ACT in Schools: A Public Health Approach

Tyler L. Renshaw¹, Sean N. Weeks¹, Anthony J. Roberson², & Stephanie Vinal¹

¹ Utah State University

² University of Houston, Clear Lake

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Correspondence should be addressed to Tyler Renshaw, Psychology Department, Utah State University, 2810 Old Main Hill, Logan, UT 84322. Email: tyler.renshaw@usu.edu

Abstract

This chapter makes the conceptual and empirical case for using acceptance and commitment therapy (ACT) with youth in school settings. We provide background for this project by making a logical, evidence-based case for school-based mental health services more generally. We then outline a public health approach to using ACT in schools via multitiered system of supports (MTSS), which emphasizes scaled prevention at universal, targeted, and intensive levels.

Following, we review the existing literature on ACT in schools—concluding there is adequate evidence to support use at the targeted level, encouraging yet weaker evidence supporting use at the universal level, and promising yet extremely limited evidence for use at the intensive level.

We close the chapter by discussing the limitations and challenges of using ACT in schools, offering future directions for progressing research and practice. We suggest future work in this area might especially benefit from (a) enhancing the methodological rigor of research designs in school-based studies, (b) testing the viability of brief or focused ACT at the targeted level in schools, (c) investigating the treatment utility of ACT-related process measures in schools, and (d) expanding the scope of ACT in schools to promote the wellbeing of teachers and other educators.

Keywords: Acceptance and commitment therapy, psychological flexibility, youth mental health, school mental health, public health, multitiered systems of supports, prevention, intervention

ACT in Schools: A Public Health Approach

This chapter overviews the use of acceptance and commitment therapy (ACT) in schools. Given there are many types of schools that serve different populations of people, we should first clarify what we mean by this term. For the purposes of this chapter, *schools* refer to formal institutions that function to educate people by providing learning environments (e.g., buildings and classroom spaces) that are staffed by trained teachers, who administer curricula to a defined population of students. Such schools can be compulsory or voluntary, may be sponsored by public or private entities, and can have broader (e.g., liberal arts) or narrower (e.g., technical skills) educational aims. We are primarily concerned here with schools that serve youth or young people, who are pre-college or pre-university age. Within the United States, this level of education is typically referred to as *primary* (serving children) or *secondary* (serving adolescents) schooling and is contrasted with *post-secondary* or *tertiary* schooling (serving adults). Schools for young people are typically held in-person on a physical campus—with online or remote exceptions made for public health conditions, such as the COVID-19 pandemic—and structure a large proportion of youths' waking hours (6–8 hours per day for at least 9 months per year) throughout their formative years of human development.

The use of ACT in schools to benefit youth has been warranted by the broader literature suggesting ACT is a promising treatment with youth *outside* of schools (e.g., Harris & Samuel, 2020), which, in turn, has been warranted by the much larger and stronger literature indicating ACT's efficacy for improving a variety of mental health concerns with adults in clinical and community settings (e.g., Gloster et al., 2020). Given there is another chapter in this volume focusing specifically on applications of ACT with youth more broadly (see Chapter 27), we refer interested readers to that chapter for deeper background and more intellectual scaffolding on

ACT with young people. For this chapter, we assume ACT is a promising transdiagnostic intervention with youth outside of schools (again, see Chapter 27) and focus more narrowly on making the conceptual and empirical case for using ACT *in schools*. We begin by outlining the need for school-based mental health services generally. We then transition to sketching a public health model for applying ACT in schools, which is guided by a multitiered, prevention-oriented, systems-level service delivery framework. Following, we review the existing literature on school-based ACT—fitting studies into the public health framework we outlined previously. We then close out the chapter by taking up the limitations and challenges of the existing literature, offering what we believe are important future directions for progressing a public health approach to using ACT in schools.

The Case for School-Based Mental Health Services

Over the past two decades, the landscape of youth mental health research has shown concerning trends regarding the increasing prevalence of psychopathology and risky behavior among young people (Collishaw, 2015; Twenge et al., 2019). Recent epidemiological studies indicate that approximately 16.5% of youth struggle with significant mental health problems (Whitney & Peterson, 2019). In an earlier national sample of adolescents (Merikangas et al., 2010), there was an overall lifetime prevalence rate of 22.2% experiencing severe impairment or distress resulting from a mental health condition, and about a 50% prevalence rate when including lower levels of severity and distress. Although rates of specific problems have been shown to vary across gender, age, race/ethnicity, socio-economic, and sexual orientation variables, the upshot of longitudinal research seems to be that mental health concerns in youth are elevated and rising. The surge in externalizing problems, such as conduct disorder, oppositional defiant disorder, and attention-deficit/hyperactivity disorder, is especially salient in

schools due to the disruptive nature of the symptoms associated with these problems. However, internalizing problems, including anxiety and depression, are also growing at alarming rates and have been shown to be associated with substantial school and quality of life impairments (Bitsko et al., 2018; Mojtabai et al., 2016).

To date, some of the best available evidence estimates that 7.4% of youth had received a diagnosis for a disruptive behavior disorder, including oppositional defiant disorder and conduct disorder (Ghandour et al., 2019). Additionally, 9.4% of youth had a diagnosis of ADHD, 7.1% for an anxiety related disorder, and 3.2% for a mood disorder. Even more striking is the fact that externalizing and/or internalizing problems have been shown to co-occur or be comorbid in about three-quarters of cases (Ghandour et al., 2019). The risks associated with these mental health concerns is another, significant cause for concern. Over the past two decades, mental health problems among youth have been associated with higher rates of law-breaking, violence, risky sexual behavior, drug and alcohol use, and incarceration (American Academy of Pediatrics, 2001; Skowrya & Coccozza, 2007). Additionally, youth mental health concerns have long been predictive of school performance problems, such as poor academic achievement, decreased classroom engagement, higher likelihood of drop-out, and increased disciplinary action and expulsion (Dupéré et al., 2018; Murphy et al., 2015).

Arguably the most noteworthy and alarming outcome associated with youth mental health problems is suicide. The Centers for Disease Control and Prevention (CDC, 2016a) recently found that 49 states are seeing an average 25% increase in rates of suicide. This growth has led to suicide accounting for more deaths among youth than all natural causes combined, making it the second leading cause of death (following accidents) for adolescents and young people (CDC, 2016b; Wyman et al., 2010). Another recent longitudinal study showed that

suicide rates have steadily increased over the last decade for youth of all ages, and that suicide has nearly tripled for young people ages 10–14 (Curtin & Heron, 2019). While the conditions contributing to these increased levels of suicidality and related mental health problems are far from understood, the current data is driving researchers, community organizations, and government task forces to attempt to answer this question. As part of this project, much work has been devoted to understanding the landscape of mental health service provision among youth.

Unfortunately, patterns of evidence strongly indicate that most youth who need mental health services do not consistently (or ever) receive treatment. Findings from the 2016 National Survey of Children's Health indicate that 49.4% of youth with a mental health disorder did not receive needed treatment from a mental health professional. Interestingly, however, there is also much variability in access rates depending on geographic location—ranging from a low of 29.5% in Washington D.C to a high of 72.2% in North Carolina (Whitney & Peterson, 2019). Similarly low service access rates were observed in a longitudinal study by Costello et al. (2014), who found that 55% of adolescents with significant mental health concerns did not receive treatment within the past 12 months. Findings from Costello et al. and others (e.g., Lipari et al., 2016) also highlight concerning disparities in youths' access to mental health services, indicating that young people from diverse and minoritized backgrounds are especially unlikely to get the mental health supports they need.

The most frequently studied mental health service settings for youth include (a) inpatient settings, (b) outpatient clinics, (c) schools, (d) other general medical settings (e.g., pediatrics or family practice), (e) child welfare services, and (f) juvenile justice systems. Recent large-scale service access studies indicate that most youth who get mental health services do so within specialty mental health settings (~24%) and schools (~23%), with far fewer services received

across all other settings (Costello et al., 2014; Lipari et. al., 2016). A meta-analysis of service access studies spanning the last few decades yielded similar results, showing that schools were the most-accessed mental health service setting for youth (22.1%), followed closely by outpatient mental health care (20.56%)—with substantially fewer services provided in primary care (9.93%), inpatient (9.05%), child welfare (7.9%), and juvenile justice (4.5%) settings (Duong et al., 2020). Given the generally low access rates among youth, as well as the fact that about 50% of youth getting services do so in schools, educational settings have developed a reputation as “gateway” or “defacto” mental health care systems for youth. This seems to be especially true for diverse and minoritized youth, who families are more likely to be socioeconomically disadvantaged and therefore have greater need to rely on public sector resources, like schools, for mental health services (Villagrana, 2010).

Taken together, the literature sketched above lays out a logical, evidence-based case for the import of school-based mental health services. Merrell et al. (in press) summarize the progression of these empirical points like so: (a) many youth experience significant mental health problems; (b) most youth with mental health problems do not access treatment; (c) for youth who do get treatment, schools are a substantial source of services and often function as the defacto mental health system; and (d) there are clear disparities related to service access for minoritized youth, which might be partially addressed via school-based service delivery. Given this line of reasoning, an increasing amount of empirical attention and public policy has turned toward establishing, maintaining, and evaluating the viability of school mental health services (Weist et al., 2014). There is now an abundance of empirical literature demonstrating the effectiveness of school-based prevention and intervention efforts for improving the mental health of youth from diverse backgrounds, presenting with a variety of risks and problems, across both

primary and secondary school settings (e.g., Sanchez et al., 2018; Mychailyszyn et al., 2012). Although investigating the relative effectiveness of services provided *in schools* compared to those provided *outside of schools* (e.g., outpatient clinics) has not been a priority to date, the literature that does exist suggests comparable outcomes across settings (Weist et al., 1999).

Like most mental health service sectors, the school-based mental health movement values and prioritizes evidence-based practice (EBP). Yet as school mental health services have expanded and evolved over the years, so have the logistical growing pains associated with integrating EBP within educational settings. As noted by Shernoff et al. (2017), some key reasons for such challenges are that EBP protocols (a) “do not consistently address multiple referral concerns and have redundancies that are burdensome” for school-based practitioners (p. 221), (b) “lack cultural responsiveness and flexibility to adapt to the local context” (p. 225), and (c) “service delivery in schools is broad in scope” requiring applications across levels (e.g., schoolwide or classroom) that are often disconnected from how EBPs were developed (i.e., at the individual level of service delivery; p. 226). To successfully meet these challenges, Shernoff et al. and others (e.g., Marchette & Weisz, 2017) have advocated for a strong focus on *transdiagnostic* or *common elements* interventions that can be provided within a *public health service delivery model* and implemented *across settings in real-world care*. The remainder of this chapter centers around how using ACT within a public health framework might be one potential solution for improving the reach and benefit of school mental health services.

A Public Health Framework for Using ACT in Schools

The big idea driving the public health framework as applied to school mental health is that taking a population-based, prevention-oriented approach to service delivery can reduce the prevalence and impact of youth mental health problems (Herman et al., 2020). The public health

approach is often contrasted with the *medical model* or *clinical framework*, which emphasizes the diagnosis and treatment (as opposed to prevention) of individuals (as opposed to populations) who are presenting with already significant impairment or distress or disease (as opposed to varying levels of risk). However, we suggest it more helpful to view both frameworks as complimentary, rather than contrasting or mutually exclusive. The following parable about “the children in the river” nicely illustrates the importance of both the public health and clinical approaches:

To illustrate the point there is a fable concerning three people who were having a picnic beside the river. As they were enjoying their lunch in the sunshine, one looked up to see a child floating down the river. Immediately he leaped in and brought the child ashore. As he did so, his companions saw two more children helplessly bobbing in the water. Upon diving in to bring them out, they were dismayed to find still three more children in the river. Very quickly, they realized that the river was alive with struggling children in need of rescue. As they frantically worked to save as many as possible, one of the three suddenly left the water and began to run upstream along the bank. Seeing this, the others shouted after him in alarm, “Where are you going? Come back, we must help these children!” Continuing to run, he yelled, “You do the best you can there, I’m going up the river to try to stop them from falling in!” (Kisler, 1967, as quoted in Drum & Figler, 1973, p. 13)

In this parable, the situation at the outset is parallel to the clinical framework. Children potentially drowning in the river and thus in dire need of help are analogous to youth experiencing significant mental health concerns who could benefit from treatment. The bystanders who are, fortunately, available to pull the periled children from the river are comparable to clinicians who are ready and able to treat youth in need. The analogy to the public

health framework enters the scene, then, as soon one of the bystanders runs upstream.

Recognizing that they do not have capacity to help all the struggling children already in the river, he endeavors to identify the source of the problem and prevent more children from endangering themselves. This person's goals are analogous to the preventive and population-based values of interventionists working within a public health framework. The important point to emphasize here is that the goals of the work downstream in no way discounts or is incompatible with the intentions of the work upstream. Rather, both types of work serve necessary and complementary functions that contribute to the children's wellbeing. And so it is with mental health professionals working within clinical and public health frameworks. Those practitioners metaphorically running upstream play no more or less critical a role than those working metaphorically downstream: both are collaborating to reduce the overall prevalence and impact of youth mental health concerns.

Multitiered Systems of Support in Schools

With this parable in hand, we turn now to fleshing out the public health approach in schools by discussing a common service delivery heuristic known as *multitiered system of supports* (MTSS; Kilgus & von der Embse, 2019; Stoiber, 2014) and describing how ACT can be applied within this heuristic. MTSS is commonly operationalized via three tiers or levels of service delivery. We represent the key features of this model in Figure 1. Within MTSS, *tier 1* or *universal level* refers to low-intensity services that are provided to *all* students within a school population, regardless of risk status. The aim of this level of service delivery is to promote overall population wellness, which prevents the onset of new problems and buffers against existing problems. *Tier 2* or *targeted level* refers to moderate-intensity services that are provided to *some* students, based on the presence of risk factors or early indicators of problems. The aim

of this level of service delivery is to support students “at risk” early and efficiently, preventing the possibility of worsening risk factors or the development of more severe problems over time. Finally, *tier 3* or *intensive level* refers to high-resource services that are provided to *few* students, based on presenting with significant problems or extremely elevated levels of risk. The aim of this level of service delivery is to support students “in risk” immediately and effectively, preventing further development of chronic and costly problems throughout the lifespan.

The key features of the public health approach that shape MTSS in schools are not necessarily the percentage of students served within each tier, nor the number of tiers included within the model, nor the techniques or procedures employed at each tier. Rather, the critical aspects are (1) the scope of students receiving services and (2) the intensity of services provided to those students. In Figure 1, these two features are represented by interlocking triangles that form a comprehensive public health service delivery model, represented by the full rectangle. The relationship between these two triangles is scaled up or down, depending on need for supports within a target population. Another way of thinking about these two key features of MTSS is that, when taken together, they function as a relative ratio that helps guide *the time or effort or resources that should be reasonably expended per pupil* (Merrell et al., in press). Thus, at the universal level (tier 1), the cost-per-pupil for services should be relatively low, whereas this ratio thickens appreciably when moving to the targeted level (tier 2). The intensive level (tier 3), by contrast, will have the densest cost-per-pupil ratio and should therefore be engaged sparingly. Harkening back to the parable of “the children in the river” can help further illustrate this ratio, as we can clearly intuit how it takes more time and effort per child to rescue them from the rushing river (analogous to tier 3 services) than it would to remove them from the water prior to wading too deeply (analogous to tier 2 services) or even preventing them from entering the

river in the first place (analogous to tier 1 services).

When it comes to applying ACT within MTSS, we suggest that the two key characteristics (i.e., scope and intensity), three tiers (see Figure 1), and cost-per-pupil ratio are sufficient guiding principles. It is also important to emphasize that the multiple tiers of service delivery are not necessarily mutually exclusive, and that school-based mental health professionals using ACT might provide services across all levels within MTSS—contingent, of course, upon their time, resources, and expertise. In addition to being transdiagnostic, then, a public health approach to ACT in schools should also be *trans-tiered*.

Trans-tiered ACT in Schools

At tier 1 (or universal level), ACT might be applied as a schoolwide or classroom-based prevention curriculum that aims to promote competencies that facilitate psychological flexibility within a general sample of students. This type of programming might be provided by a mental health professional, but it might also be feasibly implemented by a properly trained teacher or paraprofessional, as other effective interventions at this level have been (cf. Durlak et al., 2011; Klingbeil et al., 2017). The *Connect* curriculum (<https://www.connect-pshe.org>), which is grounded in the DNA-V model of ACT (Hayes & Ciarrochi, 2015) and other wellbeing literature (Basarkod, 2019), is a recent example of potential applications at this tier. *Connect* is a pay-for-use curriculum that is designed for implementation by teachers in classroom settings. It consists of over 250 lesson plans (with supplemental resources) for youth in primary schools (age range 4–11 years). In relation to the United Kingdom’s education standards, *Connect* is considered a personal, social, and health education (PSHE) curriculum, which is analogous to a social-emotional learning (SEL) program in the United States. What makes *Connect* fitting for tier 1 is that its implementation is unambiguously universal and its goals are clearly prevention-oriented,

as the curriculum aims to lower the likelihood of mental health problems and promote the wellbeing and resilience of all children within a school (<https://www.connect-pshe.org>).

Considering one *Connect* session facilitated by an educator will reach 20+ youth, the cost-per-pupil ratio of this ACT-based intervention is relatively thin.

At tier 2 (or the targeted level), ACT could be used in schools as a pull-out, group-based intervention for select students identified with emerging or sub-clinical mental health problems. This level of service delivery is typically provided by well-trained and credentialed (or supervised) mental health professionals yet is relatively short-term and more structured (compared to tier 3 applications). We suggest the *Get Out of Your Mind and Into Your Life for Teens* workbook (Ciarrochi et al., 2012) and the *Thriving Adolescent* curriculum and its associated DNA-V model (Hayes & Ciarrochi, 2015) are exemplars of what ACT might look like at this level within a public health approach. To illustrate a potential application at this level, imagine the hypothetical case of a secondary school classroom that has recently completed a PSHE or SEL program as a tier 1 intervention. Although most youth in the class are likely to respond positively to the curriculum, some may not—and others, although benefitting somewhat, are likely to need more targeted support to address elevated risk or emerging mental health concerns. To keep things simple, let us say 4/20 (20%) of the pupils in this classroom fall into this “at risk” zone. To further support these 4 students, then, a school-based mental health professional might transition them to a tier 2, ACT-based intervention, which involves pulling them out of class twice a week to participate in a 30-minute, short-term (e.g., 8 weeks) group intervention based on content the *Thriving Adolescent* manual. This content includes various psychoeducational lessons, worksheets, exercises, and scripts that integrate ACT with positive psychology to help adolescents connect with their values, develop healthy relationships, and

successfully transition into adulthood (<https://www.thrivingadolescent.com>).

At tier 3 (or intensive level), ACT in schools is relatively indistinguishable from ACT *outside* of schools (i.e., in clinical or other community settings). What we mean by this is that ACT at this level is likely to be provided by mental health professionals in individual therapy contexts that are personalized, long-term, and targeted to significant mental health concerns. The primary difference, however, is that this ACT is provided on the school campus during regular school hours. Mental health professionals using ACT at this level may be full-time employees of the school (e.g., school psychologists, school counselors, or school social workers) or they may be contractors working for the school (e.g., child clinical psychologists, marriage and family therapists, or community mental health counselors) with the express purpose of providing intensive therapeutic services for the highest-risk students. The *ACT for Adolescents* manual (Turrell & Bell, 2016) and the *Mindfulness and Acceptance Workbook for Teen Anxiety* (Turrell et al., 2018) are good examples of potential ACT applications at this level. Extending the hypothetical case example provided at tier 2, imagine that 1/4 of the students involved in the pull-out, group-based ACT intervention fails to benefit from that targeted support—and even goes on to develop chronic, severe anxiety that contributes to school refusal and academic failure. To further support this one high-needs student “in risk,” the school-based mental health professional might transition them to a tier 3 version of ACT, which consists of a pull-out, 50-minute, personalized, and longer-term (e.g., 16 weeks) treatment guided by the materials prepared by Turrell and colleagues, mentioned previously.

Additionally, considering that intensive level interventions in schools are often multi-system, collaborative, and “wraparound” in nature, ACT at this top tier might benefit from coordinated supports for youths’ caregivers, who are key stakeholders and often implementers

for interventions that extend beyond school boundaries. *The Joy of Parenting* (Coyne & Murrell, 2009) and *Acceptance and Commitment Therapy: The Clinician's Guide for Supporting Parents* (Whittingham & Coyne, 2019) may be useful resources for supporting caregivers in these intensive, collaborative intervention situations. To further extend the hypothetical case example from earlier, an ACT-based approach to parent consultation might be a useful adjunct at tier 3 to increase the probability of a parent's successful adherence to a home-school behavioral intervention for reducing the youth's school refusal. Clearly, the cost-per-pupil ratio of the treatment at this most intensive level (tier 3) is much thicker than the ratio for the group-based intervention at the targeted level (tier 2), which, in turn, is denser than the rather thin ratio for classroom-based curriculum at the universal level (tier 1).

The examples of ACT applications within MTSS mentioned previously—as well as the several practical resources we highlighted—are intended to be illustrative, not exhaustive. Ultimately, ACT might take a variety of forms across the tiers in schools, being operationalized into countless curricula, workbooks, treatment manuals, and supporting materials. The most important consideration will always be how well any given form of ACT matches the aims and key characteristics of the MTSS level at which its applied (see Figure 1). Given that ACT is inherently a practical, flexible, principle-based approach to intervention (Hayes et al., 2012), there are likely to be myriad ways in which its core processes and techniques might be adapted within schools to benefit local populations of students. Moreover, as the hypothetical, trans-tiered case example provided earlier in this section illustrates, individual students might even benefit from ACT-based supports across multiple levels of support within MTSS in schools. In the next section, we review the existing literature investigating the use of ACT in schools so far. Along the way, we draw out how these ACT innovations might be best conceptualized within

MTSS in schools by focusing on key implementation variables and study characteristics.

Review of the Research Using ACT in Schools

While the literature base regarding ACT in schools is relatively young and growing, our review suggests that researchers have already developed and tested ACT interventions across the three levels of MTSS: universal, targeted, and intensive. Results from these studies suggest promising—yet variable—outcomes across the tiers in schools and generally corroborate the findings supporting the promise of ACT with youth outside of schools (see Chapter 27 in this volume). Yet this line of research in schools is also more limited than that outside of schools, as it is characterized by fewer overall studies, less methodologically rigorous studies, and more questionable internal validity resulting from potential construct or content contamination (more on this later in the chapter). The approach we take for this review is narrative in nature—highlighting the key features and findings of select studies that we believe illustrate applications of ACT within a public health framework in schools. We begin by focusing on studies that seem to be conducted at tier 1 (or universal level), followed by those that seem well suited for tier 2 (or targeted level) and, finally, tier 3 (or intensive level). We recognize at the outset that our tier-by-tier categorization of these studies is based on our personal interpretations of the match between a given study’s research aims and scope with our understanding of the public health framework and MTSS in schools (see Figure 1). Reasonable people may therefore disagree with our classifications, and we therefore recommend holding them lightly and focusing more on their heuristic value for fleshing out public health applications of ACT in schools.

Tier 1 or Universal ACT

The earliest evaluation we identified at this level was a schoolwide case study by Dixon (2013), who reported on a universal, ACT-based curriculum in an alternative elementary setting.

In this project, the schoolwide implementation consisted of 30-minute ACT lessons delivered by school staff to each classroom at the beginning of each school day, with a supplementary ACT “book club” for teachers held once a week, which provided opportunity to discuss ACT-related concepts. There were also some committed action components facilitated by school staff at the classroom level, including student goal setting and teacher contingency management to promote positive pupil behavior. While Dixon’s (2013) report was mostly anecdotal, quantitative results indicated that students’ attendance rates, psychological wellbeing, and grades improved school-wide. The curriculum piloted in this study eventually evolved into the *Accept–Identify–Move* (AIM) curriculum (Dixon & Paliliunas, 2018), which has since been tested with more rigorous empirical methods, albeit with more targeted samples and at more intensive levels of service delivery (see Wilson et al., 2021, for an example use of the AIM curriculum at tier 3).

While there is a compelling amount of literature indicating that (non-ACT) mindfulness-based interventions (e.g., Klingbeil et al., 2017) and traditional cognitive-behavioral strategies (e.g., Mychailyszyn et al., 2012) can be effective when implemented at the universal level in schools, Burckhardt et al. (2016) endeavored to expand the literature by evaluating the value-added of an ACT component to a universal prevention program. This culminated in a combination ACT and positive psychology curriculum known as *Strong Minds*. Burckhardt et al. (2016) conducted a pilot study with a sample of 267 secondary students in grades 10–11. *Strong Minds* consisted of 16 half-hour workshops held in the school auditorium over the course of three months, starting with sessions addressing the six core processes of psychological flexibility: present moment awareness, defusion, acceptance, self-as-context, values, and committed action (Hayes et al., 2012). Pre–post outcome data was collected on measures of depression, stress, anxiety, and subjective wellbeing. Students were randomly assigned to either

the treatment group (i.e., *Strong Minds*) or an education-as-usual control group. So, although the implementation was not truly universal in nature (due to randomization), the study was open to all students regardless of risk status, and the implementation mirrored a universal approach across two secondary grades. Results are therefore reasonably generalizable to tier 1 supports in schools. Tenth graders participating in *Strong Minds* showed statistically significant and meaningful improvements in depression, anxiety, stress, and subjective wellbeing compared to the education-as-usual control. Interestingly, however, eleventh graders participating in the treatment did not show these same benefits relative to the control. Consideration of descriptive statistics indicated that high ratings of stress and anxiety at baseline were significantly reduced at posttest across grades and conditions, including the control, suggesting a potential maturation effect among the eleventh graders may have limited detection of intervention effects.

As a follow-up to this *Strong Minds* study, Burckhardt et al. (2017) went on to test another universal ACT intervention—sans the positive psychology elements—with a separate sample of tenth grade students. This second study used a similar research design yet tested the ACT intervention against a “pastoral care” control condition, which was part of the standard educational curriculum within the parochial school of interest. But this time they found no statistically significant differences between groups for any pre-post measures across outcomes. In another and much larger universal ACT study, Van der Gucht et al. (2017) evaluated change on outcomes related to quality of life, psychological flexibility, and internalizing and externalizing problems across 34 classrooms, 14 schools, and 586 adolescents. Like Burckhardt et al. (2016, 2017), Van der Gucht et al. (2017) used a similar research design and compared their intervention to an education as usual control. And like the second Burckhardt et al. (2017) study, they found no statistically significant differences in their pre-post measures across

outcomes. However, unlike Burckhardt et al. (2017), it was noteworthy that their intervention protocol was teacher-led (as opposed to facilitated by a trained professional), classroom-based (as opposed to auditorium-based), and lasted only four weeks (as opposed to a few months). While Burckhardt et al. (2017) and Van der Gucht et al. (2017) found null results, we did identify at least one additional tier 1 study with more promising results. Specifically, Takahashi et al. (2020) found meaningful reductions in hyperactivity/inattention and avoidance behavior in their large-scale study investigating the malleability of psychological flexibility and emotional/behavioral problems in 299 adolescent students. The implementation in this study was comprised of six biweekly, classwide ACT sessions (5 hours total dosage), which were loosely based on the content from Ciarrochi et al.'s (2012) *Get Out of Your Mind and Into Your Life for Teens* workbook and facilitated by clinical psychologists.

The reason we classified each of the studies noted above at the universal or tier 1 level is because they were all (a) delivered in schools, (b) in either a classroom or other large-group environment (i.e., within a school auditorium), and (c) involved general samples of students that participated in the intervention regardless of mental health risk or problem status. We estimate that, if implemented in real-world school settings, the cost-per-pupil ratio for each of these interventions would be reasonable and rather thin—appropriate for universal supports. That said, the amount of variability in the methodologies and outcomes of these studies is striking. Each evaluated a novel universal ACT-based intervention, with no available replication or generalizability studies (to our knowledge). The quality of research designs ranged from weak to strong and results were mixed, ranging from null to meaningful. Overall, then, we conclude that the evidence is currently *weak* for supporting use of ACT at tier 1 in schools.

Tier 2 or Targeted ACT

One study we identified at the tier 2 level was conducted by Barandeh et al. (2017), who compared the effects of two interventions in a high school setting for reducing procrastination among students who self-identified as having procrastination difficulties. Specifically, 60 high school girls participated in an eight-session treatment in which they were randomly assigned to an education-as-usual control group or one of two treatment conditions based on (1) ACT or (2) choice theory (a framework that emphasizes the importance of self-determination and assuming responsibility for choice-making; see Glasser, 1998). What made this intervention targeted in nature was that these 60 students were selected for participation from a much larger sample of 260 students, based on baseline questionnaire scores indicating elevated levels of procrastination compared to the general sample. Additionally, unlike the universal interventions described in the previous subsection, which were broad in content scope, the content of this intervention was tailored to procrastination-related concerns. Pre-, post-, and follow-up data were collected on participants' self-reports of procrastination. Both interventions showed statistically significant improvements in self-ratings of procrastination compared to the education-as-usual control condition. No difference was discovered regarding the relative impact of the two treatment conditions, suggesting their beneficial effects on procrastination were comparable.

In another school-based tier 2 study, Pahnke et al. (2014) piloted the efficacy of group-based ACT for improving stress, hyperactivity, prosocial behaviors, anxiety, depression, and anger in students with high-functioning autism spectrum disorder (ASD). Although the outcomes of interest in this study were broad in nature, we considered this intervention targeted because it focused specifically on youth with high-functioning ASD, who by nature of their disability status have a higher likelihood of risk related to developing a host of behavioral and mental health concerns. This pilot study used a quasi-experimental design, comparing participants in the ACT

group to an education-as-usual control group. More specifically, 28 high-functioning adolescent students with ASD across six classrooms and two schools were assigned to either the treatment or control group based on their current class grouping. Participant data was collected at pre-, post-, and follow-up time points using multiple measures of teacher-report and self-report behavioral and emotional problems. The intervention was structured as a 6-week program that met twice weekly for 40-minutes per session. Overall, the ACT intervention showed statistically significant improvements on teacher- and self-reports of stress relative to the education-as-usual control. Teacher-reports of hyperactivity and prosocial behaviors also showed meaningful improvements in the treatment group compared to the control, although self-reports of similar outcomes were not different between the conditions. Self-reports of anxiety, depression, and anger were significantly improved in the ACT group relative to the control group.

Other studies at the tier 2 or targeted level have looked at the effects of ACT on measures of psychological flexibility and its subprocesses—including experiential avoidance, mindfulness, and valued living—though few have found significant improvements (Brookshier, 2016; Livheim et al., 2015; Livings, 2017; Mirzahosseini et al., 2016; Murrell et al., 2015; Pentchenva-Burns, 2016). While these process measures in targeted groups have yet to show much sensitivity to change, a good variety of mental health outcomes measures have demonstrated statistically significant and meaningful responses to ACT interventions. Indeed, emotion regulation, depression, anxiety, stress, health development, coping skills, school engagement, and positive psychological capital have all been found to significantly improve through ACT interventions targeting youth with substantial risk factors (e.g., Fang & Ding, 2020) or who are presenting with emerging mental health concerns (e.g., Livheim et al., 2015; Luciano et al., 2011; Saibini, 2013). Given the several studies identified at this level, we conclude that using ACT at tier 2 in schools

has stronger and more consistent evidential support compared to applications at tier 1. Yet, as with tier 1, the literature at this level is still limited by an abundance of varying protocols and procedures, none of which have yet to be directly replicated or systematically generalized, as well as broad ranging outcomes of interest, only few of which have been replicated. The key characteristic differentiating ACT studies at tier 1 and tier 2 in schools, then, is not so much the scope of outcomes as it is the scope of the population of interest: universal ACT has been provided to broad and general samples of students, whereas targeted ACT has narrowed in on sampling a variety of at-risk populations of students.

Tier 3 or Intensive ACT

Although we suggested previously that using ACT at the intensive level in schools could be relatively straightforward and comparable with using ACT in clinical or other community therapy contexts, we should note that we only identified two studies at this level—and that only one of these two conform with our recommendations. This study was conducted by Wilson et al. (2021) and consisted of an intensive level application of the AIM curriculum (Dixon & Paliliunas, 2018) with three upper-primary students who were identified as displaying significant emotional, disruptive, and off-task behaviors in the classroom. Students were pulled from their classrooms for 30-minute ACT sessions once during the school day, which consisted of a mixture of psychoeducation, discussion and interaction, worksheets, metaphorical and experiential activities, and reflection upon their experiences. The authors note that although all sessions were based on content from the AIM curriculum, they were also tailored to participants' unique histories, presentations, and developmental level. This study used a noncurrent multiple-baseline design across participants, with an embedded alternating treatments component that was intended to control for the potential confounding effect of simply pulling the students out of class

to receive treatment. Following the course of 11 ACT sessions, intervention effects were analyzed for each participant, with results showing substantial improvements in disruptive and on-task behaviors in the classroom compared to both baseline and control conditions.

The only other study we identified that seemed to meet the criteria for an intensive ACT intervention was an open-trial evaluation of a school-based substance use treatment program that incorporated ACT, motivational interviewing (MI), contingency management, family sessions, and medication management as a treatment package for 41 adolescents (Lintz et al., 2019). This treatment package was provided over 12 weeks for youth with identified substance use disorders who were being served in three school-based health clinics. Lintz et al. note that the ACT and MI components of the intervention were manual-standardized yet individualized—and that this combination of approaches was chosen via collaboration among clinicians, researchers, and youth following the failure of a classical cognitive-behavioral therapy approach to treatment in these school-based health centers. Individual and family sessions of ACT+MI typically occurred weekly and lasted 45–60 minutes, whereas the frequency and duration of the contingency management and medication management components of the treatment package were not specified in the report. Ultimately, results following participation in the 12-week treatment package were promising, with students showing statistically significant improvements in substance use, school engagement, and emotional wellness. Interestingly, the average number of sessions completed by participants was only 7.4, yet the social validity ratings provided by participants for each session was extremely high (average of 38.2 out of 40 possible points). Furthermore, qualitative feedback received from the students, therapists ($N = 3$), and a school Principal was likewise positive—indicating appreciation for the flexibility of the ACT+MI intervention model as well as the convenience of the school-based treatment approach.

Considered separately, these two studies (i.e., Lintz et al., 2019; Wilson et al., 2021) seem to provide promising evidence supporting the use of ACT at tier 3 in schools. However, when compared directly with each other, sharp differences in study quality, scope, and intention become apparent. One study presents a single-case experimental design; the other presents an open-trial, nonexperimental group-design. One study implemented a relatively focused ACT treatment; the other implemented a multi-element treatment package with an ACT+MI component (among other potentially therapeutic components). One study targeted classroom-specific problem behaviors; the other targeted substance use plus subjective wellbeing outcomes. Indeed, when considered closely, these two studies seem incomparable across most methodological variables that matter. The thread that ties them together at the intensive level, then, is the simple fact that both studies endeavored to intervene with youth in schools that had been previously identified as having educationally or clinically significant mental health problems. Thus, the cost-per-pupil ratio for both treatments is relatively thick compared to the ratios for those intervention studies we cited at tier 2 and tier 1 (see above).

Given we only identified two tier 3 studies—and considering their obvious methodological heterogeneity—the most realistic and low-inference conclusion we can offer for ACT at the intensive level is that the evidence is promising yet extremely limited. To shore up evidence at this level moving forward, we recommend that future research be conducted to test more pure applications of ACT in schools using more rigorous research designs, as has been done successfully with ACT outside of schools (see Chapter 27). And if researchers continue testing ACT components within treatment packages at this level, as did Lintz et al., then we suggest component analysis or dismantling studies will be necessary to quantify the value-added

of ACT when applied in the context of other EBPs. Overall, considering the existing literature supporting applications of ACT across the tiers in schools, the upshot seems to be that the strongest evidence is found at tier 2, with encouraging yet weaker evidence at tier 1, and promising yet extremely limited evidence at tier 3. We believe there is enough empirical support across the tiers to provide proof-of-concept for using ACT within a public health framework in schools. Yet much work remains to be done to establish strong and consistent empirical support for this project at each respective level of prevention.

Future Directions for ACT in Schools

Beyond the truism that “much more research is needed” on ACT across the tiers, we believe there are several other fruitful directions for progressing ACT work in schools. For example, at tier 3, the differential effectiveness of ACT for treating common presenting problems faced by school-based mental health professionals—such as externalizing problems (see Twohig et al., 2008) and bereavement (see Renshaw et al., 2016)—is currently unknown. And this is especially true when compared to other well-established EBPs for addressing similar concerns in schools. Thus, although we assume ACT functions transdiagnostically at this tier, we do not yet have evidence to support this claim nor to demonstrate that ACT is superior (or inferior) to other EBPs with longer track records for improving a variety of youth mental health concerns (cf. Weisz et al., 2013). As another example at tier 3, the relative effectiveness of ACT *in schools* compared to ACT *outside schools* remains unspecified. Although we believe the public health approach warrants the use of ACT in schools regardless of whether it has comparable or diminished effects relative to ACT outside of schools, we suggest that explicitly testing and quantifying these relative effects is worthwhile—especially because it could lead to uncovering implementation moderators that might influence the usefulness of ACT with youth

across settings. As yet another example, more rigorous research designs would be beneficial for evaluating ACT across the tiers, with a particular focus on probing the mechanisms of change that are purported to drive ACT's effects (see Kazdin & Nock, 2003, for an overview of methods toward this end). Although some studies of ACT in schools have shown changes in purported process variables (e.g., Sabaini, 2013, Takahashi et al., 2020), none have used rigorous enough designs to conclude that changes in these processes *precede* or *account for* or *have functional relationships with* changes in mental health outcomes. Thus, at bottom, the theory of psychological flexibility underlying ACT has yet to be systematically validated in schools.

The few future directions we just sketched are all focused around upgrading the research designs and methodologies for evaluating ACT in schools. We expect there are likely many more possible improvements (beyond those we have mentioned) to be made on this theme. For the remainder of this section, however, we turn our attention to key future directions that have more substantive implications for shifting and expanding the potential applications of ACT in schools. The three potentials we find most compelling in this space are: (1) exploring the viability of brief or focused ACT in schools, (2) improving the measurement of ACT-related processes with youth in schools, and (3) expanding the scope of ACT in schools to include intervention with teachers and other educators.

Trying Focused ACT in Schools

Over the past decade, Strosahl and colleagues (2012) have been developing a line of work known as *focused acceptance and commitment therapy* (FACT). FACT aims to spark behavior change in a brief or few-session format, within contexts that are often fast-paced and dynamic in nature, such as primary care. Beginning with short interviews to assess the function and impact of symptoms, FACT generates a quick case conceptualization that is grounded in

psychological flexibility theory. The approach then moves speedily—usually within the same, initial session—to introducing reframing strategies for promoting change-oriented motivation and then implementing awareness, openness, and/or engagement strategies that are intended to affect targeted behavior changed. Some empirical data points have been generated to support the use of FACT with adults. For example, Glover et al. (2016) found that a 4-week, group-based FACT implemented within a VA integrated care context produced statistically significant and meaningful improvements in patient quality of life, depressive symptoms, perceived stress, perceptions of mental health functioning, and physical health functioning. Furthermore, Kohtala et al. (2015) observed that a 4-week, individualized FACT implemented in a university lab-based setting had statistically significant improvements on depressive symptoms, psychological inflexibility, general symptom severity, and subjective wellbeing—and that most benefits were maintained at the 6-month follow-up. To our knowledge, however, FACT has yet to be empirically evaluated with youth nor in schools.

We suggest FACT might be particularly useful within school mental health service delivery models—and that it is likely to fit especially well as a tier 2 or targeted level intervention within MTSS (see Figure 1). At this level, it is optimal for interventions to be brief, easy to implement, adaptable to individual and group-based delivery formats, and capable of positively affecting multiple outcomes. FACT fits the bill for each of these characteristics. For example, a school-based mental health professional might provide FACT to groups of adolescent students who have screened positive for mental health risk at the universal level, indicating they warrant more focused intervention beyond what is currently available schoolwide. As another example, this same provider might use individualized FACT with students referred by teachers for mental health support as a first-gate intervention—to see if their concerns might be remedied

with a thinner cost-per-pupil ratio than would be required by engaging in individualized, intensive, longer-term ACT. Although FACT has yet to be tested with youth, we believe the viability of this model is warranted by the promising and growing literature demonstrating that brief—and even single-session—interventions implemented with youth across a variety of settings, including schools, can substantially improve multiple mental health outcomes (Schleider et al., 2020). Thus, we encourage researchers interested in this topic to systematically try FACT with youth in schools, and to compare FACT with other (non-ACT) brief intervention options (e.g., growth-mindset interventions; Schleider & Weisz, 2018).

Measuring ACT-Related Processes in Schools

In addition to advancing intervention and treatment models, we suggest much work is needed to improve the measurement of ACT-related processes in schools. The public health approach and MTSS assumes that evidence-based assessment will be employed to identify the scope and severity of problems, which can then be matched with the appropriate level of support (Kilgus & von der Embse, 2019). However, measurement within the MTSS framework typically focuses on risk factors and outcomes—largely ignoring treatment mechanisms and therapeutic process variables. Given ACT is premised on a theory of multidimensional and interacting processes of behavior change (Hayes et al., 2012), we suggest measurement of these variables might facilitate more appropriate and precise decision-making regarding how to match students with appropriate tiers and types of ACT-based support. As with any other measures of psychological variables, however, measures of ACT-related processes should have acceptable technical characteristics for the population and context in which the assessment data is used to support their construct validity (Strauss & Smith, 2009). Generalizations regarding the validity of measures developed with adults or within clinical contexts are therefore insufficient for guiding

decision-making with youth in schools. Thus, although a variety of ACT-related process measures have been developed—such as the Multidimensional Experiential Avoidance Questionnaire (Gámez et al., 2011), Cognitive Fusion Questionnaire (Gillanders et al., 2014), Valuing Questionnaire (Smout et al., 2014), Committed Action Questionnaire (McCracken, 2013), and the Multidimensional Psychological Flexibility Inventory (MPFI; Rolffs et al., 2016)—the available construct validity evidence for these measures, which largely does not include children and adolescents, does not yet justify their use in schools.

To date, the ACT-related measure that appears to have the most empirical support for use with youth and in schools is the Avoidance and Fusion Questionnaire for Youth (AFQ-Y; Greco et al., 2008). The AFQ-Y is a 17-item (full version) or 8-item (short version) self-report rating scale that contains item content relating to two core processes targeted by ACT—cognitive fusion and experiential avoidance—and was based heavily on the adult-oriented Acceptance and Action Questionnaire (Hayes et al., 2004). Youth respond to the AFQ-Y's items using a 5-point scale ranging from *Not at all True* to *Very True*, and the measure is used by calculating a composite score—where higher scores are interpreted as reflecting greater degrees of psychological inflexibility. Although several studies have generated validity evidence supporting use of the AFQ-Y with youth in clinical and non-clinical community samples (e.g., Greco et al., 2008; Murriss et al., 2017), it seems that only a single validation study supports use of the AFQ-Y for intentional school mental health purposes. Specifically, Renshaw (2017) found adequate reliability and validity evidence for interpretation and use of the AFQ-Y as a universal screener for clinical levels of depression and anxiety among secondary students. Although this one study is surely better than none, it does not provide evidence to justify broad, multitiered applications of the AFQ-Y within school mental health services. Evidence is still wanting, for example, to

demonstrate that the AFQ-Y could be used for evaluating the effectiveness of universal ACT-based prevention programming (e.g., *Connect*) or for progress monitoring students' responsiveness to targeted, group-based ACT (e.g., *The Thriving Adolescent*) in schools. Some intervention studies in schools have indeed measured changes in process variables (e.g., Sabaini, 2013, Takahashi et al., 2020), yet these have not been conducted with a measurement-oriented lens and, thus, have not rigorously investigated the construct validity of the measures employed for these purposes. We therefore suggest systematic and thorough lines of school-based research are warranted not only with the AFQ-Y but also with other ACT-related measures that might have treatment utility for informing efforts across the tiers in schools.

Using ACT with Teachers and Other Educators

As our final future direction, we suggest that ACT in schools might expand its capacity for promoting human wellbeing by broadening its scope to target teachers and other educators. Our earlier review of the literature on ACT in schools (see above) focused exclusively on studies with youth, yet we mentioned in our review of the public health model (again, see above) that ACT might also be used to benefit caregivers (e.g., Whittingham & Coyne, 2019) when school-based mental health professionals are collaborating with them to support home–school interventions. This same logic that extends applications of ACT to parents also suggests the use of ACT with teachers and other educators, such as administrators and paraprofessionals working in schools, as school-based providers often consult and collaborate with them, too. Additionally, growing concern regarding teacher stress and burnout have resulted in educators becoming the focus of intervention themselves (e.g., Iancu et al., 2018). Therefore, ACT might be beneficial not only for helping teachers better support students but also for targeting and improving teacher wellbeing in its own right, both of which are worthy goals within a school mental health context.

In fact, a few studies have already tested ACT-based interventions with school staff, yielding promising results. Jeffcoat and Hayes (2012) conducted a randomized waitlist-controlled trial with 236 K–12 educators, wherein participants in the treatment group received a self-help ACT book. They found statistically significant improvements in the treatment group across teachers' anxiety, depression, and stress outcomes. In another study, Biglan et al. (2013) conducted a randomized waitlist-controlled study in which preschool teachers working with children with special needs participated in an ACT-based workshop. Those in the treatment condition evidence statistically significant increases in mindful awareness and valued living as well as reductions in experiential avoidance. Similarly, McConachie et al. (2014) conducted a waitlist-controlled study wherein support staff working with children diagnosed with an intellectual disability or behavioral disorder participated in an ACT-based workshop. Their findings showed statistically significant reductions in psychological distress at posttest and reductions of thought suppression at follow-up. Taken together, these studies provide proof-of-concept evidence for expanding the scope of ACT to promote the wellbeing of teachers and other educators. However, given that other cognitive-behavioral interventions (e.g., Iancu et al., 2018) and even (non-ACT) mindfulness-based interventions (e.g., Klingbeil & Renshaw, 2018) have been shown to be effective for reducing burnout and improving teacher wellbeing, future research would do well to narrow in on the value-added of ACT compared to other available EBPs for promoting teacher wellbeing.

Conclusions

This chapter overviewed the use of ACT in schools. We began by making the case for school-based mental health services generally and then moved to outlining a public health model for applying ACT in schools. Following, we reviewed the existing literature on school-based

ACT with youth—placing these studies within the context of the larger public health framework for school mental health work. We then took up the limitations and challenges of the existing literature, offering several future directions for progressing a public health approach to using ACT in schools. As we close out this work, we wish to reemphasize several of our key conclusions—scattered throughout this chapter—that seem especially beneficial for guiding researchers and practitioners working in this area. We boil these down here to our “top 10 take-home messages,” which we hope readers will find both memorable and useful:

1. Many youth experience significant mental health problems and, unfortunately, most do not consistently (or even ever) access appropriate treatment.
2. For youth who do access treatment, school-based services are a substantial (and often defacto) source of mental health intervention.
3. MTSS in schools is a useful heuristic for applying a public health framework to address the mental health concerns of a local school population (see Figure 1).
4. As the “children in the river” parable illustrates, the public health approach is best viewed as complimentary—as opposed to contrasting or mutually exclusive—with the clinical framework of mental health services.
5. Given its practical, flexible, principle-based, and transdiagnostic features, ACT is well-suited to functioning as a *trans-tiered* intervention within MTSS in schools.
6. So far, the available evidence for ACT in schools suggests adequate support for use at the targeted level (tier 2), encouraging yet weaker support for applications at the universal level (tier 1), and promising yet extremely limited evidence at the intensive level (tier 3).

7. Component analysis or dismantling studies are needed to determine the value-added of ACT when used within treatment packages and in combination with other EBPs in schools.
8. More rigorous research designs are warranted to validate the connection between ACT's purported mechanisms of change and the outcomes produced by ACT-based interventions in schools.
9. A couple fruitful directions for furthering applications of ACT with youth in schools include testing the viability of FACT at the targeted level (tier 2) as well as pursuing systematic measure development studies focused on the treatment utility of ACT-related process measures for informing supports across the tiers.
10. ACT in schools might expand its capacity for promoting human wellbeing by broadening its scope to target teachers and other educators.

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Figure 1. Visual representation of multitiered system of supports (MTSS) in schools.