Gifted Child Quarterly
2020, Vol. 64(1) 19–40

DOI: 10.1177/0016986219886933
journals.sagepub.com/home/gcq
SAGE

Supports for Youth in Accelerated High School Curricula: An Initial Study of Applicability and Acceptability of a Motivational Interviewing Intervention

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Abstract

High school students in accelerated classes face heightened school-related stressors but have access to few specialized supports. This article describes the development and initial application of the Motivation, Assessment, and Planning (MAP) intervention, developed to meet the needs of freshmen in Advanced Placement (AP) and International Baccalaureate (IB) curricula. MAP is grounded in motivational interviewing and designed to evoke behavior change following one to two individual meetings with a coach. This study used a multimethod, multisource approach to evaluate the applicability and acceptability of MAP as a Tier 2 support for 9th-grade students completing AP/IB coursework. Quantitative and qualitative acceptability data from 49 AP/IB students, 7 coaches, and 3 potential end-users of MAP were examined. Results indicate MAP was perceived as an acceptable intervention for addressing the social–emotional needs of high-achieving students taking AP/IB classes. Findings and directions for further research of MAP are discussed.

Keywords

International Baccalaureate, mental health, mixed methods, motivation, secondary

Many adolescents experience stress associated with hormonal changes, developmental tasks, and navigating social, intrapersonal, and academic experiences (Colten, 2017). To address the social–emotional and academic needs of high school youth, schools are increasingly adopting a multi-tiered system of support (MTSS) that includes universal (Tier 1, intended for all students), selective (Tier 2, intended for students at-risk for emotional or academic problems), and indicated levels of support (Tier 3, intended for students with needs requiring intensive intervention; see review in Grant et al., 2017). Schools adopting MTSS take into account the student populations within the school. One population that has been steadily growing is students enrolled in accelerated curricula such as Advanced Placement (AP) and International Baccalaureate (IB) coursework. Based on 2018 data, there has been a 14% increase in the number of public schools offering AP classes since 2013 (The College Board, 2018); likewise, there has been an 18% increase in IB candidates in U.S. schools since 2014 (International Baccalaureate Organization, 2018). Researchers have found that AP/IB youth have significantly higher perceived stress, related to their academic demands, as compared with students in general education (Suldo & Shaunessy-Dedrick, 2013b; Suldo, Shaunessy, & Hardesty, 2008; Suldo, Shaunessy, Thalji, Michalowski, & Shaffer, 2009). In a cross-sectional study of 1,150 students in AP classes (Grades 9-12 from 10 schools) and over 1,200 students from IB programs (Grades 9-12 from 10 schools), Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) found that 71% of the sample endorsed symptoms of school burnout, such as a sense of inadequacy at school and feelings of exhaustion due to schoolwork; however, of note, levels of burnout in U.S. students in general education are unknown.

For AP/IB students, the transition to high school may be a particularly challenging time. Suldo and Shaunessy-Dedrick (2013a), for example, found that after only one semester of 9th grade, students in an IB program reported higher perceived stress levels compared to same-age peers not enrolled in an IB program. Ninth grade may be the first time AP/IB students have been surrounded by other students who selected

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an advanced curriculum, whereas previously they may have been the top-performing students in a general education class. In line with the big-fish-little-pond effect, AP/IB students who are not able to successfully navigate the academic curricula their first year of high school may see reductions in their self-concept and academic motivation (Marsh et al., 2008; Marsh, Trautwein, Lüdtke, Baumert, & Köller, 2007).

Multitiered Supports for AP/IB Students

Supporting the unique academic, social, and emotional needs of students taking accelerated coursework has been an interest of researchers since the 1950s (Dai, 2018). This continues to be a salient concern; recent national data show that only 54.4% of students passed the end-of-course exam for AP Human Geography, the AP course most commonly offered for ninth-grade students (The College Board, 2018). Similarly, data from 2014-2018 show that approximately 20% of IB candidates did not receive an IB diploma at the end of high school (International Baccalaureate Organization, 2018). Despite the unique academic demands of AP/IB coursework, such as the quicker pace of instruction, more extensive classwork and homework requirements, and high stakes end-of-course exams, many of the universal programs available to support the social–emotional and academic needs of AP/IB students tend to be the same as those offered to all students in the general education setting.

Schoolwide social–emotional learning (SEL) for secondary students tends to fall into two categories: (1) programs addressing problem behaviors common in the adolescent years, such as alcohol and drug use (e.g., *Lions Quest Skills for Adolescence*; Eisen, Zellman, & Murray, 2003) or unplanned pregnancy and academic failure (e.g., *Wyman's Teen Outreach Program*; Allen, Philliber, Herrling, & Kuperminc, 1997) or (2) programs teaching high school youth general coping skills and relaxation strategies (e.g., *Pure Power*; Hagins & Rundle, 2016). In addition to differences in intervention goals, skills emphasized, and target population, programs also vary in terms of attention to issues of feasibility and acceptability during development work. For example, a universal intervention (*StressOFF*), developed to increase adolescents stress management abilities, examined students' perceptions of knowledge gain and willingness to use the cognitive–behavioral and mindfulness strategies taught as a first step in determining the intervention's approach and duration (Shapiro, Heath, & Carsley, 2016).

For schools with an IB program, many offer orientation seminars or workshops prior to the first day of school to help incoming students learn about IB requirements and expectations as a universal support. For students who enroll in AP courses, a growing number of states are opting to include both pre-AP instruction and online resources with the hope of increasing enrollment of minority and underrepresented students in AP classes and supporting all students in passing AP exams (see Education Commission of the States, 2018 for state-by-state supports). Although these supports are designed to help students prepare for and enter AP/IB coursework, current research (Suldo et al., 2018) suggests that the academic and social–emotional needs of these students, some of which may go unnoticed because these students are often behaving and achieving well enough to maintain course enrollment, call for more comprehensive universal supports beyond those provided for the initial transition.

A recently developed social–emotional skills program specifically for ninth-grade students starting AP/IB coursework is the Advancing Coping and Engagement (ACE) program. ACE is a universal (Tier 1) intervention that consists of 12 weekly lessons implemented in students' classes that are intended to build students' skills in coping with school-related stress and forming connections at school (Shaunessy-Dedrick et al., 2019; Suldo, Parker, Shaunessy-Dedrick, & O'Brennan, 2019). Consistent with principles underlying MTSS, even with high-quality universal instruction, it is expected that approximately 20% of students would not achieve positive academic and social–emotional outcomes following participation in Tier 1 supports. For these students, selective interventions are needed that build on the supports provided in the universal intervention.

Currently, there are no selective interventions aimed specifically at AP/IB students that address their unique curricular and social–emotional needs. In view of this gap, this article describes the implementation of a new selective intervention for AP/IB students that was grounded in motivational interviewing (Miller & Rollnick, 2013) to meet these needs. Providing selective supports to AP/IB students at-risk for academic and/or emotional challenges relatively early in high school might reduce the number of students who discontinue AP/IB coursework or who develop severe emotional or academic challenges that would warrant Tier 3 treatments. Best practices in iterative development of Tier 2 school mental health (SMH) supports involve examining the intervention's feasibility, acceptability, and contextual appropriateness within the educational context. Similar to Lyon et al.'s (2015) report of the early phases of implementation of the Brief Intervention for School Clinicians (a Tier 2 support for high school students referred to school-based health centers for initial mental health services), the purpose of the current article is to illustrate an example Tier 2 intervention tailored to accelerated and gifted students—the *Motivational, Assessment, and Planning (MAP) intervention*—and examine the feasibility and acceptability of this intervention in a high school setting.

A New Selective Intervention Based in Motivational Interviewing: Motivational, Assessment, and Planning Intervention

Leaders in the development of motivational interviewing (MI), Miller and Rollnick (2013), defined MI as "a collaborative conversation style for strengthening a person's own

motivation and commitment to change" (p. 12). MI originated as a clinical conversational style used for the treatment of addiction among adults and has shown promising outcomes as a brief treatment modality that can increase client engagement and intention to change health-related behaviors (Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010). In recent years, there has been an influx of research supporting the application of MI to SMH interventions for at-risk youth (Herman, Reinke, Frey, & Shepard, 2014; Rollnick, Kaplan, & Rutschman, 2016; Snape & Atkinson, 2016). For example, Strait et al. (2012) found that middle school students randomly assigned to one 50-minute school-based MI session with a school psychology trainee experienced significant improvements in their math grades as compared to those in the waitlist control condition. Findings were replicated in a follow-up study that used identical procedures with a different cohort of students (Terry, Smith, Strait, & McQuillin, 2013). Terry et al. then examined dosage effects (1 vs. 2 sessions) and found that middle school students who participated in a second session had significantly higher grades in math, science, and history, as compared to improvements in only one subject area among students receiving only one session (Terry, Strait, McQuillin, & Smith, 2014).

Beyond the research on academic outcomes, there is preliminary support that brief school-based MI interventions are viewed as acceptable by students and interventionists alike. In a mixed-methods study of student perceptions of an MI intervention, Snape and Atkinson (2017) found that students ($n = 3$) who took part in a brief MI intervention reported it being enjoyable and helpful in making positive behavior change and thinking about their future goals. Similarly, Iachini, Rogelberg, Terry, and Lutz (2016) examined the acceptability and feasibility of a MI Tier 3 drop-out prevention program (Aspire) implemented with ninth-grade students. All 13 participating students reported a positive working alliance with the interventionist, noting they "worked together collaboratively" and "the time spent was effective and productive" (p. 215). The 3 Aspire interventionists credited MI with helping the students feel "autonomous, empowered, and understood" (p. 214). These results are not surprising given that MI emphasizes a collaborative approach to creating an environment where a student feels heard and understood, which can reduce the likelihood they will become defensive when presented with data indicating that their behavior may not lead to optimal outcomes.

MI also fits with modern theoretical frameworks regarding how adolescents in AP/IB can increase their use of healthy coping strategies in times of stress. Educators and parents of high-achieving youth often report lack of motivation and underachievement among their top concerns (Siegle & McCoach, 2018). Rather than taking a punitive approach to behavior change (e.g., shaming, lecturing, removing privileges), MI practitioners focus on building a student's innate strengths and promoting their autonomy when making decisions about the student's behavior (Herman et al., 2014; Rollnick et al., 2016). Further supporting this idea, Garn and Jolly (2014) found that motivation among high-ability students was heightened when students were able to investigate topics that related to their interests outside of school. This demonstrates the need to connect goals and interests to the curriculum as a means of increasing intrinsic motivation and thus academic achievement in high-ability students.

Building on the positive effects of a brief school-based MI intervention and its developmental appropriateness for AP/IB adolescents, an MI framework was chosen as the foundation for the *Motivational, Assessment, and Planning (MAP) intervention*. MAP was iteratively developed and then implemented with ninth grade AP/IB students who evidenced signs of academic or emotional challenges related to their accelerated coursework. MAP is a brief, school-based selective (Tier 2) intervention aimed at improving ninth-grade AP/IB students' functioning through evoking a student's internal motivation to engage in more helpful behaviors, coupled with collaborative action planning. This intervention is intended for implementation by mental health professionals referred to as "coaches" (e.g., psychology trainees, school counselors, school social workers, or school psychologists). Incorporating a multistep process, MAP includes one to two individual MI coaching sessions (referred to as MAP Meetings 1 and 2). Consistent with best practices in MTSS (Fuchs & Fuchs, 2005; Mellard, Stern, & Woods, 2011), MAP delivery (Tier 2) follows a student's full exposure to a universal SEL curriculum (ACE, Tier 1) delivered weekly throughout the Fall semester in that student's AP/IB classroom.

Miller and Rollnick (2013) emphasized that an MI coach needs to infuse the "spirit of MI" (p. 14) throughout the interactions with the individual. Hallmarks of the spirit include (1) *cultivating change talk* through evoking the student's own language in favor of the change goal and confidence for making that change; (2) s*oftening sustain talk* by avoiding a focus on the reasons against changing or for maintaining the status quo; (3) conveying *partnership* with and *autonomy* for the student by expressing an understanding that the expertise and wisdom about the change resides mostly within the student; and (4) *accepting* the student's worldview and conveying *empathy* by making every attempt to grasp the student's perspective. Miller and Rollnick (2013) described change talk as "any self-expressed language that is an argument for change" (p. 159), whereas sustain talk is the opposite: "a person's arguments against change" (p. 165). Individuals considering a behavior change often reside in a state of ambivalence utilizing both change and sustain talk—often in the same utterance (e.g., "I know I need to stop procrastinating on assignments, but I feel like I do my best work under pressure"). MAP coaches strive to cultivate students' change talk and soften their sustain talk to help them take action in addressing barriers to their academic and life goals.

The "stages" in MAP Meetings 1 and 2 mimic Miller and Rollnick's (2013) four overlapping MI processes, *Engage,*

Focus, Evoke, and *Plan*, which are designed to strengthen a student's motivation and commitment to change. *Engage* is the first stage of MAP and lays the foundation of the collaborative relationship between the MAP coach and the student. The establishment of a positive alliance with the student is fostered through (1) a review of the meeting goals and objectives; (2) exploration of the student's character strengths, values, and goals; and (3) discussion of the student's primary reasons for positive change. Engagement with the student does not have a clear end point in the session, but rather rapport-building practices are woven throughout the meeting through collaboration, acceptance, and compassion on the part of the MAP coach.

Focus is the second stage of the MAP meeting. The goal of this stage is to narrow the range of possible target behaviors to focus on a few options that would best support the student with any challenges they might currently be experiencing. Miller and Rollnick (2013) suggested that MI coaches present relevant normative data points at this stage of the meeting to help the individual identify and prioritize areas of concern. Using Miller and Rollnick's (2013) elicit-provide-elicit cycle, the MAP coach offers normative feedback by (1) eliciting the student's perceptions of their scores (e.g., use of coping behaviors, level of student engagement; see pre-MAP Assessment) compared with other AP/IB students; (2) affirming and reflecting back the student's strengths and acknowledging areas of concern; and then (3) eliciting the student's perceptions of the discrepancy between their *current* behaviors predictive of AP/IB student success and their long-term goals, values, and expressed desire for academic and emotional health. By the end of the Focus stage, the student prioritizes and selects a target behavior to discuss further (e.g., improve my time management skills).

The third stage, *Evoke*, is arguably the crux of the MAP meeting (not to mention MI itself), yet it is often the shortest in length. During this stage, the MAP coach poses evocative questions tailored to elicit change talk (e.g., What are the three best reasons for increasing your ability to seek out support from people at school?), such that the student (not the coach) voices the rationale for positive change on the factor(s) the student wants to address further. Evocative questions often target the student's desire for change, the strengths and abilities that can be used to support change, the reasons for change, and the need for change (Miller & Rollnick, 2013), so as to amplify the importance of the target behavior change.

The MAP meeting concludes with the *Planning* stage. While this stage is optional in applications of MI with adult populations, it may be critical to applications with youth given that adolescence is an ideal time for students to practice the problem-solving process. During the planning stage the coach and student collaboratively develop an action plan that targets both the "how" and "when" the student will reach the personal goal they voiced as being directly tied to their academic and emotional success. Ideally, by the end of the planning stage, the student feels confident in enacting the plan and meeting the goals by linking the action steps to their strengths, values, hopes, and aspirations for the future. This confidence is reflected in the student voicing strong commitment to making a change in academic and emotional functioning.

Study Purpose

The MAP intervention is fashioned in line with other promising school-based applications of MI (Snape & Atkinson, 2016, 2017; Strait et al., 2012; Terry et al., 2013) including those utilized with high school students at-risk for dropping out of school (Iachini et al., 2016; Iachini, Lee, DiNovo, Lutz, & Frey, 2018). Based on published literature, MI—though grounded in strong theory—has not been used as a selective intervention with adolescents taking accelerated coursework. Given the unique academic and social–emotional needs of students taking AP/IB classes (Suldo et al., 2018) and the current lack of Tier 2 supports for this student population, an understanding of the applicability and acceptability of this intervention is critical in the iterative design and evaluation of MAP. To facilitate this understanding, we (1) describe the implementation of the school-based application of MAP with a sample of ninth-grade students taking AP/IB classes and (2) evaluate whether students, coaches, and SMH services providers perceived MAP as an acceptable Tier 2 intervention. Acceptability is a critical variable because it has been shown to be associated with fidelity of implementation, participants' engagement with the intervention, and ultimately intervention effectiveness (Kazdin, 1980).

Method

Participants

Students. Participants from two high schools in a southeastern state (subsequently referred to as School A and School B) were part of a larger study examining the research team's universal SEL curriculum focusing on AP/IB students' academic and emotional well-being (i.e., the ACE program). A total of 155 IB students (59.4% female, 40.6% male, 48.1% White) from School A and 176 AP students (60.2% female, 39.8% male, 61.1% White) from School B participated in the universal curriculum. A total of 49 ninth-grade students (n = 28 IB students from School A; n = 21 AP students from School B) participated in the MAP intervention (see Identification of Students for MAP) and completed surveys to assess their perceptions of the acceptability of the MAP intervention. The MAP sample was relatively diverse and majority female (67.9% School A, 61.9% School B). See Table 1 for additional details about the student participants.

Coaches. Seven MAP coaches served the 49 AP/IB students and completed acceptability surveys following each MAP

Table 1. Demographic Features of Student Participants in the Universal Intervention, Screening Procedures, and MAP Meetings.

	Total school		Universal intervention		Screening		Invited to participate due to presence of risk		Participated in MAP meetings	
Variable	A (N = 1,639)	B (N = 2,355)	A (N = 155)	B (N = 176)	A (N = 133)	B (N = 171)	A (N = 41)	B (N = 63)	A (N = 28)	B (N = 21)
Female	52.0	51.3	59.4	60.2	56.4	61.4	46.3	66.7	67.9	61.9
FRL	43.9	21.2	—	—	—	—	—	—	—	—
White	46.8	63.1	48.1	61.1	47.0	61.7	41.5	69.0	57.1	60.0
Hispanic	22.8	23.6	22.7	24.0	24.2	23.5	26.8	20.7	32.1	25.0
Black	14.5	6.3	1.9	3.0	2.3	3.1	2.4	1.7	0.0	5.0
Asian	7.4	2.4	15.6	3.6	13.6	3.7	14.6	1.7	7.1	0.0
Multiracial	8.2	4.2	9.7	6.6	10.6	6.2	9.8	5.2	3.6	5.0
Native Hawaiian/ Pacific Islander	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	0.0	0.0	5.0
American Indian/ Alaska Native	<1.0	<1.0	<1.0	<1.0	0.0	<1.0	0.0	0.0	0.0	0.0
Other	—	—	1.3	0.6	1.5	0.6	2.4	1.7	0.0	0.0

Note. MAP = Motivation, Assessment, and Planning; FRL = eligible for free or reduced-price lunch. For the universal curriculum and screening, 10 students did not complete the race/ethnicity questions. For the MAP meetings, race/ethnicity data for one student was unavailable. Participants from School A were enrolled in an International Baccalaureate program and participants from School B were enrolled in Advanced Placement classes.

meeting. All coaches were female, five were White (71%), one was Asian (14%), and one was Black (14%). All MAP coaches were affiliated with a school psychology doctoral program; one was a university faculty member, two were postdoctoral fellows, and four were graduate students. On average, coaches served seven AP/IB students through MAP (range = 4-11 students). Coaches were assigned to students based on overlapping availability at various times of day and their proximity to each school.

School Mental Health Services Providers. Three SMH providers (two from School A and one from School B) were interviewed in-person and completed surveys to assess their perceptions of the acceptability of the MAP intervention. Two were school psychologists and one was a school counselor who worked primarily with IB students. All were White females.

Procedures

Training in MI for Coaches. To ensure all MAP coaches were adequately trained in MI, coaches completed the Motivational Interview Training and Assessment System (MITAS; Frey, Lee, Small, Walker, & Seeley, 2017). The MITAS training was led by an external consultant who specializes in developing and implementing MI interventions for use in educational settings with students, parents, teachers, and other professionals. This consultant is a member of the Motivational Interviewing Network of Trainers (MINT) and has extensive experience training educators and mental health professionals in MI. The training component of the MITAS consisted of a 2.5-day didactic, on-site workshop followed by individualized coaching sessions in which the coaches were given performance feedback on three practice cases (per coach) using the Motivational Interviewing Treatment Integrity Code (MITI 4.2.1; Moyers, Manuel, & Ernst, 2014). The MITAS assessment component consisted of coaches completing the Video Assessment of Simulated Encounters 3–School-Based Application (VASE3-SBA; Lee, Frey, & Small, 2013) and Written Assessment of Simulated Encounters–School-Based Applications (WASE-SBA; Lee, Small, & Frey, 2013) to measure MI competency. All coaches reached proficiency in MI prior to delivering MAP. Ongoing proficiency in MI skills was monitored by the consultant, who listened to a sample of 28 de-identified audio files (2 audio files × 7 coaches × 2 meetings) within 1 week of session completion and coded for MI proficiency using the MITI 4.2.1. Performance feedback was delivered through 30-minute individualized Skype meetings and addressed the coach's use of the technical (i.e., cultivating change talk, softening sustain talk) and relational (i.e., partnership and empathy) dimensions and core skills (e.g., open-ended questions, affirmations, reflections, and summaries [OARS]) of MI.

Identification of Students for MAP. A multimethod, multisource approach was used to identify students who might benefit from MAP (the screening process is described in more detail in Suldo et al., 2019). In January 2017, 304 students who engaged in the universal SEL program completed the six-item *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983) and the eight-item *school satisfaction subscale of the Multidimensional Students' Life Satisfaction Scale* (MSLSS; Huebner, 1994) to assess their emotional risk. School records of performance in the students' first semester courses (i.e., unweighted GPA, grade earned in AP Human Geography or IB Biology) were gathered to measure academic risk. At the IB site (School A), their leadership team, which included an IB coordinator, IB ninth-grade teachers, and school counselor, reported Biology as the course in the ninth-grade pre-IB curricular sequence that typically had the largest variability in student performance.

At School B, AP Human Geography was the primary accelerated course available to ninth-grade students. In addition to this universal screening, we also invited teacher nominations for Tier 2 supports. AP/IB teachers reviewed a list of signs and symptoms of academic challenges (e.g., poor test, quiz, or exam grades; poor attendance) and emotional challenges (e.g., appears unhappy, extreme or frequent worrying about performance) that indicate risk, reviewed a list of students in their AP/IB class(es), and marked "yes" or "no" to indicate if they perceived a student to be "at risk for diminished success in AP/IB."

Teachers invited 104 students to participate in MAP on the basis of screening data (i.e., elevated stress as indicated by ratings on the PSS; low affective engagement as indicated by ratings on the school satisfaction subscale of the MSLSS; unweighted fall semester GPA <3.0 or AP/IB course grade $\leq$C; and/or teacher nomination of "at-risk"). However, only 40 students (38.5%) returned signed parent permission forms. We then opened access to MAP to a convenience sample of remaining students (i.e., those not initially identified as at-risk based on survey, school record, or teacher nomination data) through either a class-wide announcement in IB Inquiry Skills or teacher nomination of low-risk students. Twenty-four students expressed interest and received parent permission forms; nine[1] (37.5%) returned forms signed by parents.

The 49 students who participated in this first implementation of MAP included 20 students identified in the screening with emotional risk (PSS or MSLSS scores) or academic risk (course grades from school records), 5 students with teacher nominations only (did not meet criteria for emotional or academic risk based on surveys or school records), 18 students who were both nominated by their teacher and identified in the screening with emotional or academic risk, and 6 students without signs of academic or emotional risk. The 49 participants in MAP had moderate MSLSS scores (M = 4.20, standard deviation [SD] = 0.84), moderately high PSS scores (M = 3.20, SD = 0.87), 3.36 mean GPA (SD = 0.41), and 2.71 mean AP/IB course grades (SD = 0.79). We compared the academic and emotional well-being of the 43 MAP participants with signs of risk based on screening data (PSS, MSLSS, school records, or teacher nominations) to the larger sample of students with signs of risk who did not participate in MAP (n = 104 for school satisfaction and PSS; n = 105 for course grade and GPA). The two groups did not differ significantly (p = .59) in levels of school satisfaction (Cohen's d effect size = 0.10, where d = [Group 1 mean − Group 2 mean]/pooled SD), GPA (p = .26, d = −0.17), or course grade (p = .07, d = −0.37) but at-risk students who did not participate in MAP tended to have significantly (p = .005) lower PSS scores (M = 2.80, SD = 0.99 vs. M = 3.30, SD = 0.85, d = 0.53).

Delivery of MAP. Students participating in MAP had up to four separate contacts with their MAP coach: (1) during the pre-MAP assessment, used for the development of an individualized score report; (2) during MAP Meeting 1; (3) when a reminder letter was prepared by the coach and delivered to the student by the teacher; and (4) during MAP Meeting 2. At the end of MAP Meeting 1, and again after MAP Meeting 2, students completed an acceptability measure. After the assessment and the MAP meetings, students received a prepaid movie pass or a $10 gift card for participation in research activities.

Pre-MAP assessment. Individually or in small groups, students completed a 148-item pencil-and-paper comprehensive assessment that aligned with seven constructs shown to predict positive academic and/or mental health outcomes among AP/IB students (Suldo et al., 2018), and also served as the main targets of the ACE program, the universal SEL intervention delivered prior to MAP. The constructs included coping strategies, eustress, affective engagement, behavioral engagement, cognitive engagement, achievement motivation, and authoritative parenting (see Table 2 for list of constructs, measures used, and example items). The student's responses were manually entered into an Excel file that was part of a computerized scoring system developed by the research team. The student's raw scores on each composite were converted to T-scores using the means and SDs of a normative group of 2,379 AP/IB students from a prior study (Suldo et al., 2018). After a team member entered the pre-MAP assessment data, an individualized score report was created for each student (see sample graph in Figure 1).

The individualized score report mapped onto the core constructs and was organized into four areas: (1) *effective coping styles*, which included problem-focused coping strategies, such as time and task management and positive thinking; (2) *ineffective coping styles* included behaviors prior research suggests students should limit, such as withdrawing and relying on self when faced with stress and various forms of avoidance; (3) *student engagement* included behavioral (involvement in extracurricular activities) and affective (school connectedness) forms of engagement; and (4) *home*, which consisted of students' perceptions of their parents' emotional support and promotion of their independence. The gray bars represented T-scores for the overall composite score in broad areas (e.g., problem-focused coping strategies, school connectedness) and the lighter grey bars were T-scores for categories within an area (e.g., turn to family and positive thinking are types of problem-focused coping; pride in school and positive relations with teachers are types of school connectedness). The student's T-scores were represented with a solid line. To help students identify areas for growth, the score report provided two points of comparison: (1) mean score (T-score of 50) of the normative sample collected by Suldo et al. (2018) and depicted as a dashed midline on the report and (2) mean score of a subgroup of students within the normative sample who were "successful" academically (high GPAs and test scores) and emotionally

Table 2. Description of Constructs and Measures Used in the Pre-MAP Assessment Survey.

Construct (label on student graph)	Description of measure and items	No. of items
Coping strategies (problem-focused, withdraw and rely on self, and avoidance)	Coping with Academic Demands Scale (CADS; Suldo, Dedrick, Shaunessy-Dedrick, Fefer, & Ferron, 2015) measures five categories of academic coping strategies. The three categories of coping discussed in MAP meetings include (1) problem-focused, which is comprised of six factors: time and task management, positive thinking (cognitive reappraisal), seek academic support, turn to family, spirituality, and relaxation; (2) withdraw and rely on self, which is composed of items on one factor that reflect attempts to handle problems/stressors alone; and (3) avoidance, which is composed of five factors: skip school, sleep, reduce effort on schoolwork, reduce workload, and substance use. The two categories of coping with scores viewable by coaches include only (4) seek temporary diversions, which is composed of three types/factors: athletic, social, and technology; and (5) rumination (focus on negative features of problem), which is composed of two factors: deterioration, and talk with classmates and friends. Students are asked to "*Think about the current school year, when you've been faced with school-related challenges or stress, how often have you . . .* " and respond on a 5-point Likert-type scale from 1 = *never* to 5 = *almost always*.	60
Eustress (eustress at school)	Eustress Scale (ES; O'Sullivan, 2011) measures the frequency that students respond positively to stress and consider stress facilitative (e.g., *How often do you feel . . . that stress for an exam has a positive effect on the results of your exam? . . . feel motivated by your stress?*). Response options are from 1 = *never* to 6 = *always*.	5
Affective engagement (school connectedness)	Attitudes Towards Teachers (ATT) scale of the School Attitude Assessment Survey-Revised (SAAS-R; McCoach & Siegle, 2003) measures students' relationships with their AP/IB teachers (e.g., *My AP/IB teacher cares about me*). Response options are from 1 = *strongly disagree* to 7 = *strongly agree*.	7
	A single item indicator developed by the research team measured satisfaction with AP/IB classes: *I am satisfied with my school program* (AP classes/IB program). Response options ranged from 1 = *strongly disagree* to 5 = *strongly agree*.	1
	Attitudes Towards School (ATS) scale of the SAAS-R assesses students' pride in school (e.g., *I am proud of this school*). Response options are from 1 = *strongly disagree* to 7 = *strongly agree*.	5
Behavioral engagement (extracurricular activity involvement)	Extracurricular Activity Involvement (EAI) scale was developed by the research team and is a composite score that reflects (1) breadth: total number of types of extracurricular activities in which student takes part (*On average, in a typical week during this school year, how much time do you spend in . . . art and hobby clubs? Sports and athletic teams?*) and (2) intensity: overall estimate of time spent weekly in extracurricular activities (*On average, in a typical week during this school year, how much time do you spend in all extracurricular activities?*). Breadth response options are from 0 = *not involved with this activity this year* to 10+ = *I spend 10 or more hours a week in this activity*. Intensity response options are from 0 = *I spend no time in any activity this year* to 20+ = *I spend 20 or more hours a week involved in activities*.	15
Cognitive engagement (focused and interested in classes)	Self-regulation (SR) scale of the SAAS-R (McCoach & Siegle, 2003) measures students' efforts to maintain goal-directed academic behavior through strategizing (e.g., *I check my assignments before I turn them in*) and persistence (e.g., *I put a lot of effort into my schoolwork*). Response options are from 1 = *strong disagree* to 7 = *strongly agree*.	10
	Short Grit Scale (Grit-S; Duckworth & Quinn, 2009) measures students' perseverance (e.g., *Setbacks don't discourage me*) and dedication to completing long-term goals (e.g., *I often set a goal but later choose to pursue another one*). Response options are from 1 = *not like me at all* to 5 = *very much like me*.	8
	High standards scale of the *Almost Perfect Scale–Revised* (APS-R; Slaney, Mobley, Trippi, Ashby, & Johnson, 1996) measures students' high standards for personal performance in and outside of school (e.g., *I have high expectations for myself*). Response options are from 1 = *strongly disagree* to 7 = *strongly agree*.	7
Achievement motivation (motivated to engage)	Academic Self-Perceptions (ASP) scale of the SAAS-R measures perceived academic capabilities and skills (e.g., *I can learn new ideas quickly in school*). Response options are from 1 = *strong disagree* to 7 = *strongly agree*.	7
	Motivation/self-regulation (MOT/S-R) scales of the SAAS-R measures students' motivation to engage in their learning (e.g., *I use a variety of strategies to learn new material*) and self-manage their behavior to complete tasks (e.g., *I complete my schoolwork regularly*). Response options are from 1 = *strongly disagree* to 7 = *strongly agree*.	10
	Flow in one's academic coursework was measured by items developed by the research team (e.g., *The time passes more quickly than in other activities; I am completely absorbed in my work*). Response options are from 1 = *never* to 7 = *always*.	2
Authoritative parenting (positive parenting practices)	Responsiveness scale of Parenting Style Inventory–II (PSI-II; Darling & Toyokawa, 1997) measures youth perceptions of the emotional support, availability, and warmth provided by their parents (e.g., *My parent(s) and I do things that are fun together*). Response options are from 1 = *strongly disagree* to 5 = *strongly agree*.	5
	Autonomy granting scale of PSI-II reflects youth perceptions of independence and respect for privacy permitted by parents (e.g., *My parent(s) gives me a lot of freedom*). Response options are from 1 = *strongly disagree* to 5 = *strongly agree*.	5

Note. MAP = Motivation, Assessment, and Planning; AP = Advanced Placement; IB = International Baccalaureate. See Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) for additional details about the inclusion of the constructs and psychometric properties of the measures listed.

(high life satisfaction, no burnout at school or emotional distress), depicted as a dashed line that runs above and below the midline. Green shading was used to visually indicate the direction of scores that may be most beneficial to students (i.e., associated with academic and emotional success), with 1 *SD* above the mean (*T*-score >60) for variables considered desirable (effective coping styles, student engagement, and home environment), and 1 *SD* below the mean (*T*-score <40) for ineffective coping styles.

MAP Meeting 1. After a student's score report was prepared, a MAP coach scheduled a one on one meeting with the student during school hours, typically during a 50-minute elective or study hall period. MAP meetings were guided by a detailed protocol (approximately 20 pages in length) that provided a flexible script for coaches that aligned with MI principles across the four MAP stages. The stage length, activities, strategies, and example OARS from the MAP Meeting 1 Protocol are described in Table 3. During Stage

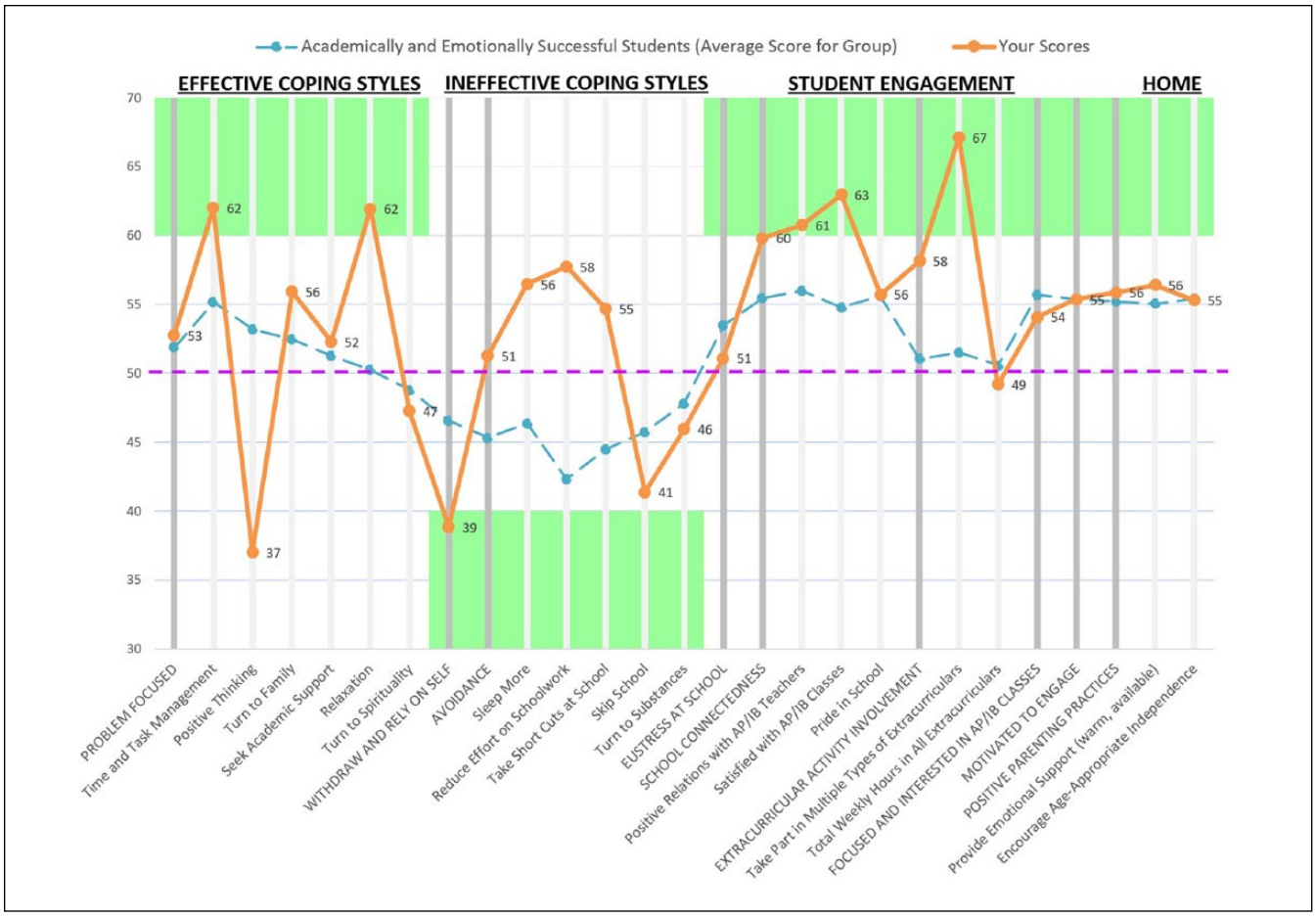

Figure 1. Example individualized score report.

1 (Engage) the student shared their values (e.g., family, friendships, education), strengths (e.g., creativity, honesty, humor), and long-term goals (e.g., graduate high school, go to college, begin preferred career). After establishing rapport, the MAP coach moved to Stage 2 (Focus) where the coach guided the student through a graphical display of their levels of coping and engagement in relation to a normative sample (Figure 1) from the pre-MAP assessment. Then, using OARS, the coach encouraged the student to identify relative strengths and weaknesses on the factors associated with success among AP/IB students (e.g., effective coping strategies, student engagement, aspects of one's home environment). After a target area was selected by the student, the coach moved to Stage 3 (Evoke), which allowed the student to voice their reasons for making a change in a specific area that they perceived were critical to their success. The MAP meeting concluded with the creation of an action plan that summarized the steps the student planned to take to reach their short-term goal (Stage 4: Plan). At the end of the meeting, the coach made a copy of the action plan for the student and asked if they would like to meet again in a month as follow-up support toward progress on their goal.

Reminder letter. Students who elected to participate in MAP Meeting 2 ($n = 42$) received a 1-page letter from their coach approximately 1 month after MAP Meeting 1, which included a summary of the goal, action steps, and solutions to self-identified barriers as discussed in Meeting 1. The bottom portion of the letter posed questions for the student to reflect on prior to the next meeting, such as *How am I doing in my AP/IB program in terms of grades, emotional well-being, and stress*? *Why is academic and emotional success in AP/IB important to my future*? *How close am I to reaching my goal of ___*? *What are three good things that would happen if I reached my goal this week*? *What can I do to make use of my action plan this week more likely*? Letters were sealed in an envelope and given to the students' AP/IB teacher who distributed them during the school day.

MAP Meeting 2. MAP Meeting 2 followed the same four stages as Meeting 1, except this meeting emphasized a review of the students' progress on their original goal. Meeting 2 also offered more autonomy regarding the direction and next steps. For example, during Stage 1 (Engage) the student shared what steps (if any) were taken toward the

Table 3. Activities, Strategies, and Example Script From Each Stage of the MAP Meeting 1 Protocol.

MAP stage (Length)	Activities, strategies, and objectives	Example OARS from MAP Meeting 1 protocol
Stage 1: Engage (10-15 minutes)	• Introduction to coach and meeting purpose • Review values, strengths, hopes, and goals for the future • Summarize how student's background fits with program targets	• *What are the most important things in your life right now?* (Open-ended question) • *Your strengths of kindness and wisdom comes through in your motivations for connecting with your IB classmates (to help others with their work when possible); what valuable assets you bring to new relationships!* (Affirmation) • *You see taking AP classes as challenging you academically and helping you learn more complex content as well as meet other bright students you might study with throughout high school and that falls in line with what you told me at the beginning of our meeting about your desire to go onto a prestigious college.* (Reflection) • *A close-knit family and persisting on something you set your mind to do are strengths and values that you associate with doing well in school and coping with all the stressors associated with AP courses—which helps out with your big picture goal—getting into the University of Michigan. You've got a plan, support, and the willingness to make the changes you want in order to make this happen!* (Summary)
Stage 2: Focus (20-25 minutes)	• Elicit student knowledge of areas related to academic and emotional success • Orient student to norm-referenced feedback graph and review individualized graph with student • Develop discrepancy between student's weaknesses and comparison groups and/or personal goals • Prioritize areas of change in a way that balances students' autonomy with assessment data • Summarize discrepancy and transition to evoke	• *I'd like to review your responses to the survey together now. Many students who we've met with in MAP meetings have appreciated seeing their own results compared to responses from the thousands of other AP/IB students we've surveyed before—how might seeing this comparison be helpful to you?* (Open-ended question) • *How is your current level of [target behavior] likely affecting your performance in AP/IB classes?* (Open-ended question) • *How would improvements in that area be in line with the goals and values you shared with me earlier?* (Open-ended question) • *Thanks for setting that admirable goal with me. Success in AP/IB and attaining [future aspirations/values] is something you hold dear, and you view [current level of target behavior] as standing in the way of your hopes and dreams. You're ready to make some changes and use some strategies to address [target behavior].* (Reflection) • *I'd like to help you plan how you will do this, but first have a few questions.* (Transition to Evoke)
Stage 3: Evoke (5 minutes)	• Elicit and reinforce change talk • Following a sufficient amount of change talk, ask a key question • Move to planning with a transition summary and question	• *Why is [target behavior] so important to you? (. . . for success in your AP/IB courses/ program)?* (Open-ended question eliciting *desire* to change) • *We've discussed a number of your strengths, how can these be helpful in approaching the areas that you've identified? What strengths and powers do you have in yourself that might help you [target behavior]?* (Open-ended question eliciting *ability* to change) • *Let me pull together what you just shared before we move onto making a plan of action. You really would like to get along with your IB Biology teacher because you see how a positive relationship with her could help your grades, and also your happiness during that class. When you started disengaging in the class you noticed your grade started to slip, and it was the D on the last test—that really got your attention. You're a pretty resourceful, optimistic person and eager to make a change in how you approach this class. You've overcome struggles like this in the past and believe you can do the same now.* (Summary)
Stage 4: Plan (15 minutes)	• Elicit and reinforce change talk • Help student brainstorm strategies for meeting goals in prioritized areas • Create action plan specifying action steps, supports needed, and timeline • Increase hope and confidence in change • Increase commitment in change and end the meeting	• *So making a list of your upcoming assignments is something you are willing to try. Why might that be helpful?* (Open-ended question) • *On a scale of 1-10, how confident are you that you* [describe change specifically]*? What is getting in the way of you getting to a* ___ [insert a number one or two higher than the number given]? ◦ *Knowing that this barrier might get in the way, what are some possible solutions to overcome this obstacle?* (Open-ended question) • *Increasing your positive thinking is really important to you. You've seen the direct connection between your thoughts and your happiness, and negative thinking hasn't been very helpful to you. Not only are you ready to make a change, but you've also thought of some steps you will take today! You're going to start a gratitude journal, put reminders of your favorite uplifting quote by your laptop, and spend more time with your family. Your ability to think creatively and be open-minded shines through in the plan you developed. You've got a plan and the resources to make the changes you want!* (Summary)

Note. MAP = Motivation, Assessment, and Planning; OARS = open-ended questions, affirmations, reflections, and summary statements; AP = Advanced Placement; IB = International Baccalaureate.

previously created goal. No matter the student's progress, the coach affirmed any steps taken, acknowledged barriers faced, and evoked potential benefits of continuing with this action plan. In Stage 2 (Focus) students were given three options: (1) pick a new target from the graph and create a new action plan, (2) keep the target selected in Meeting 1 and revise the plan, or (3) end the session without planning. For students who opted to pick a new target or retain their old one, the coach went through Stage 3 (Evoke) and Stage 4 (Plan) in a similar fashion as Meeting 1. At the end of the meeting, the coach gave the student a copy of the action plan as well as any resources from the ACE program pertinent

to the student's goal (e.g., blank planner, relaxation apps). Last, coaches encouraged all students to seek out additional resources—meeting with the school psychologist, teacher, and administrator—at the school if they needed more academic or emotional support. The stage length, activities, strategies, and example OARS from the MAP Meeting 2 Protocol are described in Table 4.

Measures and Indicators

MAP Meeting Applicability Data. Coaches documented the date, attendance, session duration (in minutes), and target(s) for change chosen during MAP Meetings 1 and 2. For students opting for MAP Meeting 2, the Coach also documented the direction of the meeting.

Fidelity of implementation. Coaches' fidelity to the MAP meeting protocols was measured using a form developed by the research team to assess the proportion of elements observed to have occurred in the meeting. A total of 49 elements could occur for MAP Meeting 1 and 37 elements could occur for Meeting 2. Example fidelity items include the following: Discuss student's long-term goals; identify an area(s) most important to focus on for remainder of meeting; and ask evocative questions to solicit student's reasons for change. All MAP meetings were audio-recorded to assess fidelity to the MAP intervention protocol and to rate the quality of each coach's use of MI skills. The quality (i.e., proficiency) with which each coach utilized MI during each session is an important measure of fidelity but is beyond the scope of the current article and will be reported separately. Regarding fidelity to protocol, a member of the research team listened to the de-identified audio file and (1) marked *yes* or *no* if each element occurred, (2) noted the length of each stage in the MI protocol (Engage, Focus, Evoke, and Plan), and (3) took notes to be delivered as informal feedback to the coach. At least one MAP session per coach, per meeting (1 or 2), was coded in real time (e.g., within a week of session completion) to ensure each coach had an opportunity to improve mid-implementation in the event fidelity was below standard (<80%).

Acceptability. Students, coaches, and SMH providers independently completed acceptability measures developed by the research team to assess participants' view of the intervention as understandable, coherent, fair, helpful, easy to engage in, and effective. Item development was guided by the theoretical framework of Sekhon, Cartwright, and Francis (2017), with many of the items adapted from existing instruments, such as the Usage Rating Profile-Intervention (Chafouleas, Briesch, Riley-Tillman, & McCoach, 2009), Treatment Evaluation Inventory (Kazdin, 1980), and the Intervention Rating Profile (Witt & Elliott, 1985). Using Sekhon et al.'s definition of acceptability—"the extent to which people delivering or receiving an intervention consider it to be appropriate, based on anticipated or experiential cognitive and emotional responses to the intervention" (p. 8)—we generated a pool of items to create five initial acceptability measures. These included (1) two measures of students' perceptions of acceptability for MAP Meetings 1 and 2; (2) two measures of coaches' perceptions of acceptability for MAP Meetings 1 and 2; and (3) one measure of SMH providers' perceptions of acceptability. Items for each of the five measures were evaluated by five members of the research team for clarity and alignment to the construct of treatment acceptability. These members of the team had extensive experience in measurement and intervention development and implementation. Items with at least 80% agreement on alignment and clarity were included in the final measures. In addition to using items with structured response scales, open-ended questions were included to obtain participants' perceptions of the MAP intervention. Although analysis of narrative responses is often hampered by variability in response length and focus, review of content written in open-ended prompts can be useful in developing hypotheses to understand trends in data for quantitative indicators. Additional details on the psychometric properties of the acceptability measures are provided in the MAP technical manual (see online supplemental file associated with this article).

Students. Students completed acceptability measures immediately following MAP Meetings 1 and 2 (see Table 5 for specific items). The MAP Meeting 1 acceptability form consisted of 11 items encompassing students' affective attitudes, perceptions of coherence, perceived effectiveness, and self-efficacy. The MAP Meeting 2 acceptability measure included 13 items; 5 items targeted students' perceptions of their behavior since MAP Meeting 1 and the reminder letter, and the remaining 8 items assessed student acceptability (e.g., coherence, effectiveness, self-efficacy) of MAP Meeting 2. Students responded on a 5-point Likert-type scale from 1 = *strongly disagree* to 5 = *strongly agree* for all items. Descriptive statistics for items and subscales were examined. Both measures included three open-ended items: (1) *What part of the meeting did you find most interesting or useful*? (2) *What recommendation(s) for change to the meeting do you have*? and (3) *Additional comments and suggestions*. To identify commonalities in responses to open-ended items, two research assistants read through all responses then grouped these into general categories of statements.

Coaches. After each MAP meeting, the MAP coach completed an acceptability measure. For MAP Meeting 1 the coach responded to two items (*The student seems likely to make a positive change in a target discussed during today's meeting; I feel the student benefitted from taking part in the meeting*). MAP Meeting 2 acceptability items were the same with the addition of one item (The student made progress on the initial goal from the first meeting). Coaches responded to all items on a 5-point Likert-type scale from 1 = *poor* to

Table 4. Activities, Strategies, and Example Script From Each Stage of the MAP Meeting 2 Protocol.

MAP stages (length)	Activities, strategies, and objectives	Example OARS from MAP Meeting 2 Protocol
Stage 1: Engage (10-15 minutes)	• Reintroduction to coach and meeting purpose • Revisit and reaffirm the student's previously expressed strengths, values, hopes, and aspirations for the future • Elicit student memory regarding goal developed during meeting 1 • Discuss current progress toward target/goal • Summarize your understanding of the student's current progress	• *Since our last meeting, how have your strengths and values played out in your daily life and your efforts in AP/IB classes?* (Open-ended question) • *In our meeting last month, we talked a great deal about how you may boost your chances for doing well in your AP/IB class(es) by targeting a factor on the graph you felt might be most central to helping you be successful. Tell me your understanding or recollection of the goal you made last time we met?* (Open-ended question) • *You made some headway on improving your time and task management by getting a planner, but found it tiresome to continue using it week after week. Practicing new habits can be very challenging, but I commend you for trying something out, even if it was for a brief period of time!* (Affirmation) • *Since I saw you last, you have used some of your strengths of humor and kindness to feel more connected to people in your IB classes. That's great, because you view success in IB classes as necessary to be optimally prepared for pursuing your goal of graphic design in college. It sounds like you've made quite a bit of progress toward the goal you set of seeking academic support from your teacher when stressed! You are participating more and asking for homework help. You've seen a change in your grades in class, happiness with life, and overall confidence and satisfaction with the class since enacting your plan.* (Summary)
Stage 2: Focus (8-10 minutes)	• Help student decide to retain target or select new target	• *You mentioned that you "kind of accomplished your goal" of reducing stress by studying after school near daily . . . do you feel there is even more room for growth in focusing on schoolwork, or that you would like to extend your changes to other areas of time and task management like organization?* (Open-ended question) • *Last time we met I shared with you this graph showing how you stood relative to other students in Florida on the factors that are linked to success in AP/IB. We talked about a few of these factors that you mentioned might be helpful to improve. As a reminder, scores that are further from the green shaded area have more room for growth. What coping, engagement, or family factor might you like to focus on today?* (Open-ended question)
Stage 3: Evoke (5 minutes)	• Elicit and reinforce change talk • Following a sufficient amount of change talk, ask a key question • Move to planning with a transition summary and question	• *How do you want your life to be different a month/several months/year from now in relation to your* [insert student's target or goal]? (Open-ended question) • *Finish this sentence: "Things can't go on the way they have been going because . . ." (followed by): On the flip side, what does the future hold for you if you are 100% successful in making this change?* (Open-ended question)
Stage 4: Plan (15 minutes)	• Elicit and reinforce change talk • Help student brainstorm strategies for meeting goals in prioritized areas • Create action plan specifying action steps, supports needed, and timeline • Increase hope and confidence in change • Plan for termination	• *You see talking to your teachers, in particular your math teacher, as being crucial to being successful in your IB program. Why?* (Open-ended question) • *On a scale of 1-10, how confident are you that you* [describe change specifically]*? What would it take to get you to a __* [insert a number one or two higher than the number given]? • *I have complete faith that you will continue to use the problem-solving process you've mastered in these meetings with me to continue to strengthen how you cope with stress and engage at school and keep growing in AP/IB. It has been a pleasure watching you shine!* (Summary/affirmation)

Note. MAP = Motivation, Assessment, and Planning; OARS = open-ended questions, affirmations, reflections, and summary statements; AP = Advanced Placement; IB = International Baccalaureate.

Table 5. Item-Level Descriptive Statistics for Students' Perceptions of the MAP Meetings 1 and 2.

Subscale items	*n*	*M*	*SD*	*Strongly disagree*	*Disagree*	*Neither agree nor disagree*	*Agree*	*Strongly Agree*
MAP Meeting 1						Percent		
1. I felt comfortable during the meeting.	49	4.49	0.71	2.0	0.0	0.0	42.9	55.1
2. The purpose of the meeting was clear.	49	4.57	0.54	0.0	0.0	2.0	38.8	59.2
3. The survey packet that asked about my current coping skills, school engagement, and home life was easy to complete.	49	4.57	0.54	0.0	0.0	2.0	38.8	59.2
4. The data and graph used in the meeting were easy to understand.	49	4.41	0.54	0.0	0.0	2.0	55.1	42.9
5. I liked reviewing the data and graph with the coach.	49	4.47	0.68	0.0	0.0	10.2	32.7	57.1
6. The Student Success Planning Guide was helpful.	49	4.33	0.75	0.0	0.0	16.3	34.7	49.0
7. I liked the process used to develop the action plan.	49	4.41	0.64	0.0	0.0	8.2	42.9	49.0
8. This meeting was effective in helping me develop an action plan of strategies to help me reach my short- and long-term goals.	49	4.55	0.61	0.0	0.0	6.1	32.7	61.2
9. I would recommend the meeting to other students.	48	4.38	0.67	0.0	0.0	10.4	41.7	47.9
10. I am likely to use ideas discussed today inside and outside of school.	47	4.45	0.69	0.0	0.0	10.6	34.0	55.3
11. I am ready to make a positive change in a target discussed during today's meeting.	47	4.51	0.50	0.0	0.0	0.0	48.9	51.1
Progress since MAP Meeting 1								
1. I like the goal my coach and I identified at the end of the first meeting.	42	4.60	0.50	0.0	0.0	0.0	40.5	59.5
2. Since last month, I've thought about my strengths and values and how they play out in my daily life.	42	4.38	0.58	0.0	0.0	4.8	52.4	42.9
3. I made progress on the goal I identified with my coach.	42	4.43	0.55	0.0	0.0	2.4	52.4	45.2
4. I made changes in my behavior based on the first meeting.	41	4.29	0.60	0.0	0.0	7.3	56.1	36.6
5. The letter I received from my coach a few weeks before today's meeting helped keep me on track with my goal.	42	3.81	0.97	2.4	2.4	35.7	31.0	28.6
MAP Meeting 2								
6. I felt comfortable during the meeting.	42	4.74	0.50	0.0	0.0	2.4	21.4	76.2
7. The purpose of the meeting was clear.	42	4.69	0.52	0.0	0.0	2.4	26.2	71.4
8. The meeting helped me revise my goal (or create a new goal) that will help me reach academic and/or emotional success.	42	4.55	0.63	0.0	0.0	7.1	31.0	61.9
9. Because of this meeting, I feel confident that I will meet my goal.	42	4.45	0.63	0.0	0.0	7.1	40.5	52.4
10. I am ready to make a positive change in a target discussed during today's meeting.	42	4.45	0.59	0.0	0.0	4.8	45.2	50.0
11. I am likely to use ideas discussed today inside and outside of school.	42	4.38	0.80	2.4	0.0	4.8	42.9	50.0
12. I would recommend the meeting to other students.	42	4.38	0.66	0.0	0.0	9.5	42.9	47.6
13. It would be helpful to meet again or more often with an ACE coach.	42	3.71	0.94	0.0	11.9	26.2	40.5	21.4

Note. MAP = Motivation, Assessment, and Planning; *SD* = standard deviation; ACE = Advancing Coping and Engagement. Response scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Higher scores represented higher acceptability. See Table 6 for subscale descriptive statistics and Cronbach's alpha coefficients for the subscales.

5 = *excellent*. Three open-ended items were provided on the measures: (1) *What part of the meeting did you think went the best*? (2) *What part of the meeting did you find challenging*? and (3) *Additional comments*. A procedure similar to the student acceptability data was used to identify categories of responses and commonalities from the coach acceptability reports.

School mental health services providers. A series of three in-person meetings were held with SMH providers. During the first meeting, a research team member provided an overview of MAP delivery at the SMH provider's school, and reviewed the MAP Meetings 1 and 2 protocols. To illustrate how a MAP Meeting was delivered, the SMH provider was introduced to a de-identified case example of a student who participated in MAP at a different school. They received de-identified audio files from MAP Meetings 1 and 2, the student's individualized score report, and completed action plans from the MAP Meetings. During the second meeting, the SMH providers answered open-ended questions about the acceptability of MAP Meeting 1, including impressions of the Meeting 1 protocol and accompanying intervention materials, and desired level of training if they were to implement MAP. During the third meeting, the research team member collected SMH providers' reactions to MAP Meeting 2 and asked the provider to complete a 26-item acceptability measure. The items included statements such as *I would be willing to use the MAP intervention in my school; AP/IB students at my school would benefit from MAP meetings*; and *The MAP intervention protocol was easy to understand*. The full acceptability measure is available from the authors by request. SMH providers rated each item on a 5-point Likert-type scale, which ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Five items were reverse coded such that when research team members created composite scores for each domain, higher scores reflected more positive perceptions of the MAP intervention. All feedback meetings were audio-recorded and reviewed by two research assistants to assess participants' general impressions and recommendations for training procedures. After feedback meetings two and three, SMH providers received a $25 gift card for participation in data collection.

Results

MAP Meeting Applicability Data

All 49 students with parent permission to participate completed MAP Meeting 1. The average Meeting 1 length was 58.32 minutes (SD = 9.33, range = 41-89 minutes). Nine Meeting 1s (18%) were 50 minutes or less. Due to conflicting school demands (e.g., student had a quiz in class) there were a total of four Meeting 1s that were split into two sessions and one Meeting 1 that was split into three sessions that totaled 89 minutes.

The most commonly selected target students chose for their action plan was increasing time and task management (n = 13), followed by increasing positive thinking (n = 5), and increasing effort on assignments (n = 4). Less common action planning targets included improving relationships with their teachers (n = 2) and increasing involvement in extracurricular activities (n = 1). Three students selected targets that were not presented on their graph but were still academically related (e.g., improve their study habits, raise their grade in English class, and be more productive during study hall).

Forty-two of the 49 students (85.7%) elected to participate in MAP Meeting 2. The seven students (2 from School A, 5 from School B) who did not want to attend a second meeting worked with five different coaches. A review of responses to the open-ended items on acceptability measures did not reveal any atypical student comments, whereas coaches reported challenges engaging six of these seven students during MAP Meeting 1 (e.g., "still had some sustain talk at the end," "student had short responses . . . did not seem extremely connected to the meeting," "she did not see a need to change."). On average, MAP Meeting 2 was held an average of 41.71 days after MAP Meeting 1 (SD = 13.35; range = 7-63 days). The average length of MAP Meeting 2 was 40.81 minutes (SD = 10.99, range = 17-69 minutes) with 6 meetings (14.3%) going beyond the 50-minute class period. Only one MAP Meeting 2 had to be split into two sessions.

Twenty students (47.6%) kept their target from Meeting 1, 17 (40.5%) students picked a new target, and 5 students (11.9%) opted to end the session prior to action planning because they felt they had the skills needed to continue toward their goals without additional support from the coach. Among the 20 students who retained their original goal, 45% chose to continue developing time and task management skills. Time and task management skills were also the most commonly selected target for students who chose a new target (n = 8), followed by seeking academic support (n = 2), and increasing use of relaxation strategies in times of stress (n = 2).

Fidelity. Fidelity to protocol was high across all MAP coaches. All 49 MAP Meeting 1s were coded and an average of 96% of the 49 protocol elements were observed to have occurred as planned (SD = 2.6%; range = 90%-100%). Of the 42 MAP Meeting 2 sessions, 22 were coded for fidelity and an average of 94% of the 37 protocol elements were observed to have occurred (SD = 5.6%; range: 80%-100%). The consultant's measurement of coach proficiency as a measure of fidelity to MI during MAP Meetings 1 and 2 supported that all coaches' MI skills remained within acceptable limits of proficiency; this information is currently the topic of another article.

Acceptability

On the 5-point response metric, participant ratings of 4 = *agree* or 5 = *strongly agree* were used to indicate positive affective responses to MAP. In contrast, we conceptualized ratings of 1 = *strongly disagree* or 2 = *disagree* as indicative of a negative affective response, and 3 = *neither agree nor disagree* as a neutral affective response. Using those benchmarks, data from students, coaches, and SMH services providers reflect high levels of acceptability for the MAP meetings. Descriptive statistics for the three acceptability forms and subscales are provided in Table 6. Skewness and kurtosis values indicated no major departures from normality for the subscale scores.

Student Perceptions of MAP. Among the 49 students participating in MAP Meeting 1, acceptability scores were high (M = 4.47, SD = 0.40). We examined any potential differences in students' perceptions of MAP based on how they were identified as at-risk (e.g., teacher nomination and/or self-reported academic/emotional risk). Four subgroups were created (1) not teacher nominated and no risk on emotional or academic screening data (surveys, school records), n = 6; (2) no teacher nomination but risk on emotional or academic screening data, n = 20; (3) teacher nominated, but no risk on emotional or academic screening data, n = 5; (4) teacher nominated and risk on emotional or academic screening data, n = 18. There were no significant differences in student acceptability scores as determined by a one-way analysis of variance, $F(3, 45) = 0.338$, $p = .798$, $\eta^2 = .022$; thus, student perceptions of acceptability were aggregated and examined together.

Item-level mean scores ranged from 4.33 to 4.57 (see Table 5), with the highest mean acceptability scores for *The purpose of the meeting was clear* and *The survey packet . . . was easy to complete* (M = 4.57, SD = 0.54 for both items). Regarding the utility of this MI-based intervention, 100% of participants in MAP Meeting 1 agreed that they were "ready to make a positive change in a target discussed during today's meeting." This high level of positive affective response to acceptability items reflecting readiness to change supports the theoretical framework underlying MAP (i.e., using MI in an attempt to increase personal motivation for self-improvement).

Table 6. Descriptive Statistics for Acceptability Subscales for Student, Coach, and School Mental Health Services Provider Perceptions of MAP Meetings 1 and 2.

Subscale	No. of Items	Cronbach's Alpha	*n*	Minimum	Maximum	*M*	*SD*	Skewness	Kurtosis
Student									
MAP Meeting 1	11	.86	49	3.64	5.00	4.47	0.40	−0.48	−0.98
Progress since MAP Meeting 1	5	.70	42	3.60	5.00	4.30	0.44	0.20	−1.27
MAP Meeting 2	8	.86	42	3.12	5.00	4.42	0.47	−0.68	−0.23
Coach									
MAP Meeting 1	2	.82[a]	7	3.33	4.75	4.02	0.48	0.16	−0.65
MAP Meeting 2	2	.89[a]	7	3.40	4.80	4.27	0.46	−1.16	1.43
Progress since MAP Meeting 1	1	—	7	3.83	4.50	4.19	0.24	0.05	−0.69
SMH Provider									
MAP Meetings 1 and 2	26	.95	3	4.08	4.89	4.51	0.41	−0.69	—

Note. MAP = Motivation, Assessment, and Planning; *SD* = standard deviation; SMH = school mental health. Response scale ranged from 1 = *strongly disagree* to 5 = *strongly agree*. Higher scores represented higher acceptability. See Table 5 for item content. The symbol — was used to indicate insufficient data to compute.

[a]The correlation between the two items (The student seems likely to make a positive change in a target discussed during today's meeting; I feel the student benefitted from taking part in the meeting) at MAP Meetings 1 and 2 were .70 and .80, respectively.

When asked *What was the most interesting part of MAP Meeting 1*? students' responses suggested three common sentiments. First, 22 students (44.8%) reported they enjoyed the opportunity to view their current levels of coping and engagement compared to other AP/IB students via the graph (see Figure 1 for example). Second, 14 students (28.6%) reported the process used to create an action plan was the most beneficial part of the meeting. Third, 12 students (24.5%) reported the personalized discussion surrounding their strengths, weaknesses, and possible next steps to be the most interesting. While the majority (55.1%) of student participants reported that they had no recommendations for change to MAP Meeting 1, 10 students (20.4%) reported the meeting was too long. Four students (8.1%) recommended the use of more specific data metrics (their grades compared to other students' grades) during meetings. Two students (4.1%) specifically noted that the questions posed by the coach in the MAP Meeting were difficult and expressed a desire for guidance (e.g., "If the questions were easier to answer, more elaborate results could flow").

Acceptability ratings for MAP Meeting 2 were high (M = 4.42, SD = 0.47, n = 42, see Table 6). Students continued to value the work completed in the first meeting 1 to 2 months after that initial meeting with the coach (M = 4.30, SD = 0.44, range = 3.81-4.60), generally agreeing that they had made positive growth toward the goal set in Meeting 1. The most variability in student perceptions was for Item 5: "The letter I received from my coach a few weeks before today's meeting helped keep me on track with my goal" (M = 3.81, SD = 0.97). During MAP Meeting 2, when coaches asked students about the usefulness of the reminder letter, some students did not recall seeing it. The research team did not collect data on distribution of the reminder letters beyond teacher receipt.

Mean scores on MAP Meeting 2 acceptability items ranged from 3.71 (*It would be helpful to meet again or more often with an ACE coach*) to 4.74 (*I felt comfortable during the meeting*; Table 5). Responses to open-ended items by the 42 students attending MAP Meeting 2 indicated students perceived making a new action plan (42.8%), picking a new goal to work on (19.0%), reviewing progress and barriers faced on their original action plan (16.7%), and getting the opportunity to talk to someone (11.9%) as the most interesting parts of the meeting. Similar to MAP Meeting 1, the majority of students reported that they had no recommendations for change to MAP Meeting 2 (78.6%), 3 students (7.1%) commented that the meeting was long, and 5 (11.6%) noted personal preferences (e.g., "Not so many steps," "[Allow] us to talk more," and "Make open topic goal").

Coach Perceptions of MAP. Acceptability data collected from MAP coaches after MAP Meeting 1 indicated high levels of acceptability of the intervention (M = 4.02, SD = 0.48), and similarly high levels of acceptability after Meeting 2 (M = 4.27, SD = 0.46). As can be seen in Table 7, perceptions of acceptability varied by coach, with acceptability mean scores by coach ranging from 3.33 to 4.75 for MAP Meeting 1 and 3.40 to 4.80 for MAP Meeting 2. Coaches generally perceived that students were making progress on their initial goal from MAP Meeting 1 (M = 4.19, SD = 0.24).

When asked *What things went well*? at the end of MAP Meeting 1, 100% of coaches indicated that they were able to develop a strong working alliance with students and described these students as bright, motivated, and/or engaged in the session. The majority of coaches (5 of 7, 71.4%) wrote that discussing students' strengths, values, and goals was a helpful way to engage students. In addition, 71.4% reported that at least one of the students they worked with exhibited a lot of change talk. Coaches' responses revealed the most common

Table 7. Descriptive Statistics for Coaches' Acceptability of the MAP Meetings 1 and 2.

Coach	No. of students served for MAP Meeting 1	No. of students served for MAP Meeting 2	MAP Meeting 1, *M* (*SD*)	Progress Since MAP Meeting 1, *M* (*SD*)	MAP Meeting 2, *M* (*SD*)
1	7	5	3.71 (0.70)	4.20 (0.45)	4.80 (0.45)
2	6	5	3.33 (0.52)	4.00 (0.71)	3.40 (0.55)
3	8	7	4.31 (0.53)	4.14 (0.69)	4.50 (0.50)
4	11	11	4.36 (0.84)	4.18 (0.75)	4.18 (0.90)
5	6	4	3.75 (0.27)	4.50 (1.00)	4.50 (1.00)
6	7	6	3.93 (0.67)	3.83 (0.41)	4.00 (0.63)
7	4	4	4.75 (0.50)	4.50 (1.00)	4.50 (0.58)

Note. MAP Meeting 1 data are the average of two items (The student seems likely to make a positive change in a target discussed during today's meeting; I feel the student benefitted from taking part in the meeting); MAP Meeting 2 is the average of the same items. Progress since MAP Meeting 1 is one item (The student made progress on the initial goal from the 1st meeting). Responses to all items are on a 5-point Likert-type scale from 1 = *poor* to 5 = *excellent*.

challenges were working with students who were reserved and slow to elaborate (85.7%), and time constraints that made getting through all four stages of MAP Meeting 1 difficult (71.4%). Additional challenges reported by more than one coach included difficulty establishing rapport (57.1%), student had difficulty understanding intervention materials (e.g., interpreting the graph, grasping questions posed during the evoke stage; 42.9%), student mentioned challenges or barriers that were outside the scope of the MAP intervention (e.g., health concerns, family concerns; 42.9%), and student exhibited a lot of sustain talk (42.9%).

Comments provided in the open-ended responses for MAP Meeting 2 were primarily positive; 57% of coaches indicated that they had a strong working alliance with students who opted to return for a second meeting, and two coaches (28.6%) specifically noted that some of their students experienced increased affect ("seemed happier"). All coaches reported that at least one of their students made progress toward the goal created during Meeting 1. The most common challenge (71.4%) reported after Meeting 2 was adhering to the intervention protocol and spirit of MI while staying within one 50-minute class period. Other challenges pertained to difficulties working with students who were reserved and nonelaborative (42.9%), and when students mentioned challenges or barriers that were outside the scope of the MAP intervention (28.6%).

Examination of the open-ended responses across coaches, across Meetings 1 and 2, suggested that they perceived student engagement, or lack thereof, as being a determining factor in the success of the meeting. When a student actively engaged in the meeting, as evidenced by verbal output following the coach's statements, coaches tended to perceive such responses as a sign the session was progressing well. Conversely, students who were reserved and did not readily share with the coach posed a challenge for this intervention, which is centered on the conversational nuances between two people. Coaches also noted the importance of the content of the conversation. When a student exhibited more change talk surrounding a chosen target, the coach perceived the meeting positively, but if a student expressed more sustain talk during the meeting, the coach viewed the meeting less positively.

SMH Services Provider Perceptions of MAP. Data from SMH services providers at partnering schools (see Table 6) indicated MAP is perceived as a highly acceptable school-based selective intervention for AP/IB students ($M = 4.51$, $SD = 0.41$). Statements shared with the research team by SMH providers indicated that these stakeholders perceived the meetings to be a positive and collaborative process that can help students create action plans to reach their short- and long-term goals. All noted that MAP differed from their current school-based practices in that they perceived the MAP intervention to be more structured and lengthier than the individualized supports they were currently providing to students referred due to academic or emotional struggles. Concerns expressed related to time and professional role constraints might limit the likelihood that a typical school psychologist or counselor could allot sufficient time for MAP meetings during regular school hours with students. All SMH providers expressed positive perceptions of the supplemental materials used in the intervention (reminder letter, student success guide), but requested the materials necessitate fewer school resources (e.g., graph printed in black/white, reminder letter handwritten vs. typed). In terms of perceived training needs, two SMH providers (from School A) did not see a need for additional training in MI or the MAP meeting protocols pending the creation of a comprehensive manual to accompany the intervention. The SMH provider from School B suggested that an in-person review of basic MI skills and MAP implementation would be helpful, especially for those with little to no knowledge of MI.

Discussion

The purpose of the current study was twofold: (1) implement a new Tier 2 intervention (MAP) with an initial sample of ninth grade students taking AP/IB classes and (2) evaluate

students, coaches, and SMH services providers' perceived acceptability of MAP as a Tier 2 intervention for this population. Results provide preliminary evidence that MAP can be implemented in high schools as a brief intervention for AP/IB students in a manner perceived as useful to supporting student progress toward goals relevant to student success. Below we discuss key findings as they relate to further refinement and use of MAP, as well as the implications of this project in relation to educators and researchers implementing Tier 2 interventions for populations that include gifted students.

Tier 2 Interventions for High School Students in Accelerated Curricula

Adolescents in AP/IB courses are tasked with managing heightened academic demands inherent to their coursework, but a sizeable proportion of these students fail to receive a passing score on their AP exam (The College Board, 2018) or their IB diploma (International Baccalaureate Organization, 2018). To increase the likelihood that students in AP/IB will experience emotional wellness and academic success, educators need universal (Tier 1) and supplemental (brief Tier 2; intensive Tier 3) supports that are tailored to the strengths and stressors unique to this student population, and that are feasible to implement at school. Apart from removing struggling students from accelerated courses, educators currently have few options to assist students who experience undue emotional distress or academic challenges while navigating their AP/IB courses. In an MTSS model of service delivery, which prioritizes prevention and equitable provision of resources, schools need intervention options that incorporate early identification and support for students with signs of risk rather than waiting for failure to become readily apparent. The availability of evidence-based Tier 2 SMH interventions for adolescents is growing (e.g., Arora, Collins, Dart, Hernandez, Fetterman, & Doll, 2019), but MAP is the first option to address the unique educational context of high school students in AP/IB. This study illustrates the successes and challenges encountered during implementation of this Tier 2 intervention for a group that often includes gifted students. In subsequent sections, we highlight key findings regarding feasibility and acceptability of MAP and offer recommendations for refinement in accordance with best practices in implementation science (e.g., Lyon et al., 2015).

Applicability of the MAP Intervention

MAP was implemented as intended with 49 students taking AP/IB classes in two southeastern high schools. However, far more students were identified as needing supports based on mid-year screening data. Even with multiple reminders, only about 40% of students invited to participate returned parent permission forms. All students with parent permission readily attended MAP Meeting 1 and 86% returned for a follow-up MAP Meeting 2 approximately 1 month later. Coaches were also able to adhere to the MAP protocols with high fidelity. The meetings did tend to run beyond the typical 50-minute class period despite time limits specified in the protocol. Instructional time is of utmost importance to schools, thus further protocol refinement and coach training may be needed to ensure coaches are consistently able to deliver the intervention within one class period.

During the MAP meetings, students in this study overwhelming chose to focus on their ways of coping with academic stressors, especially through increasing use of time and task management strategies, as a fruitful path for improving their performance and well-being. In prior qualitative work with students identified by educators as most and least successful in AP/IB, students at both ends of the performance spectrum emphasized that effective time and task management strategies were crucial to success in AP/IB (Shaunessy-Dedrick, Suldo, Roth, & Fefer, 2015). Our findings are consistent with that sentiment; even when presented with a menu of 22 targets within four areas (effective coping styles, ineffective coping styles, student engagement, and home factors), a quarter to half of students in MAP Meetings 1 and 2, respectively, chose time and task management as most worthy of their self-improvement efforts. Other students opted to work on different forms of effective coping, such as positive thinking, seeking academic support, and relaxation. A minority of students chose to focus on increasing affective or behavioral engagement at school, and few students chose to target home-based factors relevant to parent–child relationships. It is possible that students viewed factors within multiple areas as important but viewed changes in coping as most likely to be within their personal control for immediate and/or positive change.

Related to intervention training supports, training the coaches to be fluent in both MI and the MAP protocol was more extensive than initially anticipated. MI is a nuanced therapeutic style that takes rehearsal and performance feedback from a MINT consultant. The research team required all MAP coaches to reach proficiency in core MI dimensions (e.g., cultivating change talk, softening sustain talk, partnership, and empathy) and core skills (e.g., OARS) based on consultant ratings of practice sessions using the MITI 4.2.1. Beyond the support and performance feedback from the consultant, the research team practiced using MI skills within the MAP protocol to build confidence and fluency with multiple targets before delivering the intervention with students who participated in this study. The practice included using the MAP protocols in role-plays with other members of the research team, and then more formally in mock sessions with University Honors College students ("practice cases"). In addition, coaches listened to the audio-recordings of those practice cases that received high MITI and fidelity scores in order to learn from each other, and the research team devoted

time during weekly team meetings to discuss barriers and strategies to improve coach's MI skills (e.g., ways to increase our use of complex reflections or maximize student autonomy). While this level of expertise in a therapeutic style is ideal, the amount of training the research team received is likely discrepant from typical professional development available to SMH providers who express interest in learning MI and integrating MAP into their repertoire of supports. In future iterations of MAP, the research team aims to develop a range of training methods for potential end users of MAP, including an intervention manual that details procedures for developing minimum proficiency versus expertise, professional development workshops, and ongoing coaching support options that may involve case review and/or performance feedback. Future studies are needed to evaluate MAP when implemented under routine conditions, for instance led by SMH providers trained with realistic methods and meeting with students within the confines of a single-class period.

Acceptability of the MAP Intervention

Student Views. Similar to prior acceptability research on school-based MI programs (Iachini et al., 2016; Snape & Atkinson, 2017), acceptability data from students participating in MAP suggest they viewed the meetings positively. MAP provided them with supports to help identify areas for growth and create a plan of action to help them academically and/or emotionally. The individualized score report served as a useful tool to help students visually identify their strengths and weaknesses on factors associated with academic and emotional success among AP/IB students. According to Miller and Rollnick (2013) an "important motivational factor is a discrepancy between present and desired states. . . . Goal-status discrepancy is one of the most fundamental drivers of motivation for change" (p. 243). For MAP, the score report offered students a way to visualize concretely the discrepancy between their current behaviors and those of successful students on factors associated with academic and emotional success (e.g., time management, extracurricular involvement, interest in class). Utilizing normative data as part of the process allowed students to identify and voice why performance in these areas may be detrimental to their success. Such an approach promotes youth autonomy in decision making and minimizes the likelihood of adverse reactions to more directive approaches that are often used by adults when trying to get an adolescent to change their behavior.

Student acceptability ratings also highlight some parts of MAP that need additional refinement but are still worth keeping given their high rating, such as the reminder letter sent to students 2 to 4 weeks after MAP Meeting 1. These letters were typed and sealed in envelopes that were given to the student's AP/IB teacher. It is possible teachers did not distribute the letters to all students (e.g., student absent the day letters were given out), or students may have received the envelope and lost it or thought it was for their parents. In future applications of MAP, coaches might consider making this touch point more student friendly by asking the student's preferred timing (e.g., 1, 2, or 4 weeks after MAP Meeting 1), handwriting the letter, and personally delivering the letter to permit a brief greeting and to ensure receipt.

Coach Views. Similar to students, all MAP coaches perceived the intervention to be a positive and beneficial experience for the 4 to 11 students with whom they worked. Coaches' attention to each student's level of verbal engagement and change talk during meetings suggested they were appropriately tuned into key concepts in the MI framework, which underpin MAP. For instance, MI requires a coach to shift between two types of language: change talk (*I want to; I need to; I must*) and sustain talk (*I can't; I won't, I tried but it won't work*). More research is needed to determine the intervention elements (e.g., amount of change talk; target selected; completion of 1 vs. 2 meetings; therapeutic alliance) that contribute most to goal attainment and other positive outcomes.

Coaches working with a student who exhibited more serious mental health concerns that were beyond the scope of this Tier 2 intervention experienced difficulty adhering to the MAP intervention protocol and honoring the spirit of MI while staying within the time constraint of one 50-minute class period. Considering the typical rate of psychological problems seen in adolescents (Merikangas et al., 2010), and the heightened academic demands and expectations inherent to AP/IB coursework, it is to be expected that a small portion (e.g., 10% to 15%) of Tier 2 AP/IB students will show signs of significant distress in the meeting, which signals to a SMH provider that these students would likely benefit from more intense clinical assessment and interventions. MAP is not a form of long-term therapy, crisis intervention, or mental health support to address issues beyond coping and engagement targets. Future applications of MAP should include guidelines for when and how to refer students to Tier 3 services available within and beyond one's setting.

SMH Services Provider Views. All three providers perceived MAP as an acceptable school-based intervention for youth taking AP/IB coursework at their school and liked the materials that facilitated goal specification and action planning. Often SMH providers spend more time providing intensive (Tier 3) supports (e.g., assessment for special education, provision of services specified on an Individualized Education Program, crisis interventions to prevent harm to self or others) as opposed to engaging in preventative or early interventions for students with low to moderate academic and emotional risk (Castillo, Curtis, & Gelley, 2012). MAP targets a group of students often viewed as high functioning and needing minimal supports despite research that indicates these youth experience elevated academic stress (Suldo & Shaunessy, 2013b) and are

within a developmental period associated with increasing rates of psychological distress (Merikangas et al., 2010). More data from a larger sample of SMH services providers are needed to see if trends (i.e., high acceptability ratings) are replicated among other practitioners and to elicit additional open-ended feedback.

Limitations and Next Steps for Refining and Evaluating MAP

This initial application of MAP provides preliminary support that it is a viable and acceptable Tier 2 intervention for AP/IB students with and without signs of academic or emotional problems, but it has several limitations that should be noted. Data were from a small sample of two schools, 49 students, 7 coaches, and 3 SMH providers. Future examinations of MAP delivered to a larger sample of students are needed to determine whether these initial findings are replicable in different schools with a more representative sample of participating students. Likewise, we did not examine the cultural sensitivity of MAP, but future research should examine the applicability and acceptability of the intervention when delivered to a more diverse group. The demographic features of this sample are consistent with other research findings indicating that Black students are underrepresented in AP and IB classes (Kolluri, 2018; Wildhagen, 2014), which led to a low base rate of minority students available to include in MAP.

This study is limited by challenges with participant recruitment across all groups, which led the research team to open study access to students experiencing no identifiable signs of risk. Our implementation of MAP occurred within the context of a larger research study that required human subject protections and placed restrictions on the researchers' contacts with parents via phone or email, so the research team primarily relied on the classroom teacher for recruitment. Teachers distributed parent permission forms to individual students in their classes, and then verbally reminded students each week about returning the form. This process may have led some students to feel embarrassed for being identified as "struggling" in front of their peers, consequently increasing any stigma surrounding mental health supports. A coping strategy commonly endorsed by AP/IB students is attempting to handle school-related stressors alone (Suldo et al., 2015), perhaps because they have been successful in managing earlier academic stressors on their own, which could lead AP/IB students to not value (or have limited experience with) receiving additional support from adults at school. Participation rates for MAP may increase if students are invited individually or in small groups to learn about MAP. Also, framing the intervention as "an opportunity for improved success in school," as opposed to "supports for students struggling," may be more appealing to students given their achievement-oriented mind set. Future iterations of MAP should utilize varied strategies to recruit students to participate such as holding individual meetings with students to invite them to participate, modifying the recruitment language, and opening access to all students in the class instead of just those identified as at-risk. The lack of significant differences in student acceptability scores across groups with no or identified risk provides some support that the MAP intervention is likely to be useful to many types of students who are willing to try out individualized supports. The higher participation rate we observed among at-risk students with particularly elevated levels of stress—or lower grades in their AP or IB course—suggests that such students may be most likely to take advantage of opportunities for extra support; highlighting the potential benefits of prevention and early intervention to all students might also increase participation in the MAP intervention.

This study focused on the development and field testing of the initial version of the MAP protocols, with the goal of making improvements in training and/or implementation procedures to address any identified challenges. For instance, some of the students, coaches, and SMH providers noted that the length of a MAP meeting was longer than expected for a school-based intervention. Future iterations of the intervention could examine the most impactful portions of the intervention with the aim of reducing the meeting to its key elements while still retaining the fidelity to MI. We anticipate improved acceptability in a subsequent implementation of the MAP intervention that features reduced meeting length, the aforementioned modifications to recruitment procedures, and delivery of the reminder letter in a manner that ensures personal contact. Continuous monitoring and improvement of acceptability is critical in early phases of developing any new mental health intervention (e.g., Lyon et al., 2015; Shapiro et al., 2016). Given that information from the open-ended questions posed in the current study proved valuable, future investigations of acceptability should consider research designs that supplement ratings (items with structured response scales) with qualitative data collection and analysis, for instance through interviews with key stakeholders. Future studies of a refined MAP intervention can collect effectiveness data along with acceptability and fidelity data. Incorporation of student outcomes (e.g., grades, mental health, objective indicators of behavior change/progress on goal) as part of the study design is needed to better understand the short- and long-term impact of this brief intervention. MAP was developed in tandem with a universal program (Tier 1) for AP/IB students, thus it is unclear how the application and acceptability of MAP may differ if it were implemented as a standalone Tier 2 intervention. Since this was part of a larger research study, students were offered a small incentive ($10 gift card) to participate in the meetings, which may have influenced their perceptions of acceptability. Last, it is unclear if MAP can be generalized to other groups of students since it was developed specifically with

the needs of ninth grade at-risk students taking AP/IB classes in mind. It is plausible that tenth to twelfth-grade AP/IB students would benefit from this intervention, but additional research is needed to see if older students similarly perceive this support as useful.

Conclusion

With a growing body of research suggesting that the heightened academic stressors related to performance expectations coupled with the curricular demands that AP/IB students experience can lead to deleterious outcomes (Suldo et al., 2008), there is a clear need for Tier 2 supports for students opting to take accelerated high school coursework. This project advances a new option—the MAP intervention—that is grounded in MI, an interactional style particularly well-suited to the cognitive abilities of students taking advanced-level coursework, such as AP and IB classes. The emphasis on collaboration, youth autonomy, harnessing motivation, and problem solving are critical features of a brief Tier 2 support that can be delivered in the school setting. Despite its relative brevity, multiple groups of key stakeholders (students, coaches, and SMH service providers) agreed this approach would be a valuable way to provide preventative supports for students who show signs of risk on emotional or academic indicators, even after receiving a universal SEL curriculum on coping strategies. The MAP intervention is intended to be a developmentally appropriate way to provide individualized supports to students, meet their social–emotional and acdemic needs, and enhance their success with AP/IB.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The research reported here was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A150543 to the University of South Florida. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

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Supplemental Material

Supplemental material for this article is available online.

Note

1. Cut points applied to the PSS and MSLSS to identify emotional risk evolved over the course of this first application of the screening process, such that three of the students who self-selected into MAP ultimately met the (slightly less stringent) risk criteria reported in Suldo et al. (2019) and referenced in subsequent analyses of PSS and MSLSS scores reported in this article.

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Manuscript received: December 4, 2018; Final revision received: October 4, 2019; Accepted: October 14, 2019