

Ohio's Quality and Effective Practice Registry

TERRACE METRICS

School/District/Community Agency: Terrace Metrics

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Available for Program Consultation: Yes

Available for Presentations/Workshops: Yes

General Program Overview:

Creating a District-Wide Process That Measures, Manages, and Monitors the Behavioral Health Status of All Students Grades 3-12

The Terrace Metrics (TM) system allows districts to quickly and efficiently (a) measure students' behavioral health status, (b) manage students identified as needing additional resources, and (c) monitor individual and school progress. The assessment is completed in just 15 minutes, and the results are immediately provided to members of the school's response team (counselors, social workers, etc.), who are trained extensively by TM on the software and the process. These results are converted into several products, including parent reports, access to parent- and educator-specific videos and curriculum, and comprehensive school and district reports. These results are linked to an empirically based curriculum, providing school personnel with the knowledge to design, implement and evaluate prevention and intervention programs across a multi-tiered system of supports. The process is efficient (requiring little of school resources), and the system is financially sensible for school districts and schools regardless of setting.

Terrace Metrics was created for a simple but important reason: school districts struggle with how to identify students along a behavioral health continuum. Roughly 1 student in 5 currently experiences a high level of distress that is interfering with the learning and personal development (Twenge et al., 2019). While some students may be identified through expensive and resource-taxing processes, almost 66% go unidentified and thus suffer in silence (Whitney & Peterson, 2019). Conversely, schools have no consistent and reliable way to assess youth

reporting optimal functioning, or how to leverage this information to benefit the collective behavioral health of students. Information provided by Terrace Metrics is designed to help schools (a) quickly identify and attend to students who are at the lower end of the behavioral health continuum, (b) formulate strategies to advance students higher in the continuum, and (c) support students functioning in the optimal range, to keep them at this level.

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Evidence of Effectiveness:

Data for this validation study is based on 2,997 students from grades 3 – 12 who attended four school districts and two parochial schools in Ohio, beginning in October, 2018. Four of the participating schools were at the elementary level (grades 3-5), two were at the middle school level (grades 6-8) and 4 were at the high school level. The schools were located in the Southwestern/Northwestern region of Ohio. Three of the districts and the 2 parochial schools were located within a large, urban area (metro population > 2.2 million), while a separate district was located in a suburban setting (population > 50,000). District sizes ranged from 36,000 to 1,294 students, while both parochial schools were less than 300 students. The percentage of males and females was almost identical across schools (females comprised 49.3% of the total sample). Likewise, the cultural background of students was consistent across schools and reflected the general demographics of the districts' counties: the racial/ethnic composition favored Caucasian students (82%), followed by African-American (6%), and Hispanic-American students (4%). The remaining percentages reported Native-American, Pacific-American, Asian-American and "mixed race". Approximately 43% of students received free/reduced lunch status. All districts allowed passive (i.e., "opt-out") parent consent and thus the average participation rate was 97.6%. No school reported participation rates were lower than 95%.

Regression Analyses: Individual Indicators Predicting TFS

Hierarchical regression analyses were conducted with the 2018 and 2019 validation samples. Given the consistent reliability estimates and correlations described above, the middle and high school samples were combined. Demographic variables and school location was entered in the first step, resiliency indicators were entered in the second step, and risk indicators were entered in the third step (results from the final step are reported here).

For grades 6-12, the solution captured 65% of the variance and all individual indicators were significant predictors of the TFS (at $p < .001$). Using Cohen's f^2 formula, the overall regression resulted in a large effect size. Standardized coefficients ranged from .048 (Standards) to -.53 (Depression). Results of the 2019 regression yielded similar results and captured 57.2% of the variance, with each indicator again adding unique variance to the TFS at roughly the same magnitude.

A separate hierarchical regression was conducted on the elementary school students, with the three resiliency indicators added in the first block and the ostracism indicator added in the second block. Results using the 2018 sample paralleled those found with older students: the solution captured 62.1% of the variance (resulting in a large effect size) and each indicator was a unique predictor of the TFS (standardized coefficients ranged from .21 [Global Satisfaction] to -0.32 [Ostracism]). Results from the 2018 sample found that the solution captured 64.1% of the variance, and each indicator was again a significant predictor of the TFS (standardized coefficients ranged from .14 [Positive School Experiences] to -.61 [Ostracism]).

Regression Analyses: TFS Predicting Academic/Behavioral Variable

In a series of hierarchical regression analyses, specific 2018 academic/behavioral variables served as dependent variables. The first step in the regression solution controlled for gender, lunch status, and school location. The 2018 TFS was entered at the second step and the 2019 TFS was entered at the final step. Results found that in all cases the 2018 and the 2019 TFS were significant predictors at the final step. In general, an increase in TFS contributes to a substantial increase in academic outcomes and a decrease in behavioral difficulties that hinder optimal school and interpersonal functioning.

Summary

Results show that regardless of grade level, school location, lunch status, gender, and ethnic background, all indicators assessed by Terrace Metrics provide a psychometrically sound “snapshot” of a student’s behavioral health. In addition, all indicators as well as the TFS demonstrate strong temporal stability, meaning that the system can be used over time with meaningful results. Most important, data reported herein illustrates how information obtained from the assessment significantly correlates with key objective academic and behavioral indicators.

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Capacity and Resources:

TM is staffed with educators, licensed mental health professionals, and former educational policy makers. In addition, the school version of TM has nationally prominent educators and health experts on its advisory committee (which meet on a quarterly basis). The software is cloud-based, which allows students to be assessed and monitored by school response teams regardless of whether school is in session or not.

The program is typically funded through a license fee (per student) for a 1, 3, or 5-year term (with discounts given on 3- and 5-year contracts). The cost per student is very low, making it affordable to districts regardless of location and resources. There is no tiered structure and no hidden costs; the license fee covers unlimited administration rights, access to all videos, curriculum and other resources, and ongoing onsite and remote training and monitoring.

Using the TM system allows schools to understand the behavioral health of all students, which contributes to substantial cost savings by allocating resources accordingly. Given that placement along the behavioral health continuum predicts academic and behavioral functioning (see above), schools understand which students are struggling and are able to provide them the resources they need (including adopting several resources provided by TM). In addition, they understand which students are functioning at the optimal level, either overall or within a certain indicator, and can use this information to their advantage. For example, students whose TFS is at the optimal level see themselves, others, and their future positively. Peers see these students as natural leaders. Schools can use such students in interventions such as mentoring programs to help students who are struggling.

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Family and Community Partnerships:

Parents/families play a key role in the TM system. As a primary stakeholder, parents receive a comprehensive, easy to follow report of their child's behavioral health status. While these reports are generated immediately after the student completes the assessment, it is the school's choice of when to release this report to the parent. All reports are delivered electronically to parents, who can only retrieve the results using a special code. Embedded within the report are videos and other resources that help parents understand what the indicator measures, and how they can promote deficient indicators at home. In addition, by working with members of a school's response team, parents have information on community resources that they may not have known.

Family engagement is maintained through frequently held parent nights, which many schools hold prior to their partnership with TM. These events help parents understand what TM provides and what they will receive. In addition, TM sponsors numerous parent focus groups, which provide important information on how the system can be improved to optimize their user experiences. It is noted that upgrades to the parent reports is solely due to feedback from parents themselves.

Community partners are engaged through (a) sponsorship opportunities, (b) ongoing workshops regarding the necessity of measuring behavioral health in students, and (c) information sharing sessions that help secure state and national funding for schools. These relationships are maintained through TM personnel.

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Sustainability Plan:

TM continues to grow through marketing and (more important) word of mouth. Our plan for sustainability is to seek funding sources other than school funding, which is particularly challenging during COVID. We are working with legislators in several states to fund state-wide, behavioral health screening initiatives, which reduce the burden of funding on schools.

Our ultimate strategy, which is currently implemented is to use the "train the trainer model". That is, once response teams are trained on the process, they can be used as resources for adjacent schools who are just beginning the process. The TM process is one that is quickly understood and mastered, and provides a framework with which the behavioral health of all students is measured, managed and monitored.

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