

Bridging the Gap

Connecting Public Health and Public Schools to Support Students

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Though education and health are closely intertwined, public health and public schools are artificially separated. This separation may inform why some Michigan schools are failing students. This topic brief considers how public health workers and public schools personnel can work together to improve academic achievement and promote student health. This topic brief looks critically at middle schools as an important pressure point in students' health and development. Drawing upon ideas about stage-environment-fit and developmental readiness, this topic brief suggests that students' health and academic achievement is ultimately determined by how supported and empowered students feel in school. Finally, this topic brief concludes by suggesting a few realistic measures that schools can adopt in order to improve students' academic achievement and health.

Bridging the Gap: Connecting Public Health and Public Schools to Support Students

The 2017 blueprint to improve Michigan schools reports that Michigan students' academic achievement lags behind other states and that Michigan schools are "dramatically failing children" (21st Century Education Commission, 2017). This blueprint suggests that Michigan schools adopt a number of practices to improve students' academic performance.

In order to truly improve student achievement, though, Michigan schools must also work to improve student health. The connection between academic achievement and student health is currently under-recognized by the Department of Education. Michigan students face a number of health challenges that impede their ability to perform well in school and lead happy, healthy lives. As such, public health programs targeted at improving students' mental health and behavioral choices must be integrated into the classroom to support all

children. Incorporating public health interventions into public schools is the only way Michigan schools can become Top 10 in the nation over the next ten years.

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MAJOR HEALTH CONCERNS FOR MIDDLE SCHOOL STUDENTS

Mental health. 20% of children under the age of 18 have mental health concerns (Reinke, Stormont, Herman, Puri, & Goel, 2011). Most children experiencing mental illnesses are not well-screened (Lynch & Clarke, 2006) and less than half of all children with mental illnesses receive any form of prevention or treatment services (Sanchez, et al., 2018). For some demographics, suicide rates are higher than they have been in the past 40 years (Hedegaard, Curtin, & Warner, 2018) and aggregate rates of depressive symptoms among teens have increased significantly since the 1980s (Twenge, 2015).

Alcohol and other drugs. In the 2017-2018 school year, nearly a quarter of Michigan middle school students had consumed alcohol, 18.7% students had used illicit drugs, 9.1% had smoked tobacco, and 21.5% had vaped (Johnston, et al., 2019). Rates of vaping and nicotine use among middle school students has increased rapidly since e-cigarettes have become popular (Johnston, et al., 2019). Vaping is problematic: many adolescents do not know what substances they are ingesting (Johnston, et al., 2019), and some e-cigarettes are reported to contain lead, arsenic, and other toxic substances (Margham, et al., 2016).

Sexual health. Approximately 25% of adolescent females in the United States have a sexually transmitted infection (STI) (Markham, et al., 2012), and each year an estimated 1 million adolescents become pregnant (Santelli, et al., 2004). While rates of teenage pregnancy and STIs are at an all-time low (Youth Risk Behavior Survey, 2016), Michigan legislature's attempts to enforce abstinence-only education may disrupt or even reverse this trend (Mack, 2015).

SCHOOLS ARE AN IMPORTANT LOCALE FOR PUBLIC HEALTH INTERVENTIONS

Children who attend school spend more time at school than anywhere else, expect for their beds (Blackman, et al., 2016). Schools have a significant influence on children's self-esteem: students who report feeling supported and nurtured at school also report less mental illness, and perform better academically (Kuperminc, Leadbeater, & Blatt, 2001). Research shows middle school students who have strong connections to their teachers are more likely to succeed in school and resist risky behaviors outside schools, including substance use and unsafe sexual activity (Wormington, Anderson, Schnedier, Tomlinson, & Brown, 2014).

Middle school is especially important. In middle school, students undergo puberty and other significant cognitive, social, and developmental changes (Viner, et al., 2012). These changes can be overwhelming, especially for youth who are placed in environments that do not support their positive

development, or are not ready to transition into a new school.

Middle schools can improve health outcomes across the life-course if they can provide supportive, nurturing environments to curb risky behavior

Middle schoolers are at a crucial time in terms of their cognitive development. Adolescent brains are wired to seek immediate rewards (Walker, et al., 2017), making adolescents natural thrill-seekers (Dahl, 2004). Though exploration is developmentally appropriate, risky behavior initiated in adolescence can persist into adulthood. Middle schools can improve health outcomes across the life-course if they can provide supportive, nurturing environments to curb risky behaviors.

SCHOOL-BASED CHALLENGES

Providing youth with a developmentally appropriate environment is necessary to promote health. However, typical American public schools are not appropriate

environments for middle schoolers.

Middle school children develop best when they feel nurtured, have strong connections to friends and teachers, and can make decisions about their social lives and schooling (Wang & Peck, 2013). However, middle schools tend to encourage student competition, emphasize educational performance, and limit student autonomy and decision making (Wang & Peck, 2013).

As stakeholders attempt to make middle schools more appropriate environments for adolescents, they must address the following school-based challenges:

1. **A lack of funding.** Michigan public schools are severely underfunded. Michigan school budgets declined by 30% between 2002 and 2015, primarily due to the economic recession, less state funding, and school choice policies (Arsen, Delpier, & Nagel, 2019). No other state has seen such a drastic decline in budget.

2. **A lack of school-based health professionals.** Michigan

schools have a shortage of health professionals. The ratio of school nurses-to-students does not meet national recommendations (Taliaferro, 2019). And, while it is recommended to have 1 school counselor per every 250 students, Michigan schools have 1 counselor per every 729 students, the third worst ratio in the nation (NACAC & ASCA, 2017).

3. Insufficient teacher training.

Teachers are not health professionals, yet teachers often act as a gateway in connecting students to mental and behavioral health services. 94% of teachers agree that they should have an active role in connecting students to care, yet only 28% of teachers feel prepared to identify struggling students and 68% of teachers report no substantial, formal mental health training (Reinke, Stormont, Herman, Puri, & Goel, 2011). Teachers often act as the first line of defense in addressing student mental health and behavioral needs (Kuznia & Valenzuela, 2017), so it is of concern that the majority of teachers do not feel prepared to support students.

At a time when students need close connections to adults outside their families, need supportive environments, and value academic achievement, impersonal student teacher relationships, boredom with school work, and poor grades can be distressing

4. **Rising class sizes.** Personal, supportive student-teacher relationships are important for student success. Student-to-teacher ratios may vastly underestimate class sizes. Some Michigan students are in classes with up to 40 kids (Jacob, Crespin, Libassi, & Dynarski, 2016), making it more difficult for teachers to adapt lessons plans to students' needs.

5. Test-driven curricula.

Teachers are under immense pressure to improve students' standardized test scores to uphold the reputation of their schools (Jennings & Bearka, 2014). This causes some teachers to "teach to the test" and may prevent teachers from incorporating education about

health and wellness into the classroom, even when they know it might benefit students.

6. Middle school structure.

Students in middle school report less challenging school work but being graded more harshly than in elementary school which leads to poor academic performance (Eccles, et al., 1993). This sudden grade drop, compounded by feelings of anonymity and impersonal relationships, can cause students' self-esteem to suffer (Eccles, et al., 1993). At a time when students need close connections to adults outside their families, need supportive environments, and value academic achievement, impersonal student teacher relationships, boredom with school work, and poor grades can be distressing.

CHILD-SPECIFIC CHALLENGES

Different children have different experiences in the same school structures. A number of things predict how students will react to their environments. School personnel and policy makers should consider the following child-specific challenges when promoting student health in middle school.

1. Pubertal timing. Recently, researchers have started exploring the health effects of early puberty. Studies have found that youth who experience puberty earlier than their peers tend to have higher and more frequent rates of alcohol, drug, and tobacco use (Downing & Bellis, 2009). These “early bloomers” also tend to have higher rates of STIs and unintended pregnancies resulting from earlier sexual debuts and higher rates of risky sex (Downing & Bellis, 2009).

The stress of the body developing before the mind can also be confusing and drive adolescents towards unhealthy coping strategies (Kaltiala-Heino, Koivisto, Marttunen, & Fröjd, 2011). In addition to this stress, adults sometimes assume that “early bloomers” are emotionally, mentally, and cognitively mature and therefore do not supervise them as cautiously. Additionally, “early bloomers” tend to blend in well with older peers and thus may be exposed to more drugs, alcohol, and sexual activity (Kaltiala-Heino, Koivisto, Marttunen, & Fröjd, 2011).

For girls, early puberty is a risk factor for higher rates of anxiety, depression, and eating disorders. For boys, early puberty is associated with behavioral disorders, aggression, and violence (Downing & Bellis, 2009).

When people are placed in environments that do not support their needs, they struggle emotionally and mentally

2. Stage – environment – fit. Aside from early childhood, people experience the highest rate and greatest breadth of developmental and physiological changes during adolescence (Viner, et al., 2012).

The stage-environment-fit theory suggests that when people are placed in environments that do not support their needs, they struggle emotionally and mentally, become unmotivated, and are vulnerable to risky behaviors. This theory helps explain why, for some students, the *structure* of middle school is so problematic

(Eccles, et al., 1993). Research suggests that a significant proportion of youth mental illnesses is caused by exposure to improper environments (Carney, Kim, Hazler, & Guo, 2018).

Middle schoolers are concerned with defining themselves and refining how they relate to others (Kuperminc, Leadbeater, & Blatt, 2001), becoming independent, and figuring out when to conform to versus challenge peer norms (Simmons & Blyth, 2017). In order to thrive, middle schoolers must be supported in exploring their identity and interests, yet public middle schools usually do not allow students to make their own decisions (Kuperminc, Leadbeater, & Blatt, 2001).

3. Timing of transition. For some students, the transition to middle school has a worse effect on health than the actual attributes of middle school. Sudden changes, like changes from a close-knit, supportive elementary school to a middle school where students feel relatively anonymous, can leave people vulnerable to stress and low self-esteem and can result in poor coping

strategies (Simmons & Blyth, 2017).

The developmental readiness hypothesis states that when people undergo major environmental changes before they have the maturity to cope with the change, the stress and negative coping strategies developed during the transition can last for years (Simmons & Blyth, 2017). This theory helps explain why, for some students, the *transition* to middle school rather than the structure of middle school is so problematic.

In fact, research comparing students who transitioned to middle school in an earlier grade versus in a later grade shows that students who started middle school at an earlier grade displayed more problematic attitudes and higher risk behaviors than students who started middle school at a later grade (Simmons & Blyth, 2017).

RECOMMENDATIONS TO IMPROVE STUDENT HEALTH IN MIDDLE SCHOOL

1. Empower students. Health problems resulting from poor stage-environment-fit and poor

developmental readiness can be addressed by empowering students. Empowerment is a process by which people become more powerful players in their own lives including in their schools (Pearrow, 2008). Empowerment helps individuals cope with injustice and hardship (Pearrow, 2008) and can reduce vulnerability to low self-esteem and harmful coping strategies. Therefore, empowering middle schoolers is critical to improve health outcomes and academic achievement.

When people undergo major environmental changes before they have the maturity to cope, the stress and negative coping strategies developed during the transition can last for years

Adolescents with poor self-images are more likely to engage in risky behaviors and adopt negative social identities that interrupt positive development (Eisman, et al., 2016). Empowering students to cope effectively with stressors allows students to become

more hopeful about their futures (Akos & Shields Kurz, 2016). Students who are hopeful about their futures report higher life satisfaction, lower rates of risky behavior, and less emotional distress (Akos & Shields Kurz, 2016).

School personnel can empower students by providing opportunities for meaningful participation, intentionally reducing power imbalances and by allowing students to make some of their own choices (Kirk, et al., 2015).

2. Implement the TRAILS program. Teaching adolescents healthy coping strategies and connecting students with positive peer groups is an effective way to combat the health risks associated with middle school (Downing & Bellis, 2009).

The TRAILS program teaches students to manage symptoms of mental illness and provides a useful model of implementing evidence-based mental health practices into schools while building workforce capacity (Vichich & Paladino, 2019). TRAILS recognizes the connection between health and education and that schools

should promote wellbeing (Vichich & Paladino, 2019).

Through TRAILS, local mental health providers coach school counselors in evidence-based mental health services, including mindfulness and cognitive behavioral therapy (Vichich & Paladino, 2019). Trained school counselors then facilitate skills groups for students who are experiencing symptoms of anxiety and depression (Vichich & Paladino, 2019). Students attend these groups in school and learn about mental health, connect with other struggling students, and practice useful coping skills (Vichich & Paladino, 2019). TRAILS helps counselors work more efficiently and effectively and support more students (Vichich & Paladino, 2019).

3. Vary grade structures.

School districts should provide a variation in school grade structure. Research suggests that for many students, 6th grade is just too early to make the jump from elementary to middle school and results in various health, behavioral, and academic challenges that may persist throughout school (Carolan, Weiss, & Matthews, 2013). The developmental

mismatches that result in poor health can be minimized if students and their families have more control over when students transition into middle school.

Teaching adolescents healthy coping strategies and connecting students with positive peer groups is an effective way to combat the health risks associated with middle school

Schools that are unable to vary grade structures should attempt to separate 6th graders from older students within the school. Educating 6th graders in different school wings and having different lunch times for 6th graders than for older students can help ease the challenging transition into middle school and prevent 6th graders from feeling anonymous and powerless (Simmons & Blyth, 2017).

4. Create nurturing environments.

All school districts should prioritize cultural shifts in middle school. Evidence-based practices that

focus on reducing substance use and bullying behaviors demonstrate that school-level interventions are an effective way to influence children's health status. Rather than using disciplinary measures to "scare students straight", school personnel should commit to school-wide programs that provide students with a supportive, nurturing environment.

5. Promote health education.

Middle schools should promote health education and health literacy among students and teachers. Robust health curricula can educate children about risky health behaviors, positive coping strategies, and can destigmatize mental illnesses, making it easier for students to find help (Corrigan & Watson, 2002).

Teachers also need to be taught how to support students' health needs. Mental Health First Aid training provides teachers with the skills they need to support students. Mental Health First Aid training teaches participants to identify signs and symptoms of mental illness and substance misuse, provide support during crises, and connect suffering individuals to more appropriate care (National

Council for Behavioral Health, 2019).

Mental Health First Aid trainings have been adapted specifically for middle school teachers. Research shows that middle school teachers who participated in a one-time, eight-hour training held less stigmatizing attitudes towards students with mental illnesses and had improved confidence to support students with symptoms of mental illness (Morgan, Ross, & Reavley, 2018). Students who had teachers certified in Mental Health First Aid were more likely to learn about mental health in the classroom and more likely seek help (Jorm, Kitchener, Sawyer, Scales, & Cvetkovski, 2010). By providing teachers the skills to better identify mental illnesses and risky behaviors, Mental Health First Aid training may give teachers an opportunity to more effectively manage their time.

6. Continue advocating for students. Lobbyists, policy makers, and passionate citizens alike must encourage local, state, and federal agencies to provide schools and teachers with the resources necessary to seamlessly integrate public

health interventions into public schools.

CONCLUSIONS

Just as public schools can be used as locations to educate students about public health, public health can provide public schools with conceptual frameworks and effective, evidence-based models to scale and implement useful interventions that improve students' health and educational outcomes. These interventions, which span from programs that train school personnel to encouraging empowerment on a school-wide basis, make it easier for school personnel to work and for students to succeed in school.

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