An Acceptance and Commitment Therapy Approach to Adolescent Suicide

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Abstract

Approximately 4,600 American adolescents commit suicide each year, and adolescent suicide rates are on the rise. The consequences of suicidal behavior are far-reaching, and understanding the development of patterns that contribute to ideation and attempt are crucial to prevention and intervention. This paper outlines an experiential avoidance model of suicidality and discusses an Acceptance and Commitment Therapy (ACT) approach to treating adolescent suicidal behavior. A case study is reviewed, along with literature relevant to the risk factors and trajectories correlated with suicide in adolescents. Although recent evidence indicates that ACT is generally useful with adolescents with related concerns, a thorough literature review indicates that no specific work has investigated the efficacy of ACT for suicidal behavior in youth.

Key Words: Adolescent; Suicide; Acceptance and Commitment Therapy, Experiential Avoidance

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Prevalence of suicide and suicidal behavior in youth is distressing, to say the least. Suicide is the third leading cause of death of 10- to 24- year-olds in the United States, with approximately 4,600 deaths from suicide each year (Centers for Disease Control and Prevention, 2014). The greatest increase in rate of suicide in the past decade has been in individuals in the 15 to 24 age range (Centers for Disease Control and Prevention, 2011a). Further, between 100 and 200 attempts occur for every completed suicide among individuals aged 15 to 24 (Goldsmith, Pellmar, Kleinman, & Bunney, 2002). In 2012, 16% of 9th through 12th graders reported they had seriously considered killing themselves within the last year, and 13% had a specific plan for doing so (Centers for Disease Control and Prevention, 2011b). Approximately 7% of American adolescents attempt suicide each year (Centers for Disease Control and Prevention, 2012).

Suicidal ideation and suicide attempts are often precipitated by negative personal or social contextual factors. Adolescents who attempt suicide commonly have a preexisting psychological disorder, such as a depression or anxiety (Bridge, Goldstein, & Brent, 2006; Nock et al., 2013). Gould, Shaffer, Fisher, Kleinman, and Morishma (1992) reported that depression, antisocial behavior, and substance use are the most reliable predictors for adolescent suicide. Early exposure to alcohol has also been linked to increased suicidality in high school students (Epstein & Spirito, 2009).

A history of trauma is associated with adolescent suicidal behavior; additionally, adverse, life-altering events, including abuse, experiencing the death of a loved one, and/or facing a change in school or home environments are all strong predictors of suicidal thoughts and behavior (de Wilde, Kienhorst, Deikstra, & Wolters, 1992; Dube et al., 2001). Dube et al. (2001) calculated that 80% of child and adolescent suicide attempts in their study would not have occurred if participants had not been exposed to one or more adverse events. Having experienced just one negative life event increased the probability of suicide attempt during childhood and adolescence by 1.4 times. Unfortunately, most adverse events are not singular. Having experienced seven or more adverse events increased the risk of suicide attempt during adolescence 51-fold (Dube et al., 2001).

Several trajectories may lead to suicidal behavior, including substance abuse, affective disorders, anxiety disorders, thought disorders, problems in social relationships, and physical health problems (Helliwell, 2007; Luoma & Villatte, 2012; Méan, Righini, Narring, Jeannin, & Michaud, 2005; Mościcki, 2001; Sareen, Houlahan, Cox, & Asmudson, 2005; Siris, 2001; Tang & Crane, 2006). Given that there are multiple risk factors and potential pathways leading to suicide, there is no acknowledged set of symptoms for suicidality. Suicidal behavior occurs over a broad range of psychiatric disorders at varying frequencies, and can appear even in individuals with no diagnosis (Chiles & Strosahl, 2005; Williams, Duggan, Crane, & Fennell, 2005).

Some authors conclude that suicide attempts are difficult to predict as there are many complex factors involved (Bertolote, Fleishmann, De Leo, & Wasserman, 2004). One moderate indicator of suicide probability is having completed one or more previous attempt(s); while estimates vary, most researchers agree that at least 40% of adolescents who attempt suicide once will attempt again (Lewinsohn, Rohde, & Seely, 1996). If individuals are often alone, have a serious plan, and genuinely wish to die, the odds of fatality greatly increase (Miranda, De Jaegere, Restifo, & Schaffer, 2014). However, given that adolescents with suicidal behavior are prone to impulsivity and substance use (Garland & Zigler, 1993), even individuals who attempt primarily in efforts to gain attention should be taken quite seriously.

Consequences of Adolescent Suicide and Suicidal Behavior

The consequences of adolescent suicide are far-reaching. There are medical, legal, social, and personal costs. Every year, in the United States alone, non-fatal suicide attempts cost about 4.72 billion dollars (Yang & Lester, 2007), and it is estimated that youth suicide costs society more than $6 billion a year (Center for Disease Control and Prevention, 2012). A single suicide in the 10 to 24 age group costs, on average, $1,632,550 (Centers for Disease Control and Prevention, 2005). One adolescent suicide can lead to other suicides, with some instances of suicide "clusters" among adolescents who attend the same school. A suicide receiving media attention can also act as a trigger for more incidences (Gould, 2001), and surviving the suicide of a loved one increases the likelihood of suicide in the survivor (Brent, 2010; Brent, Bridge, Johnson, & Connolly, 1996).

The emotional impact on family and close friends of the suicide victim is also significant; survivors typically experience many complex and distressing emotions, including guilt, anger, abandonment, denial, shock, and helplessness (AAS, 2008; Jordan, 2001). If an adolescent attempts suicide but survives, psychological distress and behavioral problems tend to dramatically escalate (Groholt & Ekeberg, 2009). In addition, the teen and/or parents may incur large medical and legal bills and may require disability (Yang & Lester, 2007). These financial and emotional costs tend to exacerbate one another. Life event stress and chronic stress predict further suicidal ideation and attempts; poor problem-solving skills, including avoidance, make ideation worse (Grover et al., 2009).

These costs may be even higher if the adolescent is avoidant of his/her thoughts, feelings, and bodily sensations. The tendency to attempt escape of internal psychological experiences, including the events that occasion them, is termed experiential avoidance (EA; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Opportunities for experiencing disconfirmation of danger in the environment or contacting valued reinforcers are missed when individuals engage in behaviors to avoid painful internal experiences (Barlow, 2000; Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Kashdan & Kane, 2011).

As an example, consider that an adolescent boy is worried that a girl he likes will decline if he asks her out on a date. He does not want to experience rejection, so he never asks her out. In avoiding the experience, he does not get to learn that she may have said yes. He also does not have the chance to experience doing something that matters to him - connecting with her. He will not learn that if something means a lot to him, then he can do it – even when he is afraid, and even if it is scary, or hurts in the moment. He will not have the chance to understand that, regardless of her response, his world can and will go on. Working with self-doubt and potential embarrassment, he can gain a sense of empowerment in following through with a valued behavior. Bahraini et al. (2013) found that ability to identify values and behave consistently with them was associated with decreased suicidal ideation, even when psychopathology, suicidal behavior, and relevant demographic variables were statistically controlled. Such gains are all missed if he avoids asking her out.

Experiential Avoidance

EA is a process that focuses on functional classification, and while it may refer to less problematic examples (e.g., doing work to avoid feeling guilty about a late deadline), it plays a large role in severe pathology. In fact, EA is recognized across numerous theoretical orientations and is expressed in a myriad of forms of mental and physical health problems in adults and youth (Hayes et. al., 2004; Hayes et al., 1996; Kaplow, Dodge, Amaya-Jackson, & Saxe, 2005; Taylor & Stanton, 2007).

Up to a quarter of the variance within behavioral health problems can be explained by EA, including those behaviors identified as aforementioned risk factors and trajectories associated with suicidality (Hayes et al., 2006). For example, nonsuicidal self-injury, disordered eating, and substance abuse, though topographically different, share the function of attempting to escape, avoid, or modify an experience (Howe-Martin, Murrell, & Guarnaccia, 2012). Furthermore, several behaviors related to suicidality are understood as EA (Luoma & Villatte, 2012), including distress tolerance (Linehan, 1993), thought and emotional suppression (Najmi, Wegner, & Nock, 2007), and emotion/avoidance-focused coping (i.e., efforts to regulate distress by problem solving or avoidance; Edwards & Holden, 2001). Emotional suppression mediates the relationship between adverse life events and suicidal thoughts and attempts, above and beyond relevant demographic variables (e.g., gender, age, and race) and depressive symptoms, in adolescents (Kaplow, Gipson, Horwitz, Burch, & King, 2014). In fact, suicidality can be viewed as the most extreme form of EA (Chiles & Strosahl, 2005; Luoma & Villatte, 2012), with behaviors like social isolation and giving away prized possessions being lesser forms of avoidance (APA, 1996) and suicide being the ultimate attempt at controlling psychological pain (Shneidman, 1993) and difficult self-awareness (Baumeister, 1990).

Acceptance and Commitment Therapy

One treatment model that specifically addresses EA is Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999; 2011). ACT has been successful in decreasing EA as well as psychological symptoms in empirical studies of depression, anxiety, schizophrenia, trichotillomania, parenting problems, and child externalizing and internalizing behaviors (see Coyne, McHugh, & Martinez, 2011; Hayes et al., 2004, 2006; Murrell & Scherbath, 2006; Schmalz & Murrell, 2010). ACT is

based in a functional contextual philosophy of science, which assumes behaviors are functional (i.e., they serve a specific purpose, including avoidance of aversive stimuli) in specific situations. Additionally, ACT is built upon the theory of human verbal behavior called Relational Frame Theory (RFT; Hayes et al., 1999).

The goal of ACT interventions is to increase psychological flexibility (Hayes et al., 2011). Psychological flexibility is an individual's ability to fully connect with the present moment and to behave in ways consistent with one's identified values. An individual's behavior can become the inverse, psychologically inflexible, when behaviors hinder contact with the present moment or with identified values (Hayes et al., 2011).

ACT delineates six core processes that work together to promote psychological flexibility: acceptance, defusion, contact with the present moment, self-as-context, valuing, and committed action. Acceptance is the active and purposeful willingness to experience private events, such as thoughts, feelings, bodily sensations, and the situations that evoke them, without attempting to change their form or frequency. Acceptance occurs along a continuum, with EA at the opposite end. Defusion entails detachment, or distancing, from unhelpful thoughts or other private events, such as feelings. The intended goal is to change the function of the private events so that they no longer rigidly influence behavior. The goal is not to alter the content or frequency at which those private events occur, although such change may occur as a side effect of treatment. Contact with the present moment refers to experiencing the world as it is, whether in the form of psychological or external, environmental events. Self-as-context refers to constant, perspective awareness that one's self is separate from thoughts, feelings, and experiences. Values can be described as life directions that help guide short-term and lifelong actions. Finally, committed action involves engaging in behavior that is consistent with identified values, regardless of internal psychological or external barriers. By engaging in these six core processes, an individual is considered to be psychologically flexible (Hayes et al., 2011). These processes all have maladaptive counterparts that promote psychological inflexibility.

When ACT is conducted with adolescents, it is important to use frequent repetition and concrete, active representation of important topics (Murrell, Coyne, & Wilson, 2005). This is particularly important if the adolescent is depressed and may not be attending or remembering well from one session to the next. Clinicians should recognize the struggle that many adolescents have between wanting to "grow-up" and still needing a good deal of guidance from adults in their lives. An ACT clinician will let adolescents talk openly about this, without forcing a conversation. Therapy, especially in later adolescence, is often a good outlet for teens to talk about their values related to career, romantic relationships, and spirituality. These topics are often sources of both joy and pain and may require a clinician to tread lightly - moving back and forth from values to defusion, or self-as-context.

According to the ACT model, the six processes are not mutually exclusive; instead they are intertwined and overlap (Hayes et al., 2011). Thus, measuring one ACT-related process is difficult. Instead, much of the current research on maladaptive functioning tends to use measures of experiential avoidance as a proxy for psychological inflexibility (see Hayes et al., 2004, 2006 for a review). An adolescent appropriate measure of EA, such as the Avoidance and Fusion Questionnaire for Youth (Greco, Lambert, Baer, 2008; Schmalz & Murrell, 2010) should be given during treatment to track progress.

An ACT conceptualization of suicidal behavior. At its simplest, suicide and suicidal behavior are conceptualized as "a learned method of problem solving that involves escaping from or avoiding intense negative emotions" (Chiles & Strosahl, 2005, p.55). Chiles and Strosahl (2005) present a multidimensional model of suicidal behavior. From this model, negative emotional states develop from problematic internal events (e.g., depression, anger) and/or external difficulties, such as being fired from a job or getting kicked out of the home. Adolescents contemplating suicide, especially those who have had previous histories of suicidal attempts, usually experience emotional pain in more than one area of life. Individuals who commit suicide tend to view themselves negatively. They believe they are worthless, inadequate, rejected, or blameworthy (Maris, 1981; Rosen, 1976; Rothberg & Jones, 1987). Becoming

fused with negative judgments and evaluations may make a youth feel overwhelmed and may make life seem hopeless. Defusion techniques become highly relevant in such circumstances.

In the presence of (internal and/or external) problematic events, some individuals become overwhelmed and feel they cannot tolerate the experience. Thus, they begin to rely on escape or emotionally avoidant problem-solving. A technique utilized within this avoidant coping style is suicidal ideation. Thinking about suicide, which would end pain and suffering, provides short-term relief from the distress associated with the problematic events (Chiles & Strosahl, 2005). Contact with the present moment work, such as conducting a brief mindfulness exercise, is crucial because this relief is verbally constructed, not directly conditioned.

The conceptualized relief is based upon relational conditioning, studied in RFT. Given that living adolescents have not directly experienced personal death, and accompanying relief from suffering, they have only indirectly conditioned concepts of death and its consequences. Individuals may construct an "if…then" verbal association that relates death and relief, including thoughts similar to, "If I die, the bullying by my peers will stop" (Hayes, 1992). Hayes (1992) notes that values can be utilized with these same verbal, long-term conditioning processes. Statements, such as, "If I live, my parents might get to see me graduate from college someday," or "If I kill myself, it would really hurt my family to go to my funeral" might be helpful engagement strategies if an adolescent can verbally create them. It is clear these "if...then" statements may have aversive (negative) or appetitive (positive) consequences.

Hayes (1992) posits that "verbal behavior is a two-edged sword" (p. 117) given that verbal behavior enables individuals to construct positive futures; however, it also enables individuals to construct futures in which they do not exist. He writes, "Verbal behavior enables us to be warm, sheltered, fed, informed, and mobile. It also enables us to load a gun, put the barrel into our mouths, and *find relief*" (Hayes, 1992, p. 117). A good way to talk about this idea with young clients [if it fits] is to say, "It is a huge choice. It affects lots of people around you too. Your parents, your friends, clinicians you have worked with, all of them will be changed forever if you kill yourself. And, what if the hopelessness you feel isn't about you? What if it is instead about the struggle you have - trying to control your thoughts and

feelings? What if it is pointless and useless to attempt to control what you think and what you feel - but what if YOU and YOUR LIFE are not that way at all? What if it isn't hopeless to give yourself a chance - just to consider that that there might be greater possibility out there, something different, something new - once you finally let go of the struggle with control? Have you ever been wrong about something before? Ever? [wait for response]…The thing about assuming the worst is that you likely make it happen. The thing about suicide is that it has awful side effects - the worst being that you never know what would have happened if you placed your bets in the opposite direction. I am not saying that you have to believe anything good will happen. In fact, I don't want you to think anything. I just want you to give me (and, more importantly, yourself) some time to experiment - to see what will happen when you let go of trying to control your thoughts and feelings - to see what shows up in its place! How long can you give us to see what happens? Can you agree not to kill yourself until we meet again next week [if not, ask about a shorter time]?"

Chiles and Strosahl (2005) state suicidal behavior is learned behavior that is shaped and maintained by contingencies. Contingencies are chains of events that include a behavior, or functional class of behavior (in this case, suicidal ideation and correlates) and what occurs just before and after it. Contingencies foster more or less of the behavior of interest. If suicidal ideation is followed by a sense of relief or comfort, ideation will likely increase. However, if it is followed by sadness, shame, or guilt, the behavior may stop, or at least reduce in frequency. An individual that feels a sense of relief or comfort after having suicidal ideation may feel an even bigger reinforcement value when they consider how, when, and where suicide would occur. The individual who acts on suicidal ideation, from this perspective, experiences the ultimate reinforcement - a way to permanently and completely control difficult emotional experiences (Chiles & Strosahl, 2005).

This approach outlines suicide as a reasonable approach to difficult circumstances. A good way to discuss this with a young client is this: "Sometimes life sucks. Sometimes people feel really bad. If I could take away the hurt for you, I would. I really would. But, I can't. And, you've been hurting for a while now, and you have worked really hard to make it go away, and you are a really smart guy/girl, and

you have tried lots of things, and none of them have worked, so of course, it feels hopeless. It seems like it is never going to get better, or that this feeling bad is never going to go away. Why wouldn't it feel that way? Hey, if it were me in your position, I would be thinking and feeling the same way. And, in fact, I just told you that I can't take away your pain - and I am supposed to be the expert here, so that has got to feel pretty crappy, huh? Hopeless seems about right. And, if there doesn't seem to be a way to get rid of feeling bad, then it also makes sense that suicide is a reasonable option. I totally get that. It is a guaranteed way to end your pain and suffering and it is really the only long-term way to do it. I mean, drugs can do that for a little while, and so can other avoidance behaviors - like being really busy reading or working, or even falling in love. But long-term, suicide is the only way. And, when you are really hurting, it makes sense. And, turns out that almost 20% of people your age in our country have had serious thoughts about killing themselves – it isn't that uncommon, or weird."

Shame is one of the known predictors of suicide (e.g., Lester, 1998). Normalizing suicidal ideation and acceptance of internal and external problematic events may help an adolescent tremendously. In treatment settings, this helps to establish the acceptability of discussing suicide in an honest and genuine manner.

When a specific ACT client is suicidal. Clinicians may benefit from taking a collaborative approach to the discussion of suicide rather than one of confrontation and argumentativeness. In addition, attention and care from the clinician should be offered in a manner that is not contingent on suicidal behavior being expressed, or not. When working with clients with suicidal behavior, it may be beneficial to identify areas of growth that may be useful to the client. Focusing on value-based committed action allows treatment to feel more strength-based and generally more positive. Asking about values and reinforcing any behaviors toward them can be helpful.

With these principles in mind, initial sessions with a client expressing suicidality aim to reduce the client's fear of suicidal thoughts so that he or she may interact with such thoughts more flexibly, reduce the sense of emotional isolation, activate the idea that suicide is a problem solving behavior, and provide support until follow-up care is established (Chiles & Strosahl, 2005). In future sessions, clinicians

aim to further destigmatize suicidal behavior and establish a person-centered focus, rather than suicide prevention-centered focus. All the while, suicidal behavior is objectified as a way to solve a problem and keep from feeling genuine pain. Addressing and being prepared for suicidal behavior will minimize potential help-seeking obstacles. This may occur through openly discussing the reality of recurrent suicidal behavior and setting up a safety plan suitable for the individual.

One way to introduce the overlap between empowerment and responsibility for self-care and therapeutic concern is with a statement similar to this, "I could make a contract with you for safety, lock you up, take away your access to X,Y,Z, alert your family and friends, but if you really wanted to commit suicide, I could not stop you - you would find a way. Heck, I would not even want to. I think every person should have a right to choose whether they take their own life or not. I believe that people are big enough and strong enough to make that important choice AND I would like for you and I together to come up with some ways that you believe would really keep you safe." Within this honest conversation, in a genuine way, an ACT clinician can express concern for a client. Statements such as, "I really do care about you and I would hope that you can someday see all the good things I see in you. I would like for you to come up with some safety planning options that you know will really work to keep you alive, so that you seeing what I see is a possibility, even if you don't believe that it is true." Self-compassion and self-as-context exercises can also be done around this topic. For example, a clinician can ask an adolescent who has talked about suicide if she/he can remember a time - even if just for a moment - that she/he did not want to die. Asking a client what he/she would tell a friend who thought the same things about his/her life is another good exercise to cultivate seeing problems from a different perspective.

During treatment, teaching the client adaptive problem solving skills is important, as is developing a better understanding of the short-term and long-term consequences of suicide. This is particularly important with adolescents, who (as mentioned before) are prone to impulsivity and substance use. Eventually, ideally, with acceptance work, clients become better able to tolerate the emotional pain that led to the suicidal behavior.

Through the six-components of ACT, psychological flexibility is encouraged and experiential avoidance is diminished. As therapy progresses, the client (with the help of the clinician) develops specific skills and defines the course of action he/she is willing to take to move towards the development of the desired skills. As clients work toward their goals, they are also establishing valued life directions and a commitment to living, even in the presence of difficult internal and external experiences. In time, treatment comes to an end with clear access to follow-up support should the client need further care. Doing so may help the client by teaching him/her to ask for help and decrease barriers to accessing care when life's struggles are too much to handle.

Case example. The following is a case of an adolescent client with suicidal ideation and the course of treatment taken:

Client H is a 15-year-old Caucasian female, who presented for therapy regarding past and current stressful events in her life. Client H reported feeling anxious and worried about school and her home life. She also reported suicidal ideation and a history of sexual abuse. Additionally, the client's mother indicated that she feared Client H may have an eating disorder. Client H engaged in self-injurious behaviors by burning herself with hot water or a curling iron. The last time Client H engaged in self-injurious behaviors was approximately two weeks prior to attending therapy.

Client H attended six sessions of therapy. Treatment focused first on gaining an understanding of Client H's concerns and building a trusting and supportive relationship. Client H was open and forthright about her struggles and it appeared evident that the self-injurious behaviors functioned as a way to escape stressful thoughts and feelings (EA). The clinician normalized and validated her thoughts of suicide in the presence of her pain. A multi-pronged and collaboratively devised safety plan was established. Client H agreed to call someone when she was feeling overwhelmed and suicidal (a concrete list of names and numbers was provided to the clinician). Client H also decided to keep a journal she could express her thoughts and feelings in, and she agreed to listen to music until she could safely express her feelings.

When the client discussed plans for the future, the clinician took the opportunity to discuss values and what Client H wanted out of her life. This helped instill hope that Client H could live, even in the

presence of pain. The client discussed barriers (physical symptoms, thoughts, and feelings) that kept her from behaving as she would like at school and at home. To help her become more aware of the barriers, Client H - with assistance from the clinician - engaged in mindfulness exercises. Processing of the exercises afterwards helped Client H to further notice the content of thoughts and feelings and how they had kept her from functioning in the present moment, and from her valued life choices. When Client H was fused with specific content, defusion bracelets were made. The bracelets had letters used to represent difficult content. She chose letters like "D" to represent death, "C" to represent cutter, and "A" to represent anxiety. Client H wore her content on her wrist for a week and discussed how she engaged in her day-to-day activities, even in the presence of the difficult content.

As a result of this exercise, Client H noted that when she was actually engaging in her daily activities as opposed to ruminating in her mind, she was less distracted by the thoughts and painful experiences. In an effort to move toward her values, Client H began interacting with her peers more, got better organized at school in order to know what deadlines were coming up, and engaged in mindfulness practice at home. Upon termination, although Client H felt anxious, she also felt she had the resources and ability to make sure her needs were going to be fulfilled. This is one of the best outcomes that an ACT clinician can see.

ACT with Adolescents

The ACT outcome research deserves some examination. A thorough literature review was conducted to investigate the current state of ACT work with adolescents. The PsycINFO database as well as several other online databases (e.g., ERIC, MEDLINE) were used. In addition, the website for the primary association (Association for Contextual Behavioral Science) supporting ACT work was also reviewed. ACT now has substantial empirical evidence supporting its efficacy in adults with a variety of psychological difficulties (Smout, Hayes, Atkins, Klausen, & Duguid, 2012). There are over 75 randomized controlled trials (RCTs) and ACT is recognized as empirically supported by the American Psychological Association, Division 12 and the Substance Abuse and Mental Health Services Administration (APA, 2012; SAMHSA, 2012). Although there are no published data with suicidal

behaviors specifically, there is strong evidence supporting ACT for depression (Ruiz, 2012), and preliminary evidence demonstrating some success with self-harm (Gratz & Gunderson, 2006; Razzaque, 2013). This model is flexible in addressing multiple age groups, and similar interventions have been adapted for the treatment of children, adolescents, and parents (Coyne & Murrell, 2009; Greco & Hayes, 2008, Murrell, Coyne, & Wilson, 2004). Research has also begun to demonstrate the effectiveness of these ACT interventions for children and adolescents (Coyne et al., 2011; Murrell & Scherbarth, 2006).

There is a small but growing body of evidence to support ACT for adolescents, including case studies, empirical interventions, and RCTs. Single case studies have reported successful treatment of adolescents with pediatric sickle cell disease (Masuda, Cohen, Wicksell, Kemani, & Johnson, 2011), chronic pain (Wicksell, Dahl, Magnusson, & Olsson, 2005), and anorexia nervosa (Heffner, Sperry, Eifert, & Detweiler, 2002). In the first two cases, both adolescents experienced decreases in subjective pain and increases in quality of life and functioning. In the latter case, the adolescent experienced a decrease in all symptoms of anorexia except body dissatisfaction, which was not a target of intervention. Masuda et al. (2011) also identified adolescent psychological flexibility as a primary mechanism of change throughout the intervention.

Small, multiple case interventions similarly found positive outcomes in adolescents with obsessive-compulsive disorder and trichotillomania. Following an ACT intervention, three adolescents with OCD showed decreases in self-reported compulsions (Armstrong, Morrison, & Twohig, 2013). Similarly, two adolescents demonstrated decreased distress and two weeks abstinence from hair pulling after an acceptance enhanced behavioral intervention (Fine et al., 2012). Finally, a mindfulness intervention, which is one component of ACT, successfully decreased aggressive behavior in three adolescents with autism spectrum disorder (Singh et al., 2011).

Larger intervention studies have also demonstrated statistically significant improvements for adolescents with a variety of psychological and behavioral problems. Two studies have shown successful treatment of adolescents with chronic pain, decreasing self-reported pain and increasing school attendance and overall functioning (Gauntlett-Gilbert, Connell, Clinch, & McCracken, 2013; Wicksell, Melin, &

Wilson, 2006). Gauntlett-Gilbert et al. (2013) further found their positive outcomes were associated with higher acceptance. Acceptance based interventions have also successfully decreased high-risk sexual behaviors (Luciano, Salas, Marinex, Ruiz, & Blarrina, 2009). In a large RCT, adolescents in the acceptance condition reported fewer sexual partners, fewer anonymous sexual contacts, and less drug use before sex compared to treatment as usual (TAU; Metzler, Biglan, Noell, Ary, & Ochs, 2000).

An ACT protocol was used to successfully decrease behavioral problems in five adolescents who had previously been highly resistant to treatment (Luciano et al., 2009). A defusion protocol, another component of ACT, was similarly used to increase acceptance and decrease behavioral problems in a sample of adolescents with high impulsivity (Luciano et al., 2011). Finally, an ACT-based risk reduction intervention was implemented into a school targeting relational aggression (Theodore-Oklota, Orsillo, Lee, & Vernig, 2014). Although the ACT group did not show significant decreases in relation aggression compared to a control group, students exposed to the acceptance protocol were more likely to use problem-solving skills. Theodore-Oklota et al. (2014) did find that in both groups change in experiential avoidance was predictive of engaging in relational aggression, aggressive retaliation, and psychological distress. Given the importance of appropriate problem solving skills to predicting suicidal ideation, this is a key finding.

To date, there is no published research on ACT with suicidal behavior in adolescents. There is, however, very promising evidence that ACT is effective with adolescents suffering with depression. Three RCTs have evaluated ACT with depressed adolescents. In the first, 30 adolescents were randomly assigned to the intervention group or a TAU group, consisting of cognitive behavior therapy (Hayes, Boyd, & Sewell, 2011). Although both groups showed statistically significant decreases in depression over the course of treatment, only the ACT group demonstrated clinically significant change. Improvements were maintained with slight increases at 3-month follow up.

Most recently, two RCTs were conducted in Australia (N = 66) and Sweden (N = 32) to evaluate ACT compared to TAU, which consisted in this case of monitoring support by a school counselor or nurse (Livheim et al., 2014). Adolescents in the ACT groups attended a 6-8 week group program, and

primary outcomes were stress in Sweden and depression in Australia. In both cases, the primary outcome variable improved more in the ACT group than TAU with moderate to large effect sizes. In addition to decreases in depressive symptomology in the Australian group, psychological flexibility was also identified as a significant process variable in the ACT group, but not TAU.

This growing body of evidence suggests that ACT is an appropriate intervention for use with adolescents, including those suffering from symptoms related to suicidality, such as chronic pain, depression and self-harm. ACT and experiential avoidance certainly provide a useful conceptualization of adolescent suicide risk. Further, in terms of reducing suicidal behavior, there are clear empirical benefits of reducing shame via acceptance and defusion and of introducing values. What is now needed is empirical evidence demonstrating the clear, direct relationship between ACT and suicidal ideation and attempt in adolescents – before another 4,600 die.

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