Update on How School Environments, Social Networks, and Self-Concept Impact Risky Health Behaviors

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WE WISH TO update readers on progress in our field since we submitted the findings of our qualitative study, "How Urban Youth Perceive Relationships Among School Environments, Social Networks, Self-Concept, and Substance Use," in April 2016.[1] In that study, we found that structural and cultural aspects of the school environment helped shape students' social networks and self-concept, which then influenced students' decisions to engage in or abstain from substance use. Thus, schools not only transmit academic skills but also profoundly shape—often without intent or awareness—social outcomes and health trajectories.

A number of studies published after the submission of our manuscript have further supported the concept that school structures exert a powerful social influence on health behaviors. We previously reported that our sample of low-income, urban, minority students perceived that the size of their school and the processes by which they were sorted into different classes determined their universe of potential peer relationships. Further, sorting students into different classes by their academic performance had the effect of labeling struggling students, reinforcing relationships with riskier peer groups, and reinforcing negative behavioral and academic self-concept. New studies with other demographic groups and communities suggest that our findings with respect to size and sorting may be generalizable. For example, in a social network study of largely white youth from small, more rural communities, Temkin et al[2] found that friendship networks were more interconnected in smaller schools, where there may be less pressure to self-sort into separate social groups.

Participants in our study also identified times of school transition as key points when their social networks and identity were more malleable. This finding is supported by the work of Benner et al,[3] which showed that the transition to high school was a vulnerable time when students' sources of social support and identification with school were in flux, resulting in decreased academic performance and increased depressive symptoms for many. Hence, school transitions may represent a critical time to intervene with psychosocial support. Goyer et al[4] described a randomized experiment testing a classroom-based psychological intervention to buffer the effects of stereotype threat upon the transition to middle school. They hypothesized that the dramatic and persistent intervention effects on academic performance through high school and college enrollment are due to the intervention being provided during this sensitive transition time, when small changes in self-identification and performance can have long-lasting impacts on academic tracking and outcomes.

Furthermore, our study participants described how the behavioral culture at school impacted their self-concept, norms, and behaviors. Participants' descriptions of this social pressure to engage in positive versus risky health behaviors varied across and within schools. Building on this concept, we are currently developing a set of school behavioral culture measures to quantify the cultural significance of these health behaviors. Beyond the peer culture at school, we heard that "teachers who care" and other school-related adults had a powerful influence on how students saw themselves. Participants described such adults in a manner that mirrored the qualities of an authoritative parent—supportive and communicating that students were valued but also providing structure, ensuring that school rules were enforced. Using this parenting framework, we have since demonstrated quantitatively

that students attending authoritative schools (high levels of both structure and support) do indeed report healthier behaviors.[5]

Finally, in the RISE Up study, a prospective longitudinal natural experiment of students applying via admissions lotteries to high-performing schools in low-income minority communities in Los Angeles,[6] we found that winning the admissions lottery resulted in students reporting fewer risky peers in their social networks and greater teacher support, as well as lower rates of substance use.

Together, these findings contribute to a body of evidence suggesting that school environments impact health behaviors and might be harnessed to promote health and reduce disparities. The next challenge is moving from documenting to intervening on these social pathways linking school environments and health.[7] A number of experimental studies were recently published targeting the school environment itself. Hodder et al[8] tested whether a whole school approach to improve school ethos and support relationships with prosocial peers could reduce substance use among Australian adolescents. An alternative approach targets existing school-based social networks to advance health. For example, Golonka et al[9] tested whether targeting influential peers in school-based social networks for a middle-school substance use prevention program can spread prosocial norms throughout the school. Additionally, Van Ryzin et al[10] demonstrated that using cooperative learning strategies can interrupt the process of "deviant peer clustering" in schools—in effect surrounding at-risk youth with a healthier peer network—and reduce substance use among middle-school students. Similarly, we are currently conducting a pilot randomized trial of AVID to test whether this widely adopted college preparatory program, which places students in rigorous classes while providing both academic and social support, also impacts students' social networks and health behaviors.

Growing evidence indicates that school policy is health policy. Schools are dominant social institutions that touch the lives of nearly every child in the United States. They not only influence educational and economic opportunities but also directly impact health and health behaviors. The social costs of neglecting and underfunding schools are likely to magnify health disparities. Meanwhile, investing in teacher training, structural supports that encourage positive relationships between school-related adults and their students, and programs that increase both diversity and prosocial peer interactions, rather than reflexively segregating "good" and "bad" students from each other, might be an effective public health strategy. In short, investing in existing educational infrastructures could be a powerful and scalable platform for promoting better health.

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