

Religiosity as a moderator of the links between parental psychological control and children's prosociality

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Abstract

Three studies examined the links between psychological control and prosociality in middle childhood, and the role of religiosity as a moderator. Study 1 (101 Israeli Jewish families, ages 6–9, 50% girls) found a significant interaction, with a negative association between maternal psychological control and children's prosociality in secular but not in religious families. Study 2 (161 Israeli Jewish families, ages 6–12, 48% girls) replicated this interaction for mothers using a continuous religiosity measure. Study 3 (64 Arab Muslim Israeli families, ages 6–8.5, 50% girls) also found a significant interaction, with a positive link between psychological control and prosociality seen at higher, but not at lower, religiosity levels. The findings suggest that religiosity may alter the meaning and consequences of parenting practices.

This study examined the potential moderating role of religiosity in the link between parents' psychological control and children's prosociality. Psychological control refers to parents' attempts to influence their children by controlling or manipulating their emotions or thoughts (Barber & Harmon, 2002; Cheah et al., 2019; Rudy et al., 2014). This can take the form of inducing guilt or shame in the child, giving the "silent treatment," or being overly intrusive or critical. Parents' psychological control has often been linked with children's and adolescents' poorer functioning, including more internalizing and externalizing problems (Barber & Harmon, 2002). Less work, however, has examined the links between psychological control and children's positive functioning, such as prosocial behavior. Moreover, the role of culture as a moderator of these associations has been rarely examined. This paper sought to address these gaps in a series of three studies.

Abbreviations: CP, conservative Protestant; SDQ, Strengths and Difficulties Questionnaire.

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Psychological control and prosocial behavior

Prosocial behavior—voluntary behavior aimed at helping or otherwise benefiting another individual—is an important aspect of children's social competence, and is associated with better social adjustment (Hastings et al., 2015). Prosocial behavior can stem from different motivations, including concern for others, adherence to prosocial norms, guilt, desire for reciprocity, and more (Eisenberg et al., 2016). Some of these motivations, such as concern for others, may be undermined by parental psychological control. Parents' manipulation of children's emotions, intrusiveness, and criticism can model low regard for others' needs and generate resentment, which can reduce children's concern for and desire to assist needy others (Hastings et al., 2015).

There is some evidence that psychological control can be detrimental to children's prosociality although, as reviewed in the following section, this evidence is mixed (see also Hastings et al., 2007, 2015). Moreover, prior work examining this link has focused primarily on adolescents, and sometimes on young children, to the relative neglect of middle childhood. Thus, maternal (but not paternal) psychological control predicted less prosocial behavior toward

strangers a year later in a sample of Chinese early adolescents (Fu & Zhang, 2020). In two other early adolescent samples, psychological control did not directly predict less subsequent prosociality, but negatively predicted prosociality indirectly, with the effect mediated by other variables: maternal knowledge in a Turkish sample (Mouratidis et al., 2019), and a sense of balanced connectedness with the parents in a U.S. sample (Yoo et al., 2013). Moreover, Clark et al. (2015) found a concurrent association between the two variables among emerging adults, but only for African American and not for European American respondents. A large study with multiple cultural groups found no significant associations between psychological control as reported by children at around age 10 and their prosocial behavior as reported by parents 2 years later, and this (non)effect was not moderated by how normative psychological control was within each culture (Lansford et al., 2018). In young children, maternal intrusiveness and/or negative affect predicted decreases in toddlers' concern for others over time (J. L. Robinson et al., 1994) and less concern as reported by mothers (but not as observed) among preschoolers (Hastings et al., 2000). At the same time, mothers' love withdrawal, a specific psychological control practice, has been *positively* linked to toddlers' reparation after causing distress to others (Zahn-Waxler et al., 1979), and to preschoolers' interview responses reflecting concern for others (Garner, 2012), and was unrelated to empathy in a sample of sixth and seventh graders (Krevans & Gibbs, 1996). Another psychologically controlling technique, guilt induction, predicted increases in prosocial behavior 6 months later among Chinese American preschoolers who were less well-regulated, and did not significantly impact better-regulated children (Yu et al., 2018).

Overall then, the findings regarding the effects of psychological control on prosociality are mixed, and there is a notable gap in knowledge regarding the middle childhood period. This paper, therefore, focuses on the elementary school years, a period during which prosocial behaviors and attitudes play an important role in children's adjustment (Hastings et al., 2007, 2015). Moreover, although prior studies were conducted in different cultures, the role of the sociocultural context as a moderator of the association between psychological control and prosociality has rarely been directly examined. As noted earlier, one study which tested ethnicity as a moderator found a significant effect (Clark et al., 2015), and another study found no evidence that cultural normativeness moderated this association (and found no significant association overall; Lansford et al., 2018). To further address this gap in knowledge, this paper examined the role of another contextual variable as a potential moderator: the family's religiosity.

Religiosity as a moderator

Prior work shows that parenting practices which have deleterious effects in one ecological niche can sometimes be less

detrimental, or even beneficial, in another sociocultural context; this pattern of cultural moderation has been observed for psychological control (Davidov & Atzaba-Poria, 2016; Güngör, 2008; Krishnakumar et al., 2004; Rudy et al., 2014), as well as for other forms of parenting (Chao, 2001; Lamborn et al., 1996; Lansford et al., 2004). Moreover, the effects of psychological control (and other forms of parenting) on child outcomes have also been shown to differ as a function of the cultural normativeness of these parenting practices, as perceived by children and mothers or objectively defined (Gershoff et al., 2010; Lansford et al., 2018).

Such patterns of cultural moderation are thought to stem from the different meanings attributed to the parenting behavior in different sociocultural contexts. Such meanings are determined and reflected by different elements present *before* the parental behavior is shown (e.g., how the parent perceives the child's behavior and evaluates the parenting strategy), *while* the behavior is performed (e.g., what emotion the parent expresses, what the parent does in addition), and *following* the parental behavior (how the behavior affects the child's thoughts and feelings; Davidov, 2021; McLoyd et al., 2007; Rudy & Grusec, 2006). When a parenting practice (e.g., psychological control) is viewed more negatively by parents and children—for example, as manifesting rejection, lack of caring, or lack of appreciation for the child—then its consequences for children's functioning should be more detrimental. In contrast, when the same behavior conveys a more benign meaning, such as a belief that the parent is guiding the child in the right direction, then its consequences for children should be less negative, or even positive (Chao, 2001; Davidov, 2021; Güngör, 2008; Lansford et al., 2004; Rohner et al., 2005; Rudy & Grusec, 2006; Soenens et al., 2015).

The cultural variables most often examined as moderators of the effects of parenting are ethnicity and country/country of origin. Another cultural variable, religiosity, has received very little attention, although it can potentially serve as an important moderator (Ellison et al., 2011). Religiosity at the group level exerts a powerful influence on personal religiosity and other consequences at the individual level, likely because of the salience of religious norms and the pervasive social nature of religion—its norms and values are taught and reinforced by multiple socialization agents (Gebauer & Sedikides, 2021). Moreover, personal religiosity is associated with values, which can promote the use of psychological control as well as imbue it with a less negative meaning. Meta-analysis spanning 15 countries (Saroglou et al., 2004) showed that across different religious denominations (including Catholicism, Judaism, and Islam), religious people more strongly endorse “conservation values” (tradition, conformity, and security) and are more likely to dislike values reflecting autonomy and openness to change (such as self-direction).

This value constellation might on the one hand lead religious parents to exert greater control, including by undermining children's autonomy, as they seek to socialize

their children in accordance with their worldview. At the same time, when parents' psychologically controlling tactics are motivated by such a value system, which religious children are also socialized to adopt, these parenting practices might carry a less negative meaning, or even a positive meaning. For example, in a religious context psychological control may often stem from and reflect, for both parents and their children, the parent's concern about the child's future, belief that parents are the best judges of what the child needs in order to thrive, and desire for the child to respect valued norms and traditions. In this context, psychological control should not undermine prosociality, and might even support it. In contrast, when parents exert psychological control in a secular context, they are acting in a manner inconsistent with the secular cultural values of autonomy and self-direction; such behavior is thus more likely to stem from and reflect more negative meanings, for both parents and children, such as impatience with the child, hostility or rejection, which can undermine children's prosociality (Cheah et al., 2019; McLoyd et al., 2007; Rohner et al., 2005; Rudy & Grusec, 2006).

Suggestive evidence that religiosity can moderate the effects of psychological control, rendering it less detrimental to children, comes from studies showing that conservative protestant (CP) affiliation in the United States moderated the effects of other forms of controlling parenting in a similar fashion. Gunnoe et al. (2006) found that fathers' observed authoritarian parenting was not directly related to children's behavior problems in CP families, whereas it significantly predicted behavior problems in other families. And in a longitudinal study, Ellison et al. (2011) found that maternal CP affiliation moderated the link between physical discipline and adjustment problems, in much the same way. However, it is not yet known whether a similar pattern of moderation characterizes the relationship between religiosity, psychological control, and children's prosociality. This paper addresses this gap.

The present study

This report includes three studies, all examining the moderating role of religiosity in the associations between parental psychological control and children's prosociality during middle childhood. Understanding how parents' psychological control may predict children's prosociality levels at this age, and may do so differently as a function of the religious context, is of interest both theoretically and practically (e.g., for designing more effective and context-informed prevention and intervention programs).

As discussed earlier, we hypothesized that religiosity would act as a moderator, such that as religiosity increases, the association between psychological control and prosocial behavior becomes less negative and more positive. In Study 1, religiosity was assessed dichotomously (religious vs. secular), and the sample consisted of

mothers and their children from Jewish families in Israel. Study 2 assessed a similar population using a larger sample, included both mothers and fathers, and religiosity was assessed both dichotomously and continuously. Study 3 used the same methodology as Study 2 and examined a sample of Muslim Arab families in Israel.

Religiosity is also associated with sociodemographic factors, such as the number of children in the family. To rule out such factors as alternative explanations, relevant demographic variables were included as covariates in all three studies. Moreover, in addition to psychological control, religiosity may also be linked to other forms of controlling parenting, such as authoritarian parenting, a style combining strictness and power assertive tactics with low levels of responsiveness (Baumrind, 1971). Although often correlated, psychological control and authoritarian parenting are distinct, with the former primarily involving internally controlling tactics (by affecting children's guilt, shame, sense of self, etc.) and the latter primarily involving externally controlling pressures (through power assertion, etc.; Soenens & Vansteenkiste, 2010). Moreover, psychological control is also often negatively correlated with, yet distinct from, aspects of supportive parenting (Silk et al., 2003). To pinpoint the unique contributions of psychological control, all three studies also controlled for authoritarian and supportive parenting in the analyses.

STUDY 1

Israel's social fabric is vastly heterogeneous, and one important dimension of substantial variability is religiosity (Lavee & Katz, 2003). Religious Israeli Jews are committed to a way of life which abides by the many rules and prohibitions dictated by the Jewish faith (e.g., eating only Kosher food, refraining from many activities during the Sabbath, etc.). Secular Israeli Jews, in contrast, are not committed to following the various do's and don'ts of the Jewish religion. The comparison of secular and religious Israeli Jewish families provided us with the opportunity to examine our hypothesis that religiosity moderates the links between psychological control and children's tendency to act prosocially.

Method

Participants

The sample consisted of 101 children and their mothers from Israeli Jewish families, 60 secular (52% boys) and 41 religious (49% boys). Children were 6 to 9 years of age (M s for secular and religious groups = 7.44 and 7.30, respectively, both SD s = 0.82), and mothers' mean age in the secular and religious groups was $M = 37.2$ ($SD = 4.67$) and $M = 37.9$ ($SD = 6.04$), respectively (t s < 1). The large

majority of mothers were married (88% and 95% in the secular and religious groups, respectively; $\chi^2(1) = 1.50$, ns). The sample was recruited from multiple geographic areas (North and South of Israel, and the Jerusalem area), by distributing letters about the study to parents through classrooms and by word-of-mouth. Data were collected in 2007–2009. Consistent with known differences, religious mothers had more children on average than secular mothers, $M_s = 4.19$ and 2.82 , $t(99) = 5.26$, $p < .001$; these rates are highly similar to national averages for religious and non-religious Israeli Jewish women (Levi, 2016). As well, religious mothers were somewhat less likely to have had post-secondary education, 53.7% versus 71.7%, $\chi^2(1) = 2.93$, $p = .087$; this difference is consistent with national averages, but the respective rates are higher, indicating that our sample was more highly educated than average (Israel Central Bureau of Statistics, 2018). Income information was not collected in this study.

Procedure and measures

The study received ethics approval from The Hebrew University of Jerusalem IRB and from Israel's Ministry of Education. Data were collected during home visits, by trained undergraduate and graduate female students. Mothers completed a demographics form and parenting scales, while the research assistant interviewed the child in a separate room and administered the behavioral measure of prosociality. The child received an age-appropriate toy.

Religiosity

Mothers indicated whether they were secular or religious on a forced-choice item in the demographic form. Response options were: religious, secular-traditional, secular-not traditional (Jewish Israelis who identify as "traditional" observe a few religious customs, but are not committed to a religious identity and lifestyle. The latter two options were therefore combined to form the secular group).

Psychological control

Mothers completed a 32-item parenting questionnaire, by indicating how much each item described their parenting of the focal child on a 7-point scale (1 = *does not describe me at all*, 7 = *describes me very well*). All items were selected from Block's (1981) Child-Rearing Practices Report. Six items referred to central components of psychological control, such as guilt induction and shaming, control over the child's emotions, and intrusiveness ($\alpha = .78$; see Supporting Information for items).

Parenting covariates

Two additional parenting measures were created from the parenting questionnaire, to be examined as potential covariates. A *warmth* measure was constructed using

eight items (e.g., "I express affection by hugging, kissing, and holding my child"; $\alpha = .73$), and an *authoritarian parenting* measure was created from six items, focusing on strictness and power assertion (e.g., "I do not allow my child to question my decisions," "I believe that spanking is ultimately the best way of disciplining"; $\alpha = .75$).

Prosociality

This construct was assessed using two measures: An interview with the child and a behavioral observation. (1) *Child interview*: the experimenter read the child two short vignettes, accompanied by illustrations, in which a protagonist (same sex as the child) observed a peer in need (see Supporting Information). Participants were asked to complete the stories by saying what the protagonist would do and say. Responses were subsequently coded into a 7-point scale ranging from -2 (*antisocial behavior*) to 0 (*ignore*) to $+4$ (*very highly prosocial*). A randomly selected set of transcripts (32%) were independently coded by two coders, with high inter-rater reliabilities (intraclass correlation coefficient = .85 and .91 for the two vignettes). A closely similar measure had been used by Davidov and Grusec (2006) and shown to converge with behavioral, mother-, and teacher-report measures of children's prosociality. (2) *Observed behavior*: the interviewer, supposedly by accident, dropped a plastic cup filled with paperclips onto the floor. She exclaimed "oh no" and then picked up the scattered paperclips slowly, for the next 20 s (making no eye contact with the child, so as not to invite a response). Later, the interviewer documented in her notes the child's behavior during the episode. These descriptions were subsequently coded into a dichotomous measure with $0 =$ did not help, and $1 =$ helped pick up the paperclips. Inter-rater reliability, based on 20% of the cases, was 100%.

Data reduction. Children's prosocial responses to the two vignettes were highly correlated ($r = .77$, $p < .001$) and each vignette score correlated with observed helping in the paperclips assessment (point-biserial $r_s = .21$ and $.32$, $p_s = .041$ and $.001$). Moreover, the three scores (two vignettes and behavioral measure) loaded on a single factor, eigenvalue 1.56, accounting for 52.14% of the variance, with loadings ranging from .69 to .78. The factor score yielded by the factor analysis was therefore used as the total (combined) prosociality score (with a mean of 0 and SD of 1).

Results and discussion

Preliminary analyses

Transformations were applied when appropriate, to correct skewness and normalize distributions (see Supporting Information). Religiosity was associated with warmth, and marginally with psychological control, but not with prosocial behavior (Tables S1 and S2). Correlational analysis led

to the selection of six control variables: maternal education, family size, authoritarian parenting, warmth, and children's sex and age (see Tables S1 and S2).

Examining religiosity as a moderator

A hierarchical regression model was tested (in SPSS), and simple slopes analysis was performed using Hayes's PROCESS macro (version 3.4.1, Model 1), as a confirmatory examination of our hypothesis. Total prosociality score was used as the dependent variable, and independent variables were entered in three steps: Step 1 included the six control variables, step 2 included religiosity (dummy coded) and psychological control main effects, and step 3 included the religiosity \times psychological control interaction. Age was a significant predictor, $\beta = .35, p < .001$, and child's sex was close to significance, $\beta = .20, p = .057$ (girls more prosocial). Importantly, religiosity significantly moderated the association between psychological control and prosociality, $\beta = .21, p = .030, \Delta R^2 = .042$ (see Table S3 for the full model). A more parsimonious model, trimming three covariates which were far from significance (maternal education, family size, and warmth) yielded virtually identical results. Simple slope analysis showed that consistent with prediction, in secular families psychological control was linked to lower prosociality, $\beta = -.32, p = .041$, whereas in religious families the simple slope was weakly positive and non-significant, $\beta = .12, p = .50$.

The results of Study 1 indicate that, consistent with hypothesis, the link between maternal psychological control and children's prosociality was significantly moderated by religiosity. For secular mothers and their children, greater psychological control was linked to lower prosociality, whereas no such link emerged in religious families. In the general discussion, we address the meaning of these findings, in concert with those of the other two studies. Notable weaknesses of Study 1 are the inclusion of only mothers and not fathers, and the treatment of religiosity as a dichotomy, which may have appeared artificial to some participants and likely reduced meaningful variance. Another limitation is that children's ages spanned only the early elementary school period. Study 2 addressed all these issues.

It is also interesting that maternal warmth was negatively associated with prosociality for secular mothers (see Table S2). This association is unexpected, as prior work typically found either positive associations or no associations between parental warmth and children's prosociality (Hastings et al., 2015). Because warmth is one component of a permissive parenting style (together with little and inconsistent limit setting; Baumrind, 1971), one possibility is that for some mothers, warmth may be accompanied by indulgence, with this permissive style linked in turn to lower prosociality (Wong et al., 2021). We therefore included both permissive parenting

and authoritative parenting (which combines warmth with consistent, effective limit setting) as control variables in the next two studies.

STUDY 2

Study 2 sought to replicate and extend Study 1. It examined the same population with a somewhat larger sample and larger age range, and included both mothers and fathers. Moreover, religiosity was assessed both as a continuous and a dichotomous variable. As well, several of the variables (parenting, prosocial behavior) were assessed using different measures than in Study 1, to examine whether results could be replicated.

As in Study 1, we expected that religiosity would moderate the association between parental psychological control and children's prosocial behavior, such that a negative association would be found in more secular families, but no association would be found in more religious families. This pattern was predicted for both mothers and fathers. Moreover, the continuous religiosity measure was expected to yield stronger effects than the dichotomous measure, as it captures more variance. Finally, we also explored whether the interaction between psychological control and religiosity varies according to children's age.

Method

Participants

The sample consisted of 161 children (52% boys) and their mothers ($N = 160$) and fathers ($N = 144$) from Israeli Jewish families. Forty-two percent of the children (50% boys) attended schools of the religious public education stream, and the remaining 58% (54% boys) attended general (secular) public education stream schools. Children were 6–12 years old ($M = 9.13, SD = 1.65$); respective M s and SD s for religious and secular children were 8.95 (1.70) and 9.25 (1.60), $t(159) = 1.15, p = .254$. In 90% of the families, the two parents were married (91% in the religious group, and 89% in the secular group, $\chi^2 < 1, ns$). Additional demographic characteristics are reported in Table 1. As shown, the sample was fairly diverse with respect to income. Moreover, the proportions of parents with university degrees were highly similar to the national rates for Jewish adults (Israel Central Bureau of Statistics, 2018). Children who attended religious stream schools had more siblings on average than children who attended general (secular) schools, $t(158) = 3.13, p = .002$, but their parents did not differ in age or income (all t s $< 1, ns$), or in having a university degree (χ^2 s $< 1, ns$; see Table 1). The sample was recruited from the Jerusalem area, by distributing letters to parents through classrooms. Data were collected in 2009–2010. Families received a gift certificate of 100 NIS (approximately 30 US\$) and a gift for the child.

TABLE 1 Demographic characteristics of samples, Studies 2 and 3

Characteristic	Study 2			Study 3		
	Whole sample (<i>N</i> = 161)	Secular (<i>n</i> = 93)	Religious (<i>n</i> = 68)	Whole sample (<i>N</i> = 64)	Secular (<i>n</i> = 32)	Religious (<i>n</i> = 32)
	%	%	%	%	%	%
Maternal education						
<12 years	1.2	1.1	1.5	9.4	6.3	12.5
High school	48.4	50.5	45.6	53.1	40.6	65.6
University degree	49.1	46.2	52.9	37.5	53.1	21.9
Did not report	1.2	2.1	0.0			
Paternal education						
<12 years	9.7	8.6	11.1	25.0	15.6	34.4
High school	40.3	44.4	34.9	48.4	43.8	53.1
University degree	47.2	43.2	52.4	26.6	40.6	12.5
Did not report	2.7	3.7	1.6			
Number of children						
1	5.0	6.5	2.9	0.0	0.0	0.0
2	16.1	19.4	11.8	21.9	31.3	12.5
3	40.4	44.1	35.3	34.4	37.5	31.3
4	26.1	22.6	30.9	23.4	21.9	25.0
5+	11.8	6.5	19.1	20.3	9.4	31.3
Did not report	0.6	1.0	0.0			
Family income (per month) ^a						
8500 NIS or less ^b	21.7	20.4	23.5	59.4	43.8	75.0
8501–12,500 NIS ^c	25.5	24.7	26.5	26.6	34.5	18.8
12,501–20,000 NIS ^d	29.2	31.2	26.5	14.1	21.9	6.3
20,001 NIS or higher ^e	18.6	17.2	20.6	0.0	0.0	0.0
Did not report	5.0	6.5	2.9			

Note: In Study 1, secular and religious division reflects the child's school; in Study 2, secular and religious determined by maternal head cover.

^aMonthly gross family income (before taxes), as reported by mothers.

^bBelow the 30th income percentile (Israel Central Bureau of Statistics, 2017).

^cCorresponding to the 30th–40th income percentiles.

^dCorresponding to the 40th–70th income percentiles, and to the mean monthly family income in Israel at the time, 18,671 NIS.

^eAbove the 70th income percentile.

Procedure and measures

The study received ethics approval from The Hebrew University of Jerusalem IRB and from the Israeli Ministry of Education. Data were collected during home visits, each conducted by two trained undergraduate or graduate female students. The parents stayed with one research assistant, and each parent independently completed a parenting questionnaire, a structured parenting interview, a measure of the child's prosocial behavior, and a demographics form. Meanwhile, the second research assistant administered measures to the child in another room, including the behavioral prosociality measure.

Religiosity

Mothers and fathers indicated their level of religiosity on a 1–5 scale, ranging from 1 = *not at all religious* to 5 = *highly religious*. An additional, dichotomous measure of religiosity used in this study was the type of school attended by the child: a religious stream or general (secular) stream school.

Psychological control

This construct was assessed using 16 parent-report items, eight completed as part of the parenting questionnaire and eight as part of the parent interview. The questionnaire included six items from Barber (1996) and two items from Block (1981; see Supporting Information

for items). Parents rated on 5-point scales how much each item described their parenting of the focal child (from 1 = *very un-descriptive*, to 5 = *very descriptive*). In the parent interview, parents reported how frequently they reacted in a variety of ways to their child's misbehavior (1 = *never*, 5 = *nearly every day*). Eight items addressed psychological control (guilt induction, shaming, love withdrawal; see Davidov & Atzaba-Poria, 2016 and Supporting Information). All 16 psychological control items converged, $\alpha = .81$ for mothers and .83 for fathers, and were averaged to form a psychological control score for each parent.

Parenting covariates

Both parents completed the Parenting Practices Questionnaire (Robinson et al., 1995), a 62-item instrument assessing Authoritative (α for mothers and fathers = .88), Authoritarian ($\alpha = .80, .81$) and Permissive practices ($\alpha = .76, .73$). The three parenting style scores were computed for each parent, to be examined as potential covariates.

Prosocial behavior

This variable was assessed using two measures: parent reports and behavioral observation. Mothers and fathers completed the prosocial behavior subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 2001), which includes five items (e.g., "Helpful if someone is hurt, upset or feeling ill"). Alphas for mothers (.57) and fathers (.64) indicated modest internal consistency, similar to prior work (Riso et al., 2010; Van Widenfelt et al., 2003). When both mothers' and fathers' ratings were examined together, alpha increased to .694 for seven items (after deleting two items for mothers and one for fathers that reduced reliability). The behavioral measure was the same paperclips measure used in Study 1. Interviewers were asked to document the child's behavior in greater detail, enabling the subsequent coding of their accounts into three levels: 0 = no help, 1 = partial help (e.g., picked up a few and then stopped), 2 = full help (started helping right away, and continued until all paperclips were collected). Inter-rater reliability, based on a random set of 22% of the cases, was 100%.

Data reduction. Mothers' and fathers' ratings of prosociality were significantly intercorrelated, $r = .23$, $p = .008$, and both were correlated with children's behavior in the paperclips measure (r s for mothers and fathers = .19 and .21, p s = .014, .011). To reduce the number of analyses and minimize common method variance problems, two prosocial behavior total scores were created. One score combined father-reported SDQ and the behavioral (paperclips) measure (which were standardized and then averaged); this score served as the dependent variable in the models testing mothers' predictors. A second score similarly combined mother-reported SDQ and the behavioral measure; this score

was used as the dependent variable in the models testing fathers' predictors. Given the modest alphas for the separate mother-reported and father-reported SDQ scores, we also created a supplemental total prosociality score which included the SDQ measure based on both parents' ratings (with adequate alpha, see above) and the behavioral task. This score was used in supplemental analyses, to ascertain the robustness of the results (their consistency across measures).

Results and Discussion

Preliminary analyses

Transformations were applied to correct skewness of the prosociality measures (see Supporting Information). Mothers reported higher authoritativeness than fathers, but no other differences emerged (see Table S4). Religiosity, both continuous and dichotomous, was unrelated to prosocial behavior or to psychological control, for either mothers or fathers (see Tables S5 and S7). There were, however, several associations between psychological control/religiosity and other variables (see Table S5), leading to the selection of the following control variables: for mothers—family size, maternal education, authoritarian, and permissive parenting; for fathers—family size, authoritative, authoritarian, and permissive parenting.

Examining religiosity as a moderator

As confirmatory analysis of our hypothesis, moderation was tested similarly to Study 1, separately for the continuous and dichotomous religiosity variables, for mothers and fathers (four models in total).

For mothers, the interaction between psychological control and continuous religiosity level was significant, $\beta = .16$, $p = .05$, $\Delta R^2 = .028$; no other effects reached significance in this model (for the full model see Table S6). The results were highly similar when the same model was run with the supplementary prosociality measure, which included both parents' ratings in addition to the behavioral measure, $\beta = .14$, $p = .06$, $\Delta R^2 = .023$. In the model with the dichotomous religiosity variable as the moderator, the interaction only approached significance, $\beta = .165$, $p = .09$, $\Delta R^2 = .021$ (the interaction was not significant when the prosociality measure based on both parents' ratings and the behavioral task was used, $\beta = .13$, $p = .14$, $\Delta R^2 = .014$).

The significant interaction is presented in Figure 1a. Consistent with our hypothesis and with the findings of Study 1, mothers' psychological control was negatively linked to children's prosocial behavior when mothers' religiosity was low (1 *SD* below the mean), $\beta = -.25$, $p = .057$, but was not associated with children's prosocial

behavior at higher levels of religiosity: at mean, $\beta = -.08$, $p = .47$, and at 1 SD above the mean, $\beta = .08$, $p = .62$ (the religiosity mean score was 3.10, on a 1–5 scale, with $SD = 1.01$). The pattern for the dichotomous religiosity variable was highly similar (see summary in Table 2).

Given the wide age range, an exploratory analysis was also conducted in order to test whether the significant interaction was moderated by children's age, using model 3 in PROCESS version 3.4.1. Although the psychological control \times religiosity interaction was only significant for older children ($\beta = .32$, $p = .028$ for children above the median age, 9–12 years old, $M_{age} = 10.53$ $SD = 0.93$; $\beta = .16$, $p = .142$ for children below the median age, 6–9 years old, $M_{age} = 7.74$ $SD = 0.80$), the three-way interaction did not reach significance for either a continuous age variable, $\beta = .07$, $p = .45$, 95% CI $[-.12, .26]$, or a dichotomous age variable (medial-split), $\beta = .08$, $p = .39$, CI $[-.10, .26]$.

For fathers, in the model with continuous religiosity, only psychological control reached significance, $\beta = .23$, $p = .049$. Fathers' psychological control was associated with greater prosociality for the whole sample. This effect was not significantly moderated by fathers' religiosity, $\beta = .115$, $p = .194$, $\Delta R^2 = .013$, although it was more pronounced at higher religiosity levels (see Table 2).

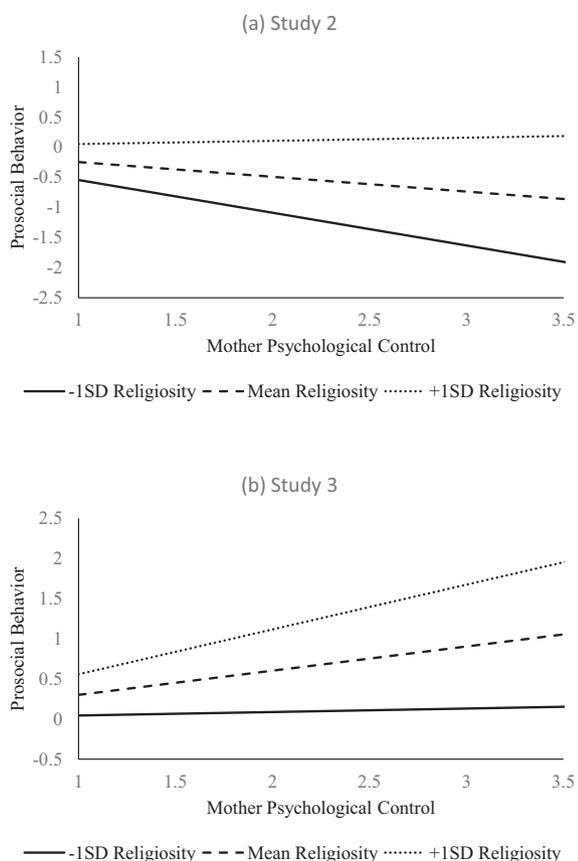


FIGURE 1 Simple slopes of the interaction between mothers' psychological control and religiosity on children's prosocial behavior in: (a) Study 2, and (b) Study 3. Prosocal behavior scores are a factor ($M = 0$, $SD = 1$) combining fathers' reports on children's prosociality and children's observed helping

The effect of fathers' authoritarian parenting also approached significance ($\beta = -.20$, $p = .067$). In the model with the dichotomous religiosity variable, the pattern was similar, albeit slightly weaker (see Table 2 for a summary). The main effect of fathers' psychological control noted above may reflect a suppression effect between authoritarian parenting and psychological control. The zero-order correlations of both these parenting variables with prosocial behavior were low for fathers ($r_s = -.09$ for authoritarian, $.09$ for psychological control, both ns ; see Table S7); but when entered into the model together, the effects became stronger, suggesting psychological control is only a positive predictor if the variance associated with authoritarian parenting is accounted for (and vice versa). Moreover, when fathers' predictors were examined with the supplementary prosociality measure based on both parents' ratings and the behavioral task, the results differed: only a main effect of authoritarian parenting emerged, $\beta = -.24$, $p = .024$ (for both the model with continuous and with dichotomous religiosity), and the main effect of psychological control was no longer significant in either model, $\beta_s < .12$, $p_s > .267$. Thus, the main effect of fathers' psychological control is not a robust finding, and will not be discussed further.

Study 2 replicates and extends the findings of Study 1. Religiosity moderated the links between mothers' psychological control and children's prosociality in the same manner: Psychological control was associated with less prosociality only when religiosity was low; when mothers reported being more religious (at the mean level of the sample or above), their psychological control was not associated with children's prosocial behavior. This interaction was replicated even though Studies 1 and 2 used somewhat different measures, and both addressed common method variance issues. Moreover, in Study 2, the pattern was consistent when using the continuous religiosity measure, which reflected mothers' subjective perception of their religiosity, and the dichotomous measure, which relied on an external criterion (the child's school type). As expected, the interaction was somewhat stronger with continuous religiosity. We address the potential meaning of these findings, along with those of the others studies, in the general discussion.

Because both Studies 1 and 2 examined the same population—Israeli Jewish families—it remains unclear whether the results would replicate to other religions. Study 3 addressed this gap, by examining Arab Muslim families in Israel.

STUDY 3

Study 3 examined the same research questions as Study 2, in Arab Muslim families. Muslim Arabs comprise approximately 18% of Israeli society. The Muslim population is typically characterized by more traditional, patriarchal, collectivistic, and authoritarian family values,

TABLE 2 Summary of results from all three studies

Study	Parent	Religiosity by psychological control interaction				Simple slopes— β values				
		Dichotomous		Continuous		Dichotomous		Continuous		
		β	95% CI	β	95% CI	Sec	Rel	-1 SD	M	+1 SD
1	Mothers	.21*	[.02, .41]			-.32*	.12			
2	Mothers	.17†	[-.03, .36]	.16*	[.00, .33]	-.26†	.08	-.25†	-.08	.08
2	Fathers	.07	[-.11, .25]	.12	[-.06, .29]	.16	.30†	.12	.23*	.33*
3	Mothers	.01	[-.30, .32]	.26*	[.02, .50]	.24	.26	.04	.30†	.56*
3	Fathers	.23†	[-.02, .49]	.08	[-.13, .29]	-.01	.46*	.12	.19	.27

Note: Dichotomous and Continuous refer to the type of religiosity measure used in the model.

Abbreviations: Rel, religious; Sec, secular.

† $p < .10$; * $p \leq .05$.

compared to the Jewish majority (and particularly to secular Jews), although there is also considerable variability within this group (Dwairy, 2004; Lavee & Katz, 2003). These differences are also manifested in parenting attitudes and behaviors, with greater endorsement and practice of controlling, harsh, and authoritarian parenting seen on average in Arab compared to Jewish samples (Davidov & Khoury-Kassabri, 2013; Khoury-Kassabri, 2010; Shechory-Bitton et al., 2015). There is also evidence that religiosity is linked to more controlling treatment of children in this population. Thus, Arab (predominantly Muslim) kindergarten teachers' reports of using corporal punishment to discipline children under their care were positively associated with their level of religiosity (Khoury-Kassabri et al., 2014).

Given that, as reviewed earlier, controlling parenting practices have been found to be generally more normative in the Muslim than the Jewish context, we expected higher rates of psychological control in Study 3 compared to Study 2. Consequently, we also hypothesized that the pattern of the interaction between religiosity and psychological control may take a somewhat different form in Study 3. Religiosity was still expected to imbue psychological control with a less negative and more positive meaning. But given the more common use of controlling practices in the Arab culture, we did not expect negative associations between psychological control and children's prosociality, as we found for secular Jewish mothers (in Studies 1 and 2). Rather, psychological control may even be positively linked with prosociality in the Arab context, particularly in more religious families, where such parenting behavior is consistent with cultural values and practices (e.g., respect for parental authority, fitting in with the group; Dwairy, 2004). We, therefore predicted a positive association between parents' psychological control and children's prosocial behavior in Arab religious families, compared to no association in more secular Arab families, for both mothers and fathers. Because the sample of the third study was smaller (due to limited resources), we focused recruitment on the earlier elementary school grades (similar to Study 1).

Method

Participants

The sample consisted of 64 children (50% boys) and their mothers and fathers from Arab Muslim families. Because the Arab school system in Israel is not divided into religious and general (secular) streams, the external criterion chosen as a proxy for the family's religiosity was whether or not the mother wears a head-cover outside the home (in addition to parents' continuous self-reports of their religiosity). Fifty percent of the families were religious according to this criterion (50% girls in each group). Children were 6–8.5 years old ($M = 7.35$, $SD = 0.61$); respective M s and SD s for religious and secular children were 7.36 (0.60) and 7.34 (0.63), $t(62) < 1$, *ns*. All parents were married. Additional demographic characteristics are reported in Table 1. The portions of parents with a university degree were highly similar to the national rates for Israeli Arabs (Israel Central Bureau of Statistics, 2018). Compared to mothers who wore a head cover, mothers who did not ("secular" mothers) reported higher income, $t(62) = 2.11$, $p = .039$, had fewer children, $t(62) = 2.49$, $p = .016$, and were more likely to have a university degree, $\chi^2(1) = 6.67$, $p = .010$ (but fathers did not differ in their education; see Table 1 for distributions). The sample was recruited from the North of Israel, by distributing letters about the study to parents through classrooms and by word-of-mouth. Data were collected in 2010.

Procedure and measures

Methodology was identical to Study 2. The only difference was the criterion used for the dichotomous religiosity variable, as noted earlier. Cronbach's alphas for mothers and fathers, respectively, were as follows: psychological control (.80, .82), prosocial behavior (.68, .51; alpha for both parents together: .71, after omitting one item for fathers), authoritative parenting (.93, .91), permissiveness (.66, .61), authoritarian parenting (.83, .80).

Results and discussion

Preliminary analyses

Consistent with prediction, parents in Study 3 (Muslim Arabs) reported greater use of psychological control and authoritarian parenting compared to Study 2 (Jewish) parents (see Table S2). The two samples also differed in family income, $t(215) = 6.60$, $p < .001$, and paternal education, $\chi^2(1) = 7.53$, $p = .006$, in a manner consistent with national averages for the two populations (Israel Central Bureau of Statistics, 2018, 2019; see Table 1 for distributions; there were no differences in maternal education and family size). Religiosity, both continuous and dichotomous, was not significantly associated with prosociality (see Table S11), but the dichotomous measure was associated with the psychological control of both parents (higher in religious families; see Table S8). Correlational analysis (Table S8) led to the selection of the following covariates: for mothers—family size, maternal education, authoritarian, and permissive parenting; for fathers—authoritarian parenting.

Examining religiosity as moderator

The same four models were tested as in Study 2, for a confirmatory examination of our hypothesis. For mothers, the interaction between psychological control and continuous religiosity level was significant, $\beta = .26$, $p = .037$, $\Delta R^2 = .07$. No other effects reached significance (see Table S9 for full model). A more parsimonious model, trimming three covariates which were far from significance (maternal education, family size, and authoritarian parenting) yielded virtually identical results. Moreover, including family income as a covariate did not change the results. In the model with the dichotomous religiosity variable as the moderator, none of the effects were significant. The results were virtually identical when the models were run with the prosociality dependent measure that included both parents' ratings and the behavioral task (interaction in the continuous religiosity model: $\beta = .26$, $p = .036$, $\Delta R^2 = .07$). The significant interaction is presented in Figure 1b. Consistent with prediction, mothers' psychological control was unrelated to children's prosociality when mothers' religiosity was low (1 *SD* below the mean, $\beta = .04$, $p = .81$), but was associated with greater prosociality when religiosity was higher (1 *SD* above the mean, $\beta = .56$, $p = .025$; see Table 2).

For fathers, in the model with continuous religiosity, only fathers' authoritarian parenting reached significance, $\beta = -.385$, $p = .019$. The results were similar to the dependent prosociality measure that included both parents' ratings and the behavioral task, $\beta = -.39$, $p = .019$. In the model with the dichotomous religiosity variable, the interaction between fathers' psychological control

and religiosity approached significance, $\beta = .23$, $p = .074$, $\Delta R^2 = .049$ (see Table S10 for the full model). Moreover, this interaction was significant when the same model was run with the prosociality measure which included both parents' ratings and the behavioral task, $\beta = .26$, $p = .042$, $\Delta R^2 = .061$. The pattern of the interaction was consistent with mothers' results and with predictions (for simple slopes, see Table 2, which summarizes the results of all three studies).

Study 3, like Studies 1 and 2, found an interaction between maternal psychological control and religiosity on children's prosocial behavior. Consistent with prediction, the pattern of the interaction was somewhat different for Arab mothers than for Jewish mothers: Psychological control was not associated with children's prosociality when maternal religiosity was low, but was associated with higher prosociality when maternal religiosity was higher (see Figure 1). The pattern for Arab fathers was similar, yet weaker, than that found for Arab mothers. In the next section, we integrate the findings of the three studies, and address possible interpretations as well as limitations and future research directions.

GENERAL DISCUSSION

This paper examined whether religiosity moderates the association between parental psychological control and children's prosociality during middle childhood. Religiosity has rarely been examined as a moderator of parenting effects, and the link between psychological control and prosocial behavior during middle childhood has also received little attention in prior work, despite the importance of prosociality for positive adjustment at this age. Across all three studies, religiosity moderated the associations between maternal psychological control and children's prosociality, such that the links were less negative or more positive with increased religiosity. Consistent with predictions, in the Jewish context (Studies 1 and 2), the link between psychological control and prosocial behavior was negative in more secular families, compared to no association in more religious families; in the Arab context (Study 3), where psychological control was more frequent overall, there was no link for the more secular families, compared to a positive association for the more religious families. Combined with prior work on the moderating effects of Conservative Protestantism (Ellison et al., 2011; Gunnoe et al., 2006), the findings point to the role of religiosity, across multiple religions, as a key aspect of the sociocultural context, which can potentially affect the meaning of controlling parenting practices and their consequences for children's adjustment.

Given the contemporaneous nature of the data, inferences regarding the direction of effects are only tentative. One possibility is that psychological control is more detrimental to children's prosociality in a secular, more

liberal context. Secular societies cherish self-direction and self-expression across religions (Saroglou et al., 2004); thus, when secular parents use psychologically controlling tactics, they often do so despite their values, likely because they are overwhelmed, stressed, or angry (McLoyd et al., 2007; Rudy & Grusec, 2006). Their children are in turn more likely to experience such tactics as overly intrusive and disruptive to their sense of autonomy, because they too have been socialized to value self-direction, and because the parents' behavior often reflects hostility and rejection (Lansford et al., 2010; Rohner et al., 2005; Soenens et al., 2015). As a result, these practices can decrease secular children's propensity to act prosocially toward others, due to children's increased anger and resentment, or because the parent is seen as providing a model of lack of concern for others (Hastings et al., 2015). This pattern was more pronounced in the Jewish samples (Studies 1 and 2) than in the Arab sample (Study 3) in which no association was found for secular families. This difference likely stems from the fact that the Arab society in Israel is generally more conservative and traditional compared to the Jewish society (Dwairy, 2004). Notably, studies have shown that, compared to their Jewish counterparts, Israeli Arab parents and children are less likely to endorse children's rights for autonomy and personal expression in the family context (Ben-Arieh et al., 2006; Khoury-Kassabri & Ben-Arieh, 2009). This raises the possibility that mothers' psychological control practices may be experienced as less coercive and hurtful in the Muslim Arab Israeli context, including in secular Arab families, and therefore less likely to undermine children's prosociality.

In religious family contexts, in contrast, parents' psychological control is generally less likely to engender children's hostility, consistent with the lack of negative associations between psychological control and prosociality seen in religious Jewish families (Studies 1 and 2) and the positive associations found in religious Muslim families (Study 3). In a religious context psychological control is more likely to reflect parents' belief that they are helping children learn important norms and values (such as respect for elders, indebtedness to parents, and compliance with social and religious traditions and ways of thinking); thus, psychological control is less likely to stem from parental rejection in a religious context, and therefore less likely to engender children's antagonism and undermine their prosociality (consistent with findings from other collectivistic or interdependence-oriented samples, e.g., Chao, 2001; Gngr, 2008; Rudy & Grusec, 2006). Moreover, in a religious context, controlling strategies may even be viewed positively in some cases. The positive associations between psychological control and prosociality found for religious Arab mothers (Study 3) may reflect such a process. Religious Muslim Arab families place a very high value on children's respect for parental wishes, deference to authority, and conformity to societal expectations (Dwairy, 2004).

It is thus possible that when these mothers exert pressure in the form of shaming, guilt induction, or love withdrawal, neither the mothers nor their children perceive this as a negative intervention, but rather as a typical parental response which reflects the mother's investment in her child's upbringing and concern for the child's well-being; such benevolent perception of mothers' behavior can, in turn, foster children's greater consideration of others' needs, conducive to prosociality (see also Cheah et al., 2019; Davidov & Atzaba-Poria, 2016; Soenens et al., 2015).

Another possibility, however, is that children in religious Muslim families who experience more maternal psychological control, act more prosocially not because they are more sensitive to others' needs, but because they want to please their controlling mothers. Prosocial behavior can reflect different motivations, some of which are other-focused, such as empathic concern, but others are more self-focused or externally controlled, such as a desire for approval or reputation (Eisenberg et al., 2016; Ryan & Deci, 2000). An important direction for future research is thus to assess children's motivations for acting prosocially, both self-focused and other-oriented motives, to better understand how these motives are impacted by psychological control as a function of religiosity (and culture more broadly).

In contrast to the above interpretations of parent effects, the current findings may reflect child effects. For example, Jewish secular mothers may be more likely to respond to their children's lack of prosociality with psychological control compared to their religious counterparts; or religious Muslim mothers might be more psychologically controlling toward more prosocial children. Prior longitudinal work reveals relevant effects of children on parents. For example, in a sample of Chinese adolescents, prosocial behavior toward strangers predicted greater paternal psychological control a year later (Fu & Zhang, 2020). Moreover, children's aggressive behavior predicted greater guilt induction from mothers of Chinese American preschoolers (Yu et al., 2019), and greater use of physical discipline among religious, but not secular, Jewish Israeli fathers (Avinun et al., 2018). Parent effects of psychological control on subsequent prosociality have also been observed (e.g., Fu & Zhang, 2020). Longitudinal designs are thus needed in order to clarify the direction of effects of the associations assessed in the current paper. Experimental designs, such as intervention studies or priming experiments, can also be useful in this regard. Nevertheless, whether these links reflect parent effects, child effects, or both, the present findings underscore that these associations are often moderated by religiosity, a frequently overlooked contextual variable (Gebauer & Sedikides, 2021) that merits further attention.

Notably, even if the current findings reflect parent effects, the pattern of moderation by religiosity may differ, or might be weaker (or non-existent), if harsher forms of

psychological control, or psychological aggression, were examined (Davidov & Khoury-Kassabri, 2013; Rudy et al., 2014). Parental behaviors which strongly convey rejection or cause humiliation are more likely to be harmful across sociocultural contexts (Hastings et al., 2015; Lansford et al., 2010; Pomerantz & Wang, 2009; Rudy et al., 2014; Soenens et al., 2015).

It is interesting that across Studies 2 and 3, the moderation effects were stronger for mothers, typically failing to reach significance for fathers (with one exception: the model for Muslim fathers that used the dependent measure based on the ratings of both parents). This might be because mothers, both Arab and Jewish, spend more time engaging with elementary school children at home than fathers (Freund et al., 2018). They are thus more likely to respond to child misbehavior and non-compliance, common situations for showing psychological control. Mothers' reports of psychological control might therefore better reflect these children's everyday experiences than father reports do. Also of interest, for Muslim fathers, results were stronger with the dichotomous religiosity measure, whether the mother wears a head-cover, than with the continuous religiosity rating (in contrast to findings for mothers). Perhaps for these Muslim men, the religiosity self-report question was seen as a more private, personal issue, whereas the seemingly more superficial head-cover criterion better reflected the norms and values of their social milieu (see also limitations below).

An important developmental question is whether the psychological control by religiosity interactions that we observed in middle childhood are also characteristic of other developmental periods. In this study (Study 2) children's age did not moderate the interaction between religiosity and psychological control, perhaps due to limited power. One possibility is that the meaning of psychological control may become more negative during adolescence, and perhaps similarly so for religious and secular youth. With increased age, adolescents in both individualistic and collectivistic cultures have been found to evaluate psychologically controlling tactics more negatively (Helwig et al., 2014; Rote & Smetana, 2017). It is thus possible that even in religious contexts, adolescents come to expect greater autonomy and parental respect of their point of view as they mature, and thus to increasingly resent parents' psychological control; if that is the case, then the moderating (buffering) role of religiosity should decrease during this age. In contrast, another study (Cheah et al., 2019) found no differences between adolescents and younger children in their evaluations of their own parents' psychological control practices. If children do not become more critical of parental psychological control practices with age, or even if they do yet secular adolescents continue to view psychological control more negatively than their religious counterparts, then the role of religiosity as a moderator suggested by the present findings should likely persist during adolescence. These possibilities await further research.

Limitations and future research directions

As already noted, a major limitation of all three studies is their non-longitudinal design, which precludes conclusions regarding the direction of effects, and highlights the need for replication with longitudinal data. A second important limitation is the small sample sizes. Third, the assessment of religiosity in the current studies was very basic; even when measured continuously, it consisted of a single general self-report item of personal religiosity. Future studies should use richer assessments of religious identity and lifestyle. Nevertheless, prior work indicates that a single-item measure of personal religiosity is correlated with, and often shows similar results to, more elaborate measures of religious beliefs and practices (Saroglou et al., 2004). A fourth limitation is that psychological control was always assessed using parent reports, which can introduce bias. Supplementing self-reports with observations or ratings by other informants in future work is highly desirable. Our measures also combined different psychologically controlling tactics (guilt induction, shaming, love withdrawal), which can have distinct effects (Cheah et al., 2019; Rudy et al., 2014; Yu et al., 2019); future work should examine whether the pattern of moderation by religiosity might differ for different forms of psychological control. Another weakness is the low internal consistency values found for parents' reports of children's prosociality (although the main results were consistent when using a measure based on both parents' ratings which had adequate reliability). Finally, although our predictions and interpretations draw on the idea that psychological control takes on different meanings due to the different values held by more and less religious families, we did not directly assess these processes. An important goal for future research is to directly examine these (or other potential) underlying mechanisms.

CONCLUSIONS

The present findings shed new light on both the specificity and commonality of the links between psychological control and prosociality in middle childhood. Regarding specificity, the findings show that the correlates of maternal psychological control—its links with children's prosocial behavior—vary considerably and depend, at least in part, on the socio-cultural dimension of religiosity. Moreover, the pattern of this moderation effect also varies somewhat by cultural group (Jewish vs. Arab families). For Jewish mothers, the association between psychological control and religiosity was negative at low religiosity, compared to no association at high religiosity; for Muslim mothers, there was no association at low religiosity, compared to a positive association at high religiosity. At the same time, the findings also show some commonality: Across studies and religions, religiosity

moderated the links between maternal psychological control and children's prosociality. Furthermore, across studies and religions, religiosity appears to render the link between psychological control and children's prosociality less negative/more positive. Important goals for the future are to clarify the underlying mechanisms of these effects, and to apply this knowledge to the design of context-informed prevention and intervention programs for families.

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REFERENCES

- Avinun, R., Davidov, M., Mankuta, D., & Knafo-Noam, A. (2018). Predicting the use of corporal punishment: Child aggression, parent religiosity, and the BDNF gene. *Aggressive Behavior, 44*, 165–175. <https://doi.org/10.1002/ab.21740>
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296–3319. <https://doi.org/10.1111/j.1467-8624.1996.tb01915.x>
- Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 15–52). American Psychological Association.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology, 4*(1, Pt. 2), 1–103. <https://doi.org/10.1037/h0030372>
- Ben-Arieh, A., Khoury-Kassabri, M., & Haj-Yahia, M. M. (2006). Generational, ethnic, and national differences in attitudes toward the rights of children in Israel and Palestine. *American Journal of Orthopsychiatry, 76*, 381–388. <https://doi.org/10.1037/0002-9432.76.3.381>
- Block, J. H. (1981). *The Child-Rearing Practices Report (CRPR): A set of Q items for the description of parental socialization attitudes and values* [Unpublished manuscript]. Institute of Human Development, University of California.
- Chao, R. K. (2001). Extending research on the consequences of parenting style for Chinese Americans and European Americans. *Child Development, 72*, 1832–1843. <https://doi.org/10.1111/1467-8624.00381>
- Cheah, C. S. L., Yu, J., Liu, J., & Coplan, R. J. (2019). Chinese children's cognitive appraisal moderates associations between psychologically controlling parenting and Children's depressive symptoms. *Journal of Adolescence, 76*, 109–119. <https://doi.org/10.1016/j.adolescence.2019.08.005>
- Clark, C. M., Dahlen, E. R., & Nicholson, B. C. (2015). The role of parenting in relational aggression and prosocial behavior among emerging adults. *Journal of Aggression, Maltreatment and Trauma, 24*, 185–202. <https://doi.org/10.1080/10926771.2015.1002653>
- Davidov, M. (2021). Cultural moderation of the effects of parenting: Answered and unanswered questions. *Child Development Perspectives, 15*, 189–195. <https://doi.org/10.1111/cdep.12422>
- Davidov, M., & Atzaba-Poria, N. (2016). Maternal discipline and children's adjustment: The role of the cultural and situational context. *Social Development, 25*, 99–119. <https://doi.org/10.1111/sode.12132>
- Davidov, M., & Grusec, J. E. (2006). Untangling the links of parental responsiveness to distress and warmth to child outcomes. *Child Development, 77*, 44–58. <https://doi.org/10.1111/j.1467-8624.2006.00855.x>
- Davidov, M., & Khoury-Kassabri, M. (2013). Recollections of harsh discipline in childhood and depressive feelings in adulthood: The roles of culture and gender. *Children and Youth Services Review, 35*, 1007–1014. <https://doi.org/10.1016/j.childyouth.2013.03.009>
- Dwairy, M. (2004). Parenting styles and mental health of Palestinian-Arab adolescents in Israel. *Transcultural Psychiatry, 41*, 233–252. <https://doi.org/10.1177/1363461504043566>
- Eisenberg, N., VanSchyndel, S. K., & Spinrad, T. L. (2016). Prosocial motivation: Inferences from an opaque body of work. *Child Development, 87*, 1668–1678. <https://doi.org/10.1111/cdev.12638>
- Ellison, C. G., Musick, M. A., & Holden, G. W. (2011). Does conservative Protestantism moderate the association between corporal punishment and child outcomes? *Journal of Marriage and Family, 73*, 946–961. <https://doi.org/10.1111/j.1741-3737.2011.00854.x>
- Freund, A., Schaedel, B., Azaiza, F., Boehm, A., & Lazarowitz, R. H. (2018). Parental involvement among Jewish and Arab parents: Patterns and contextual predictors. *Children and Youth Services Review, 85*, 194–201. <https://doi.org/10.1016/j.childyouth.2017.12.018>
- Fu, X., & Zhang, Y. (2020). Bidirectional relation between paternal/maternal psychological control and adolescent behavioral outcomes. *Journal of Child and Family Studies, 29*, 1402–1412. <https://doi.org/10.1007/s10826-019-01615-1>
- Garner, P. W. (2012). Children's emotional responsiveness and sociomoral understanding and associations with mothers' and fathers' socialization practices. *Infant Mental Health Journal, 33*, 95–106. <https://doi.org/10.1002/imhj.20339>
- Gebauer, J. E., & Sedikides, C. (2021). Cultural religiosity: A neglected but powerful dimension of culture. *Current Opinion in Psychology, 40*, 73–78. <https://doi.org/10.1016/j.copsyc.2020.08.027>
- Gershoff, E. T., Grogan-Kaylor, A., Lansford, J. E., Chang, L., Zelli, A., Deater-Deckard, K., & Dodge, K. A. (2010). Parent discipline practices in an international sample: Associations with child behaviors and moderation by perceived normativeness. *Child Development, 81*, 487–502. <https://doi.org/10.1111/j.1467-8624.2009.01409.x>
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 1337–1345. <https://doi.org/10.1097/00004583-200111000-00015>
- Güngör, D. (2008). The meaning of parental control in migrant, sending, and host communities: Adaptation or persistence? *Applied Psychology, 57*, 397–416. <https://doi.org/10.1111/j.1464-0597.2007.00323.x>
- Gunnoe, M. L., Hetherington, E. M., & Reiss, D. (2006). Differential impact of fathers' authoritarian parenting on early adolescent adjustment in conservative protestant versus other families. *Journal of Family Psychology, 20*, 589–596. <https://doi.org/10.1037/0893-3200.20.4.589>
- Hastings, P. D., Miller, J. G., & Troxel, N. R. (2015). Making good: The socialization of children's prosocial development. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (2nd ed., pp. 637–660). Guilford Press.
- Hastings, P. D., Utendale, W. T., & Sullivan, C. (2007). The socialization of prosocial development. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (1st ed., pp. 638–664). Guilford Press.
- Hastings, P. D., Zahn-Waxler, C., Robinson, J. L., Usher, B., & Bridges, D. (2000). The development of concern for others in children with behavior problems. *Journal of Developmental and Behavioral Pediatrics, 36*, 531–546. <https://doi.org/10.1037/0012-1649.36.5.531>

- Helwig, C. C., To, S., Wang, Q., Liu, C., & Yang, S. (2014). Judgments and reasoning about parental discipline involving induction and psychological control in China and Canada. *Child Development, 85*, 1150–1167. <https://doi.org/10.1111/cdev.12183>
- Israel Central Bureau of Statistics (2018). The face of Israeli society, Report no. 10, Chapter 5: Education (in Hebrew). Jerusalem, Israel: Israel Central Bureau of Statistics. https://www.cbs.gov.il/he/publications/doclib/2018/rep_10/part05_h.pdf
- Israel Central Bureau of Statistics (2019). Gaps between Jews and Arabs in well-being indicators in Israel (in Hebrew). Jerusalem, Israel: Israel Central Bureau of Statistics. https://www.cbs.gov.il/he/mediarelease/DocLib/2021/023/33_21_023b.pdf
- Khoury-Kassabri, M. (2010). Attitudes of Arab and Jewish mothers towards punitive and non-punitive discipline methods. *Child and Family Social Work, 15*, 135–144. <https://doi.org/10.1111/j.1365-2206.2009.00667.x>
- Khoury-Kassabri, M., Attar-Schwartz, S., & Zur, H. (2014). The likelihood of using corporal punishment by kindergarten teachers: The role of parent-teacher partnership, attitudes, and religiosity. *Child Indicators Research, 7*, 369–386. <https://doi.org/10.1007/s12187-013-9226-2>
- Khoury-Kassabri, M., & Ben-Arieh, A. (2009). School climate and children's views of their rights: A multi-cultural perspective among Jewish and Arab adolescents. *Children and Youth Services Review, 31*, 97–103. <https://doi.org/10.1016/j.childyouth.2008.06.002>
- Krevans, J., & Gibbs, J. C. (1996). Parents' use of inductive discipline: Relations to children's empathy and prosocial behavior. *Child Development, 67*, 3263–3277. <https://doi.org/10.1111/j.1467-8624.1996.tb01913.x>
- Krishnakumar, A., Buehler, C., & Barber, B. K. (2004). Cross-ethnic equivalence of socialization measures in European American and African American youth. *Journal of Marriage and Family, 66*, 809–820. <https://doi.org/10.1111/j.0022-2445.2004.00054.x>
- Levi, A. (2016). Fertility rates in Israel by religion and religiosity level and their impact on public spending (in Hebrew). Jerusalem, Israel: The Knesset Research and Information Center. <https://main.knesset.gov.il/Activity/Info/mmm/pages/document.aspx?docid=5d79b3ca-eb7a-e511-80d6-00155d0204d4>
- Lamborn, S. D., Dornbusch, S. M., & Steinberg, L. (1996). Ethnicity and community context as moderators of the relations between family decision making and adolescent adjustment. *Child Development, 67*, 283–301. <https://doi.org/10.1111/j.1467-8624.1996.tb01734.x>
- Lansford, J. E., Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 45*, 801–812. <https://doi.org/10.1111/j.1469-7610.2004.00273.x>
- Lansford, J. E., Godwin, J., Al-Hassan, S. M., Bacchini, D., Bornstein, M. H., Chang, L., Chen, B. B., Deater-Deckard, K., Di Giunta, L., Dodge, K. A., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Steinberg, L., Tapanya, S., Alampay, L. P., Uribe Tirad, L. M., & Zelli, A. (2018). Longitudinal associations between parenting and youth adjustment in twelve cultural groups: Cultural normativeness of parenting as a moderator. *Developmental Psychology, 54*, 362–377. <https://doi.org/10.1037/dev0000416>
- Lansford, J. E., Malone, P. S., Dodge, K. A., Chang, L., Chaudhary, N., Tapanya, S., Oburu, P., & Deater-Deckard, K. (2010). Children's perceptions of maternal hostility as a mediator of the link between discipline and children's adjustment in four countries. *International Journal of Behavioral Development, 34*, 452–461. <https://doi.org/10.1177/0165025409354933>
- Lavee, Y., & Katz, R. (2003). The family in Israel: Between tradition and modernity. *Marriage & Family Review, 35*, 193–217. https://doi.org/10.1300/J002v35n01_11
- McLoyd, V. C., Kaplan, R., Hardaway, C. R., & Wood, D. (2007). Does endorsement of physical discipline matter? Assessing moderating influences on the maternal and child psychological correlates of physical discipline in African American families. *Journal of Family Psychology, 21*, 165–175. <https://doi.org/10.1037/0893-3200.21.2.165>
- Mouratidis, A. A., Sayil, M., Kumru, A., Selcuk, B., & Soenens, B. (2019). Maternal knowledge as a mediator of the relation between maternal psychological control and altruistic prosocial, instrumental prosocial, and antisocial behavior. *Merrill-Palmer Quarterly, 65*, 207–231. <https://doi.org/10.13110/merrpalmquar1982.65.2.0207>
- Pomerantz, E. M., & Wang, Q. (2009). The role of parental control in children's development in western and East Asian countries. *Current Directions in Psychological Science, 18*, 285–289. <https://doi.org/10.1111/j.1467-8721.2009.01653.x>
- Riso, D. D., Salcuni, S., Chessa, D., Raudino, A., Lis, A., & Altoè, G. (2010). The Strengths and Difficulties Questionnaire (SDQ). Early evidence of its reliability and validity in a community sample of Italian children. *Personality and Individual Differences, 49*, 570–575. <https://doi.org/10.1016/j.paid.2010.05.005>
- Robinson, C. C., Mandlco, B., Olsen, S. F., & Hart, C. H. (1995). Authoritative, authoritarian, and permissive parenting practices: Development of a new measure. *Psychological Reports, 77*, 819–830. <https://doi.org/10.2466/pr0.1995.77.3.819>
- Robinson, J. L., Zahn-Waxler, C., & Emde, R. N. (1994). Patterns of development in early empathic behavior: Environmental and child constitutional influences. *Social Development, 3*, 125–146. <https://doi.org/10.1111/j.1467-9507.1994.tb00032.x>
- Rohner, R. P., Khaleque, A., & Cournoyer, D. E. (2005). Parental acceptance-rejection: Theory, methods, cross-cultural evidence, and implications. *Ethos, 33*, 299–334. <https://doi.org/10.1525/eth.2005.33.3.299>
- Rote, W. M., & Smetana, J. G. (2017). Situational and structural variation in youth perceptions of maternal guilt induction. *Developmental Psychology, 53*, 1940–1953. <https://doi.org/10.1037/dev0000396>
- Rudy, D., Carlo, G., Lambert, M. C., & Awong, T. (2014). Undergraduates' perceptions of parental relationship-oriented guilt induction versus harsh psychological control: Does cultural group status moderate their associations with self-esteem? *Journal of Cross-Cultural Psychology, 45*, 905–920. <https://doi.org/10.1177/0022022114532354>
- Rudy, D., & Grusec, J. E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem. *Journal of Family Psychology, 20*, 68–78. <https://doi.org/10.1037/0893-3200.20.1.68>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68–78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Saroglou, V., Delpierre, V., & Dernelle, R. (2004). Values and religiosity: A meta-analysis of studies using Schwartz's model. *Personality and Individual Differences, 37*, 721–734. <https://doi.org/10.1016/j.paid.2003.10.005>
- Shechory-Bitton, M., David, S. B., & Sommerfeld, E. (2015). Effect of ethnicity on parenting styles and attitudes toward violence among Jewish and Arab Muslim Israeli mothers: An intergenerational approach. *Journal of Cross-Cultural Psychology, 46*, 508–524. <https://doi.org/10.1177/0022022115576001>
- Silk, J. S., Morris, A. S., Kanaya, T., & Steinberg, L. (2003). Psychological control and autonomy granting: Opposite ends of a continuum or distinct constructs? *Journal of Research on Adolescence, 13*, 113–128. <https://doi.org/10.1111/1532-7795.1301004>
- Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review, 30*, 74–99. <https://doi.org/10.1016/j.dr.2009.11.001>
- Soenens, B., Vansteenkiste, M., & Petegem, S. V. (2015). Let us not throw out the baby with the bathwater: Applying the principle

- of universalism without uniformity to autonomy-supportive and controlling parenting. *Child Development Perspectives*, 9, 44–49. <https://doi.org/10.1111/cdep.12103>
- Van Widenfelt, B. M., Goedhart, A. W., Treffers, P. D. A., & Goodman, R. (2003). Dutch version of the Strengths and Difficulties Questionnaire (SDQ). *European Child and Adolescent Psychiatry*, 12, 281–289. <https://doi.org/10.1007/s00787-003-0341-3>
- Wong, T. K. Y., Konishi, C., & Kong, X. (2021). Parenting and prosocial behaviors: A meta-analysis. *Social Development*, 30, 343–373. <https://doi.org/10.1111/sode.12481>
- Yoo, H., Feng, X., & Day, R. D. (2013). Adolescents' empathy and prosocial behavior in the family context: A longitudinal study. *Journal of Youth and Adolescence*, 42, 1858–1872. <https://doi.org/10.1007/s10964-012-9900-6>
- Yu, J., Cheah, C. S. L., Hart, C. H., & Yang, C. (2018). Child inhibitory control and maternal acculturation moderate effects of maternal parenting on Chinese American children's adjustment. *Developmental Psychology*, 54, 1111–1123. <https://doi.org/10.1037/dev0000517>
- Yu, J., Cheah, C. S. L., Hart, C. H., Yang, C., & Olsen, J. A. (2019). Longitudinal effects of maternal love withdrawal and guilt induction on Chinese American preschoolers' bullying aggressive behavior. *Development and Psychopathology*, 31, 1467–1475. <https://doi.org/10.1017/S0954579418001049>
- Zahn-Waxler, C., Radke-Yarrow, M., & King, R. A. (1979). Child rearing and children's prosocial initiations toward victims of distress. *Child Development*, 50, 319. <https://doi.org/10.2307/1129406>

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