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Considering multiple levels of influence on adjustment in school: Ethnic–racial public regard, peer socialization, and social-emotional learning practices

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Abstract

Adolescence represents a developmental period of marked increase in the development of ethnic–racial identity (ERI) and the importance and influence of friends. Moreover, scores of studies have revealed that ERI and friendships are influential factors in many different academic and psychosocial outcomes for adolescents. However, the development of these relations between ERI, friendships, and academic and psychosocial adjustment do not occur in a vacuum. One context that likely shapes these relations is the classroom. In the current study, we investigated how ERI and peer socialization were related to academic and social efficacy over time, and how perceptions of social-emotional learning (SEL) practices in the classroom moderated these relations among 586 American middle school youth. Our analysis tested these hypothesized effects, controlling for potentially confounding the effects of friend selection. Results indicated that more positive ethnic–racial public regard predicted gains in students' perceived social efficacy with teachers but not their perceived social efficacy with peers or academic efficacy. In the assessment of peer socialization effects, youth became increasingly similar to their peers in

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regard to academic efficacy, social efficacy with peers, and social efficacy with teachers over time. Moderation analyses indicated that perceptions of greater exposure to SEL practices reduced students' susceptibility to their friends' influence in social efficacy with teachers. Together, these results highlight the unique and combined impact of ERI, peer influence, and SEL in the development of adolescents' social efficacy.

KEYWORDS
academic efficacy, ethnic–racial public regard, peer socialization, social efficacy, adolescence, social-emotional learning

1 | INTRODUCTION

For many youth in the United States, adolescence is a time of heightened awareness of racial and ethnic issues. During adolescence, youths' ethnic–racial identity (ERI)—the importance and meaning one ascribes to their ethnicity and race—has been shown to inform a range of adaptive psychosocial, social functioning, and academic adjustment (Miller-Cotto & Byrnes, 2016; Rivas-Drake, Seaton, et al., 2014). Simultaneously, friendships become increasingly important during adolescence (Veed et al., 2019; Wentzel, 2017). Adolescents begin to spend more time with their friends and rely on them as social supports, as compared to their parents or other adults (Wentzel & Muenks, 2016), and lend greater weight to the values and opinions of their friends (Özdemir et al., 2018). As such, the academic and social behaviors of one's friends can influence their adjustment, in tandem with their own ERI. Scholars have increasingly examined the relations between ERI, academic and psychosocial adjustment, and peer socialization; however, little scholarship has been dedicated to investigating contextual factors, such as classroom practices, that may enhance or diminish these relations. Yet, such knowledge is needed to adequately account for the role of context in the links between ERI and youth's social and academic adjustment, and for the development and refinement of pertinent school-based interventions.

Classroom teaching practices are likely to be an important contextual factor in shaping the relation between ERI, peer socialization, and both social and academic adjustment. During the academic year, adolescents spend the majority of their day in a classroom. Thus, perceptions of the teaching practices in the classroom could shape how ERI or peer socialization relates to social and academic adjustment, especially if these practices are targeted to enhance social and emotional competencies and adjustment. The goals of the current study are to (1) examine how ERI and peer socialization influences academic and social efficacy development and (2) test whether these associations are moderated by students' perception of social-emotional learning (SEL) practices during the homeroom period of their school day. Our goals are complicated by the fact that friends in schools do not provide independent observations: friend selection and peer influence have been observed in ERI (Santos et al., 2017) and on academic and social adjustment (Rambaran et al., 2016). Thus, we employed a network model to test the hypothesized associations while distinguishing influence and selection processes.

1.1 | Theoretical frameworks

To frame the role of friends and classroom contexts, we ground the study in Ecological Systems Theory, which emphasizes the importance of understanding how contextual factors shape the development of an individual

(Bronfenbrenner, 1992). These factors are situated within nested systems around the individual, with proximal factors representing those with the most direct influence on one's development. The focus of the current study investigates the most proximal system to the individual (the microsystem) and the dynamic interaction between agents within that system (the mesosystem). Independently, friends and perceptions of classroom practices represent two microsystems that influence the academic and social efficacy of adolescents. In addition to their unique influences, each may enhance or inhibit the influence of the other. Thus, we consider the mesosystemic interaction of friends and perceived classroom practices—how the role of influence from friends varies depending on classroom practices—to better understand how these factors influence the academic and psychosocial adjustment of adolescents.

Moreover, we draw on the Phenomenological Variant of Ecological Systems Theory (Spencer, 2007), which extends the ecological theory to include issues of identity, and which is argued to be pertinent to the development of diverse ethnic and racial groups. Spencer (2007) argues that youths' understanding of their ethnic or racial group membership is both a lens and product of their ecological experiences. We also follow recommended best practice in the ERI literature to aim for precision in the particular aspect(s) of ERI that may be most theoretically justified to include in a given study (Schwartz et al., 2014). In the current study, we assess youths' perceptions of *public regard*, specifically, which reflects individuals' perceptions of how positively or negatively others view their ethnic–racial group. Public regard is theorized to be a proximal influence on an individual's interpretation of the environment and subsequent behaviors, and it has been found to vary as a product of individual's exposure to racialized experiences such as discrimination and support (Rivas-Drake & Umaña-Taylor, 2019; cf. Sellers et al., 1998). It has been theorized that youth who have more positive public regard are likely to have a stronger self-concept and sense of self and thus will experience more positive and beneficial outcomes, compared to youth who perceive negative public regard (Rivas-Drake & Umaña-Taylor, 2019). Thus, given the highly social and dynamic construction of this dimension and its theorized relations to academic and social outcomes, public regard was chosen as the focal dimension of ERI in the study.

1.2 | Individual ethnic–racial public regard and academic and social adjustment

Youths' ethnic–racial public regard is associated with various positive developmental outcomes (Rivas-Drake, Syed, et al., 2014). These include myriad academic and psychosocial outcomes, including academic belonging, school engagement, self-esteem, and well-being, which are of particular importance among youth of color in the United States (Hoffman et al., 2020; Leath et al., 2019; Medina et al., 2019; Santos & Collins, 2016). For example, Latinx adolescents who perceived more positive public ethnic regard (by adults in school) were more likely to be academically engaged and have higher academic performance than those who had more negative perceptions (Rivas-Drake, 2010). In a study with American–Indian adolescents, youth who perceived that other people viewed their group more positively reported higher self-esteem and greater social, emotional, and psychological well-being (Hoffman et al., 2020).

Youths' ethnic–racial public regard is likely positively related to youths' academic efficacy. Academic efficacy is an individual's perceived capacity to master the work in their classes (Patrick et al., 1997). Perceived academic efficacy has been linked to higher self-esteem, suggesting that perceptions of one's self-image can influence one's perception of their ability level and capacity (Di Giunta et al., 2013; Smith et al., 1999). Perceiving more positive ethnic–racial regard was associated with greater academic self-competence and school-reported academic performance among Latinx adolescents (Rivas-Drake, 2011) and with less academic anxiety among African American, Chinese–American, Dominican-origin, Russian-origin, and European–American children (Gillen O'Neel et al., 2011). Additionally, past research has found that other dimensions of ERI can be promotive of academic efficacy (Berkel et al., 2010; Ellis et al., 2018; Oyserman et al., 2001). As such, we reasoned that youths' ethnic–racial public regard (i.e., evaluations of whether their ethnic–racial group is held in high social esteem) would positively relate to their individual assessment as to whether they are able to achieve academically.

Youth's ethnic–racial public regard may similarly shape their social efficacy, which refers to an individual's ability to make new friends, form positive social connections, and be accepted by their peers (Camacho et al., 2017; Patrick et al., 1997). Although there is very little work linking public regard and youths' social competencies, we have reason to believe youths' ethnic–racial public regard may influence how adolescents choose to engage with others. One basis for this likly influence of public regard is the consistent link between perceiving ethnic–racial discrimination and social-emotional, academic, and behavioral outcomes correlated with social competence among African American, Latinx, Asian–American, and Native American youth (e.g., Benner et al., 2018). Another related basis is that youth who perceive more negative perceptions by others, more generally, in a given context may feel unsafe to initiate social interactions or form new friendships (Kornienko et al., 2015; e.g., Rowley et al., 2008). Furthermore, in an ethnically diverse setting, intergroup dynamics may also play a role in youths' feelings of social efficacy. For instance, a study in the Netherlands found that Dutch adolescents in the majority group with prejudiced attitudes formed fewer outgroup friendships with youth in the minoritized group (Stark, 2015); the minoritized youths' friendship patterns were not assessed. Nevertheless, there is a dearth of research on public regard and social efficacy, specifically, and additional work is needed to explore whether and how such regard relates to social outcomes as it does to academic outcomes. The current study attempts to address this gap, critically analyzing the roles of particularly relevant social factors and their links to students' ethnic–racial public regard and both their academic and social adjustment.

1.3 | Peer socialization and academic and social adjustment

In addition to developing their ERI, adolescents are becoming more socially oriented to their friends, as they are more aware of and dependent upon their friends' evaluations and support (Ryan & Shin, 2018). This is especially true for close friendships, which are often of particularly high quality and characterized by levels of disclosure, trust, loyalty, and companionship unique among adolescent peer relationships and other friendships (Berndt, 2002). As a result, close friendships are developmentally significant, and have been linked closely to youth's positive psychosocial development (Hartup & Stevens, 1997). At the same time, adolescents are spending more time with close friends in school and interacting within a larger social scene in their classes (Rodkin & Ryan, 2012). Accordingly, friends play an important role in socializing adolescents' academic and social adjustment (Ryan & Shin, 2018), particularly as youth are likely to adopt the behaviors and attitudes of their friends through sustained interactions (Brechwald & Prinstein, 2011). There are several mechanisms through which peer socialization occurs. However, there are two mechanisms that we believe are likely particularly relevant in the socialization of academic and social adjustment. Specifically, (a) adolescents' likelihood to engage in ways that match the social norm of their peer group and (b) adolescents' likelihood to engage in ways that are enforced by their peers (Brechwald & Prinstein, 2011).

Much theory and empirical research have outlined a rich array of links between adolescents' friendships and their academic outcomes. For example, friends' opinions about how to engage with school have been shown to affirm, sustain, or dissuade an individual's motivation and engagement (Kindermann, 2007; Molloy et al., 2011; Shin & Ryan, 2014; Wang et al., 2018). In addition, both higher and lower performing students tend to select for similarly performing friends, and students' academic performance tends to become more like that of their friends over time (Blansky et al., 2013; Flashman, 2012; Rambaran et al., 2016; Sacerdote, 2011). Friendships are also important for providing adolescents a sense of social support and belonging. In particular, feelings of relatedness or belonging at school have been linked with a range of positive outcomes, including academic valuation, achievement, and engagement (Delgado et al., 2015; Hamm & Faircloth, 2005).

This bulk of knowledge points to the central role that friend characteristics play in academic and social adjustment. However, we know little about the interplay between friendships, public regard, and academic adjustment. In the current study, we aim to extend our understanding of the effect of friends on academic and social efficacy by considering two developmentally salient phenomena in adolescence: peer socialization and public regard, and how they are simultaneously related to and shape academic and social efficacy.

1.4 | Perceptions of the classroom context—A potential moderator of influence

The dynamics between friends are often the result of the 'invisible hand' of the teaching practices in the classroom. Teacher classroom practices include a variety of instructional, emotional, and behavioral support including: structuring classroom interaction patterns and activities, promoting productive engagement, and managing peer hierarchies (Farmer et al., 2011). Such classroom practices have been shown to influence the academic achievement, as well as peer relationships (Audley-Piotrowski et al., 2015; Roorda et al., 2011). Research suggests that the extent to which students' academic engagement is shaped, positively or negatively, by the engagement of their peer group can vary according to their teachers' level of classroom involvement (Vollet et al., 2017). Though the establishment and maintenance of classroom practices occur within classrooms, students may perceive their academic and social context differently. It is this student perception of the classroom context that we investigated in the current study.

As adolescents become increasingly dependent on their friends, they develop the social skills needed to facilitate mutually supportive relationships critical to enabling academic skills and promoting positive emotional growth (Caprara et al., 2000). One widespread approach for schools to address the development of students' social-emotional skills is to implement SEL in the class curriculum (Durlak et al., 2015). Practices that support SEL include those that enhance personal development and encourage positive interpersonal relationships by fostering social and emotional competencies (Weissberg et al., 2015). SEL practices have been associated with a myriad of positive outcomes among middle schoolers, including increased social competence, decreased bullying, and reduced prejudice (Jagers et al., 2015; Medina et al., 2019).

The focal school in this study used a program called *Developmental Designs* (DD) to address adolescents' psychological needs for autonomy, competence, and relationships, in part, through a daily community-building homeroom (Crawford, 2008; Niemiec & Ryan, 2009). In DD, SEL activities lasting 15–30 minutes each day were implemented during the homeroom period to establish trust among students and teachers, teach the necessary social skills to foster positive relationships with peers and adults, and make school meaningful and relevant to youth (Crawford, 2008). Teachers accomplished this by modeling respectful interactions and giving students the opportunities to establish and enforce social norms, set individual goals, share and listen to multiple peer perspectives, engage in group activities, and reflect upon social experiences. These classroom practices were executed within two frames where (1) students engaged in daily greetings, share-outs about their life, and group activities and (2) students engaged in self-reflection about SEL-related experiences (Crawford, 2008). The goal of these SEL activities is to develop adolescents' social and emotional competencies including their self-awareness, social awareness, relationship skills, self-management strategies, and responsible decision making (CASEL, 2017). These competencies are necessary for adolescents' self and communal identity and may enhance adolescents' schooling experiences by providing skills to foster confidence in themselves, build positive relationships with others, and make constructive choices. Though studies examining the effects of DD are limited, one study found that perceptions of these SEL practices (by middle school students) enhanced their civic engagement and provided insight for the effectiveness of DD practices (Jagers et al., 2017). In the current study, we consider how experiences of the broader classroom context, namely students' perceptions of SEL practices, may moderate peer influence processes on academic and social efficacy development. Where greater perceptions of SEL practices in the classroom would hamper the effect of peer influence as youth likely have developed a stronger sense of self and social awareness. Indeed, empirical evidence supports this notion as one study found that adolescents with stronger self-concepts were likely to be less susceptible to peer influence (Yang & Laroche, 2011).

1.5 | The current study

A more comprehensive examination of the relations among ethnic–racial public regard and academic and social efficacy during adolescence would benefit from considering the influence of both students' friendships and their perception of the classroom context. The extant literature has considered how each of these factors work independently to shape adolescents' academic and social adjustment (e.g., Goodenow & Grady, 1993; Ryan & Patrick, 2001;

Vollet et al., 2017; Weyns et al., 2018), however, the current work considers how all three factors may work jointly to shape students' academic and social efficacy. Building on previous work (Medina et al., 2019; Santos et al., 2017; Stein et al., 2017), the current study considers how these processes occur during adolescence, when identity development and friendship formation are typically becoming increasingly salient, and employs a social network analysis, which accounts for the non-independence of friends' beliefs by considering how students may influence one another.

To shed light on the impact of individual-level, micro- and mesosystem factors, and processes in the academic and social efficacy of adolescents, we pose three primary questions. Firstly, how does youths' ethnic–racial public regard relate to academic and social efficacy with peers and teachers? Following the theory and literature reviewed, we hypothesized that individuals' public regard would be positively related to youths' academic and social efficacy with peers and teachers (Hypothesis 1a). Given the relative importance and salience of ERI among racial/ethnic minority youth, we expected this relation to be stronger among racial/ethnic minority youth, as compared to racial/ethnic majority or White/European American youth (Hypothesis 1b). Secondly, how do friends shape adolescents' academic and social efficacy with friends and teachers? We hypothesized that socialization processes would influence youth to become more similar to their friends in academic and social efficacies over time (Hypothesis 2). Thirdly, how might perceptions of SEL practices in the classroom moderate peer influence on youths' academic and social efficacy development? We hypothesized that there would be a weaker peer influence effect on youths' academic and social efficacy among those who perceive greater exposure to SEL practices, reflecting an attenuated role of peer socialization under this condition (Hypothesis 3a). Furthermore, we expected that SEL practices would predict more positive academic and social efficacy development for racial/ethnic minority youth over time, compared to racial/ethnic majority youth (Hypothesis 3b).

In addition to the primary three study questions, we investigated one additional exploratory question. We explored the moderating role of racial/ethnic group membership on the relation between perceived SEL practices and ethnic–racial public regard. We hypothesized that perceived SEL practices would predict more positive ethnic–racial public regard development for racial/ethnic minority youth (Hypothesis 4).

2 | METHOD

2.1 | Design

Data were drawn from a 3-year survey study of sixth, seventh, and eighth grade students in a U.S. middle school located in a small Midwestern city. The data collection design was a cross-sequential model, drawing on a sample of all available students at every wave, and maximizing the number of participants in the longitudinal sample. Thus, not all students were present for all waves, as some students graduated from the school and new students were enrolled. The school was interested in the psychosocial development of its students and was implementing a school-wide SEL program (i.e., DD), using homeroom periods as a primary space to implement DD advisory activities and principles. We assessed students' academic and social efficacy, ERI public regard, friend nominations, and perceptions of the school's SEL practices. We tested the study questions using stochastic actor-based models.

2.2 | Procedure

The current study draws on three waves of a longitudinal survey that was administered in the spring of 2014 (Wave 1), fall of 2014 (Wave 2), and spring of 2015 (Wave 3) during students' homeroom periods. All students in the school were invited to participate at each wave and passive parental consent procedures (i.e., students' parents were contacted and requested to inform the research team if they did not wish their child to participate in the study) were implemented prior to survey administration. Surveys included a battery of different measures that assessed the adolescents' perception of SEL practices in their classroom, ERI, various academic and psychosocial

outcomes. The survey took approximately 30 minutes for students to complete. Students were informed of the confidentiality of their responses and the completely voluntary nature of the survey. This research was determined to be exempt by the University of Michigan IRB.

2.3 | Participants

The participating school was diverse in terms of gender and race/ethnic group membership across the three time periods of data collection (see Table 1). Demographic information was collected at each wave, and all analyses drew student gender and race/ethnicity information from the corresponding wave. The analytic sample (N = 586) was similarly diverse. 45.3% of students self-identified as girls and 48.4% as boys. 24.6% of students were in sixth grade, 45.4% were in seventh grade, and 21.9% were in eighth grade. Regarding racial/ethnic demographics, 8.5% of students self-identified as Asian/Pacific Islander, 28.1% as African American/Black, 12.4% Latinx/Hispanic, 11.6% Multiracial, 1.0% Native American, 29.2% White, and 5.0% Other.

The analytic sample also reflects the following three grade cohorts ordered by length of time within the school: Cohort 1 contains those who were in the seventh grade at Wave 1 (n = 196); Cohort 2 contains those who were in the sixth grade at Wave 1 (n = 206); and Cohort 3 contains those who were in the fifth grade at Wave 1 and who thus entered the school and study at Wave 2 (n = 184) for a total sample size of 586. Cohorts 1 and 2 each have three waves of data whereas Cohort 3 was only surveyed for two waves because this cohort entered the study at Wave 2. To be included in the survey, the student must have been present (i.e., not absent) and assented in class the day the survey was administered. This procedure resulted in high participation rates across waves. At Wave 1, the exact participation rate is unknown but comprehensive, as our collected sample of 492 students exceeds the school's 2013–2014 enrollment number of 488, indicating enrollment shifts immediately prior to or following survey administration. At Wave 2, which included 513 students, the participation rate was 92% (89% for Cohort 1, 94% for Cohort 2, and 93% for Cohort 3). At Wave 3, which included 496 students, the student participation rate was 89%; however, we did not ask student grade levels at this Wave, so participate rates by grade are unknown.

TABLE 1 Sample demographic characteristics across grades by wave and across the full sample

Demographics	W1	W2	W3	All Waves
Gender, %				
Female	45.9	46.8	38.7	43.9
Male	49.2	50.5	37.9	43.9
Preferred not to answer	1.0	1.8	5.6	2.7
Missing	3.9	1.0	17.7	7.2
Race/Ethnicity, %				
Asian/Pacific Islander	7.9	8.4	9.3	8.5
African American/Black	28.3	28.3	24.4	27.1
Latinx/Hispanic	12.0	13.6	12.3	12.7
Multiracial	13.0	8.0	10.3	10.4
White	30.1	30.0	25.8	28.7
Other/Native American	4.7	6.9	7.2	6.3
Missing	4.0	4.9	10.7	6.4

Note: Higher missing values in Wave 3 are likely related to the relocation of demographic questions to the end rather than beginning of the survey.

2.4 | Measures

2.4.1 | Academic efficacy

Academic efficacy was assessed using the Perceived Academic Efficacy scale (Cross et al., 2019; Patrick et al., 1997). The measure consisted of four items (1 = *strongly disagree* through 5 = *strongly agree*), with a sample item reading, 'I can do even the hardest work if I don't give up' ($\alpha_{\text{Wave 1}}$ = .89, $\alpha_{\text{Wave 2}}$ = .90, and $\alpha_{\text{Wave 3}}$ = .93). Higher values indicated greater academic efficacy. This scale has been used previously with a Latinx adolescent sample and shown to be reliable and valid (Cross et al., 2019).

2.4.2 | Social efficacy with peers

Perceived social efficacy with peers was assessed using the Social Efficacy with Peers scale (Patrick et al., 1997). The measure consisted of four items (1 = *strongly disagree* through 5 = *strongly agree*), with a sample item reading, 'I can work well with most students' ($\alpha_{\text{Wave 1}}$ = .85, $\alpha_{\text{Wave 2}}$ = .85, and $\alpha_{\text{Wave 3}}$ = .85). Higher values indicated greater social efficacy with peers. This scale has shown to be reliable and valid in previous studies with U.S. middle school samples (e.g., Patrick et al., 2007; Ryan & Patrick, 2001).

2.4.3 | Social efficacy with teachers

Perceived social efficacy with teachers was assessed using the Social Efficacy with Peers scale (Patrick et al., 1997). The measure consisted of four items (1 = *strongly disagree* through 5 = *strongly agree*), with a sample item reading, 'I find it easy to just go and talk to my teacher' (α_{Wave1} = .78, α_{Wave2} = .79, and α_{Wave3} = .86). Higher values indicated greater social efficacy with teachers. This scale has shown to be reliable and valid in previous studies with U.S. middle school samples (e.g., Patrick et al., 2007; Ryan & Patrick, 2001).

2.4.4 | Ethnic–racial public regard

Ethnic–racial public regard was assessed using a modified subscale of the Multidimensional Inventory of Black Identity–Teen (MIBI-T; Scottham et al., 2008). The original scale referred specifically to Black individuals, thus modified items referred instead to one's 'ethnicity' or 'ethnic group'. The subscale consisted of three items (1 = *strongly disagree* through 5 = *strongly agree*), with a sample item reading, 'People think that people of my ethnicity are as good as people from other ethnicities' ($\alpha_{\text{Wave 1}}$ = .80, $\alpha_{\text{Wave 2}}$ = .75, and $\alpha_{\text{Wave 3}}$ = .69). Higher values indicated more positive public regard. This scale has shown to be reliable and valid with diverse U.S. middle school samples in previous studies (Medina et al., 2019; Santos et al., 2017).

Note that we treat academic efficacy, social efficacy with peers, social efficacy with teachers, and ethnic–racial public regard as dependent behavior variables in the stochastic actor-based model presented in this article (SABM; additional detail follows). When estimating SABMs, dependent behavior variables must have non-negative integer values (Ripley et al., 2018). Thus, the items for each variable were averaged and then, rounded to the nearest integer.

2.4.5 | Perceptions of SEL practices

Adolescents' perceptions of their exposure to teacher SEL practices in the context of homeroom were assessed using a five-item scale (1 = *Never* through 5 = *All of the time*). These items, created in conjunction with the DD

program and in accordance with its core tenets and goals, were designed to capture the extent to which students had the opportunity to practice skills such as autonomy, social learning, and cooperation in homeroom. Sample items included, 'In homeroom, how often have you lead at least part of a class meeting', 'In homeroom, how often have you helped set classroom rules', and 'In homeroom, how often have you set goals for myself for the school year' (α_{Wave1} = .76, α_{Wave2} = .75, and α_{Wave3} = .78). Higher values indicated greater perceptions of exposure to teacher SEL practices in homeroom. This measure has been used in a previous study with Black American and Latinx middle school youth and shown to be reliable (Jagers et al., 2017).

2.4.6 | Individual attributes

Several demographic measures were included in the analyses to control for homophily in friendship selection. Students' self-reported race/ethnicity identification was dummy coded as 1 to indicate membership in a given group (e.g., Asian, Black, Latinx, Multiethnic, Other, or White) and 0 otherwise. We combined students who identified as Native American with students who indicated 'Other' due to the small number of Native American students in the school. The inclusion of all students in the complete network is required for the analysis. Given our primary interest in the minoritized students, we focus on them by making White youth the omitted group; this is a pragmatic choice that should not imply Whiteness as a normative reference. We also included students' immigrant background as a covariant. If a student reported at least one parent who was foreign-born, immigrant background was coded as 1 and 0 for all else. For gender, male was coded as 1 and female was coded as 0. Homeroom class was dummy coded such that codes of 1 indicate a student's membership in a specific homeroom class. Score tests were used to evaluate whether the effect from each homeroom dummy variable differed from a common reference homeroom (see Online Appendix for additional detail).

2.4.7 | Friend nominations

The survey asked students to name their friends within the school and in the same grade (Ryan, 2001). Using a free recall approach, students were prompted to name those with whom they 'hang around with and talk to the most' (Fortuin et al., 2016; Shin & Ryan, 2014) and to 'only name [their] closest friends', with no limits on the number of friends they could nominate. If a named friend also participated in the survey, then we linked the respondent with the named friends' survey responses. Because students were asked to identify only those close friends who were in the same grade, the friendship network is bounded by grade within the school. We discuss how network data were used in our analysis in the Online Appendix (see *Network Function)*.

2.5 | Analytic approach

Adolescents' development of academic efficacy, social efficacy, and ethnic–racial public regard were assessed using a stochastic actor-based model (Snijders et al., 2010). This approach is ideal for our needs as a SABM distinguishes peer influence from selection into friendships based on academic and social efficacy. This distinction is important as youth are likely to model their behavior after friends. Yet, youth often select friends based on shared characteristics. Thus, the strength of the network approach used for this study is in identifying the causal effects of classroom practices in shaping adolescents' behaviors and specifying the role of peer influence in youths' tendencies to adjust their behavior while simultaneously controlling for selection processes.

There are some important modeling assumptions with the use of SABM (for more detail, see Snijders et al., 2010). Firstly, the network evolves as an actor-driven process wherein the focal actor (ego) has full information of the network and other actors in the network (alters) when making decisions about changes over time. We consider

this a reasonable assumption considering the size of the school and because friendship nominations are limited to within-grade selections. Furthermore, the model assumes changes in the network and behaviors are the result of a Markov process. Thus, changes in the network and behaviors are probabilistically determined by only the current—not preceding—states of the network and behaviors. This implies that all relevant information to network evolution is included—a fairly restrictive assumption. As such, we were careful to select variables that include pertinent information of the prior state based on prior knowledge of friendship formation processes. Finally, actors are assumed to change one tie or behavior at a time. This implies that changes are not coordinated among actors in the network, but instead that actors make decisions to change (or maintain) a tie or behavior based on the current state of the network, as well as their own and others' behavior.

Using the SABM, we simultaneously model changes in youths' ethnic–racial public regard, and academic and social efficacy while accounting for other processes that may influence the propensity for youth to change their behavior, namely who they befriend and subsequent peer influence. The SABM estimates separate functions for each outcome. This includes a 'Network Function', which models the processes that result in changes to the friendship network (whether a friendship tie is gained, lost, or maintained). The remaining functions are 'Behavior Functions', which models whether youth increase, decrease, or maintain their levels for each of four behavior variables. Three of these include the dependent variables of interest including: academic efficacy, social efficacy with peers, and social efficacy with teachers. We also control for changes in youths' public regard. With respect to our first and second hypotheses, we test for direct effects of public regard and peer influence, respectively, on academic efficacy, social efficacy with peers, and social efficacy with teachers. To address the third and fourth hypothesis, we assess the effects from SEL practices on academic efficacy, social efficacy with peers, and social efficacy with teachers, and public regard.

3 | RESULTS

3.1 | SABM results

Descriptions of the networks and changes in behaviors are presented in Tables 2 and 3 (see Online Appendix for additional detail of these descriptions). Table 4 presents selected results for only our hypothesized effects. We also provide results of the full SABM in the Online Appendix (Table 5). Interested readers will find interpretations for network function effects in the 'network selection' and 'network influence' sections of the Online Appendix.

We begin with controls predicting academic, social, and ERI behavior outcomes. In Table 5, estimates from the four behavior functions specify effects that result in youths' changes in academic efficacy (rows 43–61), social efficacy with classmates (rows 62–80), social efficacy with teachers (rows 81–102), and public regard (rows 103–122) development. Public regard was higher for boys (row 115; $b = 0.30$, $SE = 0.14$, $p < .05$) whereas no gender effects were observed for academic efficacy (row 54), social efficacy with classmates (row 73), and social efficacy with teachers (row 92). Although Black youth were more likely than White youth to maintain or change to lower levels of public regard over time (row 118, $b = -0.38$, $SE = 0.19$, $p < .05$), no other race/ethnicity or immigrant background effects were observed for public regard (rows 116, 117, and 119–120). In addition, ethnicity and immigrant background were not associated with any academic and social efficacy outcomes (rows 55–60, 74–79, and 93–98). Students with greater academic efficacy were more likely to report higher public regard (row 111; $b = 0.39$, $SE = 0.18$, $p < .05$) over time. Similarly, greater social efficacy with classmates was found to be positively related to public regard over time (row 112; $b = 0.68$, $SE = 0.22$, $p < .01$).

We focus the rest of our presentation on interpreting effects from the behavior functions specifically related to our hypotheses provided in Table 4.

TABLE 2 Sample descriptive statistics by grade

		Grade 7 (*N* = 196)						Grade 6 (*N* = 206)						Grade 5 (*N* = 184)					
		W1		W2		W3		W1		W2		W3		W1		W2		W3	
Row		*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Dependent variables																			
1	Academic efficacy	3.90	0.87	3.86	0.82	3.90	0.80	4.02	0.84	3.98	0.89	3.98	0.91	–	–	4.05	0.79	3.96	0.86
2	Social efficacy with classmates	3.81	0.86	3.88	0.84	3.86	0.81	3.75	0.97	3.84	0.90	3.93	0.76	–	–	3.86	0.71	3.77	0.90
3	Social efficacy with teachers	3.53	0.92	3.67	0.92	3.60	0.99	3.76	0.85	3.79	0.99	3.88	0.97	–	–	3.91	0.76	3.85	0.94
4	Public regard	3.36	0.90	3.43	0.87	3.44	0.86	3.59	0.91	3.75	0.84	3.61	0.90	–	–	3.53	0.80	3.50	0.84
Moderating variable																			
5	Social-emotional learning practices	3.23	0.82	3.24	0.85	3.04	0.89	3.42	0.71	3.40	0.78	3.08	0.77	–	–	3.28	0.78	3.07	0.75
Network density indicator																			
6	Average degree	5.21		4.65		4.23		4.29		4.29		4.42		–	–	4.16		5.23	
Other network indicators																			
7	Reciprocity	0.50		0.45		0.45		0.45		0.47		0.46		–	–	0.40		0.44	
8	Transitivity	0.27		0.29		0.29		0.23		0.23		0.26		–	–	0.26		0.23	
Gross homophily (odds ratio)																			
9	Same gender	4.83		3.86		3.00		7.03		5.34		3.94		–	–	4.73		5.21	
10	Same ethnicity	2.60		2.57		2.50		2.00		1.89		1.96		–	–	1.49		1.86	
11	Same parent immigrant background	1.41		1.52		1.59		1.17		1.31		1.36		–	–	1.04		1.10	
12	Same homeroom	1.66		4.74		3.47		1.50		3.92		4.31		–	–	3.79		3.43	

Note: See Gremmen et al. (2019) and Veenstra and Steglich (2012) for calculations of network statistics. See Moody (2001) for calculations of gross homophily as the odds ratio α of a same-attribute by friendship cross-tabulation.

TABLE 3 Change descriptive statistics by grade

Row		Grade 7		Grade 6		Grade 5
		W1–W2	W2–W3	W1–W2	W2–W3	W2–W3
Friendship indicators						
1	Jaccard index (stability), %	0.26	0.31	0.23	0.28	0.22
2	Hamming distance (average change per student)	5.81	4.66	5.33	4.93	5.97
3	No. of friendships emerged	514	415	549	521	648
4	No. of friendships dissolved	624	498	549	494	450
5	No. of friendships maintained	398	414	335	390	315
Changes in academic efficacy						
6	No. of steps down	29	15	45	34	33
7	No. of steps up	24	18	28	30	30
8	Actors that remain stable, %	34.2	28.6	38.3	35.9	34.8
Changes in social efficacy with peers						
9	No. of steps down	26	30	36	34	40
10	No. of steps up	30	30	50	45	32
11	Actors that remain stable, %	37.8	34.2	34.5	40.3	36.4
Changes in social efficacy with teachers						
12	No. of steps down	39	36	52	40	41
13	No. of steps up	50	38	53	46	42
14	Actors that remain stable, %	29.6	26.5	31.6	39.8	34.2
Changes in public regard						
15	No. of steps down	29	34	38	43	38
16	No. of steps up	38	30	54	29	31
17	Actors that remain stable, %	28.1	24.0	24.8	31.6	31.0

Note: See Gremmen et al. (2019) and Veenstra and Steglich (2012) for calculations of network statistics. Values presented are counts unless otherwise indicated.

3.2 | Effects of ethnic–racial public regard on academic and social efficacy development (Hypotheses 1a and 1b)

3.2.1 | How does youths' ethnic–racial public regard relate to changes in academic and social efficacy, and does this vary by youths' racial/ethnic group?

We were interested in assessing how ethnic–racial public regard among youth might relate to youths' academic and social efficacy (Table 4; *public regard*). We found that higher public regard predicted greater social efficacy with teachers (b = 0.50, SE = 0.17, p < .01). No relation was found between public regard and academic efficacy (b = 0.18, SE = 0.17, p = .30) or social efficacy with peers (b = 0.30, SE = 0.17 p = .07).

We investigated the effect of public regard on academic and social efficacies for each racial/ethnic group. Due to the number of effects for the model, we adopted a forward-fitting model strategy based on score tests (Ripley et al., 2018; Snijders et al., 2010) to determine whether to include interaction effects for youth's public regard and disaggregated racial/ethnic groups for academic and social efficacies. Only those interaction

TABLE 4 Selected SABM estimates for hypothesized effects

	Behavior Functions							
	Academic efficacy (AE)		Social efficacy with classmates (SEC)		Social efficacy with teachers (SET)		Public regard (PR)	
Function effect	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Public regard	0.18	(0.17)	0.30	(0.17)	0.50	(0.17)**		
Multiracial × Public regard					−1.10	(0.52)*		
Average similarity	4.03	(1.47) **	4.90	(1.34) ***	6.80	(1.78)***		
Social-emotional learning practices ego × Average similarity	−3.15	(2.59)	−0.82	(1.79)	−6.30	(2.65)*		
Race/ethnicity × Social-emotional learning practices	*n.i.*		*n.i.*		*n.i.*			
Multiracial × Social-emotional learning practices							−0.78	(0.39)*

Note: Maximum convergence ratio = 0.202. Estimates for network function and controls presented separately. See Online Appendix for full model.

Abbreviation: SE, standard error.

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

effects that, from the score tests, indicated an improvement in model fit were estimated. From the score tests, we identified one effect to be included in the model for the social efficacy with teachers function (Table 4; *multiracial × public regard*). We found that multiracial youth with more positive public regard were more likely than youth in other racial/ethnic groups to decrease their social efficacy with teachers over time; those multiracial youth with lower levels of public regard were more likely to remain at lower levels ($b = -1.10$, $SE = 0.52$, $p < .05$).

3.3 | Effects of peer influence on academic and social efficacy development (Hypothesis 2)

3.3.1 | Do friends shape adolescents' academic and social efficacy development?

The behavior functions estimated peer influence among friends for each academic efficacy and social efficacy measure (Table 4; *average similarity*). Results suggest peer influence was present for academic efficacy ($b = 4.03$, $SE = 1.47$, $p < .01$), social efficacy with classmates ($b = 4.90$, $SE = 1.34$, $p < .001$), and social efficacy with teachers ($b = 6.80$, $SE = 1.78$, $p < .001$). For each type of efficacy, students were more likely to either maintain their behavior or make changes that brought them closer to the average levels of their friends over time. Thus, we find evidence of influence from friends on all three academic and social efficacy measures, even after accounting for friendship selection processes driven by youths' academic efficacy.

TABLE 5 SABM estimates results on friendships and behavior measures

Row	Function effect	*b*	SE
	Network (friendship) function		
1	Rate, Cohort 1 T1–T2	17.90	(1.09)***
2	Rate, Cohort 1 T2–T3	17.27	(1.08)***
3	Rate, Cohort 2 T1–T2	18.98	(1.48)***
4	Rate, Cohort 2 T2–T3	17.80	(1.21)***
5	Rate, Cohort 3 T1–T2	24.82	(1.90)***
6	Outdegree (density)	−1.28	(0.15)***
7	Reciprocity	2.44	(0.08)***
8	Three cycles	0.04	(0.03)
9	Transitivity (GWESP)	1.67	(0.04)***
10	Indegree—popularity (sqrt)	−0.14	(0.03)***
11	Indegree—activity (sqrt)	−0.52	(0.06)***
12	Outdegree—activity (sqrt)	−0.12	(0.03)***
13	Truncated outdegree (1)	−7.27	(0.48)***
14	Truncated outdegree (2)	1.01	(0.26)***
15	Anti in-isolates effect	−0.47	(0.11)***
16	Academic efficacy alter	0.01	(0.03)
17	Academic efficacy ego	−0.10	(0.04)**
18	Academic efficacy similarity	0.32	(0.16)*
19	Social efficacy with classmates alter	−0.01	(0.04)
20	Social efficacy with classmates ego	0.04	(0.04)
21	Social efficacy with classmates similarity	0.09	(0.20)
22	Social efficacy with teachers alter	−0.01	(0.04)
23	Social efficacy with teachers ego	0.03	(0.04)
24	Social efficacy with teachers similarity	0.03	(0.24)
25	Public regard alter	−0.03	(0.03)
26	Public regard ego	0.04	(0.04)
27	Public regard similarity	−0.20	(0.24)
28	Social-emotional learning practices ego	0.08	(0.03)**
29	Male alter	0.07	(0.03)*
30	Male ego	−0.06	(0.03)
31	Same gender	0.26	(0.03)***
32	Race/ethnicity same	0.26	(0.03)***
33	Parents' immigrant background same	0.04	(0.03)
34	Homeroom same	0.66	(0.03)***
35	Outdegree × Cohort 1 T1–T2	−0.24	(0.05)***
36	Outdegree × Cohort 2 T1–T2	−0.13	(0.05)**
37	Outdegree × Cohort 3 T2–T3	0.24	(0.05)***
38	Reciprocity × Transitivity	−0.97	(0.10)***

(Continues)

TABLE 5 (Continued)

Row	Function effect	*b*	SE
39	Same homeroom × Cohort 1 T1–T2	0.70	(0.10)***
40	Same homeroom × Cohort 1 T2–T3	−0.29	(0.10)**
41	Same homeroom × Cohort 2 T1–T2	0.60	(0.10)***
42	Same homeroom × Cohort 2 T2–T3	0.16	(0.10)
	Academic efficacy function		
43	Rate, Cohort 1 T1–T2	1.26	(0.24)***
44	Rate, Cohort 1 T2–T3	1.04	(0.26)***
45	Rate, Cohort 2 T1–T2	1.64	(0.36)***
46	Rate, Cohort 2 T2–T3	1.47	(0.29)***
47	Rate, Cohort 3 T1–T2	1.62	(0.33)***
48	Linear shape	0.00	(0.09)
49	Quadratic shape	−0.05	(0.10)
50	Average similarity	4.03	(1.47)**
51	Public regard	0.18	(0.17)
52	Social-emotional learning practices	0.59	(0.16)***
53	Social-emotional learning practices ego × Average similarity	−3.15	(2.59)
54	Male	0.15	(0.14)
55	Asian	0.34	(0.28)
56	Latinx	0.28	(0.23)
57	Black	0.12	(0.18)
58	Multiracial	0.25	(0.24)
59	Other race/ethnicity	0.41	(0.35)
60	Parents' immigrant background	−0.03	(0.17)
61	Classroom 7010	0.95	(0.49)
	Social efficacy with classmates function		
62	Rate, Cohort 1 T1–T2	1.38	(0.28)***
63	Rate, Cohort 1 T2–T3	1.66	(0.34)***
64	Rate, Cohort 2 T1–T2	1.88	(0.36)***
65	Rate, Cohort 2 T2–T3	1.70	(0.33)***
66	Rate, Cohort 3 T1–T2	2.17	(0.47)***
67	Linear shape	0.11	(0.06)
68	Quadratic shape	−0.17	(0.09)
69	Average similarity	4.90	(1.34)***
70	Public regard	0.30	(0.17)
71	Social-emotional learning practices	0.30	(0.11)**
72	Social-emotional learning practices ego × Average similarity	−0.82	(1.79)
73	Male	−0.02	(0.12)
74	Asian	−0.02	(0.26)

(Continues)

TABLE 5 (Continued)

Row	Function effect	*b*	SE
75	Latinx	−0.06	(0.21)
76	Black	0.01	(0.17)
77	Multiracial	0.04	(0.20)
78	Other race/ethnicity	0.20	(0.29)
79	Parents' immigrant background	0.07	(0.16)
80	Classroom 7013	−1.03	(0.51)*
	Social efficacy with teachers function		
81	Rate, Cohort 1 T1–T2	2.76	(0.69)***
82	Rate, Cohort 1 T2–T3	2.32	(0.53)***
83	Rate, Cohort 2 T1–T2	3.10	(0.79)***
84	Rate, Cohort 2 T2–T3	1.77	(0.32)***
85	Rate, Cohort 3 T1–T2	2.99	(0.98)**
86	Linear shape	0.26	(0.07)***
87	Quadratic shape	−0.03	(0.08)
88	Average similarity	6.80	(1.78)***
89	Public regard	0.50	(0.17)**
90	Social-emotional learning practices	0.19	(0.11)
91	Social-emotional learning practices ego × Average similarity	−6.30	(2.65)*
92	Male	−0.18	(0.12)
93	Asian	0.02	(0.24)
94	Latinx	0.29	(0.22)
95	Black	−0.22	(0.15)
96	Multiracial	0.21	(0.27)
97	Other race/ethnicity	−0.13	(0.28)
98	Parents' immigrant background	0.04	(0.15)
99	Classroom 7005	−0.99	(0.35)**
100	Classroom 7011	−0.92	(0.43)*
101	Classroom 7012	−0.74	(0.25)**
102	Multiracial × Public regard	−1.10	(0.52)*
	Public regard function		
103	Rate, Cohort 1 T1–T2	1.94	(0.47)***
104	Rate, Cohort 1 T2–T3	2.56	(0.62)***
105	Rate, Cohort 2 T1–T2	2.72	(0.67)***
106	Rate, Cohort 2 T2–T3	1.76	(0.36)***
107	Rate, Cohort 3 T1–T2	2.00	(0.51)***
108	Linear shape	0.02	(0.06)
109	Quadratic shape	−0.47	(0.16)**
110	Average similarity	3.12	(1.75)
111	Academic efficacy	0.39	(0.18)*

(Continues)

TABLE 5 (Continued)

Row	Function effect	*b*	SE
112	Social efficacy with classmates	0.68	(0.22)**
113	Social efficacy with teachers	−0.24	(0.19)
114	Social-emotional learning practices	0.19	(0.12)
115	Male	0.30	(0.14)*
116	Asian	0.10	(0.27)
117	Latinx	−0.20	(0.22)
118	Black	−0.38	(0.19)*
119	Multiracial	0.00	(0.23)
120	Other race/ethnicity	−0.39	(0.30)
121	Parents' immigrant background	0.04	(0.17)
122	Multiracial × Social-emotional learning practices	−0.78	(0.39)*

Note: Maximum convergence ratio = 0.202.

Abbreviation: SE, standard error.

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

3.4 | Perceptions of SEL practices as a moderator of effects of peer influence on academic and social efficacy development (Hypotheses 3a and 3b)

3.4.1 | How do perceptions of SEL practices in the homeroom period shape the relation between peer influence and academic and social efficacy development?

We also investigated the association of perceived levels of SEL practices in homeroom with academic and social efficacy (Table 4; *social-emotional learning practices × average similarity*). We found that perceptions of greater exposure to inclusive SEL practices in homeroom had positive and significant effects on changes in adolescents' academic efficacy (b = 0.59, SE = 0.16, p < .001) and social efficacy with peers (b = 0.30, SE = 0.11, p < .01). There was a negative interaction between peer influence and perceived SEL practices on adolescents' social efficacy with teachers (b = −6.30, SE = 2.65, p < .05). To help interpret this interaction, we calculated the predicted effect of peer influence on changes to social efficacy with teachers across the full range of possible student and friend social efficacy with teachers, and for homerooms with minimum, mean, and maximum levels of perceived SEL practices. Figure 1 shows the predicted relative strength of peer influence on youths' social efficacy with teachers (which is also summarized in Table S6 in the Online Appendix). The table and figures can be interpreted by considering: for friends with a given level of SET (i.e., rows in Table S6), what level of student SET (column) has the greatest predicted value. At mean levels of SEL practices, the highest (darkest) values are found on the diagonal of the table (Figure 1b), suggesting that adolescents were inclined to maintain or make changes in their social efficacy with teachers to become similar to their friends. Adolescents who perceived less exposure to SEL practices in homeroom were *more* susceptible to their friends' influence with respect to their social efficacy with teachers, as indicated by the stark contrast between the highest (darkest) values and lowest (lightest) values in low SEL homerooms (Figure 1a). Conversely, adolescents who perceived more exposure to SEL practices in homeroom were *less* susceptible to their friends' influence. The muted effect of peer influence in high SEL homerooms is reflected by the lack of distinguishable patterns in the Figure 1c. Together, these findings suggest that peer influence on adolescents' social efficacy with teachers is strongest among those exposed to lower SEL practices and is weakest among those exposed to higher SEL practices.

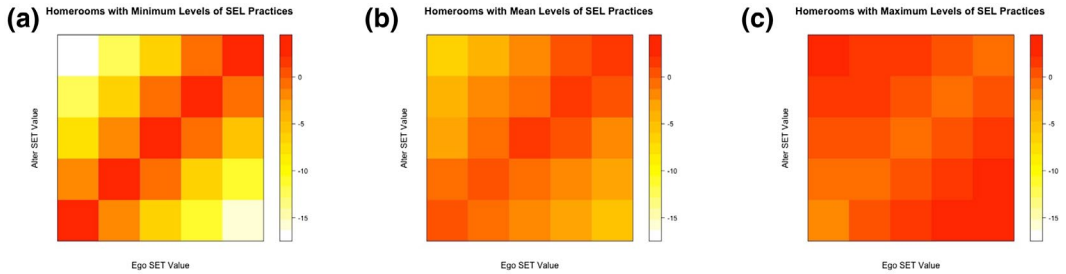

FIGURE 1 Ego-alter influence plots: Relative contributions of peer influence on social efficacy with teachers

We also examined whether the effect of perceived SEL practices on academic and social efficacy differed by racial/ethnic group. Specifically, we conducted score tests of the interactions between SEL practices and disaggregated racial/ethnic groups. Due to the lack of significance in the score tests, there was no such evidence to suggest variation in students' perceptions of SEL practices by race/ethnicity on academic or social efficacy.

3.5 | Race/Ethnicity as a moderator of perceptions of SEL effects on ethnic–racial public regard development (Hypothesis 4)

We also examined the moderating effect of race/ethnicity on the effect of perceptions of SEL on public regard development (Table 4; *race/ethnicity × social-emotional learning practices*). To determine which effects would improve model fit, we conducted score tests of interactions for SEL practices and disaggregated racial/ethnic groups on public regard. There was only one significant score test for an interaction for perceived SEL practices and youth in the multiracial group (Table 4; *multiracial × social-emotional learning practices*). We found that multiracial youth who perceived higher levels of SEL practices in homeroom were more likely than youth in other racial/ethnic groups to decrease to or remain at lower levels of public regard over time (b = −0..78, SE = 0.39, p < .01).

4 | DISCUSSION

Given the increased salience of ERI, particularly among youth of color, and of friends in adolescence, we examined the role of ethnic–racial public regard and friendship influence in the construction of youths' beliefs about their efficacy to engage with their peers and teachers. Academic and social efficacy, and their relation to ethnic–racial public regard, develop in important proximal contexts such as schools and friendships. In the current study, we examined how an individual factor (ethnic–racial public regard) and a mesosystemic interaction of peer influence with perceptions of SEL practices in the classroom (e.g., during homeroom period) could be associated with the development of social and academic efficacy among early adolescents. Below, we discuss the implications of our study in relation to the Phenomenological Variant of Ecological Systems theory (PVEST; Spencer, 2007) and ecological systems theory (Bronfenbrenner, 1992) and conclude with a discussion of the study limitations and directions for future research.

4.1 | The effect of ethnic–racial public regard on academic and social efficacy development

From the first question of the study, we sought to examine the effect of ethnic–racial public regard on the likelihood to change students' academic and social efficacy. To this end, ethnic–racial public regard was positively

related to changes in social efficacy with teachers over time, but not with academic efficacy or social efficacy with peers. These results partially support our hypothesis, as ethnic–racial public regard was related to changes in social efficacy with teachers. The current findings, and related work, support the Phenomenological Variant of Ecological Systems theory, as they indicate that ethnic–racial public regard serves as an important factor that shapes perceptions of ability effectively with youths' teachers (Spencer, 2007). The result regarding the effect of ethnic–racial public regard and social efficacy with teachers is in line with previous studies that have found positive relations between ERI beliefs and both adaptive social skills and engagement among youth of color (Bynum et al., 2008; Rivas-Drake, Seaton, et al., 2014).

That said, our hypothesis that public regard would be related to changes in academic efficacy was not supported. Theory around ERI certainly posits positive relations between ERI and outcomes generally/broadly pertaining to the self and the social self (e.g., self-esteem, well-being, social competence; Sellers et al., 1998; Tajfel, 1974). However, it could be the case that extending similar positive relations regarding academic perceptions of the self is reaching too far beyond what theory originally proposed and its subsequent measurement. Indeed, in the review of prior literature, the relation between ethnic–racial public regard and academic outcomes is more mixed and less consistent compared to its link with psychosocial outcomes (Rivas-Drake, Seaton, et al., 2014). Another consideration for this lack of relation comes from the fact that ethnic–racial public regard in the present study is assessed in a broad and decontextualized manner. Perhaps if a more contextualized (i.e., specifically referencing academic settings) assessment of ethnic–racial public regard was employed, a stronger relation would have been observed (cf. Rivas-Drake, 2011).

Perceiving that other people have a more positive view of one's ethnic–racial group (public regard) was related to increases in social efficacy with teachers but, interestingly, not peers. As noted, when considering the public regard measure, there is ambiguity as to who the 'other people' are referring to in the scale items. It could be the case that adolescents are referencing adults (including teachers) as 'other people'. If so, it is plausible that the effect of ethnic–racial public regard on social efficacy with teachers would be observed, as adolescents who believe that other people view their racial/ethnic group more positively will likely feel more confident in their ability to engage with adult authority figures, relative to adolescents with less positive ethnic–racial public regard. Our results provide a foundation for the relations between public regard and academic and social efficacy among a diverse sample of adolescents but more work is needed to fully discover how such regard plays a role in students' academic experiences.

4.2 | Peer influence on academic and social efficacy development

The study's second research question examined the extent to which friend networks shape youths' academic and social efficacy. To this end, we predicted that youth would be influenced by, and thus become more similar to, their friends over time across both outcomes. In accordance with our hypotheses, youths' responses did become more closely aligned with those of their friends in regard to academic efficacy, social efficacy with peers, and social efficacy with teachers. These findings align with ecological systems theory (Bronfenbrenner, 1992), which posits that individuals are shaped by their social contexts, particularly those that are most proximal. Friendships have been found to be highly salient to youths' academic (Kindermann, 2007; Shin & Ryan, 2014) and social (Barry & Wentzel, 2006; Maxwell, 2002) experiences throughout adolescence, and are thus unsurprisingly also related to youth's feelings of competency and agency in schools. Furthermore, research has noted that youths' academic experiences are shaped by their friends' identity beliefs (Medina et al., 2019), as well as increasing similarities within friend groups' attitudes, behaviors, and identity beliefs over time (Flashman, 2012; McPherson et al., 2001; Rivas-Drake et al., 2017; Ryan, 2001; Santos et al., 2017). The current work supports this literature, suggesting that, among diverse adolescents, both academic and social efficacy are also influenced by friendships in this way.

Although the hypothesis regarding youths' tendency to increasingly mirror their peers in academic and social efficacy was supported, a surprising nuance was found that offers additional opportunities for future research. Specifically, we found that similarity in the social efficacy measures was consistently driven by friend influence rather than by friend selection processes. This was unexpected, as youth often look to friends as social referents (Shin & Ryan, 2017), and thus would seemingly be more likely to seek out those who are more aligned with themselves in terms of social efficacy. It may instead be the case that, when creating new friendships, youth are not overly concerned with how efficacious their peers feel with others or with their teachers, as it may not directly relate to their own relationship. Alternatively, youth may simply be less aware of this quality when seeking out friendships. These points are speculative, however, and additional research would be useful in critically unpacking this pattern.

4.3 | Perception of SEL practices as a moderator of the relation between peer influence on academic and social efficacy

The third question of the study sought to assess the intersection of youth's perceptions of SEL practices in the classroom, their friend group influence, and both their academic and social efficacy with peers and teachers. Results indicated that perceptions of greater exposure to inclusive SEL practices were positively related to students' academic efficacy and social efficacy with peers. These findings support previous work highlighting the numerous academic and social-emotional benefits of SEL exposure among adolescents in schools (e.g., Jagers et al., 2015; Medina et al., 2019). In addition, a significant moderating effect was observed between peer influence and social efficacy with teachers. Specifically, we observed a negative interaction between peer influence and perceptions of SEL practices on adolescents' social efficacy with teachers. These findings indicated that adolescents who perceived more SEL practices in homeroom were less susceptible to friends' influence on the development of their social efficacy with their teacher. These findings provide partial support for our hypothesis and suggest that in classrooms that are perceived to be more social-emotionally inclusive, youth may be more effective in reading their teachers' social cues and rely less on peers. Furthermore, these findings align with ecological systems theory, as results revealed the dynamic interaction of microsystem level factors. Specifically, the relevance or intensity of friend group influence appears to vary in relation to the other academic and social-emotional inputs to which students are exposed.

4.4 | Race/ethnicity as a moderator of perceptions of SEL effects on ethnic–racial public regard development

Finally, in exploratory analyses, we investigated the effect of perceived SEL practices on public regard development, as moderated by students' race/ethnicity. Results revealed only one group had a significant moderated effect. More specifically, multiracial youth who perceived more of SEL practices in homeroom were more likely than nonminority youth to decrease or remain at lower levels of public regard over time. In the following section, we discuss this finding in conjunction with the other novel findings observed in the multiracial category. However, looking across the other racial/ethnic groups, results indicated that perceptions of SEL practices are not a predictor of changes in public regard.

One reason for this lack of effect of perceived SEL on public regard could be that the assessed teaching practices were general in the promotion of SEL and were not culturally relevant. Indeed, research has observed that when culturally relevant practices (i.e., those that intentionally encourage and guide students' receipt of cultural knowledge, cultural competencies, and critical consciousness; Ladson-Billings, 1995a, 1995b) are implemented in the classroom, ERI can be enhanced (Byrd, 2016; Thijs & Verkuyten, 2017). The inclusion of these practices varies

widely, though those that include the use of real-world examples of relevant history, culture, or values in students' assignments, such as writing prompts or community projects, may be especially impactful toward youth's ERI beliefs (Byrd, 2016; Thomas et al., 2008). Future work could consider whether the links between perceived SEL practices and ERI are enhanced in conditions where such practices are designed to be culturally relevant or implemented in culturally responsive ways (Jagers et al., 2019).

4.5 | Notable differences for multiracial youth

Across our hypotheses, we explored potential differences in our predicted relations across racial/ethnic groups. The majority of our findings uncovered no such variations. This speaks to the potential ubiquitousness of these links—the positive academic and social impact of SEL practices, the socializing role of friends, and the intersection of these factors—for most students in this sample. That said, our findings do highlight two unique outcomes for multiracial youth. Firstly, multiracial students reported a negative association between their feelings of public regard and their social efficacy with teachers over time. Secondly, they also reported a negative association between their perceptions of SEL practices in homeroom and their levels of public regard over time. These trends raise questions that should be further examined in future work in this area. The concept of public regard, which is present in both of these findings, becomes increasingly complex when considering multiracial identity, as youth are potentially now contending with external evaluations of two or more cultural backgrounds. It is likely that such beliefs vary across multiple factors, including which racial/ethnic groups an adolescent identifies with, the cultural background of their peers and teachers, and youth's levels of other ERI beliefs (e.g., centrality). Such considerations are outside the scope of the current study, however, they are critical and timely avenues of future research. The multiracial population is one of the largest and fastest growing in the United States, and thus understanding their experiences in school and with peers and teachers will only become more paramount in time (Nishina & Witkow, 2020).

4.6 | Limitations and directions for future research

Though the current study is characterized by several strengths (e.g., multiple reporters and longitudinal network analyses), it is not without limitations. The sample from which the data were drawn came from a single middle school in a small Midwestern city of the United States, thus limiting the generalizability of the study findings. Future research should address this gap by collecting network data from a diverse array of schools (i.e., urban, suburban, and rural, ethnically homogeneous, and low and high SES schools) to understand whether ERI (individuals' and friends') functions similarly to what was observed in this study. These results should be further substantiated with additional studies, perhaps including additional dimensions of ERI or highlighting specific groups such as multiracial youth, to provide a more robust understanding as to what contexts and when these influences impact the development of adolescents' academic and social development.

In addition, though the study incorporated multiple reporters, all responses from individuals were self-reported. Self-report measurement represents a method bias, as they often result as a primary source of measurement error (Podsakoff et al., 2003). In the case of the current study, self-report measures for friendship selection and public regard are likely most appropriate. However, for measures of social efficacy and perceived SEL practices, having multiple reporters or incorporating observational methods could reduce bias in measurement. Future research should aim to mitigate such error.

Though beyond the scope of the current study, the racial/ethnic composition of the friendship groups within the network as well as the race/ethnicity of the teacher were not accounted for in the current study. This could be an important factor to consider in future research. Indeed, research has shown same-ethnic and cross-ethnic

friends can have differential influence academic and psychosocial outcomes (Benner & Wang, 2017; Kawabata & Crick, 2015), and even ERI (Jugert et al., 2020). Teacher–child race/ethnicity matching, in conjunction with classroom diversity, has been shown to be associated with greater social-emotional and academic skill for Black and Latinx children (Rasheed et al., 2019). Thus, we encourage scholars to also consider the dynamic of friend and teacher race/ethnicity matching as a potential factor on the effects they are observing across the various levels of the classroom.

In future research, scholars might also consider assessing and comparing the effects of teachers in schools that do and do not incorporate SEL programs or approaches. This comparison would provide a test of the efficacy of SEL initiatives and evidence that they inform and shape the relation between friends, ERI, and the academic and social efficacy of youth. Finally, though teachers are important socializing agents in the lives of adolescents, there are other agents that might impact the relation between facets of ERI, friendships, and academic and social efficacy. Research has revealed that other socializing agents (e.g., parents, teachers, or siblings) are also important in the development of ERI and academic and social efficacy (Ahn et al., 2017; Hoffman et al., 2017; Wentzel et al., 2016). A promising avenue for future research could be to include reports from other such individuals to offer a more comprehensive understanding of the unique and combined influences of important socializing agents in the lives of adolescents.

5 | CONCLUSION

To date, very little research has investigated the influence of multiple individual- and microsystem-level factors and their dynamic interaction in the mesosystem to better understand academic and social efficacy of adolescents. The current study addresses this gap. Results partially supported the notion that ERI, specifically ethnic–racial public regard, represents an important source of self-concept and, thus, is related to positive and adaptive adjustment. Furthermore, results provided novel support for ecological systems theory, as mesosystemic effects were observed between friends' influence and perceived teacher practices in the development of social efficacy with their teachers. These results underscore the importance of recognizing that a classroom environment represents a context in which the developmental relations between ethnic–racial public regard, friends, and academic and social efficacy are dynamically constructed.

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DATA AVAILABILITY STATEMENT

Research data are not shared.

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

Supplementary Material

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