

**Risk taking profiles among college students: An examination of health-risk taking, anti-racism action, and college functioning**

Natasha Duell<sup>a,b\*</sup>, N. K. Christophe<sup>c</sup>, and M. Y. Martin Romero<sup>d</sup>

*<sup>a</sup>Natasha Duell, Department of Psychology and Neuroscience, and <sup>b</sup>Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599; <sup>c</sup>N.*

*Keita Christophe, Department of Psychology, Wake Forest University; and <sup>d</sup>Michelle Y. Martin Romero, Department of Public Health Education, University of North Carolina at Greensboro*

Correspondence concerning this article should be addressed to Natasha Duell, Department of Psychology and Neuroscience, University of North Carolina at Chapel Hill, 235 E. Cameron Avenue, Chapel Hill, NC 27599-3270; e-mail: [natashaduell@unc.edu](mailto:natashaduell@unc.edu)

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Objective: This study expands the literature on risk taking among college students by exploring anti-racism action as a form of positive risk taking. Participants: 346 Black (64%) and Latinx (36%) college students (85% female) ages 18-27 years ( $M = 18.75$ ,  $SD = 1.31$ ). Methods: Participants responded to questionnaires on anti-racism action, health-risk taking, and college functioning. Latent class analysis identified behavioral profiles of risk takers. Indicators of profile membership and associations with college functioning were examined. Results: Three profiles emerged: moderate overall risk taking, high health-risk taking, and high anti-racism action. Personal experience with discrimination was associated with a greater likelihood of health-risk taking. Students in the high anti-racism profile evinced greater educational functioning than those in the high-health risk taking profile. Conclusions: Risky behavior on college campuses is not homogeneous. Specific interventions and support networks are necessary to support students falling within specific risk profiles.

*Keywords:* critical civic engagement; anti-racism, college functioning, risk taking, health risk behavior

## Introduction

The college years are ripe with opportunities for risk taking. Dominating the conversation about risk taking among college students is health-risk behaviors such as binge drinking, substance use, and unprotected sex. Lacking from the discussion, however, is students' engagement in positive patterns of risk taking that promote their well-being or the well-being of others. One such positive risk is *anti-racism action*, which involves behaviors that challenge racism through interpersonal, communal, and political initiatives.<sup>1</sup> Anti-racism action reflects one domain of critical civic engagement, which are actions intended to resist and rectify systems of inequality.<sup>2</sup> Participation in critical civic actions such as anti-racism action is particularly important for the positive development and well-being of students from minoritized racial and ethnic groups, whose college experiences are intertwined with navigating historically-embedded systems of oppression. Although students experiencing discrimination are at greater risk for engaging in health-risk behaviors,<sup>3</sup> anti-racism actions are an opportunity for students to cope with and redress oppression through active resistance.<sup>4</sup> Most young people engage in both negative and positive risks;<sup>5</sup> however, college students' engagement in health-risks and positive risks are rarely studied together. To this end, the present study aims to identify profiles of negative risk taking (i.e., health-risk behaviors) and positive risk taking (i.e., anti-racism action) among college students, identify individual characteristics associated with those profiles, and explore implications for students' college functioning.

Colleges and universities afford students with opportunities to form social connections, learn new skills, and develop a sense of personal identity and meaning.<sup>6</sup> Essential to meeting these milestones is a willingness to take risks.<sup>5</sup> At the broadest level, risk taking involves engaging in behaviors for which the likelihood of their outcome, good or bad, is uncertain.<sup>7</sup>

Although certain risks, such as substance abuse or precocious sex, are often antisocial or dangerous, positive risks, such as critical civic engagement, are socially acceptable and developmentally constructive.<sup>8</sup>

To put this into context, imagine a college student binge drinking at a party. There is the potential for both a positive outcome, such as having fun and connecting with new peers, and a negative outcome, such as getting ill or getting into an accident. Whether the student will have fun, get sick, or both, is uncertain. Now imagine a student protesting for social justice. There is the potential for a positive outcome, such as initiating political change, and a negative outcome, such as getting arrested.<sup>9</sup> Of course, each of these risks also have a range of other potential outcomes, some of which may be more neutral (e.g., attending a protest without negative consequences). However, it is reasonable to speculate that individuals choose to take risks in pursuit of a desired outcome (for a more thorough discussion, see Duell & Steinberg<sup>8,10</sup>). Both binge drinking and protesting for social justice are risks given that the probability for any outcome occurring is uncertain; that is, greater than 0 and less than 1. Although both negative and positive risks may serve a developmentally constructive purpose (e.g., binge drinking may facilitate bonding with peers),<sup>8</sup> positive risks are unique in their potential to improve the well-being of youth or their communities through socially constructive activities.<sup>8</sup> Colleges and universities are uniquely equipped to provide students with such opportunities.<sup>11</sup>

College students are in a developmental phase during which political identities and social values take shape.<sup>12</sup> Opportunities for civic engagement allow young people to engage in meaningful work that contributes to their identity development,<sup>13</sup> such as participating in collective efforts to resolve social issues.<sup>12</sup> Colleges and universities are essential to preparing young citizens to participate in democracy through opportunities in and outside of the classroom

to gain political knowledge and strengthen civic skills.<sup>11</sup> Indeed, young adults with college experience are more civically engaged than their peers who do not attend college.<sup>11</sup> With respect to anti-racism action, recent work has identified three distinct levels of action: interpersonal, communal, and political.<sup>1</sup> Interpersonal action includes individual responses to racism that contribute to the culture of the young persons' relationships and broader social context. Opportunities for interpersonal action on college campuses are plentiful, through enriching classroom dialogues or through students' daily interactions. Youth involved in communal action participate in collective efforts in their schools and communities, whereas those involved in political action participate in protests or engage with political officials and institutions. Despite the potential dangers of engaging in anti-racism action, ranging from disagreements with peers to physical harm, students engaging in anti-racism action also have the potential to make meaningful change, both in their own lives and in their communities.

Among individuals from minoritized racial and ethnic groups, civic engagement in the form of anti-racism action may be particularly meaningful. Civic participation that is motivated by personal experiences of societal oppression may help young people mitigate the physical and psychological consequences of discrimination.<sup>2</sup> However, the association between critical civic engagement and college student functioning is still unclear. On the one hand, civically engaged youth evince lower anxiety and distress<sup>14</sup> and experience greater hope, self-esteem, and self-efficacy about being able to make change and overcome challenges.<sup>15</sup> Further, civic engagement among college students is associated with academic success,<sup>16</sup> social skills,<sup>17</sup> and even reductions in risky behaviors such as substance abuse.<sup>18,19</sup> On the other hand, political activism increases youths' exposure to injustice and their awareness about the seemingly unchangeable nature of the racially biased sociopolitical system, thereby increasing adjustment problems such as

isolation and loneliness.<sup>13</sup> The potential harm associated with critical civic engagement such as anti-racism action is likely to be exacerbated among youth from minoritized racial and ethnic backgrounds, whose civic actions are personally meaningful and have implications directly relevant to their own lives. Thus, despite the benefits associated with civic engagement more broadly, anti-racism action among minoritized students may have negative implications for their college functioning. It is important to identify the risks and benefits associated with students' critical civic engagement so that higher education institutions can determine how best to support these students.

The prevalence of anti-racism action among students from marginalized racial and ethnic groups and the implications for their college functioning is poorly understood. To illustrate initial connections between marginalized students' civic behaviors and their concurrent psychosocial functioning, the present study used latent class analysis to identify subgroups of college students based on their engagement in negative health risks (binge drinking, marijuana use, and unprotected sex) and positive risks (anti-racism action via interpersonal, communal, and political activism). From these exploratory analyses, it was generally expected that a large proportion of students would report engaging in both health-risk taking and anti-racism action, but that there may also be unique groups of students engaging predominantly in health-risks or anti-racism action, respectively. Individual characteristics such as race and ethnicity and gender, as well as experiences with discrimination, were explored as predictors of risk profile. It was expected that experiences with discrimination, particularly among Black youth, would be associated with greater anti-racism action. Finally, we explored whether membership in any given risk profile was associated with psychological, educational, and interpersonal functioning among college

students. Considering prior literature,<sup>20,21</sup> we hypothesized that higher health-risk taking would be associated with worse psychological and educational functioning.

Marginalized college students' anti-racism action has the potential to promote more positive psychosocial wellbeing, potentially due to the action serving as an adaptive coping response,<sup>2</sup> but also has the potential to expose individuals to discrimination and failure when trying to dismantle entrenched social inequalities. Indeed, among Black, but not Latinx, college students, political activism exacerbates the effect of racial microaggressions on anxiety and stress.<sup>22</sup> Given the potential for positive and negative associations between anti-racism action and functioning, we did not make specific hypotheses regarding the direction of association between risk profiles and college functioning.

In this study, we focused specifically on the experiences of Black and Latinx students for two reasons. First, we were interested in learning more about patterns of risk behavior, especially anti-racism action, among college students from demographic groups that are directly targeted by racism. Second, the time of data collection for this study—Fall 2019—was one of political significance for Black and Latinx communities. Specifically, this time preceded the 2020 presidential election, a time characterized by a rise in political activism from those connected to movements such as the Black Lives Matter movement.<sup>23</sup> At this time when the presidential administration was igniting White supremacist and anti-Latinx immigrant rhetoric,<sup>24</sup> there was also a groundswell of youth activism targeted towards fighting for the rights of and fair treatment of Latinx and immigrant populations.

## **Materials and methods**

### ***Participants and procedure***

Participants were 346 racially/ethnically minoritized (64% Black, 36% Latinx) college students ( $M_{\text{age}} = 18.8$ ,  $SD = 1.35$ , 85% female). A large majority of participants were freshman in college (66.5%), followed in frequency by sophomores (19.7%), juniors (10.1%), and seniors (3.8%). In terms of socioeconomic status, participants rated their subjective social status<sup>25</sup> relative to others in the U.S on a scale of 1 to 10. Mean subjective social status in our sample was 5.22 ( $SD = 1.58$ ). Participants provided their informed consent and completed an online Qualtrics study broadly assessing stress, coping, and wellbeing. Participants received research credit for their participation and became eligible to participate in a follow-up study. All study procedures were approved by the IRB at (blinded for review).

### ***Measures***

#### *Health risk taking*

Health risk taking variables were assessed using single-item measures assessing the frequency of binge drinking, unsafe sex, and marijuana smoking. All measures were drawn from the Monitoring the Future Study.<sup>26</sup> For binge drinking, participants indicated on a 1 (*none*) to 6 (*10+ times*) scale how frequently they had five or more drinks in a row over the past two weeks.

Participants were also asked on a 1 (*never*) to 4 (*11 or more times*) scale how often in the past 30 days participants had smoked marijuana and had sex (vaginal, anal, or oral) without using protection. Across the three items, higher values indicated more frequent engagement in the risk.

#### *Anti-racism action*

Anti-racism action was assessed using the Anti-Racism Action Scale.<sup>1</sup> This scale assesses interpersonal (5 items), communal (4 items) and political (7 items) anti-racism action.

Participants were asked to indicate whether, in the previous two months, they had (yes = 1) or had not (no = 0) engaged in actions such as “challenged or checked a friend who used a racial

slur or made a racial joke” (interpersonal), “attended a meeting on an issue related to race, ethnicity, discrimination, and/or segregation” (communal), and “attended a protest on an issue related to race, ethnicity, discrimination, and/or segregation” (political). Reliabilities were adequate ( $\alpha = .65 - .77$ ) among a diverse sample of adolescents<sup>1</sup> and ranged from .696 to .727 in our sample of Black and Latinx college students.

### *College Adjustment*

College adjustment outcomes were assessed using the College Adjustment Questionnaire.<sup>27</sup> This scale assessed educational (5 items), relational (5 items), and psychological (4 items) functioning. Participants were asked on a 1 (*very inaccurate*) to 5 (*very accurate*) scale the degree to which statements such as “I am succeeding academically” (educational), “I am happy with my social life” (relational), and “I feel that I am doing well emotionally since coming to college” (psychological) accurately applied to them. Scores within each of the three subscales were averaged such that higher values indicated higher functioning. Prior reliabilities among a sample of college students ranged from .79 to .89 for each subscale.<sup>27</sup> Reliability in our sample of Black and Latinx college students ranged from .810 to .852 across subscales.

### *Covariates*

Covariates tested as predictors of membership in one profile relative to another included year in school (0 = freshman, 1 = upperclassman), grade point average (4.0 scale), age, gender (0 = male, 1 = female), racial background (Latinx = 0, Black = 1), and experiences of discrimination. Experiences of discrimination were measured using an average of the 9-item everyday discrimination measure.<sup>28</sup> On a 1 (*never*) to 6 (*almost everyday*) scale, participants reported how often they experience things such as “people act as if they think you are dishonest” and “you are

treated with less respect than other people are.” Prior studies with Black samples have reported reliabilities ranging from .87-.88.<sup>29,30</sup> Reliability of this measure in our sample was .899.

## **Results**

Descriptive statistics and correlations among all study variables are available in Tables 1 and 2, respectively.

### ***Profile identification***

To identify patterns of positive (i.e., anti-racism action) and negative (i.e., health risks) risk taking among our sample of marginalized college students, we first conducted a latent profile analysis using Mplus Version 8.5.<sup>31</sup> To identify the optimal number of profiles, we used a combination of fit indices to qualitatively compare a series of models estimating between two and four profile solutions. Smaller<sup>32</sup> and—as the number of estimated profiles increases—more gradually decreasing Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), and sample size adjusted BIC (SSaBIC) indicates better model fit (B. O. Muthén, personal communication, June 5, 2013). These indices were evaluated in combination with the Lo-Mendel Rubin Adjusted Likelihood Ratio Test (LRT). A significant LRT indicated that a solution with  $k$  number profiles fits better than a solution with  $k-1$  profiles.<sup>32</sup> Results indicated a 3-profile solution provided the best fit to the data (see Table 3 for model fit indices). Entropy (.964) was well above the recommended minimum value (.8),<sup>33</sup> indicating that individuals were classified into their respective profile with a high level of accuracy.

Most participants ( $N = 273$ , 79%) were sorted into the *Average* profile, characterized by levels of health risk taking and anti-racist action near the overall sample mean (see Table 1 for profile-specific means). The *High Health Risks* profile included a small number of college students ( $N = 35$ , 10%) who engaged in average levels of anti-racist action and frequent health-

risk behaviors (0.5—2.5 *SDs* above the mean). The *High Anti-Racism* profile included a similarly small number of college students ( $N = 38$ , 11%) who engaged in a high level (0.5—2.0 *SDs* above the mean) of interpersonal, communal, and political anti-racist activism and low levels of health-risk behaviors. For profile-specific means, see Table 2. For a visual representation of the profiles, see Figure 1.

### ***Predictors of profile membership***

Using the R3Step procedure within Mplus,<sup>34,35</sup> we used multinomial logistic regression to examine whether experiences of discrimination and various sociodemographic characteristics influenced the likelihood of an individual belonging to one profile versus another. Given the non-symmetric distributions around probabilities of profile membership, we use 95% confidence intervals, which do not assume a symmetric distribution, rather than *p*-values to establish statistical significance.<sup>36</sup> Recent updates to Mplus have removed *p*-values from the output of multinomial regression altogether to encourage the use of confidence intervals., over *p*-values Comparisons across the three profiles with respect to year in school, grade point average, age, gender, racial background, and experiences of discrimination yielded minimal differences (see Table 4). However, a one-unit increase in perceived discrimination was associated with a significant increase in the odds of belonging to the *High Health Risk* profile than the *Average* profile ( $B = 2.309$ , 95% *CI* [1.404 - 3.797]). This implies that discrimination was associated with greater health risk-taking in college, but not anti-racism action.

### ***Profile membership and college adjustment***

Finally, we employed the BCH procedure in Mplus<sup>35</sup> to examine mean-level differences in educational, relational, and psychological functioning among risk taking profiles. Results indicated that college students in the *High Health Risk* profile endorsed lower levels of

educational functioning than did the *Average* ( $\chi^2 = 7.997, p = .005$ ) and *High Anti-Racism* ( $\chi^2 = 5.409, p = .020$ ) profiles. Additionally, those in the *High Health Risk* profile endorsed worse psychological functioning than did those in the *Average* profile ( $\chi^2 = 4.323, p = .038$ ). The *High Anti-Racism* and *Average* profiles reported similarly high levels of educational and psychological functioning. No differences between profiles were observed with respect to relational functioning. Figure 2 illustrates these differences in college adjustment across the three profiles.

### **Discussion**

Risk taking is a normative and constructive part of the college experience; it affords students with opportunities to learn new skills, discover their identities, and forge meaningful relationships.<sup>6</sup> However, not all risks are equally beneficial to a young person's well-being.<sup>8</sup> College students from minoritized racial and ethnic groups may be particularly susceptible to engaging in health-risk behaviors due to their direct and indirect experiences with institutional and interpersonal discrimination.<sup>3,37</sup> However, recent work has shown that civic engagement, such as anti-racism action, may serve as an adaptive coping response for students of color.<sup>2</sup> Although students of color are sure to engage in both positive and negative risks, no study has explored both of these behavioral patterns together. Thus, the goal of the present study was to identify distinct risk taking profiles among college students from marginalized racial and ethnic groups. Latent profile analyses revealed three groups: students engaging in moderate levels of both health-risk taking and anti-racism action (79%), students engaging in high levels of health-risk risk taking (10%), and students engaging in high levels of anti-racism action (11%). Identification of these unique groups of risk takers has implications for equipping colleges to handle the unique needs of its student body.

Perhaps most compelling is that students in the high anti-racism action profile evinced greater educational functioning than those in the high health risks profile. This finding is consistent with prior literature demonstrating an association between positive risk taking and school engagement among late adolescents.<sup>5</sup> Furthermore, the association between anti-racism action and greater educational functioning aligns with findings from prior research demonstrating associations between greater civic engagement and better academic functioning (see Heberle<sup>38</sup> for a brief review). This finding may suggest that high levels of anti-racism action is associated with greater investment in one's academics. Alternatively, it may be the absence of health-risk taking behaviors that promotes greater educational functioning. This is an empirical question worthy of future examination. Preliminarily, prior work has shown that involvement in extracurricular activities, which may include civic engagement, facilitates academic success among marginalized students who have experienced discrimination by protecting their psychological health.<sup>39</sup> In light of this evidence, universities may consider providing students with opportunities to participate in varying levels of anti-racism action, either through classroom dialogues, student organizations, or opportunities to interact with politicians. These opportunities may provide students from marginalized racial and ethnic groups with a sense of control and agency in contributing to the wellbeing and improvement of their communities.<sup>40</sup>

We expected that experiences with discrimination would be associated with membership in the high anti-racism action profile, but this was not the case. Although discrimination is known to motivate anti-racism action among minoritized college students,<sup>41</sup> personal experiences with discrimination may not be the sole source of motivation for students' anti-racism action. Rather, a general awareness and understanding of systematic inequalities (i.e., high critical reflection<sup>42</sup>) may also spur anti-racism action among marginalized students. Granted, personal

experiences of discrimination may inspire greater critical reflection.<sup>43</sup> To this end, one compelling question for future research is whether critical reflection mediates the association between personally experienced discrimination and anti-racism action. It is important for future work to consider and unpack the mechanisms and contexts in which discrimination does and does not lead to engagement in anti-racism action amongst marginalized college students. Identification of these mechanisms may help educators create opportunities for students to cope with their experiences in constructive rather than harmful ways.

In contrast to individuals in the high anti-racism profile, those in the high health risk taking profile did report higher levels of personally experienced discrimination. This finding is consistent with a large body of literature demonstrating the deleterious consequences of discrimination on risk-taking behaviors such as pernicious sex<sup>44</sup> and alcohol misuse.<sup>37</sup> It is essential that higher education institutions apply these findings to policies and programs focused on cultivating an equitable and inclusive learning environment, perhaps through anti-racism training to reduce discrimination at the individual, interpersonal level. Beyond efforts to reduce marginalized students' exposure to interpersonal discrimination, university leaders may better serve their students by ensuring their policies and procedures do not inadvertently disadvantage those from marginalized populations.

Although prior work has indicated that critical civic engagement among youth of color may lead to worse psychological functioning,<sup>22</sup> findings from this study indicate comparable levels of psychological functioning between youth in the high anti-racism action and average risk profiles. However, consistent with our expectations, students in the high health risk profile endorsed worse psychological functioning than their peers in the average risk profile. Together, findings from this study allude to the prevalence of a small subset of students at particularly high

risk for engaging behaviors with serious negative implications for their educational and psychological functioning. Given the high incidence rates of psychological problems on college campuses,<sup>45</sup> it is critical for institutes of higher education to limit opportunities for problematic substance use, provide resources to students struggling with substance use, and provide opportunities for positive risk taking (e.g., opportunities to be civically engaged on campus and in the community).

That students in the high health risk taking profile did not evince any detriments in relational functioning could be because substance use and, certainly, sexual intimacy, occur in social settings. Thus, engagement in health-risk behaviors might actually facilitate feelings of connectedness between students and their peers. Granted, because this study examined concurrent associations between risk taking profiles and functioning, we cannot rule out the possibility that health-risk taking has longer-term consequences on relational functioning.

There are several limitations that warrant consideration when interpreting the results of this study. First, the group sizes for the high health risk and high anti-racism profiles were small. Although it is unsurprising to find small numbers of individuals along behavioral extremes, the small group sizes limited our ability to make strong claims about predictors of profile membership and differences in college functioning. Furthermore, our indices of risk behavior were measured along different timeframes (e.g., 2-month retrospective report for anti-racism action vs. 2-week retrospective report for binge drinking). Using the same timeframe would have allowed us to make direct comparisons of risk-taking behaviors in terms of frequency. Granted, this limitation is minimized by the fact that we interpreted our risk profiles based on standardized values of our indicators. Additionally, given our predominantly-female sample, our measure of

binge drinking behavior (five or more drinks in one sitting) may be an underestimate of true binge drinking behavior, which is considered four or more drinks for females.

There are also limitations in this study specifically relevant to the sample. First, the sample for this study included Black and Latinx students enrolled in an entry-level psychology course, thereby limiting the generalizability of the sample to a broader college population within the United States. The students within the sample also varied greatly in age. The likelihood of engaging in health risk taking or one's confidence and maturity to engage in anti-racism action likely increases with age. Although age did not distinguish between risk profiles, it may have been a confounding factor in our results. Thus, future research exploring profiles of risk taking among college students may give special attention to age differences in factors such as opportunity and life experience. Finally, future iterations of this work would be more generalizable by including students from multiple marginalized racial and ethnic groups, such as students identifying as Asian, Pacific Islander, Middle Eastern or North African (MENA), and Native American. This is important because risk behavior among students from these groups—including both positive and negative risk taking—are likely to differ as a function of cultural norms and opportunities. This will call for purposeful study design and strategic recruitment methods that center the voices and perspectives of college students from these backgrounds.

There are several exciting opportunities for future research on the topic of positive and negative risk taking among college students. First, to make causal claims about the predictors and outcomes of health-risk taking and anti-racism action, future work should replicate this study longitudinally. A longitudinal design would also allow researchers to examine how profile membership and its effects on college functioning change throughout the college years. Additionally, future research should explore moderators of the associations between risk profile

and college functioning. For example, although psychological functioning may not differ among average risk and high anti-racism action students, perhaps anti-racism action is associated with greater feelings of hope.<sup>46</sup> Additionally, research on Black young adults indicates that the association between discrimination and alcohol use is moderated by perceived stress,<sup>3</sup> which may be informative for universities seeking ways to help their marginalized students manage the stress caused by experiences of discrimination.

Ultimately, the results of this novel study broaden the scope of risk behaviors endorsed by college students, providing evidence for positive and highly prosocial risk behaviors among college students. Although most students endorse both patterns of risk taking, results from this study identify two unique subgroups of risk takers at opposite ends of the spectrum. These findings may present opportunities for colleges and universities to direct college students' desires for risky and exciting experiences towards behaviors that are developmentally adaptive and socially beneficial. Furthermore, in identifying the factors associated with these distinct patterns of risk taking, colleges and universities may be able to develop services and initiatives that cater to the unique needs of their students.

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**Declaration of Interest Statement**

The authors report no declarations of interest.

**References**

1. Aldana A, Bañales J, Richards-Schuster K. Youth anti-racist engagement: Conceptualization, development, and validation of an anti-racism action scale. *Adol Res Rev.* 2019;4:1-13. doi: 10.1007/s40894-019-00113-1
2. Hope EC, Spencer MB. Civic engagement as an adaptive coping response to conditions of inequality: An application of Phenomenological Variant of Ecological Systems Theory (PVEST). In: Cabrera NJ, Leyendecker B, eds. *Handbook on Positive Development of Minority Children and Youth.* Online: Springer, Cham; 2017:421-435. doi: 10.1007/978-3-319-43645-6\_25
3. Metzger IW, Salami T, Carter S, Halliday-Boykins C, Anderson RE, Jernigan MM, Ritchwood T. African American emerging adults' experiences with racial discrimination and drinking habits: The moderating roles of perceived stress. *Cultur Divers Ethnic Minor Psychol.* 2018;24:489-497. doi: 10.1037/cdp0000204
4. Hope EC, Pender KN, Riddick KN. Development and validation of the Black Community Activism Orientation Scale. *J Black Psychol.* 2019;45:185–214. doi: 10.1177/0095798419865416
5. Duell N, Steinberg L. (2020). Differential correlates of positive and negative risk taking in adolescence. *J Youth Adolesc.* 2020;49:1162-1178. doi: 10.1007/s10964-020-01237-7
6. Dworkin J. Risk taking as developmentally appropriate experimentation for college students. *J Adolesc Res.* 2005;20:219–241. doi: 10.1177/0743558404273073
7. Crone EA, van Duijvenvoorde ACK, Peper JS. Annual research review: Neural contributions to risk-taking in adolescence - developmental changes and individual differences. *J Child Psychol Psychiatry,* 2016;57:353–368. doi: 10.1111/jcpp.12502

8. Duell N, Steinberg L. Positive risk taking in adolescence. *Child Dev Perspect.* 2019;13:48-52.  
doi: 10.1111/cdep.123109.
9. Corning AF, Myers DJ. Individual orientation toward engagement in social action. *Polit Psychol.* 2002;23:703-729. doi: 10.1111/0162-895X.00304
10. Duell N, Steinberg L. Adolescents take positive risks, too. *Dev Rev.* 2021;62:100984. doi: 10.1016/j.dr.2021.100984
11. Flanagan C, Levine P. Civic engagement and the transition to adulthood. *Future Child.* 2010;20:159-179. doi: 10.1353/foc.0.0043
12. Finlay A, Wray-Lake L, Flanagan CA. Civic engagement during the transition to adulthood: Developmental opportunities and social policies at a critical juncture. In: Sherrod LR, Torney-Purta J, Flanagan CA, eds. *Handbook of Research on Civic Engagement in Youth.* 2010:277-305. Online: John Wiley & Sons, Inc. doi: 10.1002/9780470767603.ch11
13. Flanagan C, Bundick M. Civic engagement and psychosocial well-being in college students. *Liberal Educ,* 2011;97:20-27.
14. Schwartz C, Meisenhelder JB, Ma Y, Reed G. Altruistic social interest behaviors are associated with better mental health. *Psychosom Med.* 2003;65:778-785. doi: 10.1097/01.psy.0000079378.39062.d4
15. Brown KM, Hoye R, Nicholson M. Self-esteem, self-efficacy, and social connectedness as mediators of the relationship between volunteering and well-being. *J Soc Serv Res.* 2012;38:468-483. doi: 10.1080/01488376.2012.687706
16. Nicotera N, Brewer S, Veeh C. Civic activity and well-being among first-year college students. *Int J Res Serv Learn Community Engagem.* 2015;3. <http://journals.sfu.ca/iarslce>

17. Conway JM, Amel EL, Gerwien DP. Teaching and learning in the social context: A meta-analysis of service learning's effect on academic, personal, social, and citizenship outcomes. *Teach Psychol*, 2009;36:233-245. doi: 10.1080/00986280903172969
18. Kelly DC. In preparation for adulthood: Exploring civic participation and social trust among young minorities. *Youth Soc*. 2009;40:526-540. doi: 10.1177/0044118X08327584
19. Weitzman ER, Kawachi I. Giving means receiving: The protective effect of social capital on binge drinking on college campuses. *Am J Public Health*. 2000;90:1936-1939. doi: 10.2105/ajph.90.12.1936
20. Meda SA, Gueorguiva RV, Pittman B, Rosen RR, Aslandzadeh F, Tennen H et al. Longitudinal influence of alcohol and marijuana use on academic performance in college students. *PLOS ONE*. 2017;12:e0172213. doi: 10.1371/journal.pone.0172213
21. Schulenberg JE, Johnston LD, O'Malley PM, Bachman JG, Miech RA, Patrick ME. Monitoring the Future national survey results on drug use, 1975–2019: Volume II, College students and adults ages 19–60. <http://monitoringthefuture.org/pubs.html#monographs>. Ann Arbor: Institute for Social Research, The University of Michigan. Published July 2020.
22. Hope EC, Velez G, Offidani-Bertrand C, Keels M, Durkee M. I. Political activism and mental health among Black and Latinx college students. *Cultur Divers Ethnic Minor Psychol*. 2018;24:26–39. doi: 10.1037/cdp0000144
23. McManus HD, Cullen FT, Lero Jonson C, Burton AL, Burton Jr VS. Will Black Lives Matter to the police? African Americans' concerns about Trump's presidency. *Vict Offender*. 2019;14:1040-1062. doi: 10.1080/15564886.2019.1671288

24. Finley L, Esposito L. The immigrant as Bogeyman: Examining Donald Trump and the right's anti-immigrant, anti-PC rhetoric. *Humanity Soc.* 2019;44:178-197. doi: 10.1177/0160597619832627
25. Adler NE, Epel ES, Castellazzo G, Ickovics JR. Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy, White women. *Health Psychol.* 2000;19:586–592. doi: 10.1037/0278-6133.19.6.586
26. Johnston LD, O'Malley PM, Miech RA, Bachman JG, Schulenberg JE. Demographic subgroup trends among adolescents in the use of various licit and illicit drugs, 1975-2016. <https://eric.ed.gov/?id=ED578738>. Institute for Social Research|paper 88. Published 2017.
27. O'Donnell MB, Shirley LA, Park SS, Nolen JP, Gibbons AM, Rosen LA. The college adjustment questionnaire: A measure of students' educational, relational, and psychological adjustment to the college environment. *J Coll Stud Dev.* 2018;59:116-121. doi:10.1353/csd.2018.0009
28. Williams DR, Mohammed SA. Discrimination and racial disparities in health: Evidence and needed research. *J Behav Med.* 2009;32:20–47. doi: 10.1007/s10865-008-9185-0
29. Krieger N, Smith K, Naishadham D, Hartman C, Barbeau EM. Experiences of discrimination: Validity and reliability of a self-report measure for population health research on racism and health. *Soc Sci Med.* 2005;61:1576–1596. doi: 10.1016/j.socscimed.2005.03.006

30. Clark R, Coleman AP, Novak JD. Brief report: Initial psychometric properties of the everyday discrimination scale in black adolescents. *J Adolesc.* 2004;27:363–368. doi: 10.1016/j.adolescence.2003.09.004
31. Muthén LK, Muthén BO. *Mplus User's Guide*. Version 8. Muthén & Muthén; 2017.
32. Nylund KL, Asparouhov T, Muthén BO. Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Struct Equ Modeling.* 2007;14:535–569. doi: 10.1080/10705510701575396
33. Bengt O Muthén, PhD, Mplus Discussion >> What is a good value of entropy. <http://www.statmodel.com/discussion/messages/13/2562.html?1237580237>. Posted November 21, 2008.
34. Asparouhov T, Muthén BO. Auxiliary variables in mixture modeling: Three-step approaches using Mplus. *Struct Equ Modeling.* 2014;21:329–341. doi: 10.1080/10705511.2014.915181
35. Asparouhov T, Muthen B. Auxiliary variables in mixture modeling: Using the BCH method in Mplus to estimate a distal outcome model and an arbitrary secondary model. Mplus Web Notes: No. 21|Version 11. <https://www.statmodel.com/examples/webnotes/webnote21.pdf>. Published February 4, 2021.
36. Bengt O Muthén, PhD, Mplus Discussion >> Latent class odds ratios and confidence intervals. <http://www.statmodel.com/discussion/messages/13/18371.html?1584664200>. Posted March 19, 2020.
37. Gilbert PA, Zemore SE. Discrimination and drinking: A systematic review of the evidence. *Soc Sci Med.* 2016;161:178–194. doi: 10.1016/j.socscimed.2016.06.009.

38. Heberle AE, Rapa LJ, Farago F. Critical consciousness in children and adolescents: A systematic review, critical assessment, and recommendations for future research. *Psychol Bull.* 2020;146:525–551. doi: 10.1037/bul0000230
39. Billingsley JT, Hurd NM. Discrimination, mental health and academic performance among underrepresented college students: The role of extracurricular activities at predominantly white institutions. *Soc Psychol Educ.* 2019;22:421-466. doi: 10.1007/s11218-019-09484-8
40. Watts RJ, Flanagan C. (2007). Pushing the envelope on youth civic engagement: A developmental and liberation psychology perspective. *J Community Psychol.* 2007;35:779–792. doi: 10.1002/jcop.20178
41. Christophe NK, Martin Romero MY, Stein GL. Examining the promotive versus the protective impact of culturally informed shift-&-persist coping in the context of discrimination, anxiety, and health behaviors. *J Community Psychol.* 2022;1-16. doi: 10.1002/jcop.22799
42. Diemer MA, McWhirter EH, Ozer EJ, Rapa LJ. Advances in the conceptualization and measurement of critical consciousness. *Urban Rev.* 2015;47:809–823. doi: 10.1007/s11256-015-0336-7
43. Mathews CJ, Medina MA, Bañales J, Pinetta BJ, Marchand AD, Agi AC, et al. Mapping the intersections of adolescents' ethnic-racial identity and critical consciousness. *Adolesc Res Rev.* 2019;5:363-379 doi: 10.1007/s40894-019-00122-0
44. Benner AD, Wang Y, Shen Y, Boyle AE, Polk R, Cheng YP. Racial/ethnic discrimination and well-being during adolescence: A meta-analytic review. *Am Psychol,* 2018;73:855–883. doi: 10.1037/amp0000204

45. Kitzrow MA. The mental health needs of today's college students: Challenges and recommendations. *NASPA J.* 2003;41:167-181. doi: 10.2202/1949-6605.1310
46. McDermott RC, Berry AT, Borgogna NC, Cheng H-L, Wong YJ, Browning B, Carr N. Revisiting the paradox of hope: The role of discrimination among first-year Black college students. *J Couns Psychol.* 2020;67:637-644. doi: 10.1037/cou0000422

Variable	<i>Risk Taking Profile</i>				
	Range	Average Risk ( <i>N</i> = 273)	High Health Risks ( <i>N</i> = 35)	High Anti-Racism ( <i>N</i> = 38)	Full Sample ( <i>N</i> = 346)
		M (SE)	M (SE)	M (SE)	M (SE)
<b><i>Profile Indicators</i></b>					
1. Binge Drink	1—6	1.12 (.02)	3.604 (.128)	1.088 (.047)	1.377 (.046)
2. Sex w/o Birth Control	0—4	1.583 (.069)	2.466 (.267)	1.303 (.134)	1.643 (.064)
3. Smoke Marijuana	0—4	1.532 (.069)	3.179 (.267)	2.013 (.264)	1.751 (.069)
4. Interpersonal Action	0—5	2.617 (.1)	3.384 (.256)	3.911 (.232)	2.832 (.088)
5. Community Action	0—4	0.942 (.074)	0.824 (.158)	2.989 (.299)	1.147 (.071)
6. Political Action	0—7	0.864 (.067)	1.3 (.16)	4.704 (.373)	1.136 (.083)
<b><i>Profile Outcomes</i></b>					
7. Educational Fxn.	1—5	3.784 (.052)	3.335 (.15)	3.809 (.138)	3.743 (.047)
8. Relationship Fxn.	1—5	3.052 (.063)	3.251 (.176)	3.3 (.178)	3.098 (.057)
9. Psychological Fxn.	1—5	3.664 (.062)	3.263 (.183)	3.373 (.183)	3.594 (.056)

Table 1. Unstandardized means and standard errors (*N* = 346). Fxn. = functioning

	1	2	3	4	5	6	7	8	9	10	11	12
1. Educational Fxn.	—	<b>.271</b>	<b>.577</b>	<b>-.124</b>	<b>-.12</b>	<b>-.198</b>	<b>-.134</b>	-.001	.035	-.027	<b>-.162</b>	-.051
2. Relationship Fxn.		—	<b>.454</b>	-.089	.061	.001	.017	-.016	<b>.12</b>	-.003	<b>-.16</b>	<b>-.116</b>
3. Psychological Fxn.			—	<b>-.213</b>	<b>-.112</b>	-.083	<b>-.126</b>	<b>-.114</b>	-.036	<b>-.122</b>	<b>-.192</b>	-.101
4. Discrimination Exp.				—	.044	.041	<b>.137</b>	<b>.363</b>	<b>.154</b>	<b>.284</b>	.005	-.004
5. Binge Drinking					—	<b>.174</b>	<b>.318</b>	.096	-.099	-.023	.104	-.058
6. Sex w/o Birth Control						—	<b>.213</b>	.002	-.028	-.023	<b>.108</b>	.018
7. Smoke Marijuana							—	<b>.149</b>	-.034	<b>.127</b>	.011	.026
8. Interpersonal Activism								—	<b>.242</b>	<b>.342</b>	.05	.007
9. Community Activism									—	<b>.492</b>	<b>-.117</b>	.009
10. Political Activism										—	.014	.031
11. Age											—	-.081
12. Female												—

Table 2. Correlations among primary study variables. Bolded values are significant at  $p < .05$ . Fxn. =

functioning. Exp. = experience.

Number of Profiles	AIC	BIC	SSaBIC	Entropy	LRT ( <i>p</i> -value)	Bootstrapped LRT ( <i>p</i> -value)
2	6425.102	6498.185	6437.911	.998	391.078 (.0003)	400.634 (<.0001)
<b>3</b>	<b>6211.062</b>	<b>6311.070</b>	<b>6228.590</b>	<b>0.964</b>	<b>222.601</b> <b>(.0002)</b>	<b>228.040</b> <b>(&lt;.0001)</b>
4	6088.003	6214.935	6110.249	0.946	133.791 (.0562)	137.060 (<.0001)

Table 3. Model fit indices for competing latent profile models. Fit indices for the final profile solution are bolded. AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria; SSaBIC = sample size adjusted BIC; LRT = Lo-Mendel Rubin Adjusted Likelihood Ratio Test.

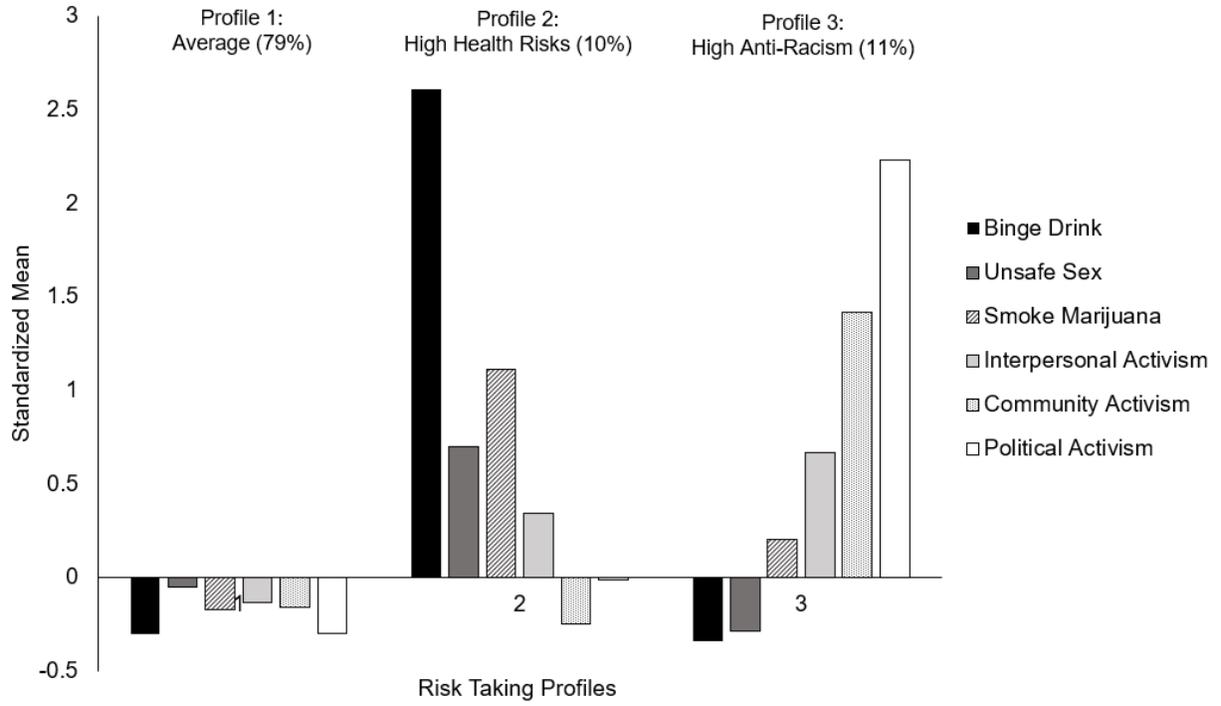
Profile and Variable	OR (SE)	95% CI
<i>Average v. High Health Risk</i>		
Black/African American	2.120 (1.152)	.731-6.149
<b>Discrimination</b>	<b>2.309 (.586)</b>	<b>1.404-3.797</b>
Gender	1.285 (.894)	.329-5.024
Age	1.379 (.314)	.882-2.156
GPA	.509 (.183)	.252-1.029
Upper Year in School	.192 (.172)	.033-1.114
<i>Average v. High Anti-Racism</i>		
Black/African American	.812 (.314)	.380-1.734
Discrimination	1.457 (.319)	.949-2.239
Gender	.791 (.408)	.287-2.176
Age	1.052 (.177)	.756-1.464
GPA	.525 (.183)	.266-1.039
Upper Year in School	1.497 (.821)	.511-4.388
<i>High Health Risk v. High Anti-Racism</i>		
Black/African American	.383 (.243)	.111-1.326
Discrimination	.631 (.185)	.356-1.120
Gender	.615 (.481)	.133-2.843

Age	.763 (.190)	.469-1.242
GPA	1.032 (.452)	.437-2.436
Upper Year in School	7.801 (7.466)	1.195-50.917

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Table 4. Logistic regression results examining predictors of profile differences.

OR (SE) = Odds ratio and corresponding standard error. 95% confidence intervals (CI) were used to determine statistical significance over *p*-values based on recommendations from Muthén.<sup>x</sup> Bolded values were determined to be significant based on a confidence interval that does not cross 1.000.



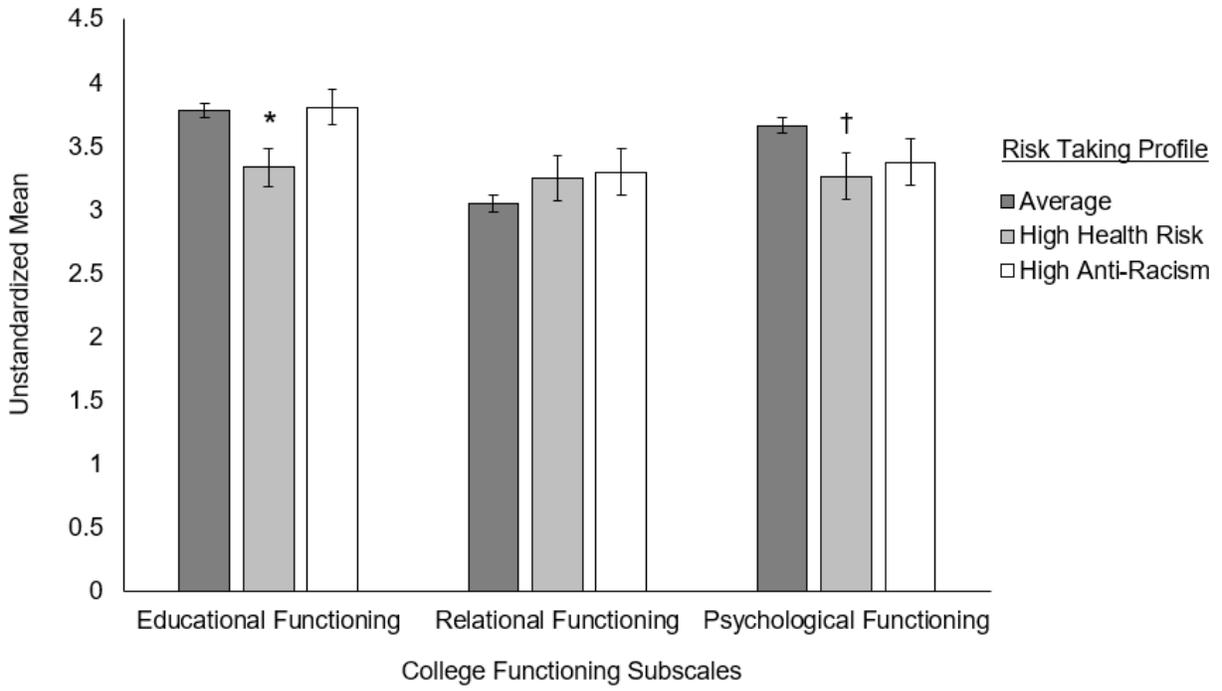


Figure 1. Class membership and standardized means.

Figure 2. Mean differences in college functioning across profiles. Values within bars indicate standardized means of educational functioning within each profile. \* = lower than Average & High Risk profiles  $p < .05$ . † = lower than Average profile  $p < .05$ .