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RESEARCH ARTICLE

Longitudinal associations between parental psychological control and adolescents' intergroup attitudes to prosocial behaviors towards ethnic outgroups

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Abstract

Introduction: While a substantial body of existing literature has examined the negative effects of parental psychological control on adolescents' prosocial behaviors, there is a noticeable gap in whether parental psychological control affects prosocial behaviors towards ethnic outgroup members. This three-wave longitudinal study investigated whether similar relations can be observed between parental psychological control and prosocial behaviors targeted at ethnic outgroup persons, and whether these relations are mediated by adolescents' intergroup attitudes.

Methods: Participants were 412 European American adolescents (42% girls; *Age* = 15.63 years at Time 1) and their primary caregivers (52% mothers) residing in the United States. They completed online questionnaires. Parents completed a measure of parental psychological control at Time 1. Adolescents completed measures of intergroup attitudes, public, and altruistic outgroup prosocial behavior at all three time points (T1, T2, T3), each approximately 8 months apart. The retention rate was 38.1% (*N* = 157; 44% girls) at Time 3.

Results: Path analyses revealed a direct negative link between parental psychological control and altruistic prosocial behavior towards ethnic outgroup persons but a direct positive association to public prosocial behavior towards outgroup persons. Importantly, parental psychological control was indirectly related to adolescents' prosocial behavior towards ethnic outgroup persons, via its effect on their intergroup attitudes.

Conclusions: The findings underscore how parental psychological control and adolescents' intergroup attitudes contribute to shaping prosocial behaviors towards ethnic outgroups.

KEYWORDS

adolescence, intergroup relation, outgroup prosocial behavior, parental psychological control

1 | INTRODUCTION

Prosocial behaviors, voluntary actions with the purpose of benefiting others (e.g., sharing, donating, and comforting), are highly valued across all societies and are foundational to social harmony and justice (Eisenberg, et al., 2006). Adolescents demonstrate various forms of prosocial behaviors driven by distinct motivational factors (Carlo & Padilla-Walker, 2020). The present study focuses on two specific forms of prosocial behavior: altruistic and public. Altruistic prosocial behaviors involve voluntary helping prompted by a genuine concern for the well-being of another person. Altruistic behaviors are not oriented towards achieving personal gain; in fact, they may entail a cost to the person who provides assistance (Eisenberg & Fabes, 1998). Adolescents engaging in altruistic behaviors are intrinsically motivated (Schwartz & Howard, 1984) and display

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high levels of empathy, compassion, and internalized moral values (Büssing et al., 2013; Eisenberg et al., 1999). Alternatively, adolescents may demonstrate prosocial actions performed in the presence of observers, which are referred to as public prosocial behaviors. Public prosocial behaviors often arise from adolescents' desire to secure the approval and admiration of others, including parents and peers, and to bolster their social status (Carlo & Randall, 2002). Thus, public prosocial behaviors are extrinsically motivated, and they are negatively correlated with empathy, perspective taking, and moral reasoning (Carlo, et al., 2018; White, 2014).

The target of prosocial behavior is also a crucial factor influencing adolescents' engagement in such behaviors (Carlo & Padilla-Walker, 2020). Adolescents are more prone to exhibit prosocial behavior towards their friends and family rather than to strangers (Padilla-Walker & Christensen, 2011). Likewise, prosocial actions typically show a preference for individuals within one's own ingroup, which may result in overlooking those from outgroups (Carlo et al., 2022; Renno & Shutts, 2015). Categorizing people as part of an outgroup gives rise to the perception of dissimilarity and greater emotional distance. Thus, people feel less responsible about improving the well-being of outgroup members. This diminished sense of responsibility reduces the emotional cost of not helping outgroup members (Dovidio et al., 1991). Consistent with this notion, Weller and Lagutta (2013) showed that both children and adolescents experienced a heightened sense of duty to assist a child from their racial ingroup as compared to a child from a racial outgroup. They reported that providing help to an ingroup member and neglecting the needs of an outgroup member would result in increased feelings of personal happiness. As anticipated, numerous studies conducted across different developmental stages consistently provide substantial empirical support for the existence of ingroup favoritism in the realm of prosocial behavior (Laible et al., 2021; Xiao et al., 2022; Xiao et al., 2023). In summary, the target of prosocial behavior shapes the fundamental processes and decisions adolescents make when engaging in prosocial behaviors.

1.1 | Links between parenting styles and prosocial behaviors

Parents play an important role in shaping prosocial development in their adolescents. Studies have consistently shown that parental warmth, support, and sensitivity promote adolescents' prosocial behavior (Carlo, Mestre, et al., 2011; Gülseven et al., 2022; Laible et al., 2017). Parenting characterized by such attributes serves as a model for cultivating effective self-regulation, instills a heightened awareness and regard for the perspectives of others, and promotes responsiveness to the needs of others (Carlo, White, et al., 2018). Additionally, these parenting styles facilitate the development of cooperative, nurturing, and empathy-driven interactions between parents and their adolescent children. Previous research has well established that through parental socialization, adolescents internalize the prosocial behaviors of parents and mirror the positive practices they observe within their immediate family (Eisenberg, et al., 2006; Hastings et al., 2007).

While supportive parenting motivates prosocial behavior towards family members to maintain existing positive relationships, it can also instill qualities that encourage prosocial behavior towards strangers and outgroups. (Eisenberg, et al., 2006; Padilla-Walker et al., 2018; Spinrad & Gal, 2018). Supportive parenting can boost adolescents' self-esteem, which in turn fosters prosocial behavior toward strangers and outgroups. Higher self-esteem can help adolescents manage the potential discomfort and higher costs associated with interacting with unfamiliar people (Fu et al., 2017; Padilla-Walker & Fraser, 2014). A longitudinal study with adolescents found that positive parenting, characterized by involvement and a strong connection with the child, is linked to greater empathy and self-regulation in adolescents. These qualities, in turn, are associated with increased prosocial behavior toward strangers among adolescents (Padilla-Walker & Christensen, 2011). So, these qualities that are fostered by parenting may enable adolescents to recognize the needs of individuals outside their immediate social circle. It also helps adolescents regulate their own priorities to provide assistance to strangers, even in situations where it might be challenging or costly (Padilla-Walker & Fraser, 2014). Studies have also found a direct positive link between positive parenting styles, such as authoritative parenting (Mesurado et al., 2019) and nurturing parenting (Xu et al., 2024), and prosocial behavior towards strangers and outgroups. Conversely, there is a direct negative link between negative parenting styles, such as hostility (Padilla-Walker et al., 2016) and restrictive parenting (Xu et al., 2024), and prosocial behavior towards these groups.

Parents who employ psychological control constrain, invalidate, and manipulate their adolescents' thoughts and feelings (Barber, 1996, 2002). Because psychological control increases adolescents' desire to conform to social expectations, it can cause adolescents to center their focus more on themselves and diminish their focus on others' needs (Barber et al., 2005). Psychological controlling parenting also interferes with adolescents' abilities to self-regulate, which hinders their ability to focus on others' well-being (Rogers et al., 2019). Furthermore, parents who employ psychologically controlling parenting provide extensive guidance in their children's social interactions, which consequently limits the development of their social skills. This, in turn, leads to heightened anxiety and avoidance in social situations among adolescents and diminishes their likelihood of engaging in prosocial behaviors (Zhang et al., 2022). As a result, it is not surprising that psychologically controlling parenting has been consistently linked with less prosocial behaviors in European American adolescents (Eisenberg & Valiente, 2002; Gülseven et al., 2022; Yoo et al., 2013).

Parental psychological control that erodes adolescents' autonomy and sense of competence (Barber, 1996) has also the potential to influence the motivations behind their prosocial behaviors and, in turn, the types of prosocial behaviors they display. Importantly, parents' use of psychological control with their children violates their children's sense of self-determination which is central to children's sense of agency and autonomy (Soenens & Vansteenkiste, 2010). Children's sense of agency and autonomy allows them to make choices with minimal external pressure and develop their own values, including prosocial values, and act according to them. Thus, they exhibit prosocial behaviors driven by intrinsic motivation. Conversely, when children are performing prosocial behaviors that are driven by extrinsic motivation, characterized by a desire for external validation rather than intrinsic and self-determined motivation, they will cease being prosocial when the external rewards or external pressures are not present (Deci & Ryan, 2012). Thus, when parents exert psychological control, they inhibit adolescents from internalizing prosocial values and engage in prosocial behaviors for intrinsic and self-determined reasons or motivations. Instead, parents' use of psychological control likely reinforces their children to perform prosocial behaviors for external reasons, such as for external validation or out of external pressures. In contrast, altruistic prosocial behaviors, typically driven by internal motivations, may decrease under psychological control because the adolescents' sense of autonomy becomes compromised. This notion finds support in previous research that has concentrated on strict, authoritarian, and autonomy-constraining parenting styles. For instance, a comprehensive meta-analysis encompassing 124 studies demonstrated an overall negative relation between authoritarian parenting and children's and adolescents' altruistic tendencies (Wong et al., 2021). Consistent with these findings, studies have indicated a positive correlation between maternal control and public prosocial behavior (Richaud et al., 2013) while affirming that parental support for autonomy exerts a positive influence on adolescents' altruistic tendencies (Ngai et al., 2018).

While there is substantial extant literature investigating the adverse implications of parental psychological control on prosocial behaviors among European American adolescents, the influence of parental psychological control on prosocial behaviors directed towards ethnic outgroups remains an underexplored domain. This study seeks to elucidate whether analogous associations extend to parental psychological control and outgroup-oriented prosocial behaviors among European American families.

1.2 | Intergroup attitudes as a mediator

In addition to investigating the association between parental psychological control and prosocial behavior directed toward ethnic outgroups, it is crucial to explore potential explanatory mechanisms underlying this association. Intergroup attitudes stand as a pivotal mechanism of interest in unraveling the connections between parenting and prosocial behaviors directed towards ethnic minorities.

When adolescents perceive their parents to be highly controlling, they may begin to perceive the world as a dangerous and threatening place, which they have little control over. This perception may increase their anxiety and fear (Chorpita et al., 1998; Schleider et al., 2014). Similarly, controlling and rejecting parenting has been consistently linked with children's social cognitive biases, especially their hostile attribution biases (Cassidy et al., 1996; Gomez et al., 2001). Although empirical work on these issues is lacking, it seems likely that the increased perception of threat, hostility, and anxiety that psychologically controlling parenting instills in adolescents increases their wariness of unfamiliar others, especially outgroup persons. As a result, adolescents with psychologically controlling parents may hold negative racial attitudes and have a decreased willingness to help outgroup persons.

In contrast, parents who support adolescents' autonomy, respect their perspectives, and make decisions collaboratively have been found to foster social trust in adolescents. Social trust serves as an indicator of adolescents' readiness to extend trust to individuals they are not familiar with and to give them the benefit of the doubt (Wray-Lake & Flanagan, 2012). Cultivating trust in others and valuing diverse viewpoints within the family can broaden adolescents' capacity to apply these principles to their interactions with peers from different social groups. Growing up in such a family environment can help adolescents develop a more inclusive and accepting perspective toward others, including outgroups.

Positive intergroup attitudes have a multifaceted impact on facilitating outgroup prosocial behavior (O'Driscoll et al., 2021). When individuals hold favorable views of diverse others, it tends to foster greater empathy and compassion for the challenges and needs faced by members of those groups. This heightened empathy, in turn, translates into a stronger inclination to help outgroup members to improve their well-being (Dovidio et al., 2010), which is an integral element of altruistic prosocial behavior. Furthermore, positive intergroup attitudes foster intergroup engagement, during which individuals participate in constructive dialogues (Carlo et al., 2022; Taylor et al., 2014). These interactions are crucial for encouraging adolescents to engage in altruistic prosocial behaviors, as they contribute to understanding the experiences and perspectives of diverse others. On the other hand, negative intergroup attitudes can result in the avoidance of individuals from ethnic or racial minority groups and lead to a less inclusive approach to helping others (Taylor et al., 2020; Van Zomeren et al., 2007). Thus, intergroup attitudes may serve as an intrinsic motivator for altruistic prosocial behavior. In contrast, public prosocial behavior, driven by extrinsic factors like seeking approval or gaining social status, tends to

prioritize external recognition. Consequently, the relationship between positive intergroup attitudes and public prosocial behavior towards outgroups can be complex, potentially manifesting as a negative association.

1.3 | Hypotheses

The present study had two main goals: (1) to explore whether parental psychological control is associated with adolescents' altruistic and public prosocial behavior directed towards ethnic outgroups, and (2) to examine whether these associations are mediated by adolescents' intergroup attitudes. In particular, our hypotheses posited that parental psychological control would exhibit a negative relation with altruistic outgroup prosocial behaviors but a positive relation with public outgroup prosocial behaviors. Additionally, we postulated that the link between parental psychological control and outgroup prosocial behaviors would be mediated by the intergroup attitudes of adolescents. In other words, parental psychological control might lead adolescents to hold more negative attitudes toward ethnic outgroups, which, in turn, would result in more public and less altruistic prosocial behaviors towards outgroup members.

2 | MATERIALS AND METHODS

2.1 | Participants

Participants were 412 European American adolescents (42% girls; *Age* = 15.63 years, *SD* = 1.25) and their primary caregivers (52% mothers), who completed online questionnaires. With regard to parents' educational level, 45% of parents had a 4-year university degree or higher, 35% had some level of university education, and 17.5% held a high school diploma. 73% of parents were married, 15% were divorced or separated, and 9% were single parents. The parents reported an average household annual income of \$78,171, but 25% of the sample had household incomes below \$40,000 per year. Adolescents were followed through three waves of data collection, with each wave occurring at 8-month intervals. The retention rate was 45.4% (*N* = 187) at Time 2 and 38.1% (*N* = 157) at Time 3. Attrition analysis results indicated that there were no statistically significant differences observed between participants who remained in the study and those who withdrew across various metrics, including parental control, racial attitudes, prosocial behavior towards outgroups, adolescents' gender, adolescents' age, parental education, and income.

2.2 | Procedure

The sample was recruited via an online survey company, which assembled a panel of eligible participants meeting specific demographic criteria: White American (non-Hispanic), fluent in English, residing in the United States, and having at least one child aged 12 to 15. Parents who met these criteria received a notification that indicated the availability of an online survey on parenting and adolescents' attitudes. If they expressed interest in the study, the consent form was sent to parents. Parents granted permission for both themselves and their adolescents to take part in the study by signing the consent form. Both parents and adolescents completed online surveys using the Qualtrics platform. The data collection occurred across three waves, each spaced 8-months apart. Parental psychological control was measured during the initial wave (Time 1), while adolescents' racial attitudes and prosocial behaviors were measured at Time 1, Time 2, and Time 3. Each survey conducted during each data collection phase took approximately 30 min to complete. Participants received compensation of \$15 for completing the survey package at each time point.

2.3 | Measures

2.3.1 | Parental psychological control

Parental psychological control was measured by employing the short version of the Parental Control Scale (PCS; Barber, 1996; Barber, et al., 2012). The 8-item scale evaluates various aspects of psychological control, including love withdrawal (e.g., 'I am less friendly with my child if he/she does not see things my way'), constraining verbal expressions (e.g., 'I often interrupt my child when he/she is speaking'), invalidating feelings (e.g., 'I am always trying to change how my child feels or thinks about things'), and personal attack (e.g., 'I bring up my child's past mistakes when he/she criticizes me'). Parents were asked to assess the extent to which each statement aligned with their own behaviors using a 5-point rating scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores on this scale showed a greater degree of parental

psychological control ($\alpha = 0.86$). The original scale relies on youth reports. In the present study, we opted for the parent report version of the scale, which has demonstrated robust psychometric validity in prior research (Shek et al., 2018; Van Heel et al., 2019).

2.3.2 | Adolescents' intergroup attitudes

Adolescents' intergroup attitudes towards three major ethnic groups (African American, Latino, Asian American) were measured using a Social Distance Scale (Bell et al., 2021). This scale asks hypothetical questions about whether adolescents would prefer to have lunch, gather at their house, dance together at a party, or sit together on the school bus with peers from these three ethnic groups. The sequence of questions about ethnic groups was systematically varied across the questionnaires to avoid order-related biases. Adolescents rated their responses on a 5-point scale, ranging from 1 (no way!) to 5 (for sure yes!). Higher scores were indicative of more positive intergroup attitudes towards diverse peers (for $\alpha_{\text{African American}} = 0.92$; $\alpha_{\text{Latino}} = 0.91$; $\alpha_{\text{Asian American}} = 0.91$). These measures of intergroup attitudes are likely considered to be measuring the same concept as they aim to capture adolescents' perceptions of ethnic outgroups. Adolescents' responses to questions for each ethnic group are highly correlated. The correlation between intergroup attitudes towards African Americans and Latinos was 0.84, African Americans and Asian Americans were 0.80, and Latinos and Asian Americans were 0.87. Thus, we combined the measures of negative racial attitudes across three target groups ($\alpha = 0.91$).

2.3.3 | Adolescents' prosocial behaviors towards outgroups

To gauge the prosocial behavior of adolescents towards outgroups, we used public and altruistic prosocial behavior subscales derived from the modified version of the Prosocial Tendencies Towards Outgroups Measure (PTM-Outgroup; Carlo & Randall, 2002). The PTM-Outgroup is the same as the original PTM except participants are instructed to respond to the items with reference to how they behave towards persons who are not from their own ethnic group. There is prior psychometric evidence on the original PTM (e.g., Carlo, White, et al., 2018) and on a version of the PTM that was similarly modified to measure helping towards strangers, friends, and relatives (e.g., Streit et al., 2020). The public prosocial behavior subscale ($\alpha = 0.90$) consists of 4 items, including statements like "Helping others when I am in the spotlight is when I work best." The altruistic prosocial behavior subscale ($\alpha = 0.89$) consists of 5 items such as "I think that one of the best things about helping others is that it makes me look good (reverse coded)." Adolescents rated how well each statement describes themselves on a 5-point scale ranging from 1 (does not describe me at all) to 5 (describes me greatly).

2.3.4 | Control variables

Participants were asked to identify their gender and education level.

3 | RESULTS

3.1 | Descriptive statistics and correlation analysis

Bivariate correlations and descriptive data for the variables are provided in Table 1. Parental psychological control was negatively correlated with adolescents' positive intergroup attitudes and altruistic outgroup prosocial behavior but positively correlated with their public outgroup prosocial behavior. Adolescents' positive intergroup attitudes were positively correlated

TABLE 1 Bivariate and descriptive information on variables.

	1	2	3	4	Mean (SD)
1. Parental psych. control (T1)	-	-0.29**	0.28**	-0.27**	1.81 (0.74)
2. Pos. intergroup attitudes (T2)		-	-0.31**	0.25**	4.36 (0.72)
3. Public outgroup prosoc. (T3)			-	-0.84**	1.88 (1.11)
4. Altruistic outgroup prosoc. (T3)				-	4.05 (1.09)

* $p < 0.05$; ** $p < 0.01$

with their altruistic behavior but negatively correlated with public outgroup prosocial behavior. Lastly, there was a negative correlation between public and altruistic prosocial behavior towards outgroups.

3.2 | Analytic strategy

Two longitudinal path analyses were conducted in Mplus version 8 (Muthén & Muthén, 2017). In the first analysis, we explored whether parental psychological control at Time 1 was associated with adolescents' prosocial behaviors towards outgroups at Time 3, mediated through adolescents' intergroup attitudes at Time 2. Full information maximum likelihood was used to account for missing data. Direct paths from parental psychological control at Time 1 to public and altruistic prosocial behaviors towards outgroups at Time 3 were included in the model. Indirect effects between parental control and prosocial behaviors were also examined, with adolescents' intergroup attitudes at Time 2 as the mediating variable. Adolescents' public and altruistic prosocial behaviors were allowed to correlate. Adolescents' gender and parental education were included as statistical controls in the model. In the second analysis, public and altruistic prosocial behaviors at Time 2 and intergroup attitudes at Time 1 were controlled by including paths from these variables to their corresponding Time 2 and 3 variables. Models will be considered to have a good fit to the data if they yield values of Comparative Fit Index (CFI) ≥ 0.95 , Tucker–Lewis index (TLI) ≥ 0.95 , Root Mean Square Error of Approximation (RMSEA) ≤ 0.06 , and Standardized Root Mean Square Residual (SRMR) ≤ 0.08 , as suggested by Hu and Bentler (1999).

3.3 | Test of the path models

The first path model fits the data well: $X^2(12) = 0.08$, $p = 0.36$; CFI = 1.00; TLI = 1.00; RMSEA = 0.00; SRMR = 0.02. Results (Figure 1) indicated that parental psychological control at Time 1 was negatively related to adolescents' positive intergroup attitudes at Time 2. Additionally, parental psychological control was positively associated with adolescents' public prosocial behavior towards outgroups but negatively associated with their altruistic prosocial behavior at Time 3. Furthermore, adolescents' positive intergroup attitudes at Time 2 were positively related to their altruistic prosocial behaviors but negatively related to public prosocial behaviors towards outgroups at Time 3. R^2 values for the mediators and outcomes are as follows: 0.10 for positive intergroup attitudes; 0.14 for public prosocial behaviors towards outgroups; and 0.11 for altruistic prosocial behavior towards outgroups. The indirect effect was significant for the relation between parental psychological control and adolescent public prosocial behavior towards outgroups via adolescents' intergroup attitudes (indirect effect: $\beta = 0.07$, SE = 0.03, $p = 0.02$). Similarly, the indirect effect was significant for the relation between parental psychological control and adolescent altruistic prosocial behavior towards outgroups via adolescents' intergroup attitudes (indirect effect: $\beta = -0.06$, SE = 0.03, $p = 0.048$).

The second model test (controlling for prosocial behavior towards outgroups at Time 2 and intergroup attitudes at Time 1) yielded an acceptable fit to the data, $X^2(7) = 13.98$, $p = .052$; CFI = 0.97; TLI = 0.92; RMSEA = 0.08; SRMR = 0.06.

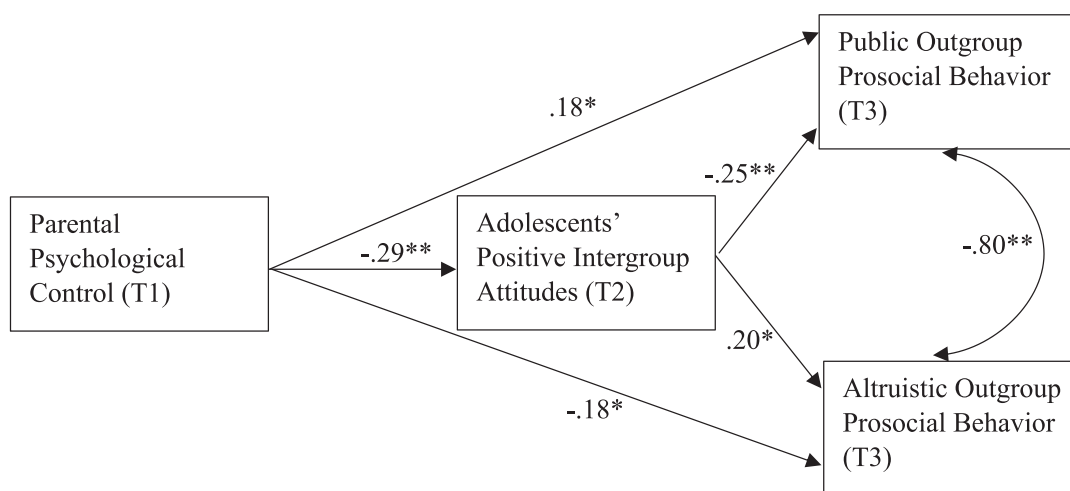


FIGURE 1 Structural model depicting paths from parental psychological control to adolescents' prosocial behaviors towards ethnic outgroups via adolescents' intergroup attitudes. Adolescents' gender and parental education at Time 1 were included as statistical controls. Model fit indices: $X^2(12) = 0.08$, $p = 0.36$; CFI = 1; RMSEA = 0.00; SRMR = 0.02 * $p < 0.05$; ** $p < 0.01$.

The public and altruistic prosocial behavior stability coefficients (Time 2 to 3 associations) were both significant, $\beta = 0.50$, $p < 0.01$, and $\beta = 0.59$, $p < 0.01$, respectively. Stability coefficients for intergroup attitudes (Time 1 to 2 associations) were also significant, $\beta = 0.57$, $p < 0.01$. In summary, the findings of this analysis showed that the path from parental psychological control at Time 1 to intergroup attitudes at Time 2 ($\beta = -0.13$, $p = 0.04$) remained significant. Similarly, the path between intergroup attitudes at Time 2 and public prosocial behavior at Time 3 ($\beta = -0.18$, $p = 0.03$) remained significant. However, the path from parental psychological control at Time 1 to the public ($\beta = 0.07$, $p = 0.38$) and altruistic ($\beta = -0.03$, $p = 0.73$) prosocial behavior at Time 3 became nonsignificant. Lastly, the path between intergroup attitudes at Time 2 and altruistic prosocial behavior towards outgroups at Time 3 became nonsignificant ($\beta = 0.07$, $p = 0.43$). None of the indirect paths were significant in the second model.

4 | DISCUSSION

The present findings generally aligned with our anticipated predictions regarding the longitudinal associations between parental psychological control, adolescents' intergroup attitudes, and their public and altruistic prosocial behaviors directed at ethnic outgroups. Parental psychological control was associated with adolescents' intergroup attitudes and public and altruistic outgroup prosocial behavior. Furthermore, adolescents' positive intergroup attitudes were positively related to altruistic outgroup prosocial behavior but negatively related to public prosocial behavior. Examination of indirect pathways showed that the effect of parental psychological control on adolescents' outgroup prosocial behavior also operated through the mediation of adolescents' intergroup attitudes.

When pre-existing levels of intergroup attitudes, and outgroup prosocial behaviors were included as additional statistical controls, the overall pattern of findings was in the same direction, but some effects were less robust. Only the relations between parental psychological control and intergroup attitudes, and between intergroup attitudes and public prosocial behavior, remained statistically significant. These latter findings could result from the relatively strong stability effects of intergroup attitudes and prosocial behaviors that might have overwhelmed other predictive paths. The relatively stable coefficients are consistent with previous work that has found substantial stability in prosocial behavior across childhood and adolescence (see e.g., Newton et al., 2014; Eisenberg, et al., 2006). However, the present findings yield evidence that there is also stability in prosocial behaviors towards ethnic outgroups.

In general, the results are consistent with self-determination theory positing that restriction of adolescents' autonomy through the use of parental psychological control would increase the likelihood that adolescents would not exhibit prosocial behaviors for altruistic reasons or motivations. Instead, they would be more likely to perform public prosocial behaviors for external validation or out of external pressures (Deci & Ryan, 2012; Ngai et al., 2018; Richaud et al., 2013; Soenens & Vansteenkiste, 2010; Wong et al., 2021), especially when these behaviors are directed towards outgroups. Parents' use of psychological control prevents adolescents from internalizing altruistic prosocial values. As a result, adolescents with controlling parents may not develop autonomous and self-determined motivations to engage in prosocial behaviors. Instead, they might feel a sense of power or control or even superiority over others by outwardly displaying outgroup prosocial behavior (i.e., self-oriented or self-focused rather than other-oriented prosocial motivations). Future research is needed to further understand these mechanisms.

Intergroup attitudes significantly mediated the longitudinal relationship between parental psychological control and outgroup prosocial behavior. Specifically, adolescents subjected to psychological control by their parents were less likely to develop positive intergroup attitudes. Adolescents with less favorable intergroup attitudes were more inclined to engage in public outgroup prosocial behavior while being less inclined to exhibit altruistic outgroup prosocial behavior. While all types of prosocial behaviors towards outgroups are undoubtedly positive, understanding the underlying motivations is imperative. This is because the motivations for engaging in prosocial behavior can significantly impact the consistency and authenticity of these actions. Given that public prosocial behavior is motivated by external social rewards (Carlo & Randall, 2002), this finding may imply that adolescents with less favorable racial attitudes are less likely to engage in prosocial behavior when there is no audience or social gain. To understand and promote selflessly-motivated prosocial actions towards outgroups, it is crucial to address the underlying motivations, not just the behaviors.

It is possible that adolescents subjected to psychological control may internalize an internal working model of relationships characterized by insecurity. Controlling parents has the potential to evoke antagonistic social cognitions, diminish social trust, particularly concerning outgroups, and amplify the perception of outgroup threat (Cassidy et al., 1996; Wray-Lake & Flanagan, 2012). The insecurities instilled by controlling parents may prompt adolescents toward adopting negative intergroup attitudes as a defensive mechanism aimed at self-protection in response to perceived threats. Maintaining negative intergroup attitudes, in turn, could inhibit the ability to empathize with and comprehend the experiences of outgroups (Carlo et al., 2022; Dovidio et al., 2010; Taylor et al., 2014), which may reduce the likelihood of engaging in altruistic prosocial behavior.

In contrast, involvement in public outgroup prosocial behavior can serve as a strategy to mask biases against ethnic outgroups. Simultaneously, it can project a sense of moral superiority in the perceptions of others. In line with this,

adolescents' White Savior beliefs might serve as a motivation for engaging in public prosocial behaviors towards outgroups. People embracing White Savior beliefs see ethnic or racial minorities as incapable of saving themselves and view it as the responsibility of White individuals to rescue them. The inclination to help arises from a desire to assert superiority and perpetuate the structural aspects of racism (DiAngelo, 2018). Adolescents holding negative intergroup attitudes might subscribe to White Savior beliefs, which leads them to participate in public prosocial behaviors where they prioritize their self-image over the needs and autonomy of ethnic outgroups.

This study exhibits several notable limitations which underscore the need for future research. The first limitation is the relatively high attrition rate. Although the analysis of attrition showed no significant statistical differences in the study variables between participants who continued in the study and those who dropped out, it is possible that there are differences in unmeasured factors. For example, the present study did not examine family demographics such as political affiliation. Future research should explore these and other possibly related factors, which may interact with psychological control in complex ways and be subsequently linked to adolescents' out-group attitudes and prosocial behaviors. Another limitation is the relatively modest R^2 values, which indicate that the models explain only a small portion of the variance. This suggests that other factors might play significant roles, so conclusions should be interpreted with caution. A third limitation is that the present sample focused on White, European Americans because of our interest in understanding these relations in a sample of the ethnic group of relative privilege in the U.S. (Coll et al., 1996). Additionally, this sample reported a relatively high educational status. Future research should include more diverse ethnic, racial, and educational groups to assess the generalizability of our findings. A fourth limitation is that the study relied on self-report measures for all the primary variables. It is essential for future research to employ various measurement methods, such as observational measures, to mitigate potential biases associated with self-reporting and to validate the current findings. Moreover, the high stability coefficients for intergroup attitudes and prosocial behaviors undermined some of the significant effects across time. Thus, the model demonstrated concurrent effects but was not predictive of changes in prosocial behaviors towards outgroup members, which calls for future research aimed at accounting changes in attitudes and prosocial behaviors.

In conclusion, the present study represents a pioneering effort to explore the longitudinal connections between parental psychological control and the development of attitudes and prosocial behaviors towards outgroup members. The results yield suggestive evidence of parents' use of psychological control as predictive of adolescents' intergroup attitudes and their propensity for prosocial behaviors directed towards outgroups. Understanding the origins and development of diverse forms of outgroup prosocial behaviors holds great promise for both research and practical applications, particularly in the context of fostering inclusive communities. By shedding light on the factors that drive adolescents to engage in prosocial behaviors towards outgroup ethnic minoritized groups, the present study contributes to the broader mission of encouraging and promoting more inclusive societies.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

The study received Institutional Review Board (IRB) approval (Lehigh University, IRB Protocols (1170523-5)).

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