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A Person-Centered Approach to Examining Out-of-School Participation Among Black Adolescents and Its Association With Racial and Ethnic Identity

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ABSTRACT

Introduction: Positive racial and ethnic identity formation is associated with psychological well-being, especially for Black adolescents. Parental socialization and school-related factors are key influences that have been studied, but less is known about other factors in an adolescent's social ecology, such as out-of-school activities. The goal of the present study was to better understand the relation between out-of-school activity (i.e., after-school hours and summer months) participation and racial and ethnic identity among Black adolescents.

Methods: Participants included Black identifying adolescents, ages 14-19 ($N = 181$; M age = 16.30, $SD = 1.38$; 69% female) recruited from the Chicagoland area of the United States. Participants completed questionnaires about out-of-school activity participation and racial and ethnic identity formation at a single timepoint. Latent class analysis was used to identify groups based on reported activity participation. Then, reported racial and ethnic identity was examined by latent class.

Results: More out-of-school participation overall (i.e., total, types, and intensity) and school-based activity participation were significantly associated with higher reported racial and ethnic identity formation. Latent class analysis of out-of-school participation revealed that classes characterized by a higher breadth of activities reported high racial and ethnic identity, while the class characterized by low participation reported significantly lower racial and ethnic identity.

Conclusion: These findings suggest that out-of-school activity participation is associated with racial and ethnic identity formation among Black adolescents and the mechanisms that support this dynamic exchange warrant further investigation. As racial and ethnic identity formation is associated with well-being, these findings have strengths-based clinical, programmatic, and community implications.

Positionality statement: The first author (MB) conducted this secondary data analysis to fulfill a requirement for a master's degree in clinical psychology within a clinical psychology doctoral program. Relevant to this project, she is a white woman with experience working in after-school and school settings that serve youth of color. These experiences shaped her belief that out-of-school spaces can foster growth, but such spaces are still embedded within systems of power and oppression. Her identities, experiences, and privileges inform the perspective and biases brought to this project. In her role as a graduate student, she received mentorship and feedback on this study that, in part, addressed oversights, biases, and assumptions.

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1 | Introduction

Identity formation is a lifelong process, but it takes on particular importance during adolescence. For youth in America, racial and ethnic aspects of identity are particularly salient (Umaña-Taylor 2011). Engaging with and exploring the meaning of one's racial and ethnic identities is associated with better adjustment, higher self-esteem, and well-being across groups who identify as people of color, and this is especially true for adolescents of color (Smith and Silva 2011). The contexts in which this facet of identity is explored and solidified are not completely understood. Much of the existing literature focuses on the role of parental socialization (Huguley et al. 2019) and school settings (Aldana and Byrd 2015), but a young person's social ecology is comprised of actors outside of the family and school settings. Out-of-school participation in activities, such as organized activities and summertime jobs, has been identified for its great potential to promote positive youth development (Mahoney et al. 2009; Pittman 2017), but less is known about how these settings shape racial and ethnic identity formation. The primary goal of the current study is to investigate the association between out-of-school activities in racial and ethnic identity formation among a sample of Black adolescents residing in the Chicagoland area.

1.1 | Race and Ethnic Identity Formation and Well-Being Among Black Americans

Conceptualizations of race and ethnicity are not static and, therefore, neither are the working definitions of racial identity and ethnic identity among researchers (Markus 2008). A critical distinction between race and ethnicity is that racial categories consider power dynamics in relation to other racial groups, both past and present, while ethnic groups, in contrast, focus on distinct values and practices. The study of racial identity has largely focused on responses to racism and reported internalized racism (Helms 2007; Phinney and Ong 2007) while the study of ethnic identity has been largely studied in reference to the participant's reported sense of belonging to an ethnic group (Phinney 1992; Phinney and Ong 2007). The *overlap* between racial and ethnic identity includes association with cultural values and practices, the process of learning about one's group, and a sense of belonging to one's group (Phinney 1992; Phinney and Ong 2007).

Aspects of Black racial and ethnic identity¹, such as racial centrality (i.e., how central race is in an individual's self-definition) and regard (i.e., feelings about belonging to their racial group), are consistently associated with reports of well-being (Sellers et al. 1997). High Black centrality and positive regard have been associated with well-being while lower reports of centrality and negative regard have been associated with poor mental health outcomes (e.g., depression, hopelessness) among adults (Mekawi et al. 2020), college students (Banks and Kohn-Wood 2007; Neblett et al. 2004) and adolescents (Brody et al. 2015; Seaton 2009). Additionally, central and positive racial identity, or the qualitative meaning one assigns to their group membership (Wakefield and Hudley 2007), in late adolescence has been found to be predictive of lower levels of biomarkers of chronic disease risk in early adulthood and a protective factor against the negative health effects of high levels of interpersonal racial discrimination (Brody et al. 2015). Racial and ethnic identity *belonging*

(i.e., sense of attachment and investment in the racial/ethnic community), also referred to as identity commitment, and identity *search* (i.e., seeking out experiences and information about one's identity), also referred to as identity exploration (Del Toro and Wang 2021; Marcia 1980; Phinney and Ong 2007) are features of the identity formation process that have been used to understand identity content, which is comprised of dimensions including racial/ethnic identity centrality and regard (Wang et al. 2017). The features of belonging and search have been utilized in both longitudinal and cross-sectional studies to conceptualize processes that inform racial and ethnic identity (Umaña-Taylor et al. 2014; Wang et al. 2017; Yip 2018).

The roles of parental socialization and school-based experiences in the identity formation process have been common topics of study (Del Toro and Wang 2021), but youth receive information from other sources that inform their sense of belonging. Youth may also intentionally seek out information to learn more about their race and ethnicity (Phinney and Ong 2007). One understudied potential source of information is out-of-school settings and understanding more about the settings that inform identity formation would flesh out social ecological models (Bronfenbrenner 1977, 1979). Doing so would help explain the complex and dynamic identity formation process, which can inform and enhance clinical and community interventions and resources that best support Black adolescents.

1.2 | Ecological Influences on Identity Formation Processes

Similar to other areas of their development, adolescents receive messages and information from a variety of sources, from every layer of the nested social ecological system, that inform their racial and ethnic identity formation in both positive and negative ways (Bronfenbrenner 1977; Velez and Spencer 2018). Educational experiences, especially school-based, occupy a great deal of space in the micro-, meso-, and exo-systems and yet a recent systematic review of educational spaces for middle and high school aged students and identity formation (Verhoeven et al. 2019) found most of the literature examining purposefully fostered positive identity formation was in the after-school or summer setting. Although the extant literature indicates after-school and summer programs are well-suited to support identity formation, it is important to consider the unintentional and negative influences they might have on identity formation, namely how they may hamper identity exploration and a sense of belonging. For example, some after-school programs serving Black youth might inadvertently employ harmful rhetoric that frame youth from a deficit perspective as "at-risk" and in need of "saving" or "rescue" (Baldrige 2014). Similarly, a pattern has been observed in which youth-serving non-profits tout their "positive investments" without interrogating their role in perpetuating systems of oppression, including racism, within the exo-system (Zeemont 2021). Therefore, the opportunities available within out-of-school settings should be contextualized via systemic power, privilege, and oppression and not viewed only through rose-colored glasses. The nested ecological model is therefore useful in understanding the influences on the individual's identity formation process as well as unpacking the systemic factors that shape out-of-school spaces.

1.3 | Opportunity for Identity Formation in Out-of-School Activities

Participation in out-of-school activities (i.e., organized activities and programs that take place outside of school hours, including sports, fine and performing arts, religious activities, school-based activities, and pro-social activities) has been associated with better academic outcomes (Roeser and Peck 2003), social and emotional well-being (Dworkin et al. 2003; Jiang and Peterson 2012; Mahoney 2000), and civic participation (Denault and Poulin 2009; Zarrett et al. 2021), positive outcomes that in turn have been associated with positive identity formation (Flanagan et al. 2011; Malin et al. 2017). While some studies suggest youth from low-income families experience a higher degree of positive outcomes associated with out-of-school activity participation (Lauer et al. 2006), such families also experience more barriers to participation (Cornelli Sanderson and Richards 2010; Fredricks and Simpkins 2012). For Black youth specifically, more time in out-of-school activities has been associated with better self-esteem (Dotterer et al. 2007). While after-school programming has long been associated with academic support and enrichment, out-of-school participation has been increasingly recognized for its potential to provide space where youth can explore their interests and identities (Philp and Gill 2020). Researchers investigating the benefits of positive youth development have documented how out-of-school spaces are contexts in which such principles are effectively applied and explored (Pittman 2017). As noted, out-of-school programs are well-suited to facilitate meaningful learning experiences, such as hands-on activities and engagement with role models, that can be purposefully employed to facilitate identity formation (Verhoeven et al. 2019).

One aspect of out-of-school spaces that may foster identity formation is the unique role of staff members. After-school program staff have the opportunity to build relationships with adolescents in these less structured environments that may, additionally, better align with the young person's interests. Staff may be closer in age to the adolescent participants and are often from the community, which can encourage adolescents to form close relationships with staff (Hurd and Deutsch 2017). Thus, relationships that may exist outside of formal mentorship should be considered among the opportunities available to youth in out-of-school spaces. That is to say, natural mentoring relationships (Van Dam et al. 2018) that take in out-of-school settings may facilitate racial and ethnic identity search and belonging.

Participation in more organized activities during high school has been associated with racial and ethnic centrality among Black first-year college students (Stanley 2014). Additionally, participation in sports (Harrison et al. 2002), fine and performing arts (Walton 2018), religious activities (Butler-Barnes et al. 2018), and school-based organized activities (Fredricks and Simpkins 2012) have all been associated with positive identity formation among Black youth. However, the mechanisms by which organized activities, which typically are not culturally tailored, remain unclear. Across these various activities, it could be that structured activities outside school hours provide Black youth the opportunity to engage with information about the Black community (i.e., identity search) and gain a greater sense of connection (i.e., identity belonging) when the activity matches the young person's interests. Insights about mechanisms specific to racial and ethnic identity formation

may come from the extant literature examining *culturally specific* out-of-school programs.

In addition to racial and ethnic identity formation specific to Black youth, these studies have explored sociopolitical development, which refers to the process in which youth develop their identities and critical consciousness by engaging with political, economic, and cultural thought and activism (Brown et al. 2018; Watts et al. 2011; Watts and Flanagan 2007). One such study (Brown et al. 2018) investigating the role of three culturally specific out-of-school programs for Black youth, ranging in age from 5 to 18, found that the programs employed Pan-African and Afrocentric theoretical approaches that mapped onto program outcomes such as knowledge of self and community, sense of belonging, leadership skills, and a shared understanding of social justice. Another study by Salas Pujols (2022) explored how an after-school program serving Afro-Latina young women facilitates formation of Black identity. Through the curriculum's focus on social justice, specifically critical consciousness, and the pride the Black and diverse staff showed for their identities, the program participants increased their identification with their Blackness, highlighting how out-of-school spaces play an influential role in identity development and formation.

1.4 | Measuring Out-of-School Participation

The flexibility inherent in out-of-school activities means it is difficult to compare programs and spaces for the purpose of assessing and evaluating best practices and outcomes. One framework quantifies the dimensions of involvement as: (1) *breadth*, or the number of different types of activities a young person engages in, (2) *intensity*, or the average number of hours a week a person spends participating in an activity, (3) *duration*, or the number of years of involvement in an activity, and (4) *engagement*, or the behaviors, emotions, and cognitions related to the activity that are best captured with qualitative approaches (Bohnert et al. 2010). Although no study to date has considered how these dimensions relate to ethnic and racial identity development, the dimensions have been used to examine related outcomes. For instance, longer duration (i.e., 2 years compared to one) and greater intensity of participation has been associated with better educational, occupational, and civic outcomes (Gardner et al. 2008). Breadth of activity participation, along with intensity, has been associated with outcomes such as civic development (Denault and Poulin 2009), which is itself associated with identity formation (Flanagan et al. 2011; Malin et al. 2017). However, civic development and engagement are often measured by volunteering and post-high school voting behaviors (Gardner et al. 2008), measures that are not culturally sensitive and exclude activities that may be more relevant to Black communities, such as civic engagement within religious communities (Robinson 2019). Youth employment during the summer is also associated with protective factors, such as decreased odds of incarceration and mortality (Gelber et al. 2016), but less is known about outcomes associated with factors such as intensity, duration, and type of labor (e.g., service, retail, childcare). However, a recent study found youth who worked in settings that clarified their identity regarding future career goals had more positive employment outcomes as young adults compared to youth who did not report this identity clarity (Thouin et al. 2023). Clearly, youth employment also holds potential for identity formation, but its role in racial and ethnic identity is not clear.

Despite the potential benefits of out-of-school time activities, Black youth are less likely to be involved in certain types of activities. A recent nationally sampled and longitudinal study (Meier et al. 2018) found Black youth had lower levels of participation in non-sport activities (e.g., arts and academics) compared to other racial and ethnic groups, which was associated with poorer outcomes (e.g., worse academics and more substance use). Additionally, the combination of participation in sports and non-sport activities was predictive of better outcomes, and Black youth had low levels of participation in this combination. Participation also varied by gender, such that young women participated in non-sport activities in a higher proportion and were less likely to not participate in any activities. While participation was associated with race/ethnicity and gender, socioeconomic status was the demographic variable most consistently associated with participation, suggesting socioeconomic advantage is a driving factor in inequitable access to extracurricular activities (Meier et al. 2018).

To examine the dimensions of Black youth's out-of-school participation, the present study utilized a person-centered analysis, as such methodologies determine if similar subgroups exist within a given population. This analysis is preferable to variable-centered analysis, which examines specific variables in a population and lacks the richness of person-centered approaches, which can detect more complex patterns and create unique subpopulations or subgroups (Howard and Hoffman 2018). One such person-centered analysis of adolescent participation in out-of-school activities found gender differences in profile membership and differences outcomes based on profiles. For example, the profile with high intensity across activities and high intensity in school-based activities also consistently reported positive outcomes while a similar profile that also reported high sports intensity reported the highest levels of negative behaviors (e.g., cheating, fighting, substance use). Young women were overrepresented in the profiles characterized by high intensity of participation and young men were overrepresented in the uninvolved profile. This uninvolved profile also reported higher levels of depression and the lowest mean grade point average (Bartko and Eccles 2003). Such person-centered studies have worked to dispel the notion that more participation means more positive outcomes, or a "more is better" approach, thus highlighting the need to examine nuanced patterns of participation.

Drawing on an ecological model, this cross-sectional study engaged a sample of Black-identified adolescents from lower-income households, ages 14–19, to examine relations between out-of-school participation, defined as organized activities and paid and unpaid jobs during the summer months, and racial and ethnic identity formation. Specifically, the aims of this study were first to describe how a sample of Black adolescents engage in out-of-school activities and, second, to explore how patterns of participation were associated with reported racial and ethnic identity.

2 | Methods

2.1 | Participants

Participants were part of a larger, longitudinal study examining social determinants of health, biomarkers of stress, and the

transition into adulthood in a population of Black adolescents. Inclusion criteria included being 14–19 years of age, identifying as Black and/or African American, and belonging to a low-income household, defined as family income reported during screening below two times the federal poverty threshold for their household size (U.S. Department of Health and Human Services 2024). Other eligibility criteria included speaking English, having no current major chronic illnesses that necessitated regular medication, having no mental or behavioral health disorder that warranted hospitalization in the past year, and having no pervasive developmental disorder that would make the youth unable to complete the study protocol. Participants who were currently pregnant or acutely ill were offered the option of rescheduling.

This study examined cross-sectional data from the baseline study visit. 400 participants were enrolled at baseline, but only the 181 participants ($M_{\text{age}} = 16.30$, $SD = 1.38$) who completed their study visit before the stay-at-home orders associated with the COVID-19 pandemic (Phillips et al. 2021) were included in this study. Participants who reported on their out-of-school participation after the start of the COVID-19 pandemic in March of 2020 were excluded to control for any variability caused by the stay-at-home orders and corresponding shift to virtual engagement. All study visits were completed between late November, 2018 and mid-March, 2020. All participants identified as either female ($n = 125$, 69%) or male ($n = 56$, 31%) and no participants provided a gender identity when given an option to write one in. Therefore, participants' sex assigned at birth was characterized as a dichotomous variable referring to female and male.

2.2 | Procedure

Participants were recruited from the Chicagoland area through advertisements, presentations at schools, outreach to community organizations, and through a direct mail campaign. School-based presentations and recruitments yielded the most participants and only a small number of participants were recruited through community organizations that offered out-of-school programming. Eligible adolescents and their caregiver were invited to a laboratory visit, during which participants completed psychosocial questionnaires and health assessments. Adolescent participants provided either written assent or consent (depending on age), and caregivers provided written consent to participate in all study procedures, which were approved by the Northwestern University Institutional Review Board. Participating families received compensation for each study visit, in addition to compensation for travel costs. For completing the baseline visit, adolescents received \$155 and parents received \$50.

2.3 | Measures

2.3.1 | Racial/Ethnic Identity

Adolescents completed the Racial/Ethnic Identity Scale (REIS), adapted from the Multigroup Ethnic Identity Measure (Phinney 1992). The measure provided a total score, reflecting

total identity formation, as well as subscales assessing racial/ethnic identity belonging and identity search. The REIS includes twelve items rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) and higher scores reflect a stronger sense of belonging and more engagement with the meaning of one's racial/ethnic identity. This measure has been used widely across studies of racial and ethnic identity formation with diverse samples and samples of Black adolescents, specifically (Del Toro and Wang 2021). The belonging subscale includes the mean of seven items that capture the sentiment of attachment and belong to the racial and ethnic group (e.g., 'I have a strong sense of belonging to my own racial/ethnic group'). The identity search subscale includes the mean of five items that capture the extent to which respondents sought out information about their racial and ethnic group (e.g., 'I have spent time trying to find out more about my racial/ethnic group, such as its history, traditions, and customs'). Both subscales have been validated with Black adolescent samples (Del Toro and Wang 2021). The REIS total score as well as the belonging and search subscales were utilized in this study. In this study, the scale's total (i.e., all items) had good internal consistency ($\alpha = 0.866$).

2.3.2 | Out-of-School Activity Variables

Adolescents completed the Organized Activity Inventory (OAI; Randall et al. 2015) in which they indicated the average number of hours of involvement in activities over the course of a week during the school year in a free-text response box. The activities included sports, arts, school-related, religious, prosocial, and other. Total number of hours for each activity category, the grand total number of hours (i.e., OA intensity), and the breadth of activities, or the number of different activity categories, were calculated and provided by the measure. To interpret the reported total intensity, the free responses were divided into four groups: 1) no participation, 2) low intensity (lower 33rd percentile and below as reported by this sample), 3) medium intensity (34th–66th percentile), and 4) high intensity (67th percentile and above). Participants were also provided space to write in three activities per activity category. The total number of activities represents the sum of all activities and the free-response activities were qualitatively grouped together. The OAI also assessed the number of paid and volunteer activities youth participate in during the summer months and the number of weekly hours of participation. Capturing activities, but not jobs, during the school year and including summertime jobs is consistent with the literature examining organized activities for adolescents (Mahoney et al. 2009). For each participant, the OA breadth was calculated, as well as the intensity score for each activity category, overall intensity score, and total number of OAs. Breadth and intensity did not include summertime activities. The OAI measure has been utilized in a sample of low-income adolescents, most of whom identified as Black (Steinberg and Simon 2019).

2.4 | Analytic Plan

The psychometric properties of all the listed measures were evaluated and additional descriptive statistics, including means, standard deviations, and scale ranges, were conducted. Pearson

correlations were conducted to examine associations between continuous study variables. T-tests and chi-square tests were conducted to examine potential differences between study variables. Next, a series of latent class analyses (LCA) were conducted. The Maximum Likelihood Estimation was used to examine the number of class models (i.e., 2–6 class models; Nylund et al. 2007; Spurk et al. 2020). Models were compared using relative fit information criteria, such as the Sample-Size Adjusted Bayesian Information Criterion (SABIC) and Akaike Information Criterion (AIC; in which lower values indicate better fitting models), the quality of classification, by examining entropy (in which higher entropy values indicate higher confidence in individual profile classification), and by comparing models with a model of one less profile, by comparing the Lo-Mendell–Rubin Adjusted Likelihood Ratio Test (LMR-LRT) value (in which significant values indicate increased model fit; Mekawi et al. 2020; Nylund et al. 2007; Spurk et al. 2020). To characterize the classes that emerged, response probabilities were examined and reviewed in the context of the literature on out-of-school participation within this population. To examine differences between the identified latent classes based on the distribution of identified demographic factors and reported racial and ethnic identity, the adjusted three-step approach (Bolck et al. 2004; Vermunt 2010) to distal outcome associations of class incidents was used. Proposed by Bolck, Croon, and Hagennar (BCH; Bolck et al. 2004), the BCH approach uses modal posterior probability assignment to classes and adjusts for classification error (Layland et al. 2022).

3 | Results

3.1 | Preliminary Analysis and Description of Out-of-School Activity Participation

Descriptive statistics and associations for the main study variables are reported in Tables 1 and 2. The most popular OA was sports, with 49% of the sample reporting participation. The most popular sports were basketball (35% of those participating in sports), football (22% of those participating in sports), and running (e.g., track, track and field, cross country; 15% of those participating in sports). The second most popular OA was fine/performing arts, with 35% adolescents reporting participation. The most popular fine/performing arts activities were dance (32% of those participating in arts), theater (including dramatic performance and stage management; 27% of those participating in arts), and singing (e.g., choir; 21% of those participating in arts). About a quarter of the sample (26%) reported participating in school-based OAs and these included leadership programs (e.g., 'Ambassador Leadership Team'), academic activities (e.g., 'Math League'), and Black student groups (e.g., 'Black Student Union'). Close to half, 46%, of the sample reported having a paid or unpaid summer job and the most popular role was with a youth development program (24% of those reporting a summer job) followed by a job in the food service industry (13% of those reporting a summer job). Additional out-of-school participation descriptives can be found in Table 2. The mean REIS score was 3.97 (scale of 1–5, 5 meaning most positive racial and ethnic identity, $SD = 0.72$) and the belonging subscale ($M = 4.32$, $SD = 0.70$) was found to be higher than the search subscale ($M = 3.48$, $SD = 0.96$; see Table 1 for additional information).

TABLE 1 | Means, standard deviations, and correlations of key continuous study variables.

Variable	Min	Max	M	SD	1	2	3	4	5	6	7
1. Age	14	19	16.30	1.38							
2. Family Income	\$0	\$175,000	\$41,535	\$30,542	0.14						
3. OA Breadth	0	6	1.73	1.22	0.08	0.27**					
4. Total OA Activities	0	10	2.53	2.00	0.13	0.27**	0.91**				
5. Total OA Intensity	0	3	1.46	0.97	0.12	0.21**	0.70**	0.73**			
6. REIS	1.58	5	3.97	0.72	0.05	0.14	0.28**	0.26**	0.25**		
7. REIS- Search	1	5	3.48	0.96	0.00	0.11	0.28**	0.26**	0.25**	0.90**	
8. REIS- Belonging	1.71	5	4.32	0.70	0.08	0.15	0.23**	0.21**	0.19**	0.90**	0.61**

Note: M and SD are used to represent mean and standard deviation. OA = Organized Activity, REIS = Racial/Ethnic Identity Scale; variables 1–2 are demographic variables, variables 3–5 are independent variables, variables 6–8 are dependent variables.

*Indicates $p < 0.05$.

**indicates $p < 0.01$.

TABLE 2 | Out-of-School activity descriptive statistics.

Out-of-School Activity	n Participants	%	Three most popular responses
Sports	89	49%	Basketball, football, running
Fine/Performing Arts	63	35%	Dance, theater, singing
School-Based OA	47	26%	Leadership, academic activity, Black student group
Religious OA	37	20%	Church, bible group, youth group
Pro-Social OA	57	32%	Mentorship, coaching, community service
Other	20	11%	Ex. Nursing program
Summer Job	84	46%	Job through youth development organization, food service, fine/performing arts related
No Participation in Above	21	12%	

Note: OA = Organized Activity.

Examination of key study variables found a number of significant associations and differences, (see Table 1 for correlations). All continuous OA variables (i.e., OA breadth, total OA activities, and total OA intensity) were significantly associated with the REIS and its subscales ($p < 0.01$), such that involvement in more OAs and more time spent in OAs was associated with higher identity formation. Family income was significantly associated with all continuous OA variables ($p < 0.01$), such that higher income was associated with more OA involvement. However, income was not associated with the REIS scores (i.e., the overall scores and the subscales). The only singular OA associated with family income was pro-social OAs ($t(180) = -2.69, p < 0.05$), such that those participating in pro-social OAs had a higher family income than those who did not participate in pro-social OAs. The only out-of-school activity associated with age was summer jobs ($t(180) = 1.93, p < 0.05$), such that those with a summer job had a higher mean age compared to those without summer jobs. Additionally, the only OA associated with the REIS was school-based OAs, such that those participating in school-based OAs reported higher racial and ethnic search ($t(180) = 4.26, p < 0.001$), belonging ($t(180) = 3.81, p < 0.001$), and overall REIS score ($t(180) = 4.15, p < 0.001$) compared to those who did not participate. Neither age, sex assigned at birth, nor family income were associated with the REIS (therefore, demographic variables were not controlled for in the examination of distal outcomes related to

the LCA). Participation in sports ($X^2(1, N = 181) = 12.25, p < 0.001$) and school-based OAs ($X^2(1, N = 181) = 5.76, p < 0.05$) differed by sex, such that males reported participating in sports more than expected and females reported participating in school-based OAs more than expected.

3.2 | Latent Classes Analysis of Out-of-School Activity Participation

3.2.1 | Model Selection

LCA was run using Latent GOLD 6.0. The latent variable assessed was classes of similar patterns of out-of-school activity participation. Fit statistics for models with 1–4 class solutions are presented in Table 3. The estimates for the AIC and SABIC decreased for the first three solutions, with the lowest estimates for the three-class solution. The p LMR became nonsignificant at the four-class solution, indicating that the additional fourth class did not result in an improved fit when compared to the three-class solution. The p LMR was significant ($p = 0.0005$) for the three-class solution, indicating better fit than the two-class solution. The three-class model was compared to the two-class model and the addition of the third class was found to be meaningful, as it was not a split of an existing class, indicating the addition of the third class represents distinct information.

TABLE 3 | Fit Statistics for LCA Solutions.

	Log-likelihood	AIC	SABIC	Relative frequency of smallest class (%)	Entropy	pLMR
1	-738.39	1490.79	1491.01	100	1.00	
2	-726.32	1482.63	1483.10	42	0.42	0.0169
3	-714.76	1475.52	1476.24	22	0.56	0.0005
4	-708.68	1479.36	1480.04	20	0.61	0.4492

Note. AIC, Akaike Information Criteria; BIC, Bayesian Information Criteria; LCA, latent class analysis; pLMR, *p* value of the adjusted Lo–Mendell–Rubin Likelihood Ratio Test. Bold indicates the model selected for further analyses.

TABLE 4 | Characteristics and outcomes across latent classes.

	Class 1 “High Activity Breadth”	Class 2 “Sports & Additional Activity”	Class 3 “Low Activity Participation”	Significant differences between classes
Age**	16.72	16.02	15.66	Class 1 and 3**
Gender	76% Female	66% Female	59% Female	
Family Income**	49,962.90	40,276.54	24, 993.11	Class 1 and 3**, Class 2 and 3**
OA Breadth**	2.25	2.58	-0.57	Class 1 and 3**, Class 2 and 3**
Total OA Activities**	3.33	3.67	-0.77	Class 1 and 3**, Class 2 and 3**
Total OA Intensity**	1.55	2.42	-0.06	Class 1 and 2**, Class 1 and 3**, Class 2 and 3**
REIS Total**	4.11	4.13	3.43	Class 1 and 3**, Class 2 and 3**
REIS- Search**	3.69	3.67	2.73	Class 1 and 3**, Class 2 and 3**
REIS- Belonging*	4.41	4.45	3.92	Class 1 and 3**, Class 2 and 3**

Note: Negative values are normal when using BCH weights and they indicate a large number of 0 values (Asparouhov and Muthén 2014).

*Indicates Wald test $p < 0.05$.

**indicates Wald test $p < 0.01$.

With these considerations of model fit along with considerations of parsimony, the three-class solution was determined to be the best solution.

3.2.2 | Latent Class Identification

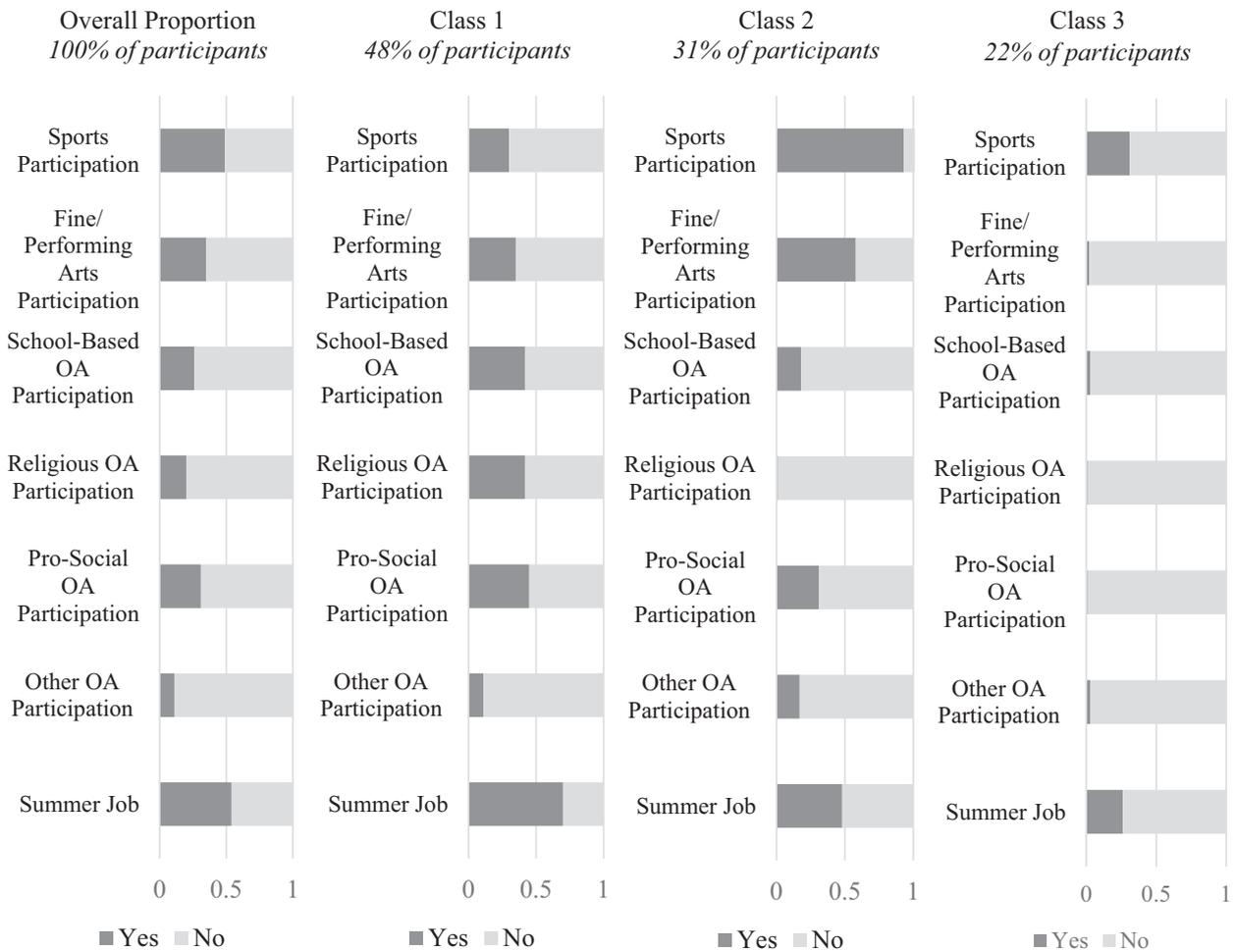
Item-response probabilities for each latent class for the three-class solution are shown in Table 5. Horizontally, each activity can be compared between the sample overall and the individual classes. Vertically, the sample overall and each class is depicted. Class 1 represents 48% of the sample and can be characterized as participants who were most likely to report participating in religious and school-based OAs and were more likely than the overall sample to report a summer job and participation in a pro-social OA. Distal outcome analysis indicated the three classes differed significantly by OA breadth (Table 4) and the unadjusted mean OA breadth for Class 1 was higher than the overall sample mean. Therefore, Class 1 will be referred to as “High Activity Breadth.” Class 2 represents 31% of the sample and participants in this class were most likely to report participating in sports, so much so that sports participation was a defining feature of this class. Participants in Class 2 were also more likely than the overall sample to report participating in fine/performing arts and their likelihood of having a summer job was just below that of the overall sample. As this class also had a mean OA breadth higher than the overall mean and has a high probability for participation in sports (93%), Class 2 will be

referred to as “Sports & Additional Activity.” Finally, participants in Class 3 (22% of the sample) reported the lowest levels of OA participation and were less likely than the overall sample to have a summer job. This class had a significantly lower rate of summer job participation compared to Class 1 ($p < 0.01$; this being the only significant difference along the latent class indicators identified by the Wald test). Therefore, the class will be referred to as “Low Activity Participation.” Other class characteristics from the distal outcomes analysis can be found in Table 4. Notably, the classes did not significantly differ by gender, but Class 1 was found to be significantly older than Class 3 and members of Class 3 had a significantly lower family income when compared to Class 1 and 2.

3.2.3 | Racial and Ethnic Identity as a Distal Outcome

The unadjusted class means, which are measurement-error weighted based on the BCH approach (Bolck et al. 2004), for the REIS and its subscales can be found in Table 4. The Wald test indicated the three identified classes differed significantly with regard to the REIS and its two subscales. The REIS total scores were similar and high among Class 1 (‘High Activity Breadth’; estimated $M = 4.11$) and Class 2 (‘Sports & Additional Activity’; estimated $M = 4.13$) and lowest among Class 3 (‘Low Activity Participation’; estimated $M = 3.43$). This pattern held true for the two subscales, with REIS search showing the biggest difference between the estimated means for Classes 1 & 2

TABLE 5 | Item-response probabilities for each latent class.



compared to Class 3. Additionally, the belonging subscale was consistently the highest among the three REIS scores in each of the three classes. The REIS search and belonging means were similar and high among Class 1 ('High Activity Breadth'; estimated search $M = 3.69$, estimated belonging $M = 4.41$) and Class 2 ('Sports & Additional Activity'; estimated search $M = 3.67$, estimated belonging $M = 4.45$) and lowest among Class 3 ('Low Activity Participation'; estimated search $M = 2.73$, estimated belonging $M = 3.92$).

4 | Discussion

This study was the first, to our knowledge, to examine out-of-school activity participation (i.e., after-school activities and summer jobs) and its association with racial and ethnic identity formation in a sample of Black adolescents using a person-centered approach. Latent class analysis was used and the three-class solution was selected (as this class had the lowest information criteria values and the significant $pLMR$). The largest class (48%) was named "High Activity Breadth" as class members reported participation in at least

two types of activities, on average, but no single combination of activities was prominent. The second class (31%) was named "Sports & Additional Activity" as class members also reported participation in at least two types of activities and one of them was a sport. Finally, the third class (22%) was named "Low Activity Participation" due to low participation rates reported by class members. The "Low Activity Participation" class reported significantly lower racial and ethnic identity formation (e.g., less reported seeking out of information about one's racial and ethnic identity and lower belonging within that identity community) than the "High Activity Breadth" and "Sports & Additional Activity" classes. Specifically, the "Low Activity Participation Class" reported significantly lower on the Racial/Ethnic Identity Scale (total score, search subscale, and belonging subscale) when compared to the other two classes. Despite different patterns of participation in the two "High Breadth" classes, the racial and ethnic identity of participants in the two classes characterized by high breadth were similar. In the overall sample, higher breadth of activity participation, participation in more activities, and higher intensity of participation were all significantly associated with higher reported racial and

ethnic identity. When out-of-school activities were examined individually by type of activity (e.g., sports, arts, summer job), only participation in school-based activities was associated with higher reports on the racial and ethnic identity scale (including the composite and both subscales). As out-of-school activities have been identified as settings in which youth opt into exploring their interests (Hurd and Deutsch 2017; Philp and Gill 2020), it may be that adolescents' interest in the activity or sense of belonging in the space is driving the association with identity formation. The study's findings suggest participation in at least two different types of out-of-school activities and a summertime job, but no specific combination of two activities, is associated with higher reported racial and ethnic identity among Black adolescents. Therefore, when considering the racial and ethnic identity formation process for Black youth within an ecological model, out-of-school spaces should be included.

These findings indicate a larger breadth of participation among Black adolescents than has previously been reported. Notably, Meier and colleagues (2018) found that Black youth were less likely to participate in non-sport activities or participate in a combination of sports and non-sports when compared to other racial and ethnic groups. In the current study, 79% of participants were included in either the "High Activity Breadth" class or "Sports & Additional Activity" class, which were characterized by participation in largely non-sport activities and a combination of sports and non-sports, respectively. Although these discrepancies could be due to a number of factors, such as geographic and sampling differences (e.g., all participants in this study live in the same metropolitan area while Meier et al. 2018] used a large, nationally representative data set), these differences highlight the importance of examining the experience of Black adolescents specifically. In terms of summertime jobs, study participants were mostly likely to report being employed by a youth development organization. While participants also reported working in food service (and retail, but to a lesser extent), participants were just as likely to report a job in the fine/performing arts. These findings suggest youth development organizations and the OAs adolescents are involved with during the school year are influential in shaping summertime employment opportunities and future work should explore these opportunities.

Socioeconomic status has been shown to be a driving factor in inequitable access to out-of-school activities above and beyond other demographic characteristics such as race, ethnicity, and gender (Meier et al. 2018). Other work that echoes this trend has found that families from lower socioeconomic backgrounds report barriers to participation in organized activities such as not feeling welcome on athletic teams, high expenses, and challenges with transportation (Tandon et al. 2021). Such literature contextualizes the present study's finding that participants in the "Low Activity Participation" class reported the lowest family income of the three classes (i.e., a mean less than \$25,000 annually, compared to an average between \$40,000–\$50,000 annually). The low participation class was also the least likely to have a summer job, which could be reflective of the class's lower age and/or indicative of barriers associated with income. Many of the summer jobs reported by participants were part of youth development organizations, and so families

with lower incomes may face similar barriers when trying to access organized activities and adolescent employment opportunities. Additionally, higher household income was significantly associated with higher activity breadth, total number of activities, and total intensity. This study's sample included families from low-income households, meaning these associations may differ when examining the experiences of adolescents from a greater diversity of family incomes. Nonetheless, household income was still found to be a significant factor in this sample, indicating the potential role of family income in determining how adolescents can spend their out-of-school time. Consistent with other research on identity formation among youth of color (Cheon et al. 2020), socioeconomic status was not associated with reported racial and ethnic identity. It may be that family socioeconomic status plays an indirect role in identity formation, due to its association with factors that are themselves associated with identity, such as out-of-school participation.

4.1 | Limitations and Future Directions

Although this study did capture a number of dimensions of out-of-school activities, it did not examine duration or consistency of participation or engagement. As duration has been identified as a dimension associated with positive outcomes (Gardner et al. 2008), future work should consider if duration in activities is influential for Black adolescents as they develop their racial and ethnic identity. A further limitation of this study is that it is cross-sectional and, therefore, the directional association between identity formation and time in out-of-school activities cannot be assumed. Learning more about engagement, particularly by using longitudinal and qualitative approaches, would help to illuminate the bidirectional relations between adolescents and out-of-school activity settings and shed light on the process and content of racial and ethnic identity (Umaña-Taylor 2024). As Salas Pujols (2022) ethnography highlights, particular focus should be paid to the relationships between Black adolescents and the staff, mentors, coaches, administrators, and other adults at the out-of-school activity and workplace. The inclusion of qualitative data would help to guide future research and ensure participant voice and experience is leading that process. Participant voice would also highlight intersectionality in the study of racial and ethnic identity formation (Crenshaw 1989) and work to identify the key features of out-of-school experiences that inform racial and ethnic identity. Notably, the identity formation literature (including the present study) often focuses on a single axis of identity, such as race. Future work should critically examine the intersections of racial and ethnic identity with gender, sexual, socioeconomic, and disability identities (Cerezo et al. 2020). Additionally, utilization of a multidimensional measure specific to Black racial and ethnic identity, such as the Multidimensional Model of Black Identity (MMBI; Sellers et al. 1997), would allow for a more nuanced examination of Black identity. Integrating a measure like the MMBI in a longitudinal study design would allow for an in-depth examination of the development of Black racial and ethnic identity. Given the information this study does not account for, the possibility of missing variable bias is present. Such variables include aspects of the OAs, such as their cultural specificity and the identities of

the program staff, family factors (e.g., socialization practices, parental involvement), and school factors (e.g., opportunities for OA participation through school, racial and ethnic composition of the student body and staff members). For example, breadth of OA participation may be a product of more parental involvement, which is the factor driving the identity formation process. Future work should examine these ecological factors.

Finally, this study did not examine the effects of the COVID-19 pandemic. Therefore, it is unclear how the pandemic and increased public attention on systemic racism following the murders of George Floyd and Breonna Taylor in 2020 have influenced both participation in out-of-school participation among Black youth and racial and ethnic identity formation. Researchers are still working to understand the short and longer-term effects of pandemic on out-of-school participation (Osai et al. 2024), especially for Black youth, and the emerging literature indicates some Black youth reported the pandemic provided space for them to engage in self-reflection and explore their identity both independently and in conversation with their peers, family, religion, and Black mental health professions (Crooks et al. 2022).

5 | Conclusion

This study found that more out-of-school activity participation, as in more total activities, types of activities, and intensity of participation, was significantly associated with higher reported racial and ethnic identity formation, defined as more seeking out information about one's racial and ethnic identity and a stronger sense of belonging. A latent class analysis revealed that classes characterized by a high breadth of participation, along with summertime employment, reported high racial and ethnic identity while the class characterized by low participation reported significantly lower ratings of racial and ethnic identity. Taken together, these findings suggest that out-of-school activities and summer jobs are spaces in the social ecology of Black adolescents that are associated with racial and ethnic identity formation and future work should examine the specific, dynamic processes within these spaces and experiences that inform identity development. Along with the substantial body of literature on the influence of the school environment on identity formation, out-of-school spaces should continue to be examined as potential spaces in which Black adolescents are obtaining information about and clarifying their sense of their Black identity. As racial and ethnic identity formation is associated with better psychological well-being (Seaton 2009; Smith and Silva 2011), and out-of-school spaces have already been identified as settings that can foster positive youth development (Pittman 2017), these findings suggest researchers, youth workers, and youth should collaboratively explore how out-of-school activities and employment opportunities can support positive racial and ethnic identity formation and broader healthy development. Appreciation for the multitude of ways that out-of-school activities shape adolescents' lives should inform efforts to address their needs from a strengths-based approach that can be implemented at clinical, programmatic, and community levels. Clinically, providers may consider recommending adolescents seek out out-of-school activities and employment opportunities that are affirming in addition to

being places in which the young person can schedule in activities they enjoy and build up a sense of mastery in a skill set. At the program level, out-of-school spaces can investigate the idiosyncratic ways they may be fostering identity formation. Such work should be guided by youth participants to ensure reflections do not just reflect staff or mentor's perceptions. Finally, as programs that host and employ adolescents during out-of-school hours may be housed within larger community organizations, such organizations may want to consider their role in identity formation. Given the therapeutic potential of positive racial and ethnic identity formation (Clark et al. 2023), those supporting Black youth in out-of-school spaces should consider their role in the racial and ethnic identity formation process.

Author Contributions

Maureen T. S. Burns devised the project, performed the analyses, drafted the manuscript, and created the figures and tables. Amy M. Bohnert was the primary supervisor and Byron D. Brooks was the secondary supervisor. Robin Hayen and Alexis Boe supported the project, including data collection and cleaning for analysis. Edith Chen devised the larger study and provided feedback over the course of the project.

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Ethics Statement

This study was approved by Northwestern University's IRB (IRB#STU00205634) and Loyola University Chicago's IRB (IRB #3879).

Consent

Caregiver consent and assessment from participants under age 18 was obtained for this study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The authors have nothing to report.

Endnotes

¹Within the present study, the term "racial and ethnic identity" will be used in a combined fashion to characterize Black identity formation, which includes aspects of culture and political power dynamics, consistent with the conceptualization of ethnicity and race, respectively.

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