

Get in Rhithm: Providing Evidence-Based Interventions to Empower Student

Self-Regulation Skills and Well-being

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Abstract

Students displaying symptoms of mental health disorders within the school setting are increasing at an alarming rate. However, despite the recognized need by systems like the U.S. Department of Education to provide evidence-based mental health interventions within the school setting, little research exists to direct schools with best practices for students' success. Factors associated with identifying effective school-based mental health intervention systems include the design efficacy on student well-being and content efficacy on self-regulation skills. Previous research discusses the concept of social innovation through co-design to lend evidence to identified best practices that have been previously researched and postulated as a solution to expedite access to effective mental health interventions. The purpose of this white paper is to examine the delivery structure and effectiveness of the evidence-based interventions Rhithm, Inc. incorporates into its application to provide students with self-regulation skills necessary to increase their overall mental well-being. A review of empirical literature examines current educational social-emotional programming and intervention trends. Findings from the literature review support Rhithm, Inc.'s ability to meet the social-emotional programming demands placed on school districts nationwide.

Keywords: mental health, school mental health, mental health well-being, student well-being, school mental health policy, social-emotional learning, mental health intervention, school services, evidence-based practices, self-regulation skills.

Contents

| | |
|---|----|
| Abstract | 2 |
| Executive Summary | 4 |
| Problem of Practice | 4 |
| Factors Associated with Effective Youth Mental Health Programming | 5 |
| Design Efficacy On Youth Well-being | 5 |
| Content Efficacy On Self-Regulation Skills | 6 |
| Solutions Associated with Effective Youth Mental Health Programming | 8 |
| Design Efficacy On Youth Well-being | 8 |
| <i>Technology integration</i> | 9 |
| <i>Intervention length</i> | 10 |
| <i>Visual applications</i> | 10 |
| Content Efficacy On Self-Regulation Skills | 12 |
| Conclusion | 13 |
| References | 14 |

Executive Summary

This white paper focuses on examining the delivery structure and effectiveness of the evidence-based interventions Rhithm, Inc. incorporates into its application to provide students with the self-regulation skills necessary to increase their overall mental well-being. An empirical literature review examines current school mental health programming needs and sets a foundation to explore Rhithm Inc's capacity to provide evidence-based mental health solutions to schools and students. Factors include design efficacy on student well-being and content efficacy on self-regulation skills. A solution demonstrating how Rhithm, Inc.'s digital platform meets current school mental health needs accompanies the findings.

Problem of Practice

Signs and symptoms of mental health disorders impact approximately one in six American youths aged 6-17 each year (National Alliance on Mental Illness, 2021). A mental health disorder is "a mental, behavioral, or emotional disorder resulting in serious functional impairment, which substantially interferes with or limits one or more major life activities" (National Institutes of Health, 2016, p. 1). The increase in mental health needs impacting school-aged students has created an environment where education settings have become a primary source to identify and implement student access to mental health services (Weist & Paternite, 2006). However, despite the identification of schools by Jacob & Coustasse (2008) as the "de facto mental health system" for students, uniform ways to deliver mental health services in schools and evidence supporting the effectiveness of the interventions offered continues to be minimal (Green et al., 2013; Kutash et al., 2006). Factors to consider when examining school-based mental health interventions to empower student self-regulation skills and increase overall student well-being include design efficacy and content efficacy on self-regulation skills.

Additionally, consideration should be given to research findings demonstrating the impact digital technology has on youth and the interest they show in using digital platforms as a way to track their overall health (Mei et al., 2020).

Factors Associated with Effective Youth Mental Health Programming

When examining school-based mental health interventions to empower student self-regulation skills and increase overall student well-being, factors to consider include design efficacy and content efficacy. Digital mental health technologies intended to act as a resource and/or intervention for individual mental health needs have recently gained recognition as a format to increase access to mental health support (Jones et al., 2020). In addition, evidence supporting the use of digital mental health technologies continues to grow, despite limited research (Hollis et al., 2017). One way of ensuring the implementation of evidence-based practices within digital mental health technologies is to incorporate knowledge and feedback from licensed clinical mental health professionals (Torous et al., 2019).

Design Efficacy On Youth Well-being

Research stressing the importance of school-based mental health interventions currently exists. However, steps and procedures outlining how to provide mental health services to students successfully are limited (Lyon & Koerner, 2016). Nevertheless, approaches to student mental health care can develop by applying various sound methodologies already viewed as practical and established (Chorpita et al., 2011). One way of introducing sound methodologies is through the application of social innovation. Social innovation is "the design and implementation of new solutions that imply conceptual, process, product, or organizational change, which ultimately aim to improve the welfare and wellbeing of individuals and communities" (OECD, n.d., para. 1). Social innovation can occur through the process of codesign, which includes

ongoing involvement of the end-users in "various stages of the production process" (Voorberg et al., 2014, p. 3).

Chorpita et al. (2011) discuss codesign concerning mental health intervention as involving treatment researchers and end-users; both apply professional knowledge of empirical evidence to create a treatment foundation and establish "practice-based evidence" (Margison et al., 2000, p. 123). Application of the definition of codesign implies researchers provide priori knowledge concerning what should be involved in the treatment process, while professional clinical end-users contribute contextual advice related to the environment. This practice allows for a tailored treatment procedure that aligns with the proposed environment, provider, and end-user (Berman et al., 2020). Ultimately, a codesign process allows sound evidence-based practices to be established and implemented at a rate necessary to meet current student mental health needs within school settings.

Content Efficacy On Self-Regulation Skills

Eccleston & Kennedy (2022) note in a previous Rhithm, Inc. publication that self-regulation interventions instructing students on the importance of taking responsibility for their academic achievement are gaining popularity within the school setting (Le & Wolfe, 2013). Self-regulation is adapted from the work of Toshalis and Nakkula (2012) and defined by Le and Wolfe (2013, p. 37) as "adapting and controlling one's behavior under a range of conditions and circumstances." Nowell et al. (2019) identify the following forms of self-regulation intervention to be impactful in supporting student success:

1. Providing concrete terminology and visuals to make abstract emotion identification and regulation concepts understandable for children.
2. Using fidget tools to release negative feelings/energy.

3. Visual guidance on diaphragmatic breathing.
4. Visual guidance with step-by-step directions on contracting and relaxing the body to ease tension.
5. Simple yoga poses.
6. Writing and drawing to support the expression of thoughts and feelings.
7. Positive imagery as an aid to help students shift their thought patterns.

Additionally, many teachers face challenges in knowing how to successfully identify and support students exhibiting mental health symptoms (Frauenholtz et al., 2015). Soares et al. (2014) suggest that currently, a gap exists in teachers' ability to understand how mental health needs cause students to respond and act a certain way. In turn, this gap in understanding creates insecurity and complicates teachers' ability to manage everyday situations involving mental disorders. Kutcher et al. (2015) refer to this gap in their research when discussing findings demonstrating how a teacher's ability to intervene and navigate a scenario where a student is experiencing mental health needs can impact their attendance and overall academic performance. Given the concerns associated with a teacher's understanding of how to intervene best when a student displays mental health symptoms, intervention practices need to be improved to support student well-being and learning outcomes. Schools relying on counseling services to provide student mental health interventions often underestimate the bandwidth currently available from the counselor(s) to support the entire school population (Keys et al., 1998). A more streamlined and evidence-based approach is necessary to ensure that proper interventions are in place.

Solutions Associated with Effective Youth Mental Health Programming

Inspiration for Rhithm, Inc.'s Wellness Check-in Tool (also referred to as the Emoji Wellness Check-In) came from CEO Josh Knutson's work as a clinical mental health therapist in

California. Knutson created the Wellness Check-in Tool with input from licensed clinicians, including child psychologist and Clinical Associate Professor at Boston University School of Medicine, Carryl P. Navalta, PhD., and practitioners versed in the mental health field. The Wellness Check-in Tool structure was inspired by a conversation with licensed clinical social worker Kate Gowan and is a simple five-step survey measuring students' mental, emotional, energy, physical, and social well-being.

Programming within the Rhithm, Inc. application leverages the clinical principles of neuroplasticity and habit formation. Activities are designed for students and adults to tap into their nervous system and regulate themselves in the moment based on their current needs. In addition, the Rhithm, Inc. application seeks to provide students and adults with simple, healthy habits that can be practiced regularly and result in a positive and lasting impact on the brain and body.

Design Efficacy On Youth Well-being

The vision and design behind the Rhithm Inc. application align directly with Chorpita et al.'s (2011) concept of codesign. Licensed clinicians design Rhithm activities and lesson videos to give Rhithm users access to the same skills, interventions, and knowledge that one would discover in individual therapy or coaching. Bearman et al. (2020) discuss the issue of providing schools and students with inadequate interventions created in a research setting that does not consider the various school environmental challenges most districts face. Thus, Rhithm Inc. strives to provide an alternative for schools by supplying identified practices from treatment researchers that apply the knowledge and expertise of clinical end-users to create an evidence-based product.

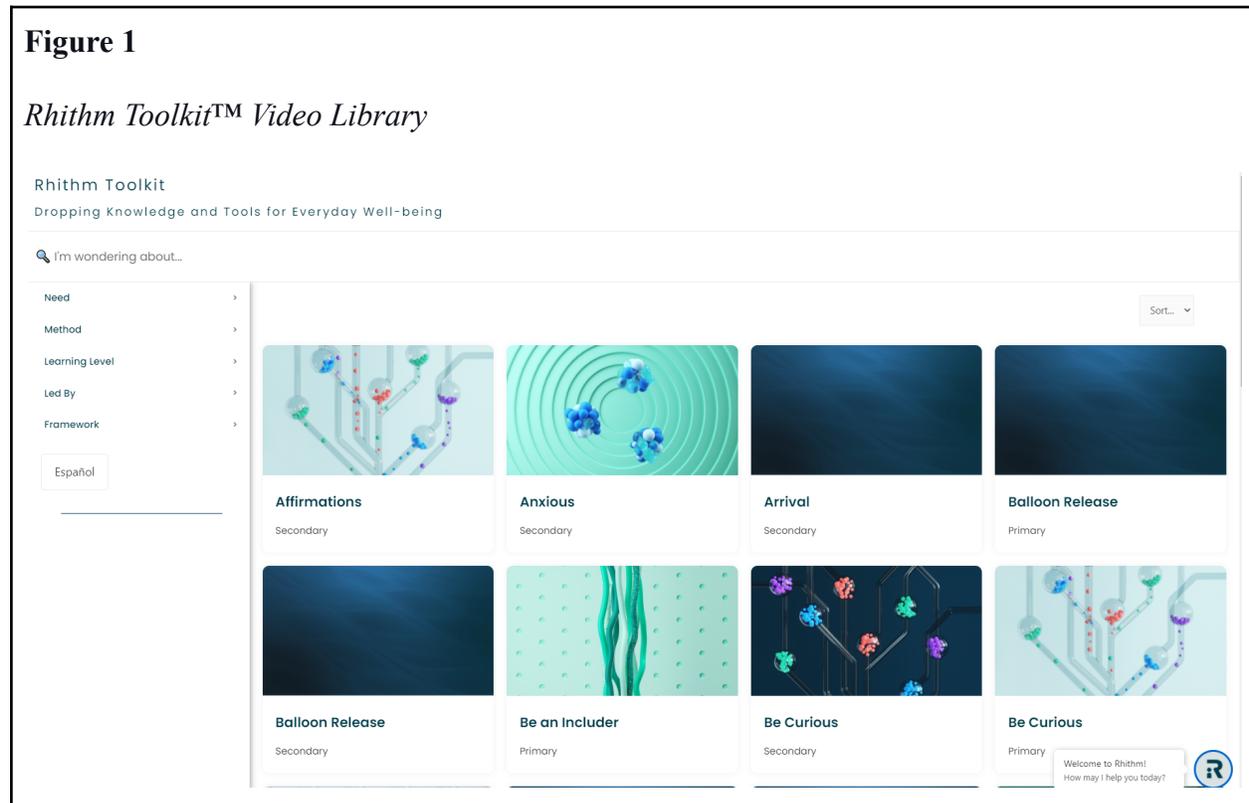
Technology integration. E-mental health accounts for a catalog of digital technologies working to provide web-based mental health support through multiple modalities such as computers, tablets, and smartphones (Hollis et al., 2017). Although effective interventions for mental health disorders exist, access to services can be limited, making technology an effective way to increase access to care (Grist et al., 2019).

Rhithm Inc. is a fully accessible web-based application that provides school districts, administrators, counselors, and teachers with real-time data related to overall student well-being. The app also provides interventions and video practices designed by licensed clinical mental health providers. With licensed clinicians overseeing media content creation within the Rhithm, Inc. application, students receive the self-regulation skills necessary to succeed academically and socially. The Rhithm, Inc. application aligns with the essential qualities of successful self-regulation intervention discussed by Nowell et al. (2019); by providing concrete language and visuals to help students identify and express their emotions through differentiated self-regulation strategies. Rhithm Inc's team of licensed clinical professionals continually develop short video segments that provide students with the types of activities identified by Nowell et al. (2019) to aid self-regulation through deep breathing, visualization, and stretching. The Rhithm Inc. algorithm works in conjunction with the Wellness Check-in Tool, composed of five questions related to mood, energy, emotion, physical body, and social life. Once students have submitted their responses, the algorithm selects one of the videos created by Rhithm's clinical staff that best aligns with their current well-being needs.

Intervention length. The creation of video segments comes from the Rhithm, Inc. clinical media team. The application's algorithm provides students and staff with the appropriate self-regulation tools that align with the information submitted by the user during the five-question check-in. Videos do not exceed three minutes in length and are a form of micro-learning that allows users to gain essential knowledge in a short period of time. Kapp and Defilice (2019, p. 11) define micro-learning as "an instructional unit that provides a short engagement in an activity intentionally designed to elicit a specific outcome from the participant." Microlearning increases learner engagement by providing information in multiple formats that improve the learner's overall knowledge and understanding of the concepts (Shail, 2019).

Visual applications. The Rhithm, Inc. application uses concrete language and visuals to help students identify and express their emotions via the Wellness Check-in Tool and differentiated self-regulation strategies discussed by Nowell et al. (2019) as effective measures to aid in prefrontal cortex regulation. Furthermore, findings from Gikas and Grant (2013) suggest that learners view social media learning platforms in a positive light, while Cheong et al. (2012) found millennials to view web-based technology used in learning to be entertaining. Rhithm, Inc's use of visual aids within a technological landscape aligns with Gikas and Grant's (2013) and Cheong et al.'s (2012) findings by providing engaging and interactive social-emotional learning to students and school personnel via a delivery platform that aligns with a preferred way of learning. Georgiev et al. (2004) discuss learning through digital media as an opportunity for learners to access knowledge and support whenever and wherever they are. Rhithm, Inc's ability to reach students in a digital environment allows for ongoing utilization and access of Rhithm's video tools whenever students require continual or intermittent social-emotional support.

Additionally, Rhithm, Inc. utilizes human interaction and 3D animation videos to guide students through various self-regulation skills to enhance their overall well-being (see Figure 1).



Research from Park et al. (2016) found that visual cues and 3D animation can enhance the viewer's overall learning outcomes. Findings from Cooper (1998) demonstrate the need for students to be active participants in the learning process to create mental schemas. Mental schemas are "mental structures that an individual uses to organize knowledge and guide cognitive processes and behaviour" (Encyclopedia Britannica, n.d.). When students can be actively involved in their learning, their attention, cooperation, and ability to translate the lesson into their cognitive structure increases, reducing an extraneous cognitive load that hinders the students working memory from processing new information (Khalil et al., 2005). The Rhithm, Inc. application allows students to be actively involved in their social-emotional learning by

providing engaging videos that use a variety of interactive 3D models and human videos that guide students through self-regulation practices.

Content Efficacy On Self-Regulation Skills

In addition to the practical and thought-out design of the Rhithm, Inc. application, curation of the content focusing on student self-regulation skills and overall student well-being comes from a licensed clinical team of mental health experts. The contribution by a clinical team allows Rhithm, Inc. to create videos and materials that align directly with current evidence-based mental health frameworks. Rhithm, Inc. provides users with the Rhithm Toolkit that allows users to search for videos according to their evidenced-based framework of choice, including the Collaborative for Academic, Social, and Emotional Learning (CASEL), Cognitive Behavioral Therapy (CBT), and Dialectical Behavioral Therapy (DBT). Having an array of therapeutic frameworks for students, teachers, and counselors to access allows for flexibility in meeting the individual needs of each student. Additionally, research from Smith et al. (2018) has shown how accessing digital mental health tools can be just as effective as receiving the same type of therapeutic tools in an in-person setting.

Additionally, the Rhithm, Inc. application has the ability to remove limitations related to teacher understanding of student mental health needs (Frauenholtz et al., 2015; Soares et al., 2014) and counselor availability constraints (Keys et al., 1998) by utilizing the application's algorithm that selects and provides students with clinician backed videos tailored to their identified mental-health/well-being needs. Meanwhile, vital data documenting student areas of need and/or concern are recorded with the Rhithm, Inc. application and provided in real-time to school personnel. Utilization of the Rhithm, Inc. application ensures students receive critical

social-emotional tools despite their teacher's current understanding of mental health and/or availability of the school counselor(s).

Conclusion

In conclusion, Rhithm, Inc's application is a vital mental health well-being tool that allows school systems to provide students and staff with tailored mental health resources and support. Through the application of co-design, Rhithm, Inc. has applied research findings with the experience and knowledge of licensed clinical professionals to create a mental health well-being application tailored to the unique needs of both school systems and individual users alike. Clear data outcomes allow school personnel to stay up to date with the overall school climate and the individual well-being needs of students. With school and student mental health needs on the rise, Rhithm, Inc. delivers a tailored solution that seamlessly fits into daily educational programming and utilizes a design built to minimize disruptions to the instructional schedule.

Rhithm Inc.'s approach to school and student social-emotional well-being is a revolutionary way to provide critical mental health interventions across school district settings. In addition to evidence-based interventions aimed at reducing mental health needs and symptoms, schools receive critical data that allows them to make decisive and vital decisions impacting the overall well-being of students and staff. Clinical input from licensed professionals allows Rhithm, Inc. to separate itself from other digital mental health platforms and ensures that students receive up-to-date and impactful mental health interventions specific to increasing overall student engagement and well-being.

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