



Implementing Universal Screening: The Benefits and Challenges of Establishing a Universal Screening System

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Purpose

The purpose of this poster is to identify the key components of a successful, evidence-based universal screening system based on a review of the extant literature. The poster also addresses the benefits and challenges of maintaining such a system. Given the emergence of Response to Intervention (RTI), an analysis of universal screening is critical in order to confidently validate the utility of such a system and to examine areas for improvement.

History

The concept of universal screening predates its formal entrance into the field of school psychology. For many, the most familiar use of screening is that for health issues, such as vision or hearing impairment. By having a doctor or school nurse administer a brief health assessment, children who were identified as having a health impairment were provided with services that would allow them to optimally function in their current environment. The same logic, applied to academics, has been demonstrated through the rise of the Response to Intervention (RTI) Model. RTI emerged with the passage of the Individuals with Disabilities Education Improvement Act (IDEA) in 2004, which dramatically changed the future of special education. Prior to the IDEA legislation, special education eligibility determinations were based upon a discrepancy approach, often referred to as a "wait to fail model," in which students only received special education services if a significant gap existed between ability and achievement (Fuchs, Mock, Morgan, & Young, 2003). RTI, on the other hand, is a preventative model designed to identify students at risk for learning or behavioral disabilities early on in the educational process. Early identification aims to prevent academic failure by requiring schools to provide specialized instruction to low performing students to accommodate their unique learning needs. In order to predict and identify students who are at risk for learning or behavior difficulties, schools now rely on universal screening. Like health screening, universal academic and behavioral screeners promote student success by tracking any potential issues prior to a dramatic decrease in performance. As educators are growing more aware of the importance of prevention and the ease by which students can be identified and provided with additional instructional supports, the RTI model is continuing to thrive.

Key Components

In order for a universal screening system to be an effective, there are a certain number of factors to consider. Jenkins (2007) has outlined some of these key components that must be considered when selecting a screener for a school district. The emergence of RTI moved schools across the nation toward a more standardized screening process, but there is still a significant amount of variation between schools. When evaluating these systems, it is necessary to consider the following:

Criterion Validity: What is the correlation between performance on a screening measure and an established measure of reading?

Classification Accuracy

- Sensitivity:** Does the measure accurately identify "at risk" students who perform poorly on future criterion measures?
- Specificity:** Does the measure accurately identify "low risk" students who meet or surpass performance expectations on future criterion measures?

Consequential Validity: How will the data be used to inform instruction?

Efficiency: How time consuming and costly is the universal screening system?

The RTI model stresses the importance of prevention and evidence-based decision-making. By focusing on tools that have been well researched and address all of these components, schools can confidently use these measures to make informed decisions about instruction and how to best meet the needs of their student population.

Benefits

Early Prevention

Identifying struggling students before they demonstrate poor performance is one of the principle tenets of RTI. Research shows that students who are able to read at grade level by the end of third grade are significantly more likely to perform at a higher level than their peers who cannot read proficiently by the end of third grade (Hernandez, 2011). Universal screening identifies students before they get even further behind, dramatically increasing their odds of success in school (Lazarus & Ortega, 2007).

Structured System

An experienced teacher will be able to identify students who are struggling to meet grade level standards and provide differentiated instruction in an attempt to explicitly teach necessary skills. As humans, however, informal screening lacks the reliability and validity of more structured, systematic testing scenarios. Eklund and colleagues (2009) conducted a study examining the accuracy of teacher-referral identification of students with behavioral and emotional problems in comparison to a universal screener. The results suggest that through a teacher-referral system, students may be under-identified as needing additional support. By using a standardized system such as AIMSweb or the Dynamic Indicators of Basic Literacy Skills (DIBELS), assessment of student performance will be less biased and better reflect student performance and skill level.

Consequential Validity

Universal screening is a single step in a process to provide appropriate supports for students. The results of screening provide valuable data, but data in isolation lacks purpose. The value in data lies in the ability to use the information in order to make a change. Current universal screening systems are designed to allow educators to provide differentiated instruction and meaningful interventions to students who are deemed "at risk" and then track their progress. By linking these systems, students receive target support that can easily and accurately be evaluated.

Non-Prejudicial System

The demographic composition of school districts throughout the country is constantly changing. There has been an influx of non-native English speakers over the years, and schools are required to accommodate these students. For this reason, screening must be a viable option for every student in order for it to be meaningfully used in schools. Keller-Margulis and colleagues (2012) examined the validity and diagnostic accuracy of curriculum-based measures (CBM) in Spanish and found that it was a valid assessment for this Spanish-speaking population. Additionally, many of the most popular universal screeners have been tested for racial or ethnic bias. While some assessments have a murky history in relation to test bias, universal screeners, such as CBM and DIBELS have demonstrated validity and reliability with a variety of populations.

Challenges

Classification Accuracy

As mentioned, the ability to accurately divide students based on current and expected performance, is the primary goal of universal screening. Given the brevity of most universal screening measures, this is a challenging task. Furthermore, the direct route screening process directly places students into intervention, increasing the importance of accuracy even further. Johnson and colleagues (2010), investigated the direct route approach to screening. They found that the use of only one screening measure did not result in high levels of classification accuracy, but by adding additional measures, accuracy significantly improved. These results suggest the need to further question whether additional screening measures that may provide more accuracy would be worth implementing at the expense of efficiency.

Differential Prediction

Similar to classification accuracy, predictive validity, or the ability to accurately predict performance for all students over the course of time, is another important feature of universal screening, yet it is one that has been difficult to achieve in certain cases. Hosp and colleagues (2011) examined the presence of bias in the predictive validity of common universal screening measures across disaggregation subgroups. Their results suggest that these universal screeners may differentially predict future performance based on group factors such as economic disadvantage, limited English proficiency, disability status, and race/ethnicity. Given that studies on classification accuracy have demonstrated a low level of bias in screening measures, additional research in this area is necessary.

Floor Effects

As noted in the key components of universal screening, classification accuracy is a critical piece of universal screening. A measure must be able to accurately identify students who may benefit from additional instruction as well as students who are on track for sufficient performance given their current level of instructional support. While popular screeners have demonstrated adequate classification accuracy throughout the later elementary years, research conducted by Catts and colleagues (2009), suggests that screening data among the earlier grades may not be as useful. Catts discovered the existence of floor effects. Too many students were underperforming, perhaps because so few had been taught essential academic skills before entering the school environment. If universal screening is to be used to prevent academic failure, measures that can more accurately differentiate between students in kindergarten and first grade is important.

The Future of Universal Screening

Refining Current Systems

While research has supported the utility of universal screening systems involving brief 1-3 minute probes to assess performance in a range of academic areas, studies exist that promote the utility of a more accurate, albeit slightly more involved screening process. Compton and colleagues (2010) conducted a study with first grade students that proposed a two-stage gated screening process in which students who were identified as "at risk" in stage one, proceeded to stage two, which involved progress monitoring (PM) over a 5 week interval to measure improvement and determine which students were in need Tier 2 intervention. The results suggest that the PM measures improved predictive validity, specifically in reducing the amount of students who were initially classified as at-risk in stage one. As more schools implement universal screening, systems such as the two-stage gated screening process are important to consider when trying to most accurately identify students who are in danger of academic failure.

Researching More Effective Systems

School districts across the nation differ among a wide variety of factors, including race/ethnicity, size, and socioeconomic status. Furthermore, through various initiatives, parents have more options than ever when choosing a school district for their child. Given the transient nature of today's society, research-based, standardized systems of assessing students must be put in place that can identify at-risk students regardless of their age, gender, background, or other factors that should not affect the validity of screening instruments. By continuing to research more effective systems that can be implemented in any school with valid results, the preventative model of RTI will truly come to fruition, and students will receive the instruction necessary in order to perform at their optimal level in school.

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