Party, academic, or prepped for college? School norm profiles and adolescent well-being using national data

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Abstract

The current study examined how school-wide norms came together into distinct profiles and how norm profile membership was linked to adolescent well-being. Using school-level (N=786) and student-level data (N=174,587 12th grade students; 52% female; 64% White, 13% Latino, 12% Black, 12% other) from Monitoring the Future, we identified four distinct school profiles—average, academic, prepped-for-college, party—that had unique patterns of shared norms. Compared with average schools, academic schools (high academic and low substance use and social integration norms) were most advantageous for students, prepped-for-college schools (high academics, substance use, and social integration norms) had both benefits and drawbacks, and party schools (low academics and high substance use and social integration norms) were most detrimental.

Keywords: school norms, substance use, academics, social integration, adolescent well-being

Introduction

Adolescents in the U.S. spend roughly half their waking hours at school (Rutter et al., 1979; NCES, 2008), and as such, the academic and social climates of schools—how well youth perform at school, what the prevailing norms and values are—matter. Their implications extend to both the short- and long-term outcomes of young people above and beyond formal instructional and structural aspects of schools traditionally targeted by educational policies and studied by researchers. Developmentally-oriented scholars have made strides to characterize the social-psychological dimensions of school settings, helping to expand the conceptualization of school effects to areas such as trust, marginalization, prosociality, substance use, or delinquent behavior using school networks and other aggregation techniques to capture individual school-wide norms (Bryk & Schneider, 2005; Coleman, 1961; Crosnoe, 2011; McGloin et al., 2014; Ragan, 2020). The current study builds on this foundation, seeking to comprehensively characterize schools' social contexts into distinct profiles of academic, social, and behavioral norms. Such an approach taps into various undercurrents in the student body that represent how potentially beneficial and possibly harmful facets of ecological environments come together to influence young people's development.

As shown in the conceptual model in Figure 1, the study is guided by a systems framework (Tseng & Seidman, 2007) anchored in the tenets of the life course perspective, an oft-used theory in developmental and demographic research (e.g., Staff et al., 2010) that is increasingly reflected in educational studies (e.g., Crosnoe & Huston, 2007; Benner & Crosnoe, forthcoming). Life course theory views lives as dynamically unfolding in transaction with sociocultural contexts (e.g., schools, peer groups; Elder, 1985). The theory also places primacy on situational imperatives (e.g., norms) tied to social settings and how norms are influenced by setting characteristics and structure development across domains; that is, norms are the typical behaviors or beliefs or guidelines for such that characterize a given sociocultural context and are shaped by individuals within that context. This study examines how norms come together within schools and the potential consequences of school norms for the students' well-being.

Attending to School Norms and Larger School Profiles

Schools are social contexts, and each school brings together a unique set of individuals who together create a shared culture of norms. According to systems theory, the norms of a context—or the typical and expected set of group-level beliefs and behaviors—have the potential to govern individuals' behaviors and expectations (Tseng & Seidman, 2007). As Coleman (1988)

notes, individuals' actions and behaviors are "shaped, constrained, and redirected" by the norms of the social context, and members of the collective provide reinforcement when individuals act in accordance with prescribed norms and sanctions when individuals' behaviors are incongruent (p. S95). Systems theory puts forth that norms both reflect social processes within schools and are proliferated and reinforced over time through unfolding social processes that link individuals within a given context (Tseng & Seidman, 2007), consistent with life course theory's focus on linked lives as drivers of human development (Elder, 1998). As such, to fully understand the well-being of individuals within a system (e.g., school), attention should be placed on the norms within that system. To that end, extensive scholarship on peer group norms exists, yet much less research has attended to larger school norms, despite the fact that research has found school norms to be potent in counteracting negative norms around aggression of more proximal peer groups (Nipedal et al., 2010).

Although schools are settings of social relations that shape individual development (Johnson et al., 2001; Osher et al., 2020), not all schools are created equal. From demographic composition to norms and expectations to relationships and interactions, there is no prototypical American school. Moreover, although often viewed as institutions of education and learning, schools are also critical settings for social and emotional development and a training ground for learned behaviors, some prosocial and others more risky (Crosnoe, 2011). Such variation complicates inquiry into school effects, as the possibilities for operationalizing "schools" in measurable terms is vast. At the more distal level, schools can be understood in terms of structural characteristics (e.g., school size; Schwartz et al., 2016) and the sociodemographics of the student population (DuPont-Reyes & Villatoro, 2019), yet such conceptualizations do little to reveal more proximal social processes underlying the demography of schools. Scholarship on social processes within schools is more extensive in scope, yet it often narrowly focuses on processes tied directly to a specific domain such as academics (e.g., Curenton et al., 2015) or bullying and victimization (e.g., Peets et al., 2015). Moreover, this work generally focuses on the individual level, looking at students' personal perceptions of, for example, their relationships with teachers or connections to their schools. This research largely overlooks the fact that schools bring students together into communities of learning with shared practices and norms that forge linked lives, driving interpersonal interactions and individual behaviors across domains (Elder, 1998).

In the current study, we identify prevailing school norms for substance use, academics, and social integration encompassing both behaviors and attitudes and beliefs to tap into the broader academic, behavioral, and social domains of schools. The selection of these domains is purposeful. In determining prevailing non-academic school norms, no domain has received greater attention than substance use. Alcohol use remains widespread among American secondary students, and although the annual prevalence of marijuana use has been level in recent years, the frequent use of marijuana use has been on the rise among adolescents in the United States (Miech et al., 2021). Moreover, research has demonstrated variations in alcohol and drug use between schools (Botticello, 2009; Hill & Mrug, 2015; Kumar et al, 2002). Given that substance use is tied to a host of negative life outcomes (Marshall, 2014; Schulenberg et al., 2018; Volkow et al., 2014) and evidence that perceived peer group norms can drive individual use (Song et al., 2012; Amialchuk & Sapci, 2021), attention to this risky behavior is clearly warranted. As such, the current study attends to school norms around both approval and use of alcohol and marijuana.

The social contexts of schools, however, extend far beyond simply the drinking and drug use culture. Schools are first and foremost institutions of learning, but they vary tremendously in the achievement and engagement of the students they serve (Reardon et al., 2019; Rothstein, 2004). As students move through the U.S. K-12 educational system, there are increasing academic stressors and competition (i.e., academic press), which can affect achievement and future educational plans (e.g., Manzano-Sanchez et al., 2019). Educational expectations, in turn, are strongly linked to actual educational attainment (Beal & Crockett, 2010; Göllner et al., 2018). Evidence also suggests that larger academic norms (along with social and behavioral norms) in educational settings are influential of student outcomes (Dijkstra & Gest, 2015). Thus, in the current study, schoolwide competition for grades (tapping into the academic press of schools) and educational expectations are integrated as distinct indicators of academic norms.

Beyond academics, schools are also unique socialization contexts, and youth must negotiate a web of interpersonal relations to find their niches and where they fit in, a fundamental human need that is particularly salient during adolescence (Baumeister & Leary, 1995). Given the heightened importance of friends as key socializing agents during adolescence (Bagwell & Bukowski, 2018) and the role of social integration in adolescents' physical and

mental health and academics (Cundiff & Matthews, 2018; Rose et al., 2014), indicators of norms around the importance of friendships and social inclusion were included in the current study.

Clearly, prior scholarship indicates that each facet of the school context matters for young people individually, but in line with systems theory, the current study posits that the whole is greater than the sum of its parts. To fully understand the social contexts of schools and their consequences for young people's development, we must understand how these facets come together to represent unique contexts of development. For example, two schools may share similar academic norms but vary substantially in norms around substance use, which may have differential effects on the students therein. Latent profile analysis allows for the identification of distinct subpopulations of schools that share similar norms across domains. This approach is consistent with prior research that has identified a link between school risk and protective profiles and students' experiences of peer harassment (Gloppen et al., 2017) as well as relations between profiles of within-domain norms across social contexts (e.g., schools, peers, families) and young people's risky health behaviors and college-going attitudes (Kremer et al., 2018; Wang et al., 2019). In capturing school norms, we consider both descriptive and injunctive norms. Whereas descriptive norms reflect more aggregate beliefs or behaviors (e.g., whether students' educational expectations at a given school are typically high or low), injunctive norms are reflective of individuals' judgements of appropriate behavior (e.g., the extent to which students at the school disapprove of substance use; Blay et al., 2018).

We also give attention to the short-term stability of school norms. Given that each new cohort of students enters and then navigates the high school setting together, these unique sets of students may shape a mini-culture of linked lives within their grade level, thus contributing to variation in norms year to year and suggesting norms are better captured and operationalized as grade-level norms. It is also possible, however, that each new cohort is socialized by the existing students in the school, thus ensuring greater stability in norms across time, particularly in schools where there is less variation in norms across students within a given school. The unique design of the study from which the data are drawn, wherein targeted schools participate in surveys for two consecutive years, allows us to determine the consistency of within-school norms across two consecutive cohorts of 12th grade students.

Linking Adolescent Developmental Outcomes to the Social Contexts of Schools

During adolescence and across the life course, developmental trajectories are intertwined (Elder, 1998). To understand the totality of young people's well-being, a broad lens on development and the interrelated nature of outcomes is needed. For example, self-competent and socially integrated adolescents tend to perform better academically, and likewise, the co-occurrence of academic struggles and mental health difficulties is common (McLeod et al., 2012; Shi & Ettekal, 2021). Thus, taking a broad view of development by exploring multiple domains is both theoretically driven and empirically motivated. Further, given ample evidence of between-school variation in students' school achievement and problem behaviors (Arum, 2000; Sellstrom & Bremberg, 2006; You et al., 2020), investigating the consequences of the social contexts of schooling for young people's well-being is warranted. Prior research documents that domain-specific norms matter for outcomes. Research with young adolescents suggests that schoolwide achievement levels are linked to individual student achievement levels, whereas schoolwide engagement and friendship quality are individually related to students' subsequent school engagement (Lynch et al., 2013). Likewise, student substance use tends to be higher in schools with higher descriptive norms characterized by higher levels of student substance use (Eisenberg et al., 2014).

In the current study, we attend to how norms across domains come together to influence young people's well-being and performance in school. The systems theory framework asserts that the norms within schools are a manifestation of the intersection between individuals' personally held beliefs and the beliefs of the larger school collective, ultimately reflecting the larger social processes that unfold within the school walls. In social contexts such as schools, norms do not exist in isolation, and studying them as such is both short-sighted and ecologically invalid. As an illustration, in thinking of a hypothesized "prepped-for-college" school where norms for alcohol use, social integration, and academics are all high, prior research would suggest that students should be doing poorly academically due to the higher rates of schoolwide substance use, yet a separate set of literature would suggest that students should be doing better academically due to the greater attention students generally place on academics in such schools. The current study addresses such contradictions and identifies the optimal environments for young people's well-being.

Current Study

The current study uses U.S. nationally representative data from the Monitoring the Future (MTF) Study (Miech et al., 2021) to examine two research questions (see Figure 1 for conceptual model). First, are there unique profiles related to schools norms around substance use, academics, and social integration? Here we were interested in how norms come together across these three domains to represent unique educational and social contexts for students. We also attended to whether the observed within-school norm profiles were consistent across two consecutive cohorts of 12th grade students (Path A in Figure 1). Although the analyses were exploratory in nature, we hypothesized the existence of at least three unique school profiles—an academic school profile characterized by high academic norms and low substance use norms, a party school profile characterized by high substance use and social integration norms and low academic norms, and a prepped-for-college profile characterized by high norms across all three domains. Our second research question examined the associations between school profiles and individual students' adjustment in the domains of socioemotional well-being and academic performance (Paths B1 and B2 in Figure 1). We expected party schools to be particularly detrimental for adolescents across academic and socioemotional domains and academic and prepped-for-college schools to be particularly promotive of academic performance.

Method

Participants and Procedures

Data were drawn from a nationally representative study, Monitoring the Future (MTF). MTF is an ongoing U.S. national study funded by the National Institute on Drug Abuse designed to examine the etiology and epidemiology of substance use across adolescence and adulthood conducted by the Institute for Social Research at the University of Michigan (Miech et al., 2021; Schulenberg et al., 2021). As part of MTF, nationally representative samples of 12th graders (approximately 13,000 to 18,000 in 130 public and private schools per year) have been surveyed annually beginning in 1975. MTF uses a multistage random sampling design—primary sampling units (PSU) based on geographic area are randomly selected, followed by the random selection of one or more schools in each PSU, followed by a random sample of up to 350 students at each school. Schools are asked to participate for two years. If the school enrolls fewer than 350 students at the grade level, all students are asked to participate, whereas in larger schools, MTF randomly samples entire classrooms or uses other unbiased random selection methods. Students are randomized within classroom to one of six survey forms, with each form having common and

form-specific items. The average student response rate for the MTF is 82.5% for 12th graders, with almost all non-response due to absenteeism (less than 1% refuse participation). The MTF project design, protocol, and sampling methods are described in greater detail elsewhere (Miech et al., 2021; Bachman et al., 2015).

For the current study, we used school-level data from 768 schools that had two years of consecutive data within 2000 to 2013; this narrow time frame was selected given that the U.S. educational landscape has changed dramatically over the past five decades, particularly in relation to school race/ethnic diversity (Orfield & Lee, 2006). During the first year, there were 87,257 12th grade students in these 768 schools who completed paper-and-perncil surveys, and during the second year, there were 87,330 12th grade students in these same schools; these two cohorts represent unique sets of 12th grade students with the exception of a few who could have been retained in grade following year one. The schools in this sample varied in sector (i.e., 84% public, 16% private), region (i.e., 20% Northeast, 26% Midwest, 33% South, 20% West), and urbanicity (i.e., 29% large metropolitan statistical areas [MSAs], 40% other MSAs, 31% non-MSAs). The school-level average of highest parent education was between "some college education" and "college graduate." In addition to school-level data, we also conducted a set of analyses with student-level data in Year 1 and Year 2. In Year 1, students' ages ranged from 14.2 years old to 23.3, with the majority being 17 to 19 years old (M = 18.1, SD = 0.5). The sample included a comparable number of boys and girls (52% female), and the race/ethnic breakdown of the student sample was reflective of the race/ethnic make-up of U.S. schools during the years of the study (64% White, 13% Latino, 12% Black, 12% other ethnicities). More than half of the sample (69%) lived with two parents. More details about school and student characteristics in Years 1 are shown in Table 1; Year 2 characteristics closely mirrored those of Wave 1 (available from first author upon request).

Measures

The study measures were developed by MTF investigators or adapted based on the concepts covered by validated scales and constructs.

School Norms

School norms included substance use (i.e., alcohol use disapproval, marijuana use disapproval, alcohol use, marijuana use), academics (i.e., academic press, educational expectations), and social integration (i.e., social inclusion, importance of friends), and we created

the school norm variables by aggregating all individual student reports to the school level (mean scores), consistent with prior research on deriving schoolwide norms (see Kumar et al., 2002; Lynch et al., 2013).

For substance use norms, we used items on students' disapproval of substance use and actual use. Students indicated how much they disapproved of "people taking one or two drinks every day" and "people smoking marijuana occasionally," using a scale from 1 (*don't* disapprove) to 3 (strongly disapprove). Students also reported on the number of occasions they had alcohol in the last 30 days and the number of occasions they smoked marijuana in the last 30 days, using a scale from 1 (none) to 7 (more than 40 occasions). In assessing academic norms, we used items on educational expectations and school academic press. For educational expectations, students rated their perception of the likelihood that they would graduate from a four-year college on a scale from 1 (*definitely won't*) to 4 (definitely will). For academic press, students rated how much competition for grades they perceived among students at their high school using a scale from 1 (none) to 5 (a great deal). Finally, social integration norms included social inclusion (frequency of going to parties/social affairs), with response options ranging from 1 (never) to 5 (nearly daily), and the importance of strong friendships, with response options ranging from 1 (not important) to 4 (extremely important).

Students' Socioemotional Well-being

For socioemotional well-being, we used measures of social support, loneliness, happiness, and self-esteem. Students rated their social support using three items (e.g., "There is always someone I can turn to if I need help;" $\alpha = .72$ for Years 1 and 2) and their loneliness using three items (e.g., "A lot of the time I feel lonely;" $\alpha = .74$ and $\alpha = .75$ for Years 1 and 2, respectively). Students rated their self-esteem using four items (e.g., "I take a positive attitude toward myself;" $\alpha = .85$ for Years 1 and 2) adapted from the Rosenberg (1965) Self-Esteem Scale. All socioemotional measures were assessed using a five-point scale ranging from 1 (disagree) to 5 (agree) and reverse coded as necessary such that higher mean scores denoted greater social support, loneliness, and self-esteem. Students also reported about their happiness using a single item that asked, "How happy are you these days?" Response options ranged from 1 (not happy) to 3 (very happy).

Students' Academic Performance

For academic performance, students reported their average grades in the current school year using a scale from 1 (D) to 9 (A). Generally, studies find high correlations between student- and transcript-reported grades (r = .88; see Langenkamp, 2009). In addition, students were asked about the number of days that they skipped class in the last four weeks, and their response options ranged from 0 (0 times) to 5 (20+ days).

Covariates

For student characteristics, students self-reported their gender (0 = male, 1 = female) and age (date of birth was reported). We identified students' race/ethnicity as one of the following groups: Latino, Black, White, and other ethnicities, and we used the group with the largest sample size (i.e., White) as the reference group when controlling for race/ethnicity. Family structure was assessed by number of parents in the household (0 = not living in a two-parent household, 1 = living in a two-parent household).

School characteristics included school sector (i.e., 0 = private. 1 = public), urbanicity (i.e., large metropolitan statistical area [MSA; reference group], other MSA, non-MSA), and region (i.e., Northeast, Midwest, West with South as the reference group). Average parental education was created by calculating the mean of the highest parental education across all students in the school, with individual responses ranging from 1 = completed grade school or less to 6 = graduate or professional school after college. Racial/ethnic diversity was computed using Simpson's (1949) index of diversity:

$$D = 1 - \sum_{i=1}^{g} p_i^2$$

In this equation, p_i refers to the proportion of students from each racial/ethnic group in the school, and g refers to the total number of racial/ethnic groups represented in the school. Higher diversity scores denote greater racial/ethnic diversity in a school. In addition, we calculated a score representing proportion of Latino and Black students for each school. Finally, given the sampling design, we used the number of students responding in each school as a proxy for grade-level size.

Analysis Plan

We conducted latent profile analysis (LPA) to address part one of research question 1 (RQ1; are there unique school profiles related to schools' norms around substance use, academics, and social integration? See the upper portion of Figure 1). The LPAs included eight

indicators of school norms across the domains of substance use (i.e., alcohol and marijuana disapproval and use), academics (i.e., educational expectations, academic press), and social integration (social inclusion, importance of friends). Here, schools were the unit of analysis (N = 768 schools that had data for two consecutive years). To address the second part of RQ1 (i.e., how consistent are these school norm profiles across time? Path A in Figure 1), separate sets of LPAs were conducted for Years 1 and 2, which allowed us to determine the stability of school norm profiles across two consecutive years. For each set of LPAs, we fit models estimating one to five profiles sequentially and selected the optimal solution based on fit indices, including changes in loglikelihood or the Lo-Mendel-Rubin (LMR) and Vuong-Lo-Medell Rubin (VLMR) tests, the Bayesian information criterion (BIC), the sample size adjusted BIC (ABIC), and parsimony and interpretability of the emerging profiles (Jung & Wickrama, 2008; Nylund et al., 2007). Using cross-tabulations, we determined whether a school's profile remained stable or changed from Year 1 to Year 2.

For RQ2 (i.e., how school profiles are linked to individual student adjustment), the extracted latent profile membership for each student (identified in RQ1) was used as a predictor in regression models to examine whether attending certain profiles of schools was associated with socioemotional well-being and academic performance (Paths B1 and B2 in Figure 1). We conducted separate models for each well-being domain, and all analyses included student- and school-level covariates. We rotated the comparison group to allow representation of comparison across all school profiles.

All analyses were conducted in Mplus 8.2 (Muthén & Muthén, 1998-2017). Missing data were handled using full-information maximum likelihood (FIML). FIML provides estimates based on all the available data, and it is a preferred method that helps with generalization of the sample data to population (Enders, 2010). We used the appropriate weight and stratification procedures to account for the complex survey data given MTF's design (Muthén & Muthén, 1998-2017). In addition, we used the CLUSTER function in Mplus to account for students nested in schools for RQ2.

<div align="center">Results</div>

School Norm Profiles of Substance Use, Academic, and Social Norms

To address the first part of RQ1, focused on identifying unique school profiles in Year 1, we first used latent profile analysis (LPA) to identify how constellations of school norms came

together across substance use, academics, and social integration into unique school profiles. Descriptive statistics and bivariate correlations for the school norm variables are shown in Table 2. Results from the LPA revealed that the four-class model fit the data best in Year 1 (see Table 3). Specifically, changes in BIC and ABIC values started to flatten from the four- to five-class model, suggesting the four-class solution was optimal. Moreover, although LMR and VLMR tests were not significant for the three-class model, they were marginally significant for the four-class but not the five-class model, providing additional support for the four-class solution.

School profiles for the four-class solution are displayed in the upper portion of Figure 2. In Year 1, the majority of schools (50%) had average levels of substance use, academics, and social integration and were labeled "average" schools. An additional 24% of the schools had strong academic norms and high levels of substance use disapproval along with the lowest levels of substance use and social integration; this group was labeled "academic" schools. In total, 17% of the schools exhibited high levels of substance use, academic norms, and social integration, which closely matched to the norms typically observed in universities; as such, we labeled this group "prepped-for-college." Finally, 9% of schools showed high levels of social integration and substance use norms but low academic norms; these were labeled "party" schools.

To address the second part of RQ1 that examined the consistency versus change in profile membership from Year 1 to Year 2, we first conducted LPA analyses in Year 2. As shown in lower portion of Table 3, similar to Year 1, the four-class-solution was selected as the best fitting model with an identical rationale to that described above for the Year 1 LPA's. Year 2 school profiles for the four-class solution are displayed in the lower portion of Figure 2. The majority of Year 2 schools (48%) were labeled as average schools, followed by 32% as academic schools, 18% as prepped-for-college schools, and 2% as party schools.

We then extracted the classes from both years and examined stability versus change in school profiles across years using crosstabulations. As shown in Table 4, approximately two-thirds of schools (65%) remained stable in their profile membership (e.g., average school in Year 1 and Year 2). For the schools that switched profiles from Year 1 to Year 2, the most common transitions were from average schools to academic schools (15%), academic schools to average schools (8%), or party schools to average schools (5%). The remaining transition patterns occurred for 3% or fewer schools in the sample.

School Profile Membership and Students' Adjustment

RQ2 investigated the associations between school profile membership and students' socioemotional well-being and academic performance; separate analyses were conducted for Year 1 and Year 2 (see Table 5). Results from the Year 1 path analysis models indicated that, for socioemotional well-being, students in academic schools were significantly more likely to report higher levels of social support than those in average schools, with no other profile differences emerging. Loneliness levels also did not vary for students based on the profile of the school that they attended. In contrast, those in prepped-for-college schools and in academic schools reported significantly higher levels of happiness than those in average and party schools, and students in prepped-for-college schools also reported higher self-esteem than those in average schools. No other differences in socioemotional well-being tied to the school profile attended in Year 1 were observed. Fewer differences in socioemotional well-being by school profile membership were observed in Year 2. Those in prepped-for-college schools reported higher happiness than those in average and academic schools, but no other profile differences emerged in the socioemotional domain in Year 2.

In regard to Year 1 academic outcomes, students in party schools reported lower grades than those in average, academic, and prepped-for-college schools, while students in academic schools reported higher grades than those in average schools. Additionally, students in prepped-for-college schools reported higher truancy than those in average and academic schools. Similar findings were observed in Year 2 with the exception that those in party schools reported comparable grades to those in average schools but higher truancy than those in academic schools in Year 2.

Discussion

Schools are a central context of socialization for adolescents in the U.S., and each school brings together a unique set of individuals that establish a shared culture. In the current study, we posit that consideration of this shared culture must attend to larger norms around not only academics but also social integration and substance use as well. Our findings identified four distinct profiles of schools that have unique patterns of shared descriptive and injunctive norms, indicated that school norm profiles are relatively stable across consecutive years, and highlighted the links between school norm profiles and young people's well-being.

In considering how norms came together into unique profiles, four profiles emerged, corresponding to labels of average, academic, prepped-for-college, and party schools. The most

common profile was the average school (approximately 50% of all schools in both Year 1 and Year 2), indicating middle-range scores across the domains. To some extent, this may reflect issues around central tendency bias (Douven, 2018), such that participants are generally less likely to use the endpoints of Likert scales. Party schools, in contrast, were less common (9% and 2% at Years 1 and 2, respectively). These schools, as hypothesized, were particularly distinguished by their low levels of schoolwide substance use disapproval, high levels of schoolwide substance use and social integration, and low levels of schoolwide academics. Given that trajectories of alcohol use have declined historically for American youth (Miech et al., 2021) while educational expectations have increased (Johnson et al., 2017), it is not surprising that party schools were observed rather infrequently. Nonetheless, the fact that party-school profiles emerged in both years indicates that these types of schools show distinct interrelated norms that work against optimal health and development and are unlikely to equip young people for a productive life after high school.

The final two profiles—academic (24% and 32% at Years 1 and 2, respectively) and prepped-for-college schools (approximately 17% in both years)—emerged more frequently than party schools. Although both academic and prepped-for-college profiles shared the highest academic norms, they were particularly distinguished by levels of substance use, substance use approval, and social integration (in relation to attending parties or other social events), which were all higher for the prepped-for-college schools. Although there is evidence that earlier initiation into and higher levels of substance use are linked with poorer academic achievement and lower educational expectations (Bryant et al., 2003; Williams et al., 2020), research delving into the nuances of these relations suggest that individuals with different patterns of educational attainment seem to exhibit unique patterns of substance use behaviors over time (Crosnoe et al., 2017). It was the latter study, in which those who attained a bachelor's degree had lower levels of alcohol use in adolescence but higher levels through young adulthood compared with those who attained lower levels of education, that motivated us to employ the prepped-for-college label. What remains for future research, however, is whether those in these prepped-for-college schools followed similar substance use and educational attainment trajectories after they transitioned from secondary school.

In addition to documenting school norm profiles, the current study also highlighted the correlates of these profiles in relation to individual students in the schools. In general, attending

an academic school (versus an average school) was most advantageous for students, with young people in academic schools reporting higher social support, happiness, and grades and lower levels of truancy, although these were more consistently linked in Year 1. Attending a prepped-for-college school (versus an average school) conferred fewer benefits, with students at these schools reporting greater happiness but higher levels of truancy, while attending a party school (versus an average school) was more detrimental, with a higher likelihood of truancy and lower happiness and grades in school. Taken together, these findings suggest that attention to multiple facets of norms simultaneously provides insights not possible through more focused attention to a single domain. Certainly academic schools tended to bestow the most advantages for students across domains of well-being, even after controlling for a host of known correlates of well-being, yet the strong academic norms in prepped-for-college schools were counterbalanced by high substance use norms, resulting in a mix of benefits and challenges for youth in these schools. Overall, the findings suggest greater attention to the interpersonal processes and educational and socioemotional supports across domains is warranted.

Understanding how adolescents' development and well-being are shaped by schools' prevailing norms also has clear implications for intervention and prevention efforts. For example, norm-based intervention and prevention efforts are common in the substance use domain. They are based on social distancing effects, where young people tend to overestimate levels and approval of use, particularly as the reference group is further from themselves (e.g., close friends vs schoolmates; Brechwald & Prinstein, 2011). Intervention efforts that target changing individual perceptions of substance use norms and increasing schoolwide disapproval of use seem to bring perceived norms into line with actual use and reduce drinking behavior (see Miller & Prentice, 2016 for review). Building on this base, in identifying school profiles, the current study findings can inform how intervention and prevention efforts could be most effectively tailored to specific schools. In this way, although results would suggest intervention and prevention efforts are particularly needed in party schools, findings also indicate that intervention and prevention efforts in these party schools would expectedly look quite different than those in a prepped-for-college school despite many shared schoolwide norms regarding substance use. These tailored efforts would thus enable efforts to be more responsive to the needs of the school population. Given that schools do indeed change in their norm profiles from year to year, our research suggests that schools can be coached to adopt more optimal norms.

Study Strengths and Limitations

The current study used nationally representative data across multiple cohorts of 12th grade students to identify school norms. Building off prior research focused on domain-specific norms, this novel research identified how descriptive and injunctive norms come together across academic, substance use, and social integration domains into unique profiles of schools, with particular attention to the short-term stability of the profiles and the consequences of the school norm profiles for student well-being. There are, however, limitations that must be acknowledged. First, the associaions between norm profiles and adolescent well-being were conducted cross-sectionally using student self-report data, thus limiting our ability to tease apart directionality and potentially influencing the strength of associations observed. It must also be noted that each of the measures used to determine schoolwide norms was assessed with a single item. One benefit of national panel studies such as MTF is the breadth of constructs assessed, which allowed us to comprehensively assess school norms across domains and across proscriptive, descriptive, and prescriptive norms, but an associated drawback is a lack of measurement depth. This is likewise the case with some measures assessing outcomes, which used single items or more restricted Likert scales (e.g., happiness). As such, future research should integrate more comprehensive measures of the norms and outcomes under study to replicate the findings reported here.

In addition, students who were absent were not surveyed, and thus students who were frequently absent were likely underrepresented, suggesting our findings could be somewhat conservative regarding struggling students. Those who drop out of school before 12th grade as well as home-school students also were not included in the sampling frame, and thus our findings pertain only to in-school 12th graders. Additionally, the MTF sampling design ensures that schools are typically in the study for two consecutive years, so it is possible that a few students in a given school were surveyed in both years, but this is unknown and is considered unlikely to affect results. In general, school norms were relatively stable, with two-thirds of schools displaying the same profile for the 12th grade cohorts in the two consecutive study years. We suspect that this stability is, at least in part, driven by the density and structural cohesion of the larger social network of the schools (Gest et al., 2011), such that norms are likely more apparent, regulated, and salient in schools where structural cohesion is strong and the connections among peer group networks are more dense. Studies linking social network analyses and schoolwide norm stability are needed to test this proposition.

Finally, although we observed clear associations between schoolwide norm profiles and students' well-being, it is possible that a stronger driver of well-being may be the norms within students' tighter peer groups with whom they are more likely to interact on a day-to-day basis. Certainly, there is a wealth of extant research highlighting the impact of peer group norms for substance use decisions, academic achievement, and prosocial behaviors (Dijkstra & Gest, 2015; Jackson et al., 2014). Systems theory (Tseng & Seidman, 2007) and other comprehensive theories of, for example, substance use prevention (Lilja et al., 2003), suggest that attention should be placed at both the peer and school norm level, indicating an important area for future inquiry. There is also empirical research documenting effects of school norms around substance use above and beyond those of peer norms (Mrug et al., 2010). This is consistent with unpacking the reflection problem, which centers on the use of average behavior within a group or context to predict individual behavior (Manski, 1993); it is only through understanding what reference group the adolescent is using for understanding larger norms can one truly unpack the endogenous effect of aggregate norms on individual behavior.

Conclusions

This U.S. nationally representative study considered the interconnections among different norms concerning academic, social, and substance use domains. Clearly, these norms are linked, as we documented four distinct profiles replicated across two concurrent years. Further, while most schools maintained consistent norm profiles across years, about one-third switched, suggesting that norms are more pervasive and entrenched in some schools than others. How and why this occurs is an area ripe for future inquiry. Also of note is that how these norms come together has bearing on students' well-being correlates. Taken as a whole, the current study suggests that comprehensively examining school norms across domains can better illuminate what American schools look like and how they matter for the students therein.

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Table 1

Demographic Characteristics of the Schools (N = 768) and Students (N = 87,257) in Year 1

	N	Valid %	M	SD
Schools				
Sector				
Public	648	84.4		
Private	120	15.6		
Region				
Northeast	157	20.4		
Midwest	203	26.4		
West	152	19.8		
South	256	33.3		
Urbanicity				
Large MSA (urban)	221	28.8		
Other MSA (suburban)	310	40.4		
Non MSA (rural)	237	30.9		
Grade-level size	768		113.6	70.2
School-level percent Black and Latino students	766		0.2	0.3
School-level diversity of student body	766		0.4	0.2
School-level average parental education	768		4.3	0.5
Students				
Gender				
Female	42,379	51.7		
Male	39,593	48.3		
Race/Ethnicity				
White	52,698	63.5		
Latino	10,584	12.7		
Black	10,134	12.2		
Other	9,618	11.6		
Age	83,700		18.1	0.5

Family structure		
Lived with two parents	57,473	68.7
Did not live with two parents	26,223	31.3

Note. School- and student-level characteristics were not meaningfully different between Year 1 and Year 2. MSA = Metropolitan Statistical Area. Grade-level size represents the number of 12th grade MTF respondents in the school.

Table 2

Correlations, Means, and Standard Deviations for School Norm and Variations in School Norms

	1	2	3	4	5	6	7	8
1. Disapproval of alcohol use	--	.51***	-.65***	-.35***	.07	.14***	-.36***	-.15***
2. Disapproval of marijuana use	.55***	--	-.47***	-.68***	.02	-.14***	-.31***	-.04
3. Alcohol use	-.64***	-.50***	--	.43***	-.02	-.03	.59***	.18***
4. Marijuana use	-.39***	-.72***	.47***	--	-.13***	-.11**	.22***	-.01
5. Academic press	.09*	.05	.00	-.15***	--	.45***	.20***	.12**
6. Educational expectations	.14***	-.05	-.03	-.13***	.50***	--	.25***	.21***
7. Social inclusion	-.34***	-.33***	.60***	.31***	.16***	.22***	--	.17***
8. Importance of friends	-.15***	-.03	.12**	.01	.15***	.19***	.15***	--
Year 1								
Mean	1.98	2.00	1.94	1.60	2.98	3.30	2.95	3.56
SD	0.20	0.27	0.39	0.35	0.53	0.32	0.30	0.23
N	768	768	768	768	767	768	768	768
Year 2								
Mean	1.97	1.98	1.94	1.62	2.95	3.29	2.93	3.55
SD	0.20	0.26	0.39	0.37	0.55	0.32	0.30	0.24
N	768	768	768	768	765	768	768	767

Note. Total possible N = 768 schools. Year 1 is below the diagonal and Year 2 is above the diagonal.

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

Table 3

Latent Profile Analysis Results for School Profiles (N = 768).

School profiles	1 Class	2 Classes	3 Classes	4 Classes	5 Classes
Year 1					
Loglikelihood	-1565	-1133	-982	**-851**	-765
# of parameters	16	25	34	**43**	52
BIC	3236	2432	2190	**1988**	1876
ABIC	3185	2353	2082	**1852**	1711
Entropy	--	0.75	0.78	**0.79**	0.81
LMR p	--	< 0.001	0.10	**0.07**	0.20
VLMR p	--	< 0.001	0.10	**0.07**	0.19
Year 2					
Loglikelihood	-1606	-1251	-1094	**-977**	-890
# of parameters	16	25	34	**43**	52
BIC	3318	2669	2413	**2240**	2125
ABIC	3267	2589	2305	**2103**	1959
Entropy	--	0.72	0.78	**0.78**	0.81
LMR p	--	0.03	0.44	**0.10**	0.72
VLMR p	--	0.03	0.44	**0.10**	0.72

Note. One to five class solutions were conducted. Dashed lines indicate that estimates were not available. BIC = Bayesian information criterion; ABIC = sample size adjusted BIC; LMR = Lo-Mendel-Rubin test; VLMR = Vuong-Lo-Medell Rubin test. **Bold** indicates the selected number of classes as the best fitting model after considering a combination of model fit indices.

Table 4

School Profiles Consistency across Year 1 and Year 2 (N = 768)

Variable	N	%
Stable (n = 496)		
Average to average	265	34.5
Academic to academic	123	16.0
Prepped-for-college to prepped-for-college	96	12.5
Party to party	12	1.6
Unstable (n = 272)		
Average to academic	112	14.6
Average to prepped-for-college	13	1.7
Average to party	< 4	< 0.5
Academic to average	58	7.6
Academic to prepped-for-college	< 4	< 0.5
Prepped-for-college to average	21	2.7
Prepped-for-college to academic	6	0.8
Prepped-for-college to party	< 4	< 0.5
Party to average	37	4.8
Party to prepped-for-college	16	2.1
Party to academic	< 4	< 0.5

Note. Per MTF regulations, sample sizes less than 4 are masked.

Table 5

Unstandardized Coefficients for School Profiles Predicting Students' Adjustment in Year 1 (N = 87,257) and Year 2 (N = 87,330).

	Socioemotional Well-being								Academic Performance			
	Social support		Loneliness		Happiness		Self-esteem		Average Grades		Truancy	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Year 1												
Comparison: "Average"												
"Party" school	0.05	0.03	-0.01	0.05	-0.01	0.01	-0.01	0.03	-0.27**	0.08	0.08	0.05
"Prep Clg" school	0.03	0.03	-0.04	0.03	0.02*	0.01	0.02	0.02	0.10	0.06	0.09*	0.05
"Academic" school	0.05*	0.02	-0.04	0.03	0.03**	0.01	0.04**	0.02	0.12**	0.05	-0.01	0.03
Comparison: "Party"												
"Prep Clg" school	-0.02	0.04	-0.03	0.05	0.04*	0.02	0.04	0.03	0.37***	0.09	0.01	0.06
"Academic" school	0.00	0.04	-0.03	0.05	0.04**	0.02	0.06	0.03	0.39***	0.09	-0.09	0.05
Comparison: "Prep Clg"												
"Academic" school	0.01	0.03	0.00	0.04	0.00	0.01	0.02	0.02	0.02	0.07	-0.10*	0.05
Year 2												
Comparison: "Average"												
"Party" school	-0.02	0.07	0.10	0.12	0.01	0.03	-0.03	0.07	-0.34	0.18	0.21	0.11
"Prep Clg" school	0.02	0.03	0.01	0.03	0.05***	0.01	0.03	0.02	0.08	0.07	0.13**	0.04
"Academic" school	0.00	0.02	-0.01	0.03	0.01	0.01	0.02	0.01	0.10*	0.05	-0.02	0.03

Comparison: "Party"												
"Prep Clg " school	0.04	0.07	-0.09	0.13	0.04	0.03	0.06	0.07	0.42*	0.19	-0.08	0.11
"Academic" school	0.02	0.07	-0.11	0.12	0.01	0.03	0.05	0.07	0.44*	0.19	-0.23*	0.11
Comparison: "Prep Clg"												
"Academic" school	-0.02	0.03	-0.02	0.04	-0.03*	0.01	-0.01	0.02	0.02	0.08	-0.15***	0.04

Note. The comparison group was rotated to present all of the comparisons. Prep Clg = Prepped-for-college. Separate models were conducted for each outcome domain. Covariates included, students' age, gender, race/ethnicity, parental education as well as schools' region, urbanicity, diversity, minority, size (divided by 100), and sector. All models were saturated and thus model fit indices are not available.

$p < .05$. $**p < .01$. $***p < .001$.
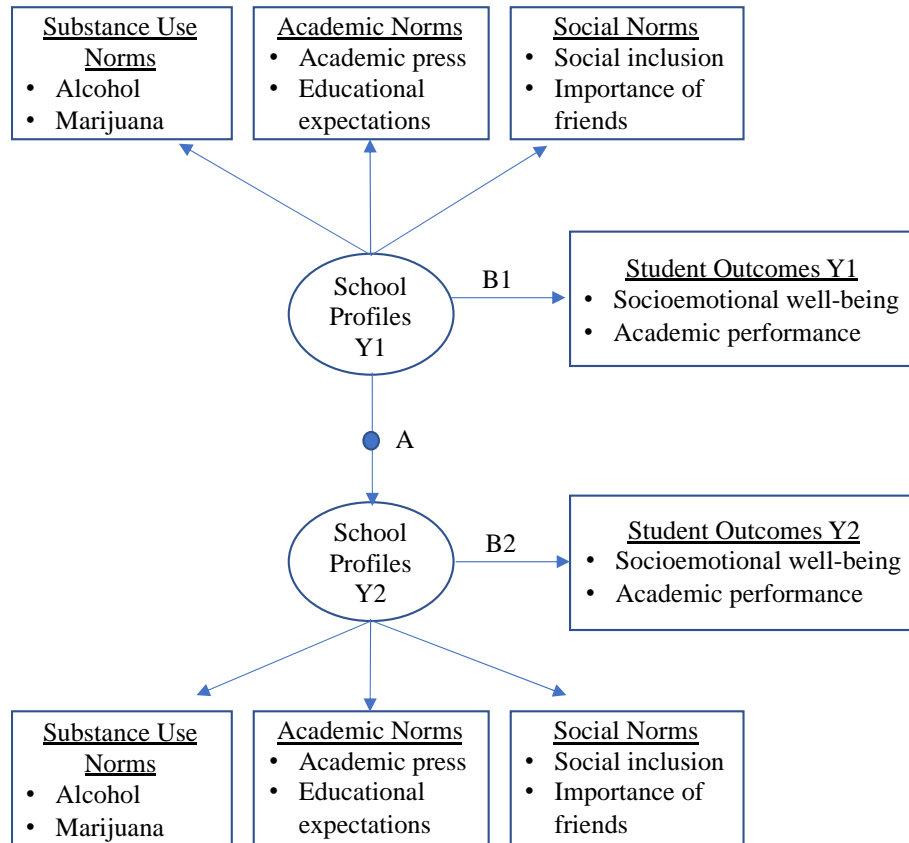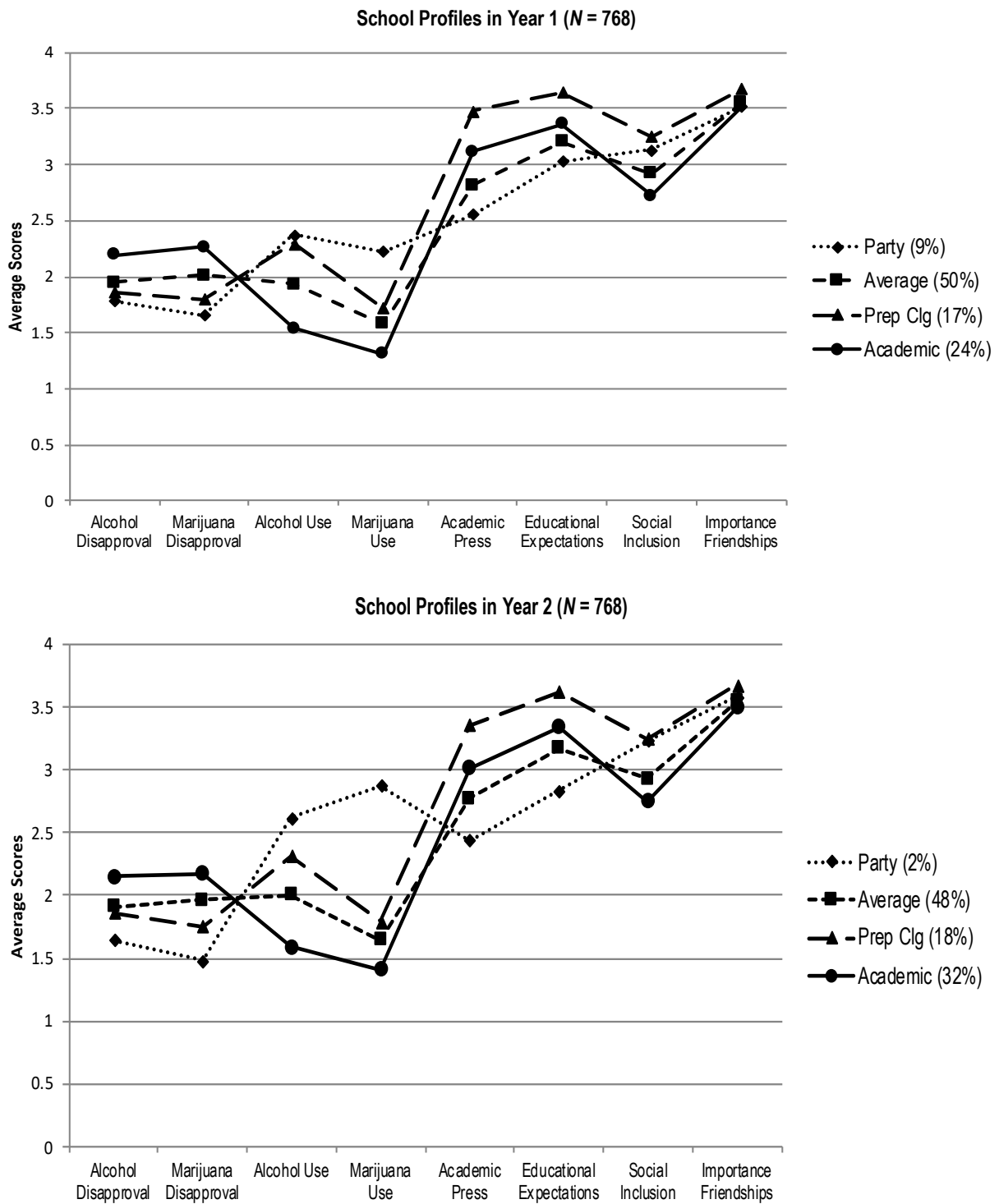
Figure 1

Conceptual Model

Figure 2

Latent class analysis results for school profiles for Year 1 and Year 2.

School Profiles in Year 1 (*N* = 768)

School Profiles in Year 2 (*N* = 768)

Note. Prep Clg = prepped-for-college.