive, and nonrejecting ways toward them and others (Bandura, 1986). Ample empirical evidence links parenting with prosocial behavior in childhood (Bower & Casas, 2016; Yagmurlu & Sanson, 2009) and adolescence (Healy, Sanders, & Iyer, 2015; Padilla-Walker, Nielson, & Day, 2016), but the directionality of the effect is under debate. The default assumption in developmental science is that parents shape their children's development. However, contemporary theories of child development explicitly account for children's effects on the parenting they receive, as well as how children shape their own development (Bornstein, 2009; Demick, 2011; Scarr & McCartney, 1983). For example, the Relational Developmental Systems Perspective suggests that each individual in a family is active, plastic, and self-organizing, and that individuals engage in bidirectional and "reciprocal interpenetrating actions" (Overton, 2013, p. 102).

Developmental Transactions Between Parenting and Child Prosocial Behavior

Transaction in child development acknowledges that characteristics of an individual shape his or her experiences, while, reciprocally, experiences shape the characteristics of the individual through time (Bornstein, 2009). Thus, child and parent bring distinctive characteristics to, and each is understood to change as a result of their interactions with one another; parent and child alike then enter succeeding interactions as changed individuals. Some studies of cross-lagged relations between parenting and child prosocial behaviors in early childhood find relations only of positive parenting on later prosocial behavior and no reciprocal effects of child prosocial behavior on parenting (Daniel, Madigan, & Jenkins, 2016; Knafo & Plomin, 2006). Studies of later childhood and early adolescence find either bidirectional effects (Carlo, Mestre, Samper, Tur, & Armenta, 2011; Newton, Laible, Carlo, Steele, & McGinley, 2014; Putnick et al., 2015) or cross-lagged effects of child prosocial behavior on later parenting and no cross-lagged effects of parenting on child prosocial behavior (Padilla-Walker, Carlo, Christensen, & Yorgason, 2012; Pastorelli et al., 2016). Moreover, these differential cross-lagged relations across child development are suggestive but not determinative. Perhaps parenting promotes prosocial behavior when children are young, but prosocial behavior in later childhood protects against normative declines in positive parenting as children enter adolescence (e.g., Shanahan, McHale, Crouter, & Osgood, 2007). Our study is positioned to explore potential differential transactional effects of parenting and prosocial behavior across three time points in this pivotal period of development.

Effects Across Countries, Parents, and Genders

Relations between parenting and prosocial behavior have been studied in a narrow band of countries and mostly with mothers and not fathers, so less is known about prosocial development internationally or about father–child relationships. It is also undetermined whether parenting and prosocial behavior have similar associations for girls and boys.

Countries

Most research on prosocial behavior and parenting is based on samples from North America, Australia, and Western Europe. With their high incomes and shared (primarily) European heritage, these three regions are not representative of the world's families. There is evidence that prosocial behavior varies across countries (e.g., Feygina & Henry, 2015; Mesurado et al., 2014). Some researchers have suggested that on average, people in collectivist countries (those that value the needs of the group over the indi-

vidual) may be more empathetic or prosocial than individualist countries (those that value individual needs over the group; e.g., Chopik, O'Brien, & Konrath, 2017; Kumru, Carlo, & Edwards, 2004), but others find no associations between individualism–collectivism and prosocial behavior (Levine, Norenzayan, & Philbrick, 2001). Likewise, parental acceptance–rejection varies across countries (Chung, Zappulla, & Kaspar, 2008; Dwairy, 2010; Putnick et al., 2012; Perris et al., 1985). However, average differences do not necessarily translate into parenting–prosocial relation differences across countries.

Studying transactional relations between parenting and child prosocial behavior across a diverse range of countries could help to identify universal developmental socialization processes. Relations between parenting and prosocial behavior have been found in various countries (e.g., Carlo et al., 2011; Gülseven et al., 2018; Janssens & Deković, 1997; Mesurado et al., 2014; Romano, Tremblay, Boulerice, & Swisher, 2005), but not all (e.g., Russell, Hart, Robinson, & Olsen, 2003). Two previous studies compared bidirectional relations between parenting and child prosocial behavior across late childhood in eight or nine countries, and found relatively consistent effects across countries (Pastorelli et al., 2016; Putnick et al., 2015). However, these studies suffered some specific weaknesses: (a) when comparing countries, Pastorelli et al. (2016) cited good overall model fit but did not report follow-up tests of country differences (as recommended; see Putnick & Bornstein, 2016); (b) both studies tested bidirectional relations across only two time points in childhood; and (c) both studies measured parenting and prosocial behavior by child report, potentially inflating effects due to shared source variance. The current study formally compares country parameter estimates, employs three time points, extends into early adolescence, targets transactions in development, and uses measures from different sources to explore transactional patterns between child prosocial behavior and parenting in nine countries. We expected consistent transactional effects across countries.

Parents

Mothers and fathers are known to engage in different overall amounts and types of interactions with their children (e.g., Craig, 2006; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001) as well as to have different styles of parenting (e.g., McKinney & Renk, 2008; Putnick et al., 2012). Despite differences in parenting, mothers and fathers may each contribute to their children's prosocial socialization in similar ways (e.g., Janssens & Deković, 1997). For example, just as has been found for mothers (Farrant, Devine, Maybery, & Fletcher, 2012; Padilla-Walker, 2014; Padilla-Walker & Christensen, 2011), Flouri (2008) found that father involvement with high school children is related to child prosocial behavior regardless of fathers' biological or residential status. Mothers and fathers also have similar values with respect to promoting prosocial behavior (Suizzo, 2007).

Several studies of bidirectional effects between parenting and child prosocial behavior have included fathers either as interchangeable with mothers in a single group (Knafo & Plomin, 2006), in the same models with mothers so that mother and father parenting control for one another (Daniel et al., 2016; Padilla-Walker et al., 2012), or as a separate group (Newton et al., 2014; Putnick et al., 2015). In only one study were bidirectional effects

of child prosocial behavior with mother and father parenting compared (Putnick et al., 2015), so questions remain whether mothers and fathers are equally influential in developing their children's prosocial behavior, and whether mothers and fathers are equally influenced by children's prosocial behaviors. Given mothers' and fathers' shared goals for developing child prosocial behavior, and the limited evidence that bidirectional relations between parenting and prosocial behavior are similar for mothers and fathers (Putnick et al., 2015), we expected that transactions would be invariant across parents.

Genders

Girls generally exhibit more prosocial behaviors than boys, but it is unclear whether transactions between parenting and prosocial behavior are similar for girls and boys. Most studies control for the effect of child gender without investigating differential relations for girls and boys. In two exceptions, relations between parenting and child prosocial behavior were similar for boys and girls (Carlo, McGinley, Hayes, Batenhorst, & Wilkinson, 2007; Knafo & Plomin, 2006). The current study attempts to replicate this finding in a longer-term design with a nationally diverse sample of older children. We expected that transactional relations between child prosocial behavior and parenting would be similar for girls and boys.

This Study

The present study uses cross-national multiwave long-term longitudinal multivariate multisource data to examine the transactional nature of parenting and children's prosocial behavior from middle childhood to early adolescence, across nine countries, and for mothers and fathers and girls and boys. To avoid shared source variance, at each wave parents self-reported their acceptance–rejection of their children and children self-reported their prosocial behaviors. Transactional models were fit that accounted for stability over time in each construct and within-wave relations between constructs; important sociodemographic covariates were also controlled.

Method

Sample

Altogether, 1,178 families including 1,178 mothers and 1,178 children and 1,024 fathers from nine countries provided data when children (50.1% female) averaged 9.35 years ($SD = .73$), 10.39 years ($SD = .74$), and 12.89 years ($SD = .84$). Families were drawn from Shanghai, China ($ns = 104$ mothers and 102 fathers), Medellín, Colombia ($ns = 97$ mothers and 95 fathers), Naples and Rome, Italy ($ns = 205$ mothers and 172 fathers), Zarqa, Jordan ($ns = 114$ mothers and 113 fathers), Kisumu, Kenya ($ns = 89$ mothers and 87 fathers), Manila, Philippines ($ns = 101$ mothers and 90 fathers), Trollhättan/Vänersborg, Sweden ($ns = 100$ mothers and 79 fathers), Chiang Mai, Thailand ($ns = 105$ mothers and 90 fathers), and Durham, North Carolina, United States ($ns = 263$ mothers and 196 fathers). At Wave 1, mothers averaged 37.96 years of age ($SD = 6.03$), and fathers averaged 41.16 years of age ($SD = 6.37$). Mothers had completed 12.76 years of education ($SD = 4.18$), and fathers had completed

13.06 years of education ($SD = 4.07$) on average. Mothers reported that 80.16% were married, 7.53% were unmarried and cohabiting, and 12.31% were unpartnered.

This sample of countries varies greatly on the Human Development Index (ranks of 4 to 128 out of 169; UNDP, 2010), a composite indicator of a country's status with respect to health, education, and income. To provide a sense of what this range entails, in the Philippines, for example, 22% of the population falls below the international poverty line of less than USD $1.25 per day (UNICEF, 2010), whereas only negligible proportions of the population fall below this poverty line in Italy, Sweden, or the United States. Germane to the study of prosocial behavior (Batson, Ahmad, Powell, & Stocks, 2008), countries also varied widely on psychological constructs such as individualism–collectivism. Using Hofstede's (2001) rankings, participating countries ranged from the United States, with the highest individualist score in the world, to China, Colombia, and Thailand, countries that are among the most collectivist. This diversity of sociodemographic and psychosocial characteristics provided an opportunity to examine research questions in comparison groups that varied across multiple economic, social, and cultural dimensions and an overall sample that is more generalizable to the world's population.

Online supplementary Table S1 displays sociodemographic characteristics of the sample by country and shows that the country samples differed significantly on all characteristics except the proportions of girls and boys.

Procedures

Families were recruited from schools that served socioeconomically diverse populations in each participating country. Families were given modest payments for their participation, were entered into drawings for prizes, or small financial contributions were made to children's schools. At age 9, mothers reported on demographic information about the family. At all three ages, mothers and fathers completed questionnaires about their acceptance/rejection of their child, and children completed questionnaires about their prosocial behaviors.

Translation. A procedure of forward- and back-translation was used to ensure the linguistic and conceptual equivalence of measures across languages (Maxwell, 1996; Peña, 2007). Translators were fluent in English and the target language. Measures were administered in Mandarin Chinese (China), Spanish (Colombia and the United States), Italian (Italy), Arabic (Jordan), Dholuo (Kenya), Filipino (the Philippines), Swedish (Sweden), Thai (Thailand), and English (the United States and the Philippines).

Interviews. Interviews were conducted in participants' homes, schools, or at another location chosen by the participants. Procedures were approved by Duke University IRB (protocol #2032; title: Parent Behavior and Child Adjustment Across Cultures) as well as IRBs at universities in each participating country, and all parents signed statements of informed consent. Mothers and fathers were given the option of having the questionnaires administered orally (with rating scales provided as visual aids) or completing written questionnaires. Children were interviewed orally.

Measures

Prosocial behaviors. Children completed a 13-item scale (e.g., "I try to help others") which was adapted from Pastorelli, Barbaranelli, Cermak, Rozsa, and Caprara (1997). Items included caring, sharing, and helping behaviors as well as general sociability. Items were rated as $1 = never$, $2 = sometimes$, or $3 = often$. A single scale was computed as the average of the nine prosocial behavior items (the remaining 4 items were distracter items). Internal consistency (α) reliabilities across counties were .76, .77, and .73 at the three ages, respectively (see online supplementary Table S2 for reliabilities within countries).

Parental acceptance–rejection. Mothers and fathers independently completed the Parental Acceptance-Rejection/Control Questionnaire-Short Form (PARQ/Control-SF; Rohner, 2005) to measure the frequency of their parenting behaviors. Parents rated items as $1 = never$ or almost never, $2 = once$ a month, $3 = once$ a week, or $4 = every$ day. Based on pretesting and to reduce the possibility of ambiguous interpretations across cultures, we modified the original response scale (*almost never true, rarely true, sometimes true, almost always true*). In this study, we did not use five items about behavioral control. We used the total acceptance–rejection scale, which is generally computed as the sum of eight warmth-affection (reversed), for example, "I make my child feel wanted and needed"; six hostility-aggression, for example, "I say unkind things to my child"; four rejection, for example, "My child is a nuisance for me"; and six neglect-indifference, for example, "I pay no attention to my child" items. We reversed the direction of the scale so that a high score represented more parental acceptance. Reliabilities (α) across countries were .84, .85, and .85 for mother self-report of acceptance–rejection, and .87, .86, and .86 for father self-report of acceptance–rejection at the three ages, respectively (see online supplementary Table S2 for reliabilities within countries).

Results

Preliminary Analyses and Analytic Plan

Prior to data analysis, variable distributions were examined for univariate normality (Tabachnick & Fidell, 2012). Standard transformations were applied to correct deviations from normality. Descriptive statistics are presented in the variables' original metrics to aid interpretation. At Wave 2 older children experienced less acceptance from mothers, $r(1091) = -.07$, $p = .019$, and fathers, $r(898) = -.11$, $p < .001$, and at Wave 3 older children experienced more acceptance from mothers, $r(991) = .17$, $p < .001$, and fathers, $r(794) = .09$, $p = .009$. To account for within-wave variation in child age, prior to analyses we residualized the acceptance–rejection variables for child age at each wave. This procedure allowed us to account for the variation of age within waves and still explore developmental changes in the constructs across waves.

All models were fit using M*plus* Version 7.2 (Muthén & Muthén, 2015). In all models, full information maximum likelihood (FIML; Arbuckle, 1996) was used to account for missing data (8.74% of the data points were missing overall; range = 5.52% in Kenya to 13.29% in Sweden). Available *n*s for each variable at each wave are presented in Table 1. A model was

Table 1
Descriptive Statistics of Transaction Constructs

Construct	n	M	SD	Range
Age 9				
Parental age (years)				
Mother	1,118	37.96	6.03	22.00–60.00
Father	952	41.16	6.37	25.00–63.00
Parental education (years)				
Mother	1,120	12.76	4.18	.00–40.00
Father	950	13.06	4.07	2.00–30.00
Acceptance–rejection[a]				
Mother	1,132	88.28	7.14	49.00–96.00
Father	924	86.73	8.01	31.00–96.00
Prosocial behavior	1,144	2.44	.35	1.22–3.00
Age 10				
Acceptance–rejection[a]				
Mother	1,103	88.17	7.38	55.13–96.00
Father	908	86.65	8.01	53.00–96.00
Prosocial behavior	1,108	2.48	.35	1.00–3.00
Age 12				
Acceptance–rejection[a]				
Mother	1,001	88.34	7.41	54.00–96.00
Father	805	87.19	7.92	30.00–96.00
Prosocial behavior	1,026	2.50	.32	1.11–3.00

Note. Possible scale ranges were 24–96 for acceptance–rejection and 1–3 for prosocial behavior.
[a] Higher scores indicate more acceptance and less rejection.

considered to have good fit if the χ^2 test was nonsignificant ($p >$ .05), the CFI and TLI $\geq$ .95, the RMSEA $\leq$ .06, and the SRMR $\leq$ .08 (Hu & Bentler, 1999), but we gave greater weight to the incremental/approximate fit indices than to the significance of the χ^2 because the χ^2 value is known to be sensitive to sample size (Cheung & Rensvold, 2002). For correlations and standardized path coefficients, we adopted conventional magnitudes of r corresponding to small, medium, and large effect sizes as .10, .30, and .50, respectively (Cohen & Cohen, 1983, p. 61).

An a priori model was tested for fit. If that model fit was not acceptable, we examined model modification indices and iteratively added the largest theoretically plausible path, reevaluated the fit of the revised model, and added the next largest theoretically plausible path until model fit was acceptable. Next, a covariate

controlled model, removing variance associated with parental age and years of education, was evaluated using the same procedures and criteria as the a priori model. Because a study goal was to test whether our models fit well for mothers and fathers, we fit our a priori and covariate controlled models on mothers and fathers combined to arrive at a common structure. Mothers and fathers were nested within families and their scores were correlated (see Table 2). Consequently, we accounted for within-family variance by including family as a sampling cluster and using maximum likelihood estimates that are robust to nonindependence of observations (MLR estimation in M*plus*, which results in the robust Satorra-Bentler chi-square test of model fit).

Multiple-group models were tested across the nine countries, mothers and fathers, and girls and boys. A fully free model (with no equality constraints) was compared with a model in which all structural paths and within-time covariances were constrained to be equal across groups (see Putnick & Bornstein, 2016). Following Cheung and Rensvold (2002), if the differences in χ^2 values for the two models were nonsignificant, and the change in CFI $\leq$ .01, we could be reasonably certain that the model fit well across groups. Because we used the Satorra-Bentler (S-B) χ^2, the change in χ^2 was computed using a scaling correction (Bryant & Satorra, 2012). If the difference in fit between the constrained and unconstrained multiple-group models did not meet the criteria above, we examined model modification indices and iteratively released the path with the largest index, reevaluated the fit of the revised model, and released the path with the next largest index until the model fit was acceptable.

Descriptive Statistics and Correlations

The average level of acceptance–rejection was high across countries (as indicated by levels of acceptance in the top third of the scale range; see Table 1). At age 9, average mother acceptance–rejection ranged from 80.24 ($SD = 7.22$) in China to 91.81 ($SD = 4.16$) in Sweden, and average father acceptance–rejection ranged from 77.96 ($SD = 7.79$) in China to 90.81 ($SD = 3.96$) in Italy. Children reported relatively high mean levels of prosocial behavior at all ages. At age 9, average prosocial behavior ranged from 2.19 ($SD = .25$) in Kenya to 2.60 ($SD = .24$) in

Table 2
Correlations Among Transaction Study Variables

Variable	1	2	3	4	5	6	7	8
Age 9								
1. Parental age	*.70****	.27***	.16***	.11***	.16***	.13***	.11***	.08*
2. Parental education	.19***	*.74****	.10***	.08**	.08**	.10***	.07*	.08**
3. Acceptance–rejection	.09**	.05	*.45****	.27***	**.69*****	.31***	**.61*****	.20***
4. Prosocial behavior	.09**	.05	.23***	—	.26***	**.52*****	.14***	**.29*****
Age 10								
5. Acceptance–rejection	.08*	.03	**.65*****	.24***	*.47****	.27***	**.59*****	.19***
6. Prosocial behavior	.15***	.07*	.25***	**.52*****	.24***	—	.21***	**.38*****
Age 12								
7. Acceptance–rejection	.09*	.00	**.57*****	.13***	**.52*****	.18***	*.37****	.18***
8. Prosocial behavior	.06	.05	.17***	**.29*****	.17***	**.36*****	.21***	—

Note. Mothers' intercorrelations are above and fathers' intercorrelations are below the diagonal. Correlations between comparable mother and father variables are italicized in shaded cells on the diagonal. Bolded correlations in shaded cells in off-diagonals are stabilities of the same construct over time.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Sweden. Hence, there was considerable variability in both constructs within and across countries.

Table 2 displays the correlation matrix of all variables. Constructs were generally highly stable across ages, but stability for prosocial behavior was smaller between ages 10 and 12 than ages 9 and 10, $zs = -4.35$ to -4.65, $ps < .001$, possibly reflecting the longer age gap or child maturation. Within ages, parental acceptance-rejection and child prosocial behavior were moderately related. Correlation matrices by country are presented in online supplementary Table S3.

Transactional Model

We fit an a priori model with stability coefficients for acceptance-rejection and prosocial behavior from ages 9 to 10 and ages 10 to 12, covariances between acceptance–rejection and prosocial behavior within ages, and transactional paths from each construct to the other across ages (e.g., from acceptance–rejection at age 9 to prosocial behavior at age 10 and vice versa). This model did not have good fit, S-B $\chi^2(4) = 135.73$, $p < .001$, CFI = .92, TLI = .72, RMSEA = .12, 90% CI [.11, .14], SRMR = .04. Based on modification indices, we modified the a priori model by incrementally adding two lagged stability paths from age 9 to age 12 for acceptance–rejection and prosocial behavior. This final model (see Figure 1) was a good fit to the data, S-B $\chi^2(2) = 7.88$, $p = .019$, CFI = .99, TLI = .98, RMSEA = .04, 90% CI [.01, .07], SRMR = .01. Both acceptance-rejection and prosocial behavior were stable across time and were correlated with one another at ages 9 and 12, but not at age 10. Three significant transactional paths emerged, controlling for stability over time and within-age relations: (a) higher age 9 parental acceptance predicted an increase in age 10 child prosocial behavior, (b) higher age 10 parental acceptance predicted an increase in age 12 child prosocial behavior, and (c) higher age 9 child prosocial behavior predicted an increase in age 10 parental acceptance. In addition, the following indirect transactional effects were significant: (a) age 9 acceptance–rejection to age 12 prosocial behavior through age 10 acceptance–rejection, $\beta = .05$, $p = .010$, (b) age 9 acceptance–rejection to age 12 prosocial behavior through age 10 prosocial behavior, $\beta = .05$, $p < .001$, (c) age 9 prosocial behavior to age 12 prosocial behavior through age 10 acceptance–rejection, $\beta = $ .01, $p = .020$, and (d) age 9 prosocial behavior to age 12 acceptance–rejection through age 10 acceptance–rejection, $\beta = $ .02, $p < .001$.

Covariate Controlled Final Model

To determine the roles of parental education and age in the final model, we added both as observed variables to the model with direct paths to all variables in the model and covariance between them. The covariate controlled model fit the data, S-B $\chi^2(2) = 7.59$, $p = .023$, CFI = .99, TLI = .96, RMSEA = .04, 90% CI [.01, .06], SRMR = .01. When controlling for parental education and age, all significant paths depicted in Figure 1 remained significant at the .05 level, and no standardized coefficient changed by more than .01.

Multiple-Group Models by Country, Parent Gender, and Child Gender

We examined whether the final model in Figure 1 fit for families in the nine countries. A model with no constraints was compared to a model with equality constraints across countries on all model coefficients. The difference in model fit, ΔS-B $\chi^2(104) = 160.88$, $p < .001$, ΔCFI = .040, indicated that all coefficients were not invariant in the nine countries. To achieve an acceptable difference in model fit, ΔS-B $\chi^2(98) = 109.16$, $p = .207$, ΔCFI = .007, six coefficients were released (out of 104 potential coefficients; 5.8%): (a) stability of parental acceptance–rejection from age 9 to 10 in Kenya, which was smaller than other countries but still significant; (b) stability of parental acceptance–rejection from age 10 to 12 in Kenya, which was small and nonsignificant; (c) stability of prosocial behavior from age 9 to 10 in Kenya, which was small and nonsignificant; (d–e) stabilities of prosocial behavior from age 10 to 12 in Kenya and Jordan, which were small and nonsignificant; and (f) the age 12 covariance of parental acceptance–rejection and prosocial behavior in Jordan, which was larger than other countries. Hence, the released coefficients involved only Kenya's and Jordan's stability coefficients and within-age covariances. No transactional paths differed across countries.

We next examined whether the final model in Figure 1 fit for mothers and fathers. The difference in model fit between uncon-
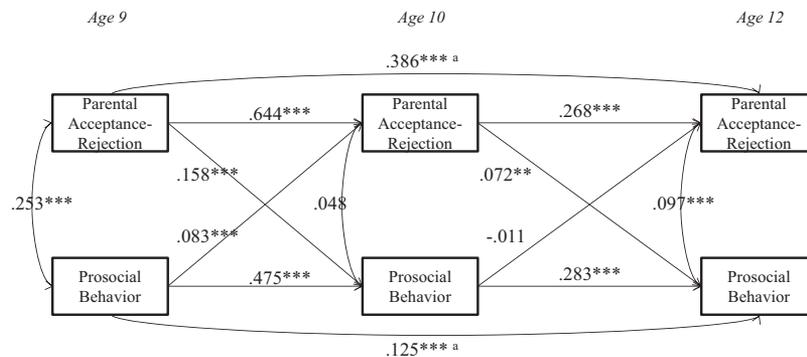

Figure 1. Standardized final model of transactional relations between mother and father acceptance–rejection and child prosocial behavior across nine countries. [a] Path was added to the a priori model. ** $p \le .01$. *** $p \le .001$.

strained and constrained models, ΔS-B $\chi^2(13) = 16.19$, $p = .239$, ΔCFI $= .003$, indicated that constraining the coefficients to be equal for mothers and fathers did not significantly reduce the model fit.

We finally examined whether the final model in Figure 1 fit for girls and boys. The difference in model fit between unconstrained and constrained models, ΔS-B $\chi^2(13) = 23.86$, $p = .032$, ΔCFI $= .007$, indicated that all coefficients were not invariant across girls and boys. Therefore, we released the stability path for prosocial behavior from age 10 to age 12, which was larger for girls, $\beta = .348$, $p < .001$, than boys, $\beta = .208$, $p < .001$. With this released constraint in the model, the difference in model fit was no longer significant, ΔS-B $\chi^2(12) = 14.16$, $p = .291$, ΔCFI $= .001$.

We conclude that the full model depicted in Figure 1 was largely invariant across countries and girls and boys, and fully invariant across mothers and fathers. Furthermore, across countries, mothers and fathers, and girls and boys, parental acceptance had similar transactional effects with child prosocial behavior.

Discussion

We report consistency across countries, mothers and fathers, and girls and boys in effects of positive parenting on changes in child prosocial behavior across late childhood and the transition to adolescence, as well as a reciprocal effect of child prosocial behavior on changes in positive parenting in late childhood, but not across the transition to adolescence. The effects of positive parenting on child prosocial behavior development support an extensive theoretical and empirical literature on the socialization of children (Bornstein, 2015). This study confirms that socialization narrative in a broader sample and adds to it by suggesting that child prosocial behavior at age 9 leads to increased parental acceptance at age 10, which, in turn, leads to gains in child prosocial behavior at age 12. Hence, child prosocial behavior in middle childhood initiates a cascading effect leading to more positive responses from parents and better child adjustment later. This finding also validates the view that child characteristics influence parenting. Promoting prosocial behavior in childhood may lead to better parent–child relationships and to more positive child behavior later.

Although child prosocial behavior affected parental acceptance from ages 9 to 10, the effect was not significant from ages 10 to 12. Perhaps the longer 2-year gap between ages 10 and 12, versus a 1-year gap between ages 9 and 10 attenuated relations. Supporting this explanation, stability in parenting and prosocial behavior as well as transactional effects between them were smaller from ages 10 to 12 than 9 to 10 (see Figure 1). Alternatively, children entering adolescence gain moral reasoning, empathy, perspective taking, and social understanding, which underpin prosocial behaviors (Eisenberg et al., 2013), but their prosocial behaviors tend to decline (Carlo, Crockett, Randall, & Roesch, 2007) and become more differentiated (Güroğlu, van den Bos, & Crone, 2014). Perhaps early adolescent prosocial behaviors are directed more toward peers than to parents (Bornstein, Jager, & Steinberg, 2012; Carlo, Crockett et al., 2007; Padilla-Walker et al., 2016), or parents' acceptance of their children at this stage of development is more focused on parent–child dysfunctional interactions (e.g., conflict), which tend to increase in the transition to adolescence (Putnick et al., 2010).

Transactions Across Countries, Parents, and Genders

A major advantage of this study was the exploration of the moderating effects of nine countries, mothers and fathers, and girls and boys. Regarding country moderation, the transaction effects were invariant across all nine countries, suggesting consistency in predictive relations between parental acceptance and child prosocial behavior regardless of country context. This finding extends much of the existing research from Western samples to some underresearched countries in South America, Asia, and Africa. Overall, despite the sociodemographic and cultural differences between the country samples (online supplementary Table S1), socialization processes and effects were common across countries. Parental acceptance consistently promoted child prosocial behaviors, and child prosocial behaviors promoted greater parental acceptance in childhood but not adolescence regardless of country. Stability coefficients and one within-age relation were different for two countries.

Model coefficients were also invariant for mothers and fathers. Both parents' acceptance have important relations with child prosocial behavior, and mothers' and fathers' acceptance of their children are similarly influenced by their children's prosocial behaviors. This finding is important because the literature about father involvement with children indicates that fathers interact less with their children, and do so in different ways, than mothers (Craig, 2006; McKinney & Renk, 2008; Putnick et al., 2012; Yeung et al., 2001). The acceptance–rejection construct is less focused on what parents do and more focused on how parents make their children feel (i.e., accepted). Perhaps the amount of time, the exact content, or the style of parental interaction is less important than instilling feelings of worth and approval in children.

Finally, for models across girls and boys, all transaction effects were invariant, but there was slightly smaller stability of prosocial behavior for boys than girls across the transition to adolescence. Kokko, Tremblay, Lacourse, Nagin, and Vitaro (2006) also found only moderate ($r = .19$) stability of boys' prosocial behavior over this developmental period. It may be that for boys, stability of prosocial behaviors is disrupted across the transition to adolescence because of changes in social-affective processing accompanying puberty (Crone & Dahl, 2012) and the transition to middle school and its different social structures.

Strengths and Limitations

This study had several notable strengths: the large sample size, three-age longitudinal design, inclusion of families in nine countries, comparisons of mothers and fathers and of girls and boys, and application of statistical controls for parental age and education. Still, three specific limitations should be acknowledged. First, we did not have nationally representative samples from each country. Our samples are representative of school-based families in their respective communities, and these country samples still differed greatly on many sociodemographic characteristics and so provided a robust test of the country moderation of transactional effects. Second, this study employed survey data (not observational measures) of parenting and child prosocial behavior. Self-reports may carry some bias, but the reporters did not overlap, so shared source variance was not an issue. Still, studies that employ complementary observational measures of parenting and child

prosocial behaviors should be undertaken. Third, the unequal intervals between assessments made it more difficult to interpret the findings.

Future Directions and Implications

This study's findings have several implications for research and clinical practice on parenting and child development. The results apply broadly to community populations, but it remains to be seen if these transactional effects apply in clinical samples of parents and children (e.g., parents who maltreat; children with conduct or antisocial disorders). Future research should investigate the unique and additive effects of mothers' and fathers' acceptance/rejection as well as distinguish between child general prosocial behaviors and those that are relationship- or setting-specific (e.g., prosocial behaviors in the parent–child relationship vs. peer–child relationship; prosocial behaviors in home vs. school settings), as they may have different developmental pathways (Padilla-Walker et al., 2012). Measuring conflict in the parent–child relationship in the transition to adolescence may also help to explain why child prosocial behaviors no longer predict parental acceptance. Within families, mothers' and fathers' acceptance–rejection of their children were only moderately correlated (rs = .37–.45; Table 1). Hence, future research should investigate the multiplicative effects of mothers' and fathers' acceptance. For example, is one accepting parent enough to support prosocial behavior, or is it better to have two accepting parents? Can one parent's acceptance buffer the effects of the other parent's rejection?

General prosocial behaviors in childhood lead to more parental acceptance later. Hence, interventions to increase child prosocial behaviors could lead to more positive family interactions (see, e.g., Webster-Stratton, Reid, & Hammond, 2004). Likewise, parenting interventions are known to improve child prosocial behaviors (Griffin, Guerin, Sharry, & Drumm, 2010; Menting, de Castro, & Matthys, 2013; Tiedemann & Johnston, 1992). Despite variability in sociodemographic circumstances, parental acceptance–rejection, and child prosocial behavior across the countries we studied, transactional relations were invariant. Hence, our findings indicate that similar processes are at work across countries, for mothers and fathers, and for girls and boys, and consequently suggest that effective interventions to improve child prosocial behavior or parental acceptance could be broadly applied. It is also important to note that mothers and fathers had similar influences on their children's prosocial behaviors, and their parenting was similarly influenced by their children's prosocial behaviors. Hence, interventions could target either or both parents' acceptance of their children, and interventions to improve child prosocial behaviors may have similar effects on improving acceptance from both mothers and fathers.

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