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Helping Students C.O.P.E.: Effects of a Mental Health Program on Adolescents With Challenging Behaviors

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ABSTRACT OF THE DISSERTATION

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Mental health concerns are rising among adolescents and have intensified since the COVID-19 pandemic (APA, 2020). Specifically, externalizing behavior challenges perceived by adults as 'aggressive' place adolescents at an increased risk for negative outcomes, including poor academic achievement and involvement with the juvenile justice system (Skiba et al., 2014). Schools have a responsibility to respond to the mental health needs of adolescent students through the implementation of evidence-based intervention (Domitrovich et al., 2010). One program that has demonstrated effectiveness towards improving these outcomes is the seven-session Creating Opportunities for Personal Empowerment (COPE) Teen program, a cognitive-behavioral skills-building intervention. In this study, the COPE program was delivered virtually, through a culturally responsive lens, to three high school students with ongoing aggressive behavior during the COVID-19 pandemic. It was hypothesized that the frequency and intensity of the aggressive behavior would decrease for each participant as a function of the COPE program. The behavior was operationally defined for each student and measured through

direct observation by parents in the home setting. A single case multiple-baseline design was implemented. Visual analysis of data suggest that the frequency and intensity of aggressive behavior did not decrease as a function of the COPE program, indicating no intervention effect. Supplementary statistical analyses (e.g., log-response ratios) found varied intervention effects among students, ranging from no effects to small effects. Further, participants reported the COPE program as a helpful way to manage stress and would recommend it to their peers. The study results, limitations, and implications for future research are discussed.

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Introduction

Mental health is recognized as a core determinant of individual well-being, family relationships, and community engagement (Alegría et al., 2015). Yet, results of the 2020 American Psychological Association's annual survey, *Stress in America*, indicate that Americans are facing a national mental health crisis (American Psychological Association [APA], 2020). Even more troubling are the consequences for contemporary adolescents, also referred to as Generation Z (teens ages 13-17; APA, 2020). Survey results indicate that an overwhelming number of adolescents (81%) report negative outcomes from pandemic-related school closures, including less motivation to complete schoolwork (52%), less involvement in sports, clubs, and extracurricular activities (49%), and feelings of not having learned as much as in previous years (47%; APA, 2020). Further, two in five Generation Z adolescents report an increase in life stress over the past year (APA, 2020).

Notwithstanding the challenges of 2020, adolescence presents a time of challenge and transition. During this period of critical development, adolescents may experience mental health problems, including emotional and behavioral challenges. An analysis of the 2016 National Survey of Children's Health indicates that, among a nationally representative sample of young people ages 3-17 years old, 7.4% of youth had behavior/conduct problems, 7.1% had current anxiety problems, and 3.2% had current depression (Ghandour et al., 2019).

These concerning statistics highlight the urgency of addressing mental health issues among young people across the nation. Mental health encompasses both emotional

and behavioral challenges, including externalizing behaviors (e.g., aggression, defiance), and internalizing behaviors (e.g., anxiety, depression). Moreover, there is evidence suggesting that aggressive behaviors, depression, and anxiety are closely related (Ritakallio et al., 2005; Lee & Stone, 2012). Behaviors perceived as aggressive may include defying rules, irritability, and shouting (CDC, 2018). Aggressive behaviors are particularly concerning as adult responses to these behaviors often place students on the school-to-prison pipeline and may subsequently lead to a persistent pattern of violence in adulthood (APA, 1993; McCarter, 2017). Further, institutionalized racism permeates the identification of problem behavior in school settings. For example, schools tend to evaluate the behavior of Black students as more problematic when compared to White students, leading to Black students being punished more frequently and more harshly (Riddle & Sinclair, 2019).

Fortunately, society may effectively address mental health problems among adolescents, and potentially begin to partially rectify racial disciplinary disparities, through the implementation of effective school-based interventions (APA, 1993; Valois et al., 2002; Riddle & Sinclair, 2019). In fact, the World Health Organization (WHO) recommends that mental health promotion be mainstreamed within education sectors, indicating that school settings are essential environments for supporting the mental and social wellbeing of students (WHO, 2018).

In particular, cognitive-behavior therapy (CBT) has demonstrated effectiveness in reducing emotional and behavioral problems, including aggression, among youth in school settings (Lochman et al., 2002; Mychailyszyn et al., 2012). Research demonstrates

strong evidence supporting CBT for children with internalizing disorders (e.g., anxiety, depression), and moderate support for children with externalizing disorders (e.g., aggressive behavior; Southam-Gerow & Kendall, 2000).

Review of Literature

Mental Health during Adolescence

The World Health Organization (WHO; 2018) defines mental health as "a state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community." Traditionally, challenges with mental health have been associated with high rates of distress, with a focus on internalizing problems (e.g., inward-directed forms of distress; McLeod et al., 2012), including depression and anxiety. However, a broad definition of mental health encompasses externalizing behavior problems, viewing these problems as outward-directed forms of distress (McLeod et al., 2012).

Adolescence is a time of transition from childhood to adulthood, during which chronic mental health disorders may develop (Skeen et al., 2019). There are many reasons why mental health may be challenging for adolescents. During this critical period of development, there are rapid physical, cognitive, and psychosocial changes taking place (WHO, 2020). Some characteristics of adolescence include amplified emotional responses to real and/or perceived stressors, marked increases in social sensitivity, and underdeveloped self-regulatory systems (Magson et al., 2021). At the same time, adolescents are expected to self-regulate their behavior, manage heightened emotions,

complete increasingly demanding academic workloads, navigate peer relationships, and cope with environmental stressors (Magson et al., 2021).

Aggressive Behavior and Student Outcomes

Adolescents are expected to have high levels of self-regulatory skills during a developmental period where their self-regulation system is underdeveloped (Magson et al., 2021). Some of the most challenging adolescent behaviors for adults to respond to are externalizing behaviors, including behaviors perceived as aggressive. Aggressive behavior has been defined as a behavior that is intended to harm other people or things (Hadley et al., 2017). Aggressive behaviors such as kicking, hitting, or biting are normative and can be common in early childhood (CDC, 2018), but present differently as children mature and enter adolescence. As children develop more advanced language and social skills, they may engage in more proactive aggressive behaviors (e.g., defying parent rules, screaming, shouting; CDC, 2018).

Aggressive behavior among adolescents is typically viewed as disruptive, problematic, and met with punishment (Magson et al., 2021; APA, 1993). However, under the broad view of mental health, aggressive behavior is perceived as an outward expression of distress (Magson et al., 2021). In other words, adolescents may engage in aggressive behaviors as a response to stressors in their lives. A variety of factors may contribute to aggressive behavior, including individual factors (e.g., age, medical conditions, psychological characteristics), family factors (e.g., family structure, parenting style, residential mobility), peer influences (e.g., delinquent siblings and peers, gang membership), community factors (e.g., poverty, crime, racial prejudice, exposure to

violence), and school factors (e.g., academic failure, school transitions, suspensions/expulsions; Valois et al., 2002).

Impact on Academic Achievement

Students with externalizing behavior challenges are more likely to experience negative academic outcomes. One study by Nelson and colleagues (2004) assessed whether internalizing behaviors (i.e., anxiety, depression) and externalizing behaviors (i.e., attention, aggression, delinquency) were predictive of academic outcomes across reading, written language, and mathematics achievement. Participants included 155 students receiving special education services for emotional and behavioral disorders within K-12 school settings. A cross-sectional research design was implemented within a 4-month period. The Child Behavior Checklist: Teacher Report Form was used to measure social adjustment, including broadband scale scores on internalizing and externalizing behaviors, and the Woodcock-Johnson, Third Edition (WJ-III) was used to measure students' academic achievement. Results demonstrated that approximately 83% of participants scored below the mean of the norm group on the WJ-III in all content areas. Further, multiple regression analyses indicated that students with externalizing behaviors were more likely to experience academic achievement deficits across all domains (reading, writing, math) than students with internalizing behaviors. Results from this study suggest a negative correlation between externalizing behavior problems and academic achievement (Nelson et al., 2004).

Another study by McLeod and colleagues (2012) examined the association of adolescent mental health and behavior problems with academic achievement, while

controlling for academic aptitude, and taking co-occurring problems into account. The study included four types of mental health and behavior problems, which have been shown to predict academic achievement among adolescents: delinquency (e.g., aggressive behavior), depression, attention problems, and substance use. Both internalizing problems (e.g., depression) and externalizing problems (e.g., delinquency) were evaluated in association with achievement. Results indicated that delinquency, attention problems, and substance use were significantly associated with lower academic achievement, while depression was not. The presence of an externalizing problem was especially indicative of lower academic attainment, independent of academic aptitude. For example, delinquency was negatively associated with academic attainment whether it was considered alone or in combination with another problem (i.e., depression, attention problems, substance use). Results suggest that, among adolescents, delinquency (including aggressive behavior) predicts poor academic performance. Overall, mental health and behavior problems comprised of externalizing problems (e.g., delinquency) were more strongly negatively associated with academic achievement than internalizing problems (e.g., depression).

Aggression and Co-occurring Mental Health Disorders

There is empirical evidence, conducted across the globe, providing support for the relationship between behavioral and emotional health among children and adolescents. One study conducted in Finland found that, among a sample of over 50,000 adolescents, depressive symptoms increased according to the frequency of delinquent behavior (Ritakallio et al., 2005). Similarly, a study conducted with 2,000 children in South Korea

suggested that a child's tendency to engage in disruptive and aggressive behaviors increased their symptoms of anxiety and depression (Lee & Stone, 2012). Thus, evidence suggest that aggressive behaviors, depressive symptoms, and anxiety symptoms may be closely intertwined, particularly among young people.

Depression. As described within the Diagnostic and Statistical Manual of Mental Health Disorders (DSM-V; American Psychiatric Association, 2013), children with persistent irritability and frequent, severe temper outbursts tend to develop depressive disorders and anxiety disorders as they grow into adolescence and adulthood. Depressive disorders all share common features, including a "sad, empty, or irritable mood" (American Psychiatric Association, 2013, p. 155), and symptoms of depression may be both externalizing (e.g., irritability, destructive behaviors) and internalizing (e.g., depressed mood, anxiety; Lusk & Melnyk, 2013). Moreover, adolescents with depression are 6 to 12 times more likely to have an anxiety disorder, and 4 to 11 times more likely to have a disruptive behavior disorder (Thapar et al., 2012).

Adolescent depression has been linked to negative psychosocial outcomes that may persist into adulthood. For example, statistically significant associations have been found between adolescent depression and failure to complete high school, a higher chance of unemployment, and lower chance for obtaining postsecondary education (Clayborne et al., 2019). Among adolescents in the US, the rate of depressive symptoms, in addition to suicide-related outcomes, has increased from 2010 to 2015 (Twenge et al., 2018).

Anxiety. The DSM-V defines anxiety disorders as sharing common features of persistent fear and anxiety, in addition to related behavioral problems (APA, 2013). The disorders differ from developmentally appropriate fear or anxiety, as they are often stress-induced and persistent (e.g., lasting 6 months or longer; APA, 2013). Anxiety symptoms include, but are not limited to: avoidance of social situations, fears of embarrassment or making mistakes, refusing to go to school, difficulty sleeping, fears about a specific situation causing significant distress, and low self-esteem (American Academy of Child & Adolescent Psychiatry, 2021).

Symptoms of anxiety among adolescents may negatively impact an adolescent's functioning in both home and school environments. Anxiety disorders among youth are associated with impairments in psychosocial functioning and can run a chronic course into adulthood (Essau et al., 2018; Roblek & Piacentini, 2005). Moreover, elevated anxiety symptoms are associated with lower academic performance and peer victimization (Owens et al., 2012; Crawford & Manassis, 2011). Thus, the consequences of anxiety among adolescents, specifically when symptoms are stress-induced and persistent, remain problematic when left unaddressed.

COVID-19 Pandemic Considerations. The ongoing global COVID-19 pandemic has placed pressure on youth and their families, which may lead to distress, mental health issues, and violence (Fegert et al., 2020). Recent research indicates that the pandemic has exacerbated mental health problems among young people (Liang et al., 2020; Jiao et al., 2020; APA, 2020). Pandemic-related mental health risks for children and adolescents are associated with social distancing, heightened pressure placed on

families, and a reduction in access to support services (Fegert et al., 2020). For example, children and families across the globe have been asked to quarantine for public health and safety purposes. However, despite their necessity for both personal and public health, quarantine practices may also result in negative consequences for individuals. A systematic review of the psychological impacts of quarantine found that, of the 24 studies reviewed, the majority reported negative psychological effects including depression, stress, irritability, and anger (Brooks et al., 2020). More specifically (and unsurprisingly), this review illustrated that confinement, loss of routine, and reduced social interaction frequently led to boredom, frustration, and feelings of isolation among study participants.

Research regarding the effects of the pandemic on the mental health of American adolescents is emerging. Since the pandemic's spread across the US, recent evidence suggests that mental health conditions have worsened among American children and their families (APA, 2020). In order to evaluate the effects of COVID-19 on the well-being of parents and children, Patrick and colleagues (2020) conducted a national survey in June 2020. Participants included 1,011 families with children under the age of 18. Results indicated that, since national policy responses to the pandemic began in earnest in March 2020, parents, children, and adolescents have been adversely affected: 1 in 4 parents reported declining mental health for themselves, 1 in 7 parents reported worsening behavioral health for their children, and approximately 1 in 10 families reported declines in both parental mental health and child behavioral health (Patrick et al., 2020). Among families who reported declines in both parental mental health and child behavioral health,

11% reported worsened food security (Patrick et al., 2020). Overall, these reports of declining mental and behavioral health among American families indicate a pressing need for equitable access to high-quality services.

Aggressive Behavior and the School-to-Prison Pipeline

Adult responses to aggression among adolescents have often led to harmful outcomes for youth, including placing them onto a trajectory towards becoming incarcerated (APA, 1993). The "school-to-prison pipeline" is a term that is used to describe a trajectory where exclusionary discipline practices place students at risk for negative outcomes, specifically by increasing the likelihood they will become involved with the juvenile justice system (Skiba et al., 2014). Without systematic and effective intervention, aggressive behaviors may persist and increase over time, leading to established patterns of violence which become harder to modify later in life (APA, 1993; David-Ferdon et al., 2016). Moreover, adolescents involved in the juvenile justice system may lose the right to vote if they remain incarcerated as adults (McCarter, 2017).

When students present aggressive behavior in school settings, the responses by school personnel are critically important both proximally and distally for an individual student (Skiba et al., 2014; McCarter, 2017). Research consistently demonstrates that disciplinary action, particularly exclusionary discipline practices (e.g., suspensions, expulsions) do not foster safer school environments, and instead perpetuate negative outcomes among students (APA Zero Tolerance Task Force, 2008; Skiba et al., 2014; David-Ferdon et al., 2016). Moreover, while school-based transgressions vary in their level of severity, the majority of reported incidents involve student behaviors that are less

extreme, such as disrespect, insubordination, and disruptive behavior (Fabelo et al., 2011; McCarter, 2017). Once students are excluded from the school community, they are deprived of academic instruction, and potentially left alone at home with little to no supervision, providing additional opportunities to engage in risk-taking behavior (Valois et al., 2002). When a student is suspended, even if only once, the likelihood of the student dropping out of school, repeating a grade, and being placed in the juvenile justice system increases (McCarter, 2017).

Disproportionality by Race/Ethnicity. Exclusionary discipline practices continue to be disproportionately applied to Black and African American students. Data from the Civil Rights Data Collection (CRDC) provides information pertaining to suspensions and expulsions by race and sex for students in the U.S. (U.S. Department of Education, 2019). The CRDC found that, during the 2015-16 school year, approximately 2.7 million of all K-12 students in the U.S. received one or more out-of-school suspensions, and approximately 120,800 students received an expulsion. Moreover, suspensions and expulsions were disproportionately applied to Black or African American students. For example, Black male students represented 8% of enrolled male students, yet accounted for 25% of male students receiving a suspension and 23% of male students expelled. Black female students represented 8% of female student enrollment, yet account for 14% of female students receiving a suspension and 10% of expelled female students. In order to foster safe and equitable learning environments, schools must take an active stance in remediating the disproportionality of Black and African American students being excluded from school.

Disproportionality by Disability Status. Students with emotional and behavioral problems, particularly students who present aggressive behaviors, are also at an increased likelihood for being placed on the school-to-prison pipeline. In fact, students with emotional and behavioral disorders are suspended and expelled at a rate that is greater than their representation in the population (APA Zero Tolerance Task Force, 2008). Data from the CRDC indicate that students with disabilities represented 12% of total students enrolled in the 2015-16 school year, yet they represented 24% of total students who were expelled (U.S. Department of Education, 2019). Additionally, between 65-70% of youth involved in the juvenile justice system have had at least one diagnosable mental health disorder, with almost half (46.5%) being identified as having a disruptive behavior disorder (Shufelt & Cocozza, 2006). It is evident that, when schools apply exclusionary discipline practices, they are not only perpetuating racial injustices, but are also causing significant harm to students who are in need of emotional and behavioral support.

School-Based Intervention for Aggressive Behavior

Given the potential consequences of aggressive behaviors during adolescence (e.g., increased likelihood of violence into adulthood, incarceration), there exists an urgent need for access to high quality, effective interventions (David-Ferdon et al., 2016; McCarter, 2017). Moreover, minority youth have a lower likelihood of accessing mental health services; therefore, school-based mental health services are one important avenue for helping to reduce these disparities (Alegría et al., 2015), particularly as there is strong evidence suggesting that externalizing behaviors (i.e., aggression) are strongly related to deficits in academic achievement. Thus, there is a pressing need to effectively ameliorate

these behaviors in school settings. If schools are to foster academic success for students with emotional and behavioral concerns, school-based interventions targeting externalizing behaviors must be initiated.

While many factors contribute to an adolescent's likelihood to engage in violence, including familial and societal factors, it is possible for larger systems to effectively address some of these problems, particularly through the implementation of school-based interventions (APA, 1993; Southam-Gerow & Kendall, 2000). Schools provide a well-positioned opportunity for programs to teach skills for managing aggression (Valois et al., 2002). Moreover, as adolescents learn alongside their peers in the classroom, it is critical for them to develop social and interpersonal skills. Particularly for students presenting aggressive behaviors, schools may provide students with opportunities to learn nonviolent strategies for managing conflict (e.g., peer mediation, problem solving skills; Valois et al., 2002).

While aggressive behaviors are associated with a combination of risk factors across domains (e.g., structural racism as well as individual, family, peer, community factors), school settings are viewed as a natural social context for prevention efforts (Valois et al., 2002). Schools are responsible for not only improving the academic performance of students, but increasingly also assuming accountability for their socio-emotional and behavioral development (Domitrovich et al., 2010; Mayer & Van Acker, 2009). Students in the United States are in school for an average of 180 days each year, spending approximately 6.64 hours in school per day (U.S. Department of Education,

2008); as adolescents spend a considerable amount of time in school, it may be important to provide school-based support during this critical period of development.

Moreover, schools provide an environment where equitable access to mental health and behavioral services may be provided to students who have been historically minoritized; these students are the victims of the disproportionate use of exclusionary practices, and it is therefore critical that schools respond through high-quality, evidence-based intervention in order to address the emotional and behavioral needs of students.

Cognitive-Behavioral Therapy (CBT) in School Settings

For many young people, the school system provides their only opportunity for mental health treatment (Hoagwood et al., 2001), and schools are capable of delivering high quality, evidence-based mental health interventions for adolescent students with emotional and behavioral problems (Lochman et al., 2002; Domitrovich et al., 2010). Specifically, interventions grounded in cognitive-behavioral therapy (CBT) have been implemented with success in school settings (Hoagwood et al., 2001). Overall, research on CBT with youth indicates strong empirical support for those with internalizing disorders (e.g., anxiety, depression), and moderate support for students with externalizing disorders (e.g., conduct disorder; Southam-Gerow & Kendall, 2000). CBT consists of a body of strategies, rather than a singular method or approach, used to modify behavior through increasing a client's understanding of thoughts, feelings, and behaviors (Mayer & Van Acker, 2009).

The implementation of CBT-based interventions within school settings may vary. For example, a student may be receiving individualized counseling sessions based on

CBT principles, or a group of students may be receiving a manualized, evidence-based CBT-based group intervention, such as Coping Power (Lochman et al., 2002). However, data demonstrate that, when adolescents exhibiting behavioral challenges are grouped for intervention, they may reinforce and support one another's behavioral problems (Valois et al., 2002). Therefore, providing intervention on an individual basis may be more beneficial for students, particularly for those presenting aggressive behaviors.

Moreover, research suggests that adolescents with a history of antisocial or delinquent behavior may benefit from cognitive-behavioral intervention. Lardén and colleagues (2006) examined the role of cognitive distortions (i.e., exaggerated and irrational thought patterns/beliefs) among adolescents in Sweden. Specifically, the study evaluated whether cognitive distortions contribute to criminal offending among incarcerated adolescents. Participants (ages 13-18 years old) included 58 adolescents incarcerated in youth homes (delinquent group) and 58 adolescent public-school students (nondelinquent group). The How I Think (HIT) survey, a 54-item questionnaire on self-serving cognitive distortions, was administered to both groups. A two-way analysis of variance was conducted to examine differences among groups (delinquent vs. nondelinquent) and gender differences. Significant large to moderate group and gender differences were found for cognitive distortions measured by the HIT survey, as adolescents in the delinquent group self-reported more cognitive distortions than adolescents in the nondelinquent group, and girls reported less cognitive distortions than boys. Results from the study (Lardén et al., 2006) highlight the need to target cognitive

distortions (particularly among male adolescents) to foster positive learning outcomes among youth and subsequently prevent them from becoming incarcerated.

Cognitive Change Processes in CBT. While there is mounting evidence suggesting that CBT leads to positive outcomes for both children and adults with depression, the specific mechanisms through which CBT operates and exerts its beneficial effects remain less clear (Webb et al., 2012). Nonetheless, there have been numerous attempts to examine the cognitive change processes of individuals with depression, for both adolescents and adults. Kaufman and colleagues (2005) examined 93 adolescents with comorbid major depressive disorder and conduct disorder, with participants randomly assigned to a CBT-based intervention (Coping with Depression [CWD]) or a life skills course (control condition). The CWD intervention is a brief (16-session) program based on CBT principles, with activities including mood monitoring, improving social skills, relaxation training, and increasing pleasant activities. Changes in negative thinking among participants, as measured by the Automatic Thoughts Questionnaire (ATQ), were most closely associated with reductions in depression for CWD participants. Thus, the authors noted it may not be necessary for therapists to engage in intensive CBT in order for adolescents to experience a significant reduction of depressive symptoms.

Another study by Kwon and Oei (2003) explored change processes during a 12-week CBT group intervention for depression. This project was guided by the Causal Cognition Model, which proposes that CBT leads to a change in dysfunctional attitudes and automatic thoughts, which subsequently leads to a change in depressive symptoms.

In order to examine cognitive change processes, the Automatic Thoughts Questionnaire (ATQ), Dysfunctional Attitudes Scale (DAS), and Beck Depression Inventory (BDI) were monitored for each participant at pre-treatment, fourth session, eighth session, and post-treatment. Results from paired *t*-tests suggested significant reductions in the BDI score between pre-treatment and the fourth session, and between the eighth session and post-treatment. However, significant reductions in BDI score were not found between the fourth and eighth sessions, and between the eighth session and post-treatment. Further, there was a significant reduction in the ATQ score only from pre-treatment to fourth session, whereas the DAS score showed significant reductions between pre-treatment to fourth session, and between the fourth and eighth sessions.

These results suggest that this CBT-based intervention may demonstrate clear effects early on in treatment, particularly during the time between the pre-treatment/baseline phase and the fourth session. Aligning with the conclusions of Kaufman and colleagues (2005), Kwon and Oei (2003) found that depressive symptoms are more likely to be reduced early on during the course of CBT treatment.

Creating Opportunities for Personal Empowerment (COPE)

The Creating Opportunities for Personal Empowerment (COPE) program is based within CBT principles and demonstrates evidence suggesting improved mental health outcomes for students. COPE incorporates several key components of CBT, including cognitive restructuring, self-monitoring, problem solving, and behavior activation, with a particular emphasis on the standard ABC model (Activator event, Belief that follows, and Consequence of the beliefs; Melnyk et al, 2015). COPE consists of several program

options, including programs for children (ages 7 to 11), teens (ages 11-18), and young adults (ages 18 to 24; Cope2Thrive LLC, 2020). These programs are designed to help children and adolescents feel emotionally better and behave in healthy ways (Cope2Thrive LLC, 2019).

COPE Seven-Session Teen Program

COPE Teen is a seven-session, manualized cognitive-behavioral skills-building program for children and young adults designed to reduce negative thoughts, increase healthy behaviors, improve communication skills, and improve problem-solving skills (Cope2Thrive LLC, 2019). More specifically, the COPE Teen program is designed to help adolescents dealing with anxiety, stress, and depression by teaching them to recognize negative/unhelpful thought patterns and engage in cognitive-behavioral skills to modify their thinking and behavior.

In recent years, a growing body of literature has evaluated the effectiveness of COPE programs among participants ranging from children to college students (Kozlowski et al., 2015; Hart Abney et al., 2019; Melnyk et al., 2015). In particular, the COPE Teen Program has demonstrated promising results for adolescents experiencing mental health problems. Recent studies have evaluated the effects of the COPE Teen program on levels of depression, anxiety, disruptive behaviors, and healthy lifestyle choices among adolescents with beneficial results (Lusk & Melnyk, 2011; Melnyk, Kelly, & Lusk, 2013; Melnyk, Kelly, & O'Haver, 2015). These studies have evaluated the implementation of COPE Teen across a variety of settings, including primary care institutions, community mental health centers, and K-12 schools.

Erlich, Dillon, and Becker (2019) evaluated the effects of the COPE Teen program on depression and anxiety for 37 adolescent patients in a primary care setting. The Patient Health Questionnaire (PHQ-A) and Generalized Anxiety Disorder Assessment (GAD-7) were used to assess depression and anxiety, respectively. Using a paired *t*-test to evaluate change between pre- and post-intervention scores, scores on both the PHQ-A and GAD-7 significantly declined from pre- to post-intervention. Results suggest the COPE Teen program may be an effective behavioral treatment for adolescents experiencing depression and anxiety in a primary care setting.

The COPE Teen program has also demonstrated evidence of success in community-based settings. Lusk and Melnyk (2011) assessed the effects and feasibility of the COPE Teen program among 15 clinically-depressed adolescents in a community mental health center. A one group pre- and post-test design was implemented for the study. Participant scores were evaluated using five Beck Youth Inventories (Anxiety, Anger, Depression, Destructive Behavior, and Self-Concept) and a personal beliefs scale. From pre- to post-intervention, there were statistically significant decreases in depression, anxiety, anger, and destructive behavior scores. Moreover, there were significant increases in self-concept and personal beliefs scores. Study results suggest that the COPE Teen program may be effective in reducing both internalizing and externalizing symptoms among adolescents with depression, in addition to increasing their self-concept and personal beliefs in managing stress.

In addition to health and community institutions, the COPE Teen program has been examined within educational settings. For example, Melnyk, Kelly, and Lusk (2014)

evaluated the effectiveness of the seven-session COPE Teen program for 16 adolescents (ages 14-17) identified by a school-based nurse practitioner as having depression and/or elevated anxiety symptoms. The adolescents were placed into two groups (eight participants each) with each group receiving weekly 50-minute sessions in the high school setting. The COPE sessions were delivered by a pediatric nurse practitioner for each group of adolescents. Each session was held during a different class period each week to help prevent any stigma associated with the student being pulled out of the same class.

In order to evaluate the effects of the COPE Teen program on adolescent anxiety, depression, and personal beliefs in their ability to manage stress, paired-sample *t*-tests were conducted. Changes in depression, anxiety, and personal beliefs were assessed at baseline, post-intervention, and at a four-week follow-up. Findings revealed that there was no significant decrease in depression scores from baseline ($M = 58.5$, $SD = 7.2$) to post- intervention ($M = 54.1$, $SD = 8.8$), $p > .05$. However, there was a significant decrease in depression scores from baseline ($M = 58.5$, $SD = 7.2$) to follow-up ($M = 53.5$, $SD = 8.4$), $p = .02$. Similarly, there was no significant decrease in anxiety scores from baseline ($M = 55.5$, $SD = 9.6$) to post-intervention ($M = 49.9$, $SD = 9.4$) $p > .05$. There was not a significant decrease in anxiety scores from baseline ($M = 55.5$, $SD = 9.6$) to follow-up ($M = 50.5$, $SD = 9.2$) $p > .05$. Further, there were significant increases in personal beliefs from baseline ($M = 32.9$, $SD = 3.9$) to post-intervention ($M = 37.3$, $SD = 6.2$), $p < .05$.

Additionally, the adolescents themselves reported the COPE Teen program as being a positive experience, as indicated by the COPE program evaluation form. Common positive themes from these evaluations included the development of skills in order to change their thinking, manage stress, cope with problems, relax through mental imagery/breathing exercises, and regulate emotions. Overall, the COPE Teen program significantly decreased depression scores and marginally decreased anxiety scores among adolescents when delivered in a school setting. Further, the COPE program significantly increased coping skills among adolescent students, and participants reported the program as a positive learning experience. In summary, evidence suggests that the COPE Teen Program may produce positive mental health outcomes for adolescents across settings, including health institutions, community-based centers, and educational environments.

Integrating Culturally Responsive Practice and CBT

CBT-based programs tend to have an individualistic orientation as they focus on the cognitive restructuring of an individual (Hays, 2009). However, it is critical to understand that individuals, including children and adolescents, exist within larger social and political systems. Particularly for youth from racial and ethnic minority populations, mental health is embedded within larger contextual factors (Williams, 2018). These larger systems (e.g., socioeconomic status, family factors, access to healthcare, institutionalized racism) influence one's cognitions and behaviors.

For instance, socioeconomic status has been found to disproportionately impact the mental health of children and adolescents from historically marginalized communities. In the United States, children from racial and ethnic minority populations

(including African American, Hispanic, and American Indian) face higher risks of parental unemployment and are more likely to reside in households with significantly lower net wealth when compared to white children (Trent et al., 2019). These examples of systemic racism, embedded in housing and employment structures, subsequently place young people at greater risk for depression and anxiety (Trent et al., 2019; Lemstra et al., 2008). In addition, experiences of discrimination, including the disproportionate placement of minority youth in the juvenile justice system, significantly impact the mental health of young people. Among a national sample of African American youth, self-reported experiences of discrimination were found to be positively associated with depressive disorders (Assari et al., 2018). Moreover, African American, Hispanic, and American Indian youth continue to be disproportionately represented in the justice system, placing them at a greater risk for negative mental health outcomes (Trent et al., 2019).

Further, environmental factors have been shown to impact the self-regulation of children. A nationally representative examination of self-regulation in young children used parent-reported data from the 2016 National Survey of Children's Health (NSCH) to compare factors associated with children who were described as "on track" with self-regulation and those who were "not on track" with self-regulation (Claussen et al., 2021). Self-regulation was defined as "the ability to influence or control one's thoughts or behavior" when responding to a request, demand, or norm (Claussen et al., 2021, p. 28). The study found that children who were described as "not on track" were more likely to: (a) live in neighborhoods with less amenities and social support, (b) experience family

adversity, including poverty, (c) have difficulty accessing health care, and (d) be diagnosed with a mental or behavioral disorder (Claussen et al., 2021).

As evidence suggests, it is essential to acknowledge the role of systemic factors on child and adolescent mental health outcomes. Incorporating the influence of one's physical and social environment (e.g., neighborhood amenities, access to health care, family adversity, institutionalized racism) into CBT sessions is imperative to understanding and supporting the individual. Mental health professionals may proactively engage in strategies to optimize the well-being of young people by embedding culturally competent care throughout their practice (Trent et al., 2018). Hays (2009) provides ten suggestions for synthesizing cognitive restructuring and culturally responsive practice. First, assessing the individual's needs should include culturally respectful behavior. For example, the CBT therapist may use the ADDRESSING framework (Age and generational influences, Developmental Disabilities and disabilities acquired later in life, Religion and spiritual orientation, Ethnic and racial identity, Socioeconomic status, Sexual orientation, Indigenous heritage, National origin, and Gender; Hays, 2009) and consider its influences throughout each session. Second, the therapist should help the client identify culturally-related strengths and support systems. An emphasis should be placed on strengths and supports that have a cultural connection. Third, there should be a distinction between problems that are primarily environmental (e.g., external) and those that are primarily cognitive (e.g., internal). For example, the therapist must consider how cultural influences may impact the client's options moving forward.

Fourth, for problems that are primarily based on external factors, the therapist can help the client minimize stressors, increase support, and build skills that allow them to interact more effectively in their environment (e.g., participating in skills training in a format that is culturally acceptable to the client, engaging in self-care activities related to one's culture). Fifth, it is important to validate any experiences of oppression reported by the client. CBT therapists must avoid minimizing any self-reported experiences of oppression and should not provide alternative explanations. Sixth, the CBT therapist should be collaboratively aligned with the client; particularly when the client belongs to a minority group, the therapist should communicate their understanding of privilege and oppression.

The seventh suggestion is that cognitive restructuring should question the helpfulness of the thought or belief, rather than the validity of it. The eighth suggestion is to not challenge core cultural beliefs, and the ninth suggestion includes using the client's list of culturally related strengths and supports to develop a list of helpful cognitions. The tenth and final suggestion is to incorporate culture within homework assignments. For example, co-creating homework assignments with clients may allow them to incorporate their culture in order to achieve their goals. Thus, refining the practice of CBT to encompass cultural responsiveness through practices like these holds promise for allowing therapists to better serve clients (Hays, 2009).

Statement of the Problem

Aggressive behaviors during adolescence are concerning as they present severe consequences for the life trajectory of students (Skiba et al., 2014). Adolescents

presenting behaviors perceived as aggressive are at risk for a myriad of negative outcomes, including deficits in academic achievement, co-occurring mental health disorders (e.g., anxiety, depression), and an increased likelihood for incarceration (Nelson et al., 2004; Shufelt & Cocozza, 2006; McCarter, 2017). These outcomes are further sustained by exclusionary school discipline policies, pervasive racial injustices, and the COVID-19 pandemic (Skiba et al., 2014; U.S. Department of Education, 2019; Patrick et al., 2020; APA, 2020). Despite extensive evidence demonstrating that exclusionary practices are ineffective and perpetuate racial injustices, these practices continue to be applied disproportionately to Black students and students with emotional and behavioral problems (U.S. Department of Education, 2019).

Schools have a responsibility to foster safe and equitable learning environments for all students, particularly for students who identify with a historically marginalized race/ethnicity or disability status. Although there remains an urgent need to mitigate the emotional and behavioral concerns currently faced by adolescents, the well-being of young people continues to worsen (APA, 2020). In order to effectively address problematic behaviors such as aggression, schools must provide students with access to evidence-based interventions. One such intervention based on CBT principles, the Creating Opportunities for Personal Empowerment (COPE) Teen program, has demonstrated promise in improving mental health and behavioral outcomes for adolescent students (Lusk & Melnyk, 2011; Melnyk, Kelly, & Lusk, 2013; Melnyk, Kelly, & O'Haver, 2015). However, limited research has evaluated the effectiveness of COPE for adolescents presenting aggressive behaviors in school settings.

Although there is evidence supporting the use of cognitive-behavioral interventions in schools, including COPE, no research to date has examined whether the implementation of COPE in school-based settings is effective in reducing aggressive behavior among adolescents. Given the negative outcomes associated with adolescent aggressive behavior, as well as acute mental health needs posed by the COVID-19 pandemic, research investigating how to reduce aggressive behavior and mitigate mental health needs is critical. Therefore, the current study evaluated the effectiveness of the COPE Teen program in reducing aggressive behaviors among adolescent students in school settings.

Research Questions and Hypotheses

For this study, the primary research question asked: *Will parent/guardian ratings of (a) the frequency of aggressive behaviors and (b) the intensity of aggressive behaviors decrease significantly following the implementation of a cognitive-behavioral skills building program, COPE, for three high school students?*

It was hypothesized that, as a function of the COPE program, there would be a significant reduction in both the frequency and intensity of aggressive behaviors, from baseline to intervention phases, for all three high school students. Visual analysis was expected to demonstrate reductions in the frequency and intensity of aggressive behavior, among all three students, by examining changes in mean, trend, variability, and immediacy of effect. Further, it was hypothesized that supplementary statistical analysis (e.g., log-response ratio) will demonstrate moderate to large effects for each student.

The secondary research question asked: *Will the high school students perceive the COPE program as a positive and helpful experience?*

It was hypothesized that at least two of three students will evaluate the COPE intervention positively, as evident by themes and patterns of self-reported responses through the COPE program evaluation form.

Method

Setting

The study was approved by the Institutional Review Board: Socio-Behavioral (IRB-SB) at the University of California, Riverside on April 27, 2021 (Approval #: HS-21-057; see Appendix A). Participants included students from a school district in the Coachella Valley region of Southern California. The school district includes a total of approximately 29,000 students distributed across more than 30 schools. Grades range from Kindergarten through Grade 12. The district community is composed of students who are identified as 47% White, 45% Hispanic or Latino, 3% Asian, 2% Black, and 2% two or more races. Approximately 20% of families earn an income below the poverty level. Permission to recruit potential participants (i.e., students within the district) was obtained from the school district. Due to COVID-19 school closures, the study was completed online via the Zoom platform. Participants were provided with a password-protected Zoom link for each of their COPE sessions.

Participants

Screening Procedure

Prior to implementation of the COPE program, the Educationally Related Mental Health Services (ERMHS) team at this district provided an online Social-Emotional Needs Survey (see Appendix C) to all high school students within the school district. The survey was sent to students via an online form in Spring 2021. The survey consists of twelve questions evaluating whether students are (within the last 30 days) facing challenges with (a) the COVID-19 pandemic (e.g., positive COVID exposure, loss of a loved one), (b) basic needs (e.g., food, housing), (c) mental health, and (d) behavior. For the purposes of this study, students who answered yes to being physically aggressive towards others (on either a daily, weekly, or biweekly basis) were eligible to participate in the study. Students who did not answer yes to being physically aggressive (on at least a biweekly basis) were not eligible for participation.

Students of any gender were eligible for participation, and in line with the COPE Teen Program description, students between the ages of 11 to 18 years old were eligible to participate in the study. Students being served through both the general education curriculum and special education curriculum were eligible to participate. However, if a potential participant was currently receiving an intervention specifically targeting aggressive behaviors, they were not eligible to participate in the study.

In total, 12 students were eligible to participate in the study. Out of the 12 students, four students reported daily physical aggression towards others, four students reported weekly physical aggression towards others, and four students reported bi-weekly

physical aggression towards others. The parents and guardians of each eligible participant were contacted by the researcher via phone call. During the phone call, the researcher explained that their child was eligible to participate in a short-term mental health program provided online through the school district. If the parent or guardian expressed interest, the researcher went on to explain the screening procedure, COPE program, duration of the program, and any potential risks/benefits to participating in the program. Additionally, the researcher explained the procedures (e.g., direct behavior ratings made by parent).

Out of the 12 eligible participants, the parents/guardians of six students declined to participate, and the families of three students were not available and could not be reached by phone. The parents/guardians of three students agreed to participate; thus, a total of three adolescent students participated in the study, meeting design standards for multiple baseline designs. See Table 1 for participant characteristics. Once the parent/guardian provided the researcher with verbal consent, written consent forms were subsequently emailed to both parents and students (see Appendix B).

Student A. Student A was a 16-year-old Hispanic male in Grade 11. His primary language was English. Student A participated in the general education curriculum via distance learning. Student A had a prior history of mental health intervention, including inpatient support, but was not receiving any services during the time of the study.

Student B. Student B was a 14-year-old Hispanic female in Grade 9. Her primary language was English. Student B participated in the general education curriculum through

distance learning. Student B had a prior history of receiving counseling services, but was not receiving any services during the time of the study.

Student C. Student C was a 14-year-old Asian male in Grade 9. He was an emerging bilingual student who spoke both Spanish and English. Student C participated in the general education curriculum through the hybrid model (a combination of in-person and distance learning). According to the parent, while Student C was in middle school, he was involved in a physical altercation with another student on campus.

Measures

Direct Observation of Behavior by Parents or Guardians

The primary outcome variables in this study included the frequency and intensity of aggressive behavior as recorded by one parent or guardian for each student within the home setting. The most fundamental design requirement of single case designs (SCDs) is repeated observation of performance over time (Kazdin, 2019). Due to the COVID-19 health and safety restrictions in place at the time of study, direct observation of student behavior by educators and researchers was not possible. Therefore, there was a need for behavior measurement systems that may be reliably completed by adults who are living or in close proximity with the student.

Frequency Count. Frequency measures note the occurrences of the target behavior within a given period (Kazdin, 2011). Aggressive behaviors are typically discrete (e.g., have a clear beginning and end), therefore the frequency of the target behaviors was counted for each student. There are numerous advantages for using frequency measures. First, frequency counts are easy to score in applied settings, as they

simply require the observer to keep a tally of the behavior (Kazdin, 2011). The parent or guardian of the student counted the behaviors in the home setting (during a one-hour observation period) and noted the total number of occurrences on the Google Form. Second, frequency counts can be expected to reflect change over time as they are typically considered to be sensitive to various interventions (Kazdin, 2011). Counting the occurrences of the target behavior both before the implementation of COPE, and during implementation of COPE, was expected to allow the researcher to assess for changes in the amount of aggressive behavior. Frequency measures thereby provide important data regarding whether or not the behaviors are decreasing as a function of the COPE program.

Intensity Rating. Along with frequency counts of the target behavior, parents rated the overall intensity of the behaviors for each participant. When obtaining ratings of student behavior, raters should include individuals who are most likely to interact with target students during the specified observation period (Chafouleas et al., 2010). Due to the COVID-19 context, parents and guardians of participants were determined to the most appropriate raters in the home setting. For this study, intensity was also described as the strength of the target behavior of each student. The overall intensity of the target behavior(s) was rated on a scale of 0 (no intensity) to 10 (high intensity) during the observation. While previous rating scales have defined intensity as the sum of the target behaviors (e.g., Eyberg Child Behavior Inventory; Burns & Patterson, 2001), intensity ratings were used in this study as a supplementary measure. Parents or guardians who rated intensity level as high were indicating that the behavior is more concerning

(compared to low intensity ratings). The intensity ratings provide information regarding the severity of the behavior, which may be used to help guide future intervention and response.

Defining Target Behavior. Once informed consent paperwork was obtained, the researcher scheduled individual parent trainings, via telephone, for the parents and guardians of Students A, B, and C. The phone meetings with parents and guardians included: (a) introductions and an overview of the study, (b) identifying and operationally defining the challenging (e.g., aggressive) behavior for the student, (c) an orientation to the Google Form, including explanations of frequency counts and intensity ratings, and (d) identifying dates/times to observe the student in the home.

At the start of the meeting, the researcher and parent/guardian of the student introduced each other. The researcher then provided an overview of the study, including study goals, an overview of the COPE program, and what their participation in the study would entail (e.g., directly observing their child's behavior). It was emphasized that the study would focus on a challenging, aggressive behavior that has been ongoing for the student.

The researcher met with the parent/guardian of each participant via phone call to determine the operational definition of aggressive behavior for their child. The three criteria of the operational definition of aggressive behavior included: (a) objectivity, (b) clarity, and (c) completeness (Kazdin, 2011). To illustrate, the operational definition included observable characteristics of the behavior (objectivity), was unambiguous so that it could be understood by others who are unfamiliar with the study (clarity), and also

delineated the boundary conditions by providing examples and nonexamples of the behavior (completeness; Kazdin, 2011).

First, the following operational definition was agreed upon by researcher and parent/guardian for Student A: "*Irritability is defined as when Student A becomes easily annoyed or angry. Examples of irritability include: (a) initiating arguments with grandma (especially regarding politics/religion), and (b) refusing to speak with mom when called upon. Non-examples of irritability include (a) sharing his perspective in a kind manner or (b) expressing disagreement in a respectful manner.*"

Second, the following operational definition was agreed upon by researcher and parent/guardian for Student B: "*Verbal outbursts are defined as when Student B makes a vocalization that is above normal conversational level in a defiant manner. Examples of verbal outbursts include (a) yelling and/or screaming at parent when requested to complete a chore, and (b) accusing parent of being unfair and/or not understanding her. Non-examples of verbal outbursts include (a) voicing a concern to parent in an appropriate tone, and (b) discussing chores with parent in an appropriate tone.*"

Third, the following operational definition was agreed upon by researcher and parent/guardian for Student C: "*Verbal aggression is when Student C speaks in a disrespectful manner to his mom or siblings. Examples of verbal aggression include when Student C (a) refuses to answer a question or request, (b) argues with others, and/or (c) uses profanity. Non-examples of verbal aggression include (a) expressing not understanding a request due to language (e.g., Spanish), and (b) speaking to his mom or siblings in a respectful tone.*"

Google Forms were used to document the frequency and intensity of the operationalized definition of aggressive behavior for each student (see Appendix D for a sample observation form). Upon developing an operational definition, each of the parents and guardians were provided with instructions on how to complete the Google Form. First, the researcher provided instructions to the parent/guardian on how to access the form. The researcher explained that a link for their Google Form would be emailed (and/or texted if parents preferred text over email). The researcher confirmed with each parent/guardian that they would have access to the Google Form link prior to the start of the COPE program (for baseline data) and until the program was completed (for intervention data).

Second, the instructor explained each step of the Google Form. The parent/guardian of each participant had access to a Google Form containing the operational definition of the target behavior pertaining to their child. Access to the Google Form was restricted to the parent or guardian, and the researcher was the only other individual with access to the forms. Each parent/guardian was oriented to the: (a) operational definition at the top of the form, (b) date/time of the observation, (c) frequency count, (d) intensity rating, and (e) additional comments section.

Parents and guardians were asked to directly observe the student's behavior for a one-hour period in the home setting. Each student was randomly assigned a set number of baseline ratings (i.e., 3, 5, or 7). They were informed that the COPE program would not be introduced until the baseline ratings were completed. Subsequently, COPE was not introduced to their child until the correct amount of baseline ratings were completed.

The researcher explained that, during the observation session, the target behavior for each student was measured through both a frequency count and an intensity rating. The frequency count consisted of a simple tally noting each occurrence of the target behavior, on a scale ranging from 0 (did not occur) to 10 (occurred 10 or more times). The overall intensity of the observed behaviors was rated on a scale of 1-10, with a rating of 1 indicating little intensity, and a rating of 10 indicating very high intensity. The researcher explained that, for each count of behavior (e.g., an occurrence of the operationally defined behavior), the parent/guardian would provide an overall intensity rating to supplement the frequency count. The researcher discussed examples of low intensity behavior and high intensity behavior, as well as the contrast between them, with the parents and guardians. Examples of intensity were individualized for each student's operational definition of the target behavior. Parents and guardians were instructed to complete the Google Form immediately following their observation.

Procedures

COPE Implementation

The seven-session COPE Teen Program was administered by the researcher, a PhD student in School Psychology. The researcher completed the online instructor training for the COPE program prior to beginning the sessions. Once the COPE program was purchased, the researcher was emailed a link to complete the instructor training. The training included a video, accessible online, which included an overview of each session and instructions for program delivery. Upon completion of the training video, the instructor is presented with a multiple-choice quiz. A passing score of at least 80% must

be obtained to receive the delivery license. Further, the training requires instructors to complete a practice session. When the practice session is completed, the instructor must complete and submit the Practice Delivery Results form, accessible on the COPE website. Once the passing score is achieved, and the Practice Delivery Results form has been approved, then the instructor is mailed a delivery license. The researcher obtained the Program Delivery Licence on February 25, 2021 (see Appendix G).

For each participant, the program was delivered 1-2 times per week, at a mutually agreed upon scheduled time. The program start time was staggered to ensure at least one participant had 3 baseline data points, one had 5 baseline data points, and one had a total of 7 baseline data points. The program was delivered individually via the online platform Zoom. Prior to the beginning of each session, the instructor would email each participant with a unique password-protected Zoom link. The duration for each session ranged between 30-40 minutes. The researcher followed the fully scripted manual for the seven-session COPE Teen program for each session. See Table 2 for an overview of the COPE program sessions.

Treatment Fidelity

While the COPE program was being implemented, treatment fidelity (TF) data were collected. TF is the extent to which an intervention was delivered as planned (Sanetti et al., 2021). TF data are necessary for drawing valid conclusions about the effects of an intervention on an outcome variable (Sanetti & Kratochwill, 2009; Sanetti et al., 2021). The primary dimensions of TF data include (a) content, (b) quality, and (c) quantity (Sanetti & Kratochwill, 2009). First, the content dimension refers to adherence,

and is the extent to which the intervention steps were delivered as planned (Sanetti et al., 2021). To address the content domain, the TF form was developed to assess instructor adherence to the core components of the COPE program (see Appendix F). A description of the development and procedure of the TF form is provided in the following section below. Second, the quality dimension assesses how well the intervention steps were delivered. The quality dimension of program delivery includes positive interpersonal interactions and sensitivity to participant needs (Sanetti et al., 2021). To assess for quality, core components on the TF form included the presence of interpersonal interactions (e.g., opportunities to engage) and instructor sensitivity to needs (e.g., answering questions or concerns, culturally responsive practice). Third, the quantity dimension refers to dosage (e.g., frequency and duration for which an intervention was delivered) and exposure (e.g., frequency and duration for which a participant received the intervention; Sanetti et al., 2021). Research indicates that exposure levels less than 90% are predictive of poorer student outcomes across academic, behavior, and social-emotional domains (Sanetti et al., 2021). During this study, all three participants attended 100% of the COPE sessions, demonstrating a high exposure level.

Selection of Core Components. A TF form for the COPE program was created by the researcher including the core components of the COPE program (see Appendix F). The COPE instructor manual was evaluated to identify core components of the program (Melnyk, 2003). For a component to be included in the TF form, it had to be (a) present across all seven sessions (with the exception of homework instructions/review), and (b) directly observable. In total, six core components were identified and listed on the TF

form. An additional seventh component, which was not COPE program-specific, assessed for cultural responsiveness. Each component required a Yes or No response, and the TF form was designed to generally be able to be used for any one of the seven COPE sessions. The selection of each component included on the TF form is described below.

The first component on the TF form assesses whether homework from the previous session was reviewed. Reviewing the homework at the beginning of each session is a major component of the COPE program. This component is not applicable to the first session (since they have not received homework prior to starting the program). The second component involves adhering to the text presented in the COPE manual. In the COPE instructor manual, it is emphasized that the text for each session must be presented exactly as written (Melnyk, 2003). Thus, it was critical to assess for adherence to the COPE manual text. An adherence range of 80-100% is considered high, 50-79% is considered moderate, and 0-49% is considered low (Sanetti et al., 2021). To assess for high adherence, the first item on the TF checklist asks if at least 90% of the COPE manual text was adhered to by the COPE instructor.

The third and fourth components on the TF form involve student engagement and participation. The TF form asks the observer if the instructor has provided the student with opportunities to respond, and if the student was provided with at least one activity to participate in. The COPE instructor manual emphasizes that students need to practice the skills they are learning through activities (Melnyk, 2003). Every one of the COPE sessions involves at least one activity and interaction with the participant, thus making these components essential aspects of the program.

The fifth component on the TF form assesses whether the instructor was checking for understanding and /or responding to any questions. It is important for the instructor to clarify and answer any questions the participant may have. Although the COPE program is manualized, there is flexibility for answering student questions and connecting concepts to the student's own experiences (Melnyk, 2003).

The sixth component examines whether the instructor was engaging in culturally responsive practice, based on Pamela Hays' steps for implementing culturally responsive practices during therapy (Hays, 2009). Although the COPE program does not explicitly include cultural competence as a core component, the influence of culture must be considered across all evidence-based practices (Hays, 2009). Therefore, it was imperative to include culturally responsive practices on the TF form. To measure this component, there must have been the presence of at least one culturally responsive practice. Examples were explicitly listed on the TF form, including: (a) not challenging cultural beliefs when they arise, (b) identifying culturally related strengths/supports, (c) validating self-reported experiences of oppression, and (d) questioning the helpfulness - rather than the validity - of a belief (Hays, 2009).

The seventh and final component on the TF form assesses whether homework instructions are provided at the end of the session. Homework is a core component of the COPE program, as it provides students with opportunities to practice the skills they have learned in real-world settings (Melnyk, 2003). Homework instructions are provided at the end of each session, with the exception of the final session.

Direct Observation of Core Components. Two doctoral students in school psychology directly observed and evaluated the researcher's adherence to COPE program fidelity. Research has shown that TF data collected via direct observation are more reliable when compared to data collected through permanent product or self-report (Collier-Meek et al., 2020). Both observers completed a graduate-level course on child behavior therapy, which included training on CBT and an overview of the COPE program. Additionally, they each reviewed the COPE instructor's manual and were familiar with the core components across the seven sessions. Finally, each observer completed the Social and Behavioral Research program course through the Collaborative Institute Training Initiative.

Observers were asked to complete three observations each (for a total of two observed sessions per participant). The instructor notified participants at least one session prior that an observer would be attending the following session. Participants were reminded that the purpose of having observers attend sessions was to evaluate the instructor's implementation of COPE, not to evaluate the participants. All three participants provided verbal consent for having the observer present for two of their sessions. The two observers were provided with observation dates to choose from, based on the scheduled sessions of participants. Once the scheduling was completed, the observers were provided with the password-protected Zoom links. At the start of the session, the observer would introduce themselves/say hello, and would not participate for the remainder of the session. The observers completed the TF form during each Zoom session.

COPE Program Evaluation

The COPE program evaluation form (Appendix E) was provided to each participant following the final session to evaluate the second research question. The form is available on the COPE website as a resource to instructors. The COPE program evaluation form was provided to each participant immediately following the final session via a link to access the form. The form consists of 23 questions, including "Did you find the COPE program helpful?" and "Did you learn new ways to deal with your thoughts?". Participant responses were descriptively reported to assess whether students themselves found the COPE program to be beneficial for them.

Incorporation of Culturally Responsive Practice

The definition of evidence-based practices, in the field of psychology, requires cultural competence (Hays, 2009). As a result, individuals providing evidence-based interventions (e.g., psychologists, mental health therapists, program facilitators) must consider the influence of culture in all aspects of their work (Hays, 2009). One limitation of the COPE program is that it does not explicitly include cultural competence as a core component of the program. Subsequently, steps should be taken to incorporate culturally responsive practices into the program.

Culturally responsive practices were embedded into each of the seven COPE sessions. Specifically, the ten suggestions provided by Hays (2009) were incorporated by the researcher implementing the program. Although the COPE program is manualized (as opposed to traditional CBT sessions between therapist and client), the researcher implemented each session through a culturally responsive lens when (a) developing

rapport with the student, (b) engaging in COPE program activities, (c) reviewing homework assignments, (d) participating in discussions (embedded within the COPE program), and (e) responding to student questions/concerns. A comprehensive summary of the seven sessions, including how culturally responsive practices were embedded into the COPE program, is presented below.

Session One. For the first session, an introduction was provided before beginning the activities. The COPE instructor introduced themselves, asked the student if they had any questions, and asked the student a series of icebreaker questions. Upon completion of the introduction, the first session focuses on the cognitive triangle and the ABCs (antecedent, belief, consequence). An introduction to the cognitive triangle is provided, along with case scenarios and an activity. The activity required the student to engage in identifying thoughts, feelings, and behaviors. Next, positive self-talk statements and mindfulness activities were introduced. The student is encouraged to try one activity to stay "in the moment" (e.g., making clapping sounds and having a friend repeat the pattern). A review of the cognitive triad and positive self-talk are given, followed by a case scenario. The student was asked to identify positive self-statements for the case scenario. The final activity involves changing negative statements to positive ones.

Homework activities include (a) writing down three situations that made the student upset (including thoughts, behaviors, and feelings pertaining to the event) and how they could have changed a negative thought to respond differently; (b) writing down positive self-statements on an index card; and (c) practice being present in the moment at least twice per day. Additionally, students filled out a goal setting and self-monitoring

log. The log includes information pertaining to a goal for how many positive self-statements to say each day, any barriers that made it challenging to reach goals, what the student can do to overcome these barriers, and rating emotions on a scale of 1-10.

Embedding culturally responsive practice within the first session involved the instructor engaging in rapport building with the student. The instructor allocated time at the beginning of session one to get to know each student. Specifically, the instructor used the ADDRESSING framework when interacting with students. First, the instructor acknowledged the cultural characteristics of age and generational differences. The instructor is in a position of power as the adult, and the participant/student has less power as the adolescent. Second, the instructor acknowledged the cultural characteristics of race/ethnicity; The instructor was White/Caucasian, and the participants were Hispanic and Asian. Recognizing that the instructor had multiple cultural characteristics that placed them in a position of power (e.g., age, race/ethnicity), it was critical for the instructor to consider how these influences shape the participants' experience of the COPE program.

Session Two. In the second session, the topic of self-esteem is discussed. Examples of healthy/positive self-esteem and poor self-esteem are provided. Positive self-talk is identified as a strategy to build self-esteem, and students are asked to identify a positive self-statement. Following the discussion on self-esteem, an activity is presented which requires the student to list people or things that they are thankful for. Following the activity, the cognitive triad is briefly reviewed. Next, there is a discussion on habits and change. Unhealthy habits are discussed, and the student is asked to identify any person

they may know who has changed an unhealthy habit. Steps to implement positive change are identified. Homework includes filling out the goal setting/self-monitoring log, reading a positive book for five to ten minutes per day, naming positive habits, naming negative habits, and developing a plan for changing negative habits.

Culturally responsive practices in session two consisted of identifying culturally-related strengths to develop positive self-esteem. For example, if a student disclosed that they spoke two languages, the instructor would remain curious about the student's culture, and discuss the potential benefits of speaking multiple languages. The instructor explicitly viewed the student's culture as a strength, and remained mindful to draw upon culturally related strengths and supports in future sessions. For example, a positive self-statement may include culturally related strengths (e.g., having the ability to understand and speak multiple languages).

Session Three. The third session focuses on stress and coping. It begins with a review of the cognitive triangle and the ABCs. The student is also asked to identify a situation from the past week where they changed their thoughts from positive to negative. The review is followed by a discussion of what stress is, whether it can be good or bad, and its connection to negative thoughts. Common examples of what may cause stress are provided (e.g., pressure from parents, questioning whether one is liked by peers), along with examples of how the body may respond to stress (e.g., increased heart rate, feelings of anger, trouble sleeping). The discussion of stress is followed by questions pertaining to how the student typically responds to stressful situations. Next, healthy coping is discussed. Examples of healthy coping skills (e.g., exercise, journal writing, relaxation

techniques) are provided, along with examples of unhealthy coping (e.g., drug or alcohol use, fighting with others). The session describes how unhealthy coping may lead to depression and anxiety. The discussion encourages the student to seek out help from parents, teachers, school counselors, or healthcare providers if they or someone they know is experiencing symptoms of anxiety or depression. A breathing exercise concludes the session. Session three homework includes questions on managing stress, saying positive self-statements 20 times per day, recording healthy ways they have coped with stress, and the weekly log.

Culturally responsive practice in session three may be present through cultural congruence in the identification of coping strategies. Although students are provided with an inventory of healthy coping strategies, they are also asked to identify healthy coping strategies for themselves. If students were to decide that a presented coping strategy does not work for them, they should be provided with opportunities to instead draw upon culturally-related coping strategies and supports that are unique to their sociocultural background. The instructor reminded students that they do not necessarily have to engage in the presented list of coping strategies, but they may tailor their list to fit their own experiences and background (e.g., attending cultural events, participating in religious activities). The instructor embraced supports which are unique to the student and would build upon the student's own repertoire of coping strategies.

Session Four. The fourth session involves solving problems and setting goals. The session begins with a review of the ABCs and the cognitive triad. The review is followed by an activity asking the student what they dream about doing when they get

older. The session identifies how positive self-talk and planning each step is important in making the dream come true. The student is asked to identify weekly goals, potential barriers, and how to overcome these barriers in reaching their dream. Next, there is a discussion on problem solving. The four-step process to problem solving is identified. The steps are first applied to two case scenarios. Homework for session four includes applying the four-step problem solving process to a real situation in the student's life. Additionally, the student is asked to identify three things they are thankful for, two to three good things about themselves, and a new positive self-statement. Lastly, they are expected to complete the weekly log.

From a culturally responsive perspective, the instructor acknowledged that each student has different goals and respects the goals of all participants. When students are in the process of identifying the barriers to achieving their goals, the instructor did not seek to minimize these barriers or provide alternative explanations. The instructor validated the barriers and challenges that each student has identified. Further, the instructor encouraged students to identify culturally related strengths and supports in overcoming (or managing, for situations that cannot be changed) the barriers that were identified.

Session Five. The fifth session focuses on managing emotions in healthy ways through positive thinking and effective communication. The session begins with a review of the cognitive triad. The session then provides an introduction to mental imagery, followed by a mental imagery activity. Subsequently, the COPE instructor leads the student in a guided imagery exercise. The activity is followed by an introduction to regulating emotions and self-control strategies. The importance of self-control activities

(e.g., positive self-talk, practicing deep breathing) is emphasized, and the student is encouraged to practice these activities when they feel annoyed or sad/worried. Other healthy coping strategies are discussed, including exercise, writing in a journal, watching a funny movie, and doing hobbies. Next, effective communication skills are introduced. Examples of effective communication skills are provided, including active listening, tone of voice, and word choice. Homework for this session includes practicing mental imagery before bed each night, writing down anger and anxiety triggers (along with response plans), writing down strategies used to manage anger, and describing instances of both healthy and unhealthy coping. Lastly, the weekly log is completed.

Similar to session four, culturally responsive practices for session five guide the discussion of positive coping strategies. Students were provided with another opportunity to discuss positive ways of coping with stress that work for them. Moreover, students were asked for feedback following the guided imagery exercise. While the program manual provides the beach as a setting for the exercise, the instructor recognized that not all students will find this setting relaxing. For example, one student did not want to use the beach setting for guided imagery. The instructor collaborated with the student to identify a situation/setting where they feel comfortable or relaxed, and encouraged students to use their preferred setting when practicing guided imagery. Rather than assume all students will find the beach setting as pleasant, the instructor worked with students to identify a context which was relaxing for them .

Session Six. During the sixth session, coping with stressful situations is emphasized. The session begins with a review of the ABCs and the cognitive triad. The

student is asked to provide an example of a strategy they used in the past week (e.g., positive self-talk, relaxation, problem solving, effective communication). Next, a list of possible stressful situations are presented. The instructor works with the student to act out healthy ways to deal with the problems. Examples of the stressful situations include being bullied, saying "no" to peer pressure, being criticized, and accepting "no" from others. Homework includes writing down how to respond to a variety of stressful situations, adding a positive self-statement to say each day, and the weekly log.

Culturally responsive practices were embedded within the role-plays of session six. For example, one scenario asks the student how to say "no" to others. If a student is from a culture where saying "no" involves different considerations than those present in the dominant culture, this situation may not be comfortable for them. The instructor and student would collaborate together to come up with a response that is both respectful and culturally congruent for the student.

Session Seven. The seventh and final session focuses on summarizing the material and skills learned since the first session. The session begins with the student describing a situation, in the past week, in which they have handled differently because of what they have learned in the COPE program. Important review points include positive thinking, the cognitive triad, staying in the present moment, being thankful for what you have, changing reactions to situations, achieving new goals and dreams, and solving problems. Strategies are provided for dealing with stress, managing anger, and communicating positively. Finally, the student is provided with positive praise for completing the program.

During session seven, the student is provided with a review and is provided with opportunities to ask questions or provide comments. Following the final review session, it is important to seek feedback from participants. This was done through the COPE program evaluation survey. Culturally responsive practice involved validating client experiences, whether they be positive or negative. Prior to administering the survey, the instructor emphasized that the survey responses will not be used to evaluate students, and that their perspective was a valued contribution to the research study. A difference in perspectives was embraced by the researcher. Thus, if a student did not find the program helpful, their perspective would be valued equally as someone who did find the program helpful.

Study Design

Single-Case Design: Multiple Baseline Across Individuals

To evaluate the effects of the COPE program on the challenging behavior of adolescents in the home setting, a single-case design (SCD) was utilized for this study. The implementation of SCD with a student involves collecting data on a target behavior, predicting the future performance of those data, and testing whether the implementation of an intervention is associated with a change in predicted performance (Johnson et al., 2016). SCD involves the continuous assessment, or repeated measurement, of performance (i.e., behavior) over time (Kazdin, 2019). In this study, the repeated measurement of aggressive behavior was continuously assessed under different experimental conditions (e.g., baseline phase, intervention phase; Kazdin, 2011). Specifically, a multiple baseline across-individuals design was utilized for this study. The

multiple baselines refer to the number of students who will have their behavior observed (Kazdin, 2011). To illustrate, each participant was randomly assigned a baseline consisting of three, five, or seven data points. In total, there were six design phases (two phases per participant), thereby meeting the design standards for multiple-baseline designs (Kratochwill et al., 2014).

An SCD was chosen for this study over a randomized controlled trial design for several reasons. While randomized controlled trial designs are considered the 'gold standard' of research, they are not always practical or feasible when conducting research in applied settings (e.g., schools, homes; Kazdin, 2011). SCDs have been widely used to test the effects of interventions in many parts of education, psychology, and medicine (Shadish et al., 2015). Specifically, there has been an increased interest in the role that SCDs can play in the recommendation of educational and psychological interventions (Kratochwill & Levin, 2014). Although SCDs have historically been restricted to behavioral interventions, recent research has incorporated behavioral interventions under the scope of mental health interventions (e.g., cognitive-behavioral techniques; Kazdin, 2019).

Data collection consisted of the parent or guardian submit their observations of the target behavior on the Google Form during the baseline phase. For example, if a student was randomly assigned to the baseline with five data points, the parent submitted five Google data collection forms prior to implementation of the COPE intervention. Once the parent completed the baseline phase data collection, the COPE intervention was introduced to the student. The COPE intervention was implemented 1-2 times per week

for each participant. During the intervention, the parent or guardian rated the student's behavior and submitted the Google data collection forms. There were a minimum of five data points in the intervention phase for each participant. During the process, the researcher moved the data for each participant from Google Forms to an Excel sheet, which only the researcher had access to.

Visual Analysis. Visual analysis was conducted to evaluate whether parent/guardian frequency counts and intensity ratings of aggressive behaviors would improve (i.e., decrease) among Student A, Student B, and Student C. The methodology of SCD recommends a minimum of three demonstrations of effects to conclude an intervention effect (e.g., the intervention was functionally related to the changes in the target behavior; Johnson et al., 2016). First, baseline and intervention phase data for frequency of aggressive behavior were visually graphed for each student. Second, baseline and intervention phase data for the intensity of aggressive behavior were visually graphed for each student. To evaluate whether there was an effect, and in line with the single-case design standards, the effects of COPE on the frequency and intensity of aggressive behaviors were analyzed according to changes in level, trend, variability, and immediacy of effect (Kratochwill et al., 2010; Johnson et al., 2016).

Effect Size Estimates. A primary reason to include an effect size estimate within single case designs is to encourage the inclusion of single case data in recommendations of effective interventions (Kratochwill et al., 2010). An effect size is an index of improvement by the client (Parker et al., 2011). An effect size, as pertaining to single case design studies, is "a numerical index that quantifies the direction and magnitude of

the functional relationship between an intervention and an outcome" (Pustejovksy, 2018, p. 100).

Selection of Effect Size Method. Supplemental quantitative analysis was conducted to evaluate the strength of the relationship between the COPE program and any changes in frequency and intensity of aggressive behavior. In SCDs, there are no standard methods for effect size estimates (Kratochwill et al., 2010). Two of the primary types of effect size measures include standardized mean differences (SMDs) and nonoverlap methods (Pustejovsky, 2014). One major limitation of these approaches is that they involve the assumption of comparable measurement scales. First, while SMDs are appropriate for interval scale measurements, and typically connected to a normal distribution outcome, most measurements used in SCDs are not interval scaled or normally distributed (Pustejovsky, 2014). Second, there remains a large selection of nonoverlap effect size strategies used in SCDs, including percentage of nonoverlapping data (PND) and percentage exceeding the median (PEM; Parker et al., 2011). As with SMD, these methods do not require interval scales or normal distribution, making them particularly appealing for SCDs (Parker et al., 2011). However, since nonoverlap methods do not involve specific distributional assumptions, it is unknown if they are sensitive to differences in measurement scales (Pustejovsky, 2014).

Log-Response Ratio (LRR). A log-response ratio (LRR) was calculated for each participant to determine the effect sizes for Student A, Student B, and Student C. Considering the limitations of SMD and nonoverlap methods, they were not used for calculating effect size estimates in this study. Instead, the LRR was calculated for both

the frequency and intensity of behavior among participants. The LRR is an effect size index that has proven useful for describing the magnitude of functional relationships, particularly for use with single-case designs (Pustejovsky, 2018). The LRR effect size estimate has several advantages. Compared to nonoverlap methods, LRR addresses measurement-comparability and it specifically accounts for how behavioral outcomes are measured (Pustejovsky, 2014; Pustejovsky, 2018). The LRR was designed to work with systematic direct observation procedures, making the index appropriate for behavioral outcomes (Pustejovsky, 2018). Moreover, LRR estimates can be translated into percentage change between phases as an effect measure, which is an appropriate measure for quantifying the magnitude of functional relationships (Pustejovsky, 2018). Lastly, the use of robust variance estimation accounts for the possibility of auto correlation in the data. (Pustejovsky, 2018).

Interobserver Agreement

Interobserver agreement (IOA) data are traditionally collected within single-case designs to ensure that observation data are obtained reliably (Kazdin, 2011). In addition to parent/guardian frequency counts and intensity ratings, it would be ideal to have another adult familiar with the participant, such as a teacher, also complete the Google form during both baseline and intervention phases. Agreement between both observers (e.g., parent and teacher) helps determine whether the operational definition of aggressive behavior is objective, clear, and complete, or whether the definition needs to be adjusted (Kazdin, 2011). However, given the circumstances of the COVID-19 pandemic, it will not be possible for teachers to rate student behavior within the online learning

environment (e.g., students may have their cameras turned off during remote instruction). Further, it will not be possible for the researcher to collect IOA data in a way that protects the safety of both participants and their families (e.g., researcher is unable to visit student homes due to social distancing requirements). Thus, while the importance of IOA is acknowledged and understood, the current global situation prevents IOA data from being feasibly and safely collected.

Student Evaluations of COPE

Student perspectives were incorporated into the evaluation of the COPE program. The COPE Program Evaluation form was created by the COPE program developer and is openly accessible on the program website (Cope2Thrive, 2021). It is a self-report form consisting of 23 free response questions to be completed by program participants (see Appendix E). The COPE website recommends that the form be used by instructors as an assessment tool following program completion (Cope2Thrive, 2021). The form is a way for participants to share their experiences participating in the program. It also provides the COPE instructor with feedback on how program delivery could be improved for the future.

Results

To address the primary research question, the data was evaluated by the researcher through visual analysis. For each student, the frequency counts of the target behavior were graphed during baseline and intervention phases. Additionally, the intensity ratings for each student were graphed during baseline and intervention phases. The data were evaluated according to changes in level, trend, variability, and immediacy

of effect. Supplementary statistical analyses were conducted to evaluate the strength of the relationship between the COPE program and any changes in frequency and intensity of aggressive behavior. To address the secondary research question of whether the COPE program was perceived as a positive experience, themes and patterns of self-reported responses on the COPE program evaluation form were evaluated.

Visual Analysis

Frequency of Aggressive Behavior

Student A. The results for frequency of aggressive behaviors are visually depicted in Figure 2. The phases are separated by a black dashed line, and the intervention end point is represented by a blue dotted line. For Student A, the frequency of aggressive behavior ranged from four to eight in the baseline phase (M = 5.7, Mdn = 5.0, SD = 1.7; see Table 3). The data points in the baseline phase demonstrate some variability, as there is a slight downward trend during baseline. During the intervention phase, the frequency of aggressive behavior ranged from two to nine, indicating greater variability among data points (M = 5.4, Mdn = 5.0, SD = 2.3). The data pattern in the intervention phase demonstrates a downward trend with greater variability. There was a slight decrease from the mean of the baseline phase (M = 5.7) to the mean of the intervention phase (M = 5.4), suggesting a small decrease in average aggressive behaviors from baseline to intervention phases.

Interestingly, the level of the baseline phase (M = 5.7) was lower than the level of the first three points of the intervention phase (M = 6.7), indicating that aggressive behaviors slightly increased immediately following the COPE program. However, the

frequency of aggressive behaviors continued to decline in the intervention phase. As both baseline and intervention phases indicate a downward trend, an intervention effect cannot be concluded.

Student B. For Student B, the frequency of aggressive behaviors ranged from eight to ten during the baseline phase (M = 9.6, Mdn = 10.0, SD = 0.8; see Table 3). The baseline phase indicates little variability, with a slight downward trend (see Figure 2). During the intervention phase, the frequency of aggressive behavior ranged from eight to nine, and demonstrated another slight downward trend with little variability (M = 8.6, Mdn = 9.0, SD = 0.5). The mean of the intervention phase (M = 8.6) was lower than the mean of the baseline phase (M = 9.6), suggesting a decrease in the average frequency of aggressive behaviors between phases.

Further, the mean of the last three data points from the baseline phase (M = 9.3) is slightly higher than the mean of the first three data points of the intervention phase (M = 9.0), indicating that the frequency of aggressive behaviors slightly decreased immediately following the introduction of the COPE program. The data pattern in the intervention phase is what would be expected when considering the data pattern in the baseline phase, as there was a slight decreasing trend in both phases with little variability. Thus, an intervention effect is not evident.

Student C. During the baseline phase, the frequency ratings of aggressive behaviors for Student C ranged from zero to three, with little variability and a slight downward trend (M = 1.0, Mdn = 1.0, SD = 1.1; see Table 3). During intervention phase, the frequency of aggressive behavior ranged from zero to two, with even less variability

within the phase (*M* = 0.9, *Mdn* = 0.0, *SD* = 1.0). Data in the intervention phase demonstrate a stable trend line. There was a decrease from the mean of the baseline phase (*M* = 1.0) to the mean of the intervention phase (*M* = 0.9), suggesting a small decrease in the average frequency of aggressive behaviors.

The level of the last three data points of the baseline phase (*M* = 0.7) is slightly higher than the level of the first three data points in the intervention phase (*M* = 0.0), indicating that there was some evidence of aggressive behaviors immediately following the introduction of the COPE program. However, the data pattern in the intervention phase does not differ more than would be expected from the data pattern in the baseline phase. Therefore, an intervention effect is not evident (see Figure 2).

Intensity of Aggressive Behavior

Student A. The results for intensity of aggressive behavior are visually depicted in Figure 3. The phases are separated by a black dashed line, and the intervention end point is represented by a blue dotted line. During the baseline phase of Student A, intensity ratings of aggressive behavior remained stable with three ratings of eight (*M* = 8.0, *Mdn* = 8.0, *SD* = 0.0; see Table 4). There was no variability during the baseline phase of intensity ratings, and the trend line was flat. However, during the intervention phase, the intensity ratings ranged from six to nine (*M* = 7.7, *Mdn* = 8,.0 *SD* = 0.9). The intervention phase indicated some variability with a trend line that is slightly increasing. The mean of the baseline phase (*M* = 8.0) is slightly higher than the mean of the intervention phase (*M* = 7.7), indicating a decrease in the average intensity of aggressive behavior from baseline to intervention.

The mean of the last three data points in the baseline phase (*M* = 8.0) was higher than the mean of the first three data points of the intervention phase (*M* = 7.6), indicating a small decrease in the intensity rating immediately following the introduction of the COPE program. However, the predicted data pattern in the intervention phase would be expected to decrease rather than increase. Thus, when comparing data patterns from the baseline phase to intervention phase, there is no evidence of an intervention effect. See Figure 3.

Student B. During the baseline phase, the intensity ratings of aggressive behavior ranged from nine to ten, indicating slight variability and high intensity levels of aggressive behavior (*M* = 9.2, *Mdn* = 9.0, *SD* = 0.4; see Table 3). Data in the baseline phase indicates a slight downward trend (see Figure 3). During the intervention phase, the intensity ratings of aggressive behavior ranged from eight to nine (*M* = 8.6, *Mdn* = 9.0, *SD* = 0.5). Data in the intervention phase indicates a downward trend. The mean of the baseline phase (*M* = 9.2) is higher than the mean of the intervention phase (*M* = 8.6), suggesting a decrease in the average intensity of aggressive behavior from baseline to intervention phase.

The level of the last three data points in the baseline phase *(M* = 9.0) is the same as the level of the first three data points of the intervention phase *(M* = 9.0), indicating no evidence of immediacy of effect. The data pattern in the intervention phase is what would be expected when considering the data pattern in the baseline phase (e.g., data patterns in both baseline and intervention phases present a slight downward trend). Therefore, an intervention effect is not evident. See Table 4.

Student C. Further, during the baseline phase, the intensity ratings of aggressive behavior ranged from zero to four, indicating moderate variability (M = 1.3, Mdn = 1.0, SD =1.4; see Table 4). Data in the baseline phase demonstrates a slight downward trend. During the intervention phase, the intensity ratings of aggressive behavior ranged from zero to two, demonstrating another small downward trend (M = 0.7, Mdn = 0.0, SD = 0.8). The mean of the intervention phase (M = 0.7) is lower than the mean of the baseline phase (M = 1.3), suggesting a decrease in the average intensity of aggressive behavior from baseline to intervention.

The level of the last three data points in the baseline phase (M = 0.7) was slightly higher than the level of the first three data points in the intervention phase (M = 0.0), indicating that the intensity rating of aggressive behaviors decreased immediately following introduction of the COPE program. However, the pattern of baseline data is similar to the pattern of intervention phase data, indicating no difference. Since both baseline and intervention phases demonstrate a slight downward trend, an intervention effect is not present. See Figure 3.

Supplemental Statistical Analysis

Effect Size Estimates for Frequency

Among the three students, the estimated log-response ratios for the frequency of aggressive behaviors ranged from no effects to small effects. For Student A, there was a 5% decrease in the frequency of aggressive behaviors from baseline to intervention, with a 95% confidence interval (CI) of [-0.59, -0.49]. For Student B, the LRRd estimate indicates a 11% decrease in the occurrences of aggressive behaviors from baseline to

intervention, with a 95% CI of [-0.20, -0.02]. For Student C, there was a 21% decrease in the frequency of aggressive behavior from baseline to intervention, with a 95% CI of [-1.27, 0.85]; however, this confidence interval includes zero, engendering minimal confidence in whether change for this study was indeed in therapeutic direction. Overall, the LRRd estimates indicate that the COPE program led to small reductions in the frequency of aggressive behaviors for Student B, but no effects for Students A and C. See Table 5.

Effect Size Estimates for Intensity

The estimated log-response ratios for the intensity of aggressive behaviors range from no effects to small effects. For Student A, the LRRd indicates a 4% decrease in the intensity ratings of aggressive behaviors from baseline to intervention, with a 95% CI of [-0.13, 0.06]. However, since the CI includes zero, we cannot conclude a decrease in the intensity of aggressive behaviors from baseline to intervention. For Student B, the LRRd indicates a 6% decrease in the intensity ratings of aggressive behaviors, with a 95% CI of [-0.12, -0.01]. For Student C, there was a 66% decrease in aggressive behaviors from baseline to intervention, with a 95% CI of [-1.75, 0.44]. Since the CI includes zero, we cannot conclude a decrease in the intensity of aggressive behaviors from baseline to intervention. Although there were no effects for Students A and C, there was a small decrease in the intensity ratings of aggressive behaviors for Student B. Further details are provided in Table 5.

Treatment Fidelity

Each additional fidelity observer was invited to an online form (via Google Drive) and completed each form while observing the COPE session through Zoom. For each participant, each observer observed the researcher for more than 20% (two out of seven sessions) of the COPE program. In total, they observed six COPE sessions (three sessions each), for a total of approximately 29% observed sessions for each participant. Results from the TF forms indicated that the researcher adhered to the instructor steps for 100% of the observed sessions for each student.

Student Perspectives

All three students completed the COPE Program Evaluation form via Google Forms (see Appendix E). Prior to completing the form, the researcher emphasized that the student will not be graded on their responses, and to answer the questions as openly and honestly as possible. The form asks students to answer questions regarding the helpfulness of the program, their likes/dislikes of the program, changes experienced after the program, program topics, strategies learned for managing stress, future use of skills learned, what they would change about the program, homework assignments, program duration, parent involvement, what they would tell friends about COPE, program dissemination, and cognitive-behavioral skills building. Each student completed the form independently upon completion of the final session (i.e., session 7) of the COPE program. See Table 6 for a results summary of the COPE Program Evaluation form.

Program Helpfulness. Students B and C reported that they found the COPE program to be helpful. Student B expressed that "It helped me reach out for help when I

needed it, and it helped me manage my anger and stress levels." Student C stated: "it helped me with positive thinking and stress management." In contrast, Student A reported that the COPE program was not helpful. When asked to explain why the program was not helpful, Student A responded by writing "It wasn't that the program isn't helpful, it's that it's very by the book." Further, Student A explains that the COPE program is not helpful for those who have already been to therapy. Student A notes that "It's just reading from a bad book that has been read to us many times before." Although Student A initially reported that the COPE program was not helpful, he then stated that the program is helpful, but that the manualized nature of the program is not helpful for those who have already received mental health treatment. In summary, at some point on the form, all three participants expressed that the COPE program was a helpful experience; however, the manualized structure of the program was seen as unhelpful to one student who had previously attended therapy.

Likes and Dislikes. When asked what they liked best about the COPE program, Students B and C expressed components of the program that they valued. Student B reported "I liked how interactive the activities were, I enjoyed each session." Student C stated: "I like that they offer ways of managing stress like breathing techniques or visual imagery." Student C did not report any enjoyable aspects of the program. When asked what they liked least about the COPE program, Student B did not report anything. Student A noted they disliked "how basic the program is." Student C stated: "Some of the things they talked about were kind of repetitive but overall great." To summarize, participants listed the most positive experiences as (a) interactive sessions and (b)

learning new ways to manage stress, such as breathing techniques and visual imagery. The negative experiences were described as (a) the overall simplicity of the program and (b) the repetitiveness of concepts within the program.

Changes after COPE. One question on the form asks participants if anything has changed for them since they started the COPE program. Student A reported no changes since starting the program, while Students B and C both reported changes. Student B stated: "I've been more happy and active, less stressed, and I don't procrastinate as much." Student C stated: "My way of thinking has changed and I am more concerned with my mental health." Overall, two out of three participants listed positive changes in their lives since starting the COPE program, including feeling happier, engaging in more physical activity, feeling less stressed, spending less time procrastinating, learning new ways of thinking, and prioritizing their own mental health.

Program Topics. Students were asked which topic within the COPE program was the most helpful for them. Student A reported none of the topics were helpful, while Sutdents B and C reported that there were helpful topics. Student B stated that the visual imagery sessions were the most helpful because they helped her to "stay at peace." Student C reports that topics on managing stress and emotions were the most helpful because he often feels like he is "losing control of the world around me."

When asked what topics they would have liked to spend more time on, Student A reported none, Student B reported mental imagery, and Student C reported managing stress and positive thinking. When asked what topics they would have liked to spend less

time on, Student A reported all, Student B reported none, and Student C reported problem-solving.

Strategies for Managing Stress. The form asks students about any new or different thoughts they have for managing stress and concerns. Student A reported no new or different thoughts. Student B reported that they can manage negative thoughts since she learned how to manage stress through the program. Student C stated "I have a optimistic perception now, instead of feeling hopeless, I feel confident that I can deal with stress effectively."

Future Use of Skills Learned. Students were asked if they will continue to use the skills learned in the COPE program. Student A reported that he will not use any skills learned in the future. Student B reported that she will continue to use positive self-talk, mental imagery, and problem-solving skills. Student C reported that he will continue to use skills for managing stress, including positive self-talk and positive thinking.

Program Changes. When asked what they would change about the COPE program (if anything), Students A and C provided suggestions to the program, while Student B reported no changes are needed. Student A reported that the program should be revamped completely and to "make it so that you aren't telling teens what to do according to a book." Student C suggested focusing more on stress experienced by adolescents. Student C further elaborated, "…focus more on the stress part since that is usually why kids suffer, adults believe that they don't experience stress, but they do and so focusing more on stress will definitely help."

Homework Assignments. Students were asked if the homework/skills-building after each session were helpful to them. Student A reported it was not helpful, while Students B and C reported that the homework assignments were helpful. Student B stated that the homework assignments were "enjoyable" and reminded her to practice the exercises. Student C stated that the homework assignments were "really helpful" and "made me think about the things it was asking." Overall, two out of three students found the homework/skills-building assignments to be helpful.

Program Duration. When asked about the length of COPE sessions, Student B reported that the length was just right, while Students A and C said the program was too short. Student B noted "I was satisfied with the amount of time spent on each session because it fit well into my schedule and it wasn't too short, nor too long." Student C stated it was short, although it was still "fine and great." Student A noted that "it was rather short in my opinion."

Parent Involvement. Students were asked if they discussed things they have learned in the COPE program with their parents or guardians. Students A and C reported they did not discuss the program with parents/guardians, while Student B reported that she did. Student B explained "Yes, my mom asks me every session what I learned and I tell her, so she uses those exercises as well." Student A stated there was "no reason to" discuss the program with parents. Student C stated "my mom is busy, I don't really have time to talk to her, or I usually forget."

Telling Friends About COPE. When asked what they would tell a friend about the COPE program, all three students responded with recommendations to the program.

Student A said he would tell a friend to "take it if you have only recently started feeling depressed or feeling very stressed." Student B said she would tell a friend that "it is very helpful, especially when you are in school." Student C responded by saying he would tell a friend that "it's a great program that helps with mental health." Overall, all three students would recommend the COPE program to their friends, especially for students who are experiencing stress.

Program Dissemination. Further, students were asked whether or not they believe all students should receive the COPE program. Student A reported that adolescents experience a lot of stress, but the program would not be beneficial for those students who have received mental health support already. Student B noted that "it depends" but that "everyone could benefit in some way with this program." Student C reported that "COPE would be more for students that especially suffer from mental health issues."

Cognitive-Behavioral Skills Building. Students were asked if they learned new ways to deal with thoughts, feelings, and behaviors. Student A reported no new skills learned to manage thoughts, feelings, and behaviors. Students B and C reported that they did learn new ways to manage thoughts, feelings, and behaviors. Lastly, students were asked if there is anything else they would like the COPE instructor to know. Student A did not provide a response. Student B stated that it helped with her "behavior issues at home." Student C reported that it was a "great experience, thank you!"

Overall, the results from the COPE Program Evaluation form indicate that two out of three students, Students B and C, found the program to be a positive and helpful

experience. These two students reported that they learned new ways to manage their thoughts, feelings, and behaviors. After completion of the COPE program, Students B and C indicated that they are more happy, active, and confident. Negative aspects of COPE, as reported by Students A and C, included the manualized format and short duration of the program. All three students reported that they would recommend the COPE program to their peers, particularly for those who are experiencing stress.

Discussion

Summary of Study

Adolescents in the United States continue to struggle with both mental health and behavioral challenges, which have been exacerbated by the COVID-19 pandemic (Liang et al., 2020; Jiao et al., 2020; APA, 2020). Public schools provide a setting for students to receive equitable access to mental health and behavioral support. However, the introduction of remote learning presented a new barrier for school systems to remediate the mental health and behavioral concerns among students. In this study, a seven-session manualized cognitive behavioral skills training program, COPE, was virtually delivered to three high school students during the pandemic. All three participants were recruited through a high school in the Coachella Valley region of Southern California. Participants were eligible to participate based on their results of a survey screening for self-reported aggressive behaviors. The target behavior was operationally defined for each student as a collaborative effort between the parent/guardian of the student and the researcher. The parent/guardian observed the student's behavior in the home setting and recorded the frequency and intensity of the behavior they observed. It was hypothesized that both the

frequency and intensity of the target behavior, for all three participants, would decrease upon the introduction of the COPE program, and that students would perceive the program as a positive, helpful experience. Results indicated that there were no observable changes in the frequency or intensity of aggressive behavior among participants. However, participants perceived the program to be helpful for themselves and would recommend the program to other students.

Overview of Findings

This study's primary hypothesis was that both the frequency and intensity of aggressive behaviors of three high school students would decrease upon the introduction of a cognitive-behavioral skills building program, COPE. Culturally responsive practices were embedded into each of the seven COPE sessions. Visual analysis of the frequency of aggressive behavior (see Figure 2) and intensity of aggressive behavior (see Figure 3) demonstrated that the COPE program did not produce an intervention effect for frequency nor intensity of the targeted behaviors. The data patterns in the intervention phases did not differ more than expected from the data patterns in the baseline phases. Thus, there was insufficient evidence to conclude an intervention effect for both frequency and intensity of aggressive behaviors.

Supplementary statistical analysis included LRR effect size estimates for the frequency and intensity of behavior. First, a small decrease in the frequency of aggressive behavior, from baseline to intervention phases, was found for Students A and B, but not for Student C. Second, there was a moderate decrease in the intensity of aggressive behavior for Student B, but no decreases in behavior for Students A or C. Overall, the

LRRs indicate that while there were small-to-moderate improvements in behavior for Student B, mixed effects for Student A, and no effects for Student C.

The secondary hypothesis postulated that at least two out of three students would find the COPE program to be a positive and helpful experience. Data from the COPE program evaluations indicated that two out of three students did perceive the COPE program to be a helpful experience for them. Specifically, Students B and C reported positive experiences with the program, including feeling happier, learning new ways to manage stress, being more active, increasing positive self-talk, and feeling more confident. Interestingly, Student B reported that she shared the strategies learned in the COPE program with her parent, who also began to use the strategies to manage stress. Although Student A reported that the program was not helpful for himself, he would recommend the program to others (particularly for those who have recently started to experience depression or stress). Overall, two out of three students found the COPE program to be helpful for themselves, and all three students reported they would recommend the program to other students.

Social Validity

Social validity helps researchers and practitioners understand that interventions are implemented "within a sociopolitical, cultural, and historical context" (Foster & Mash, 1999, p.15). The concept of social validity posits that consumers of an intervention participate in the evaluation process (Leko, 2014). Social validity encompasses three aspects: (a) the social significance of goals, (b) the social appropriateness of procedures, and (c) the social importance of the intervention effects (Wolf, 1978).

Social Significance of Goals

Social significance of goals refers to the benefits of the study for society (Wolf, 1978). In this study, the goals were to reduce the frequency and intensity of aggressive behavior of adolescent students through a mental health program. The study goals provide several possible benefits for society. First, the study sought to improve access to evidence-based mental health and behavioral services for all students. Due to the pandemic, there has been an increase in emotional and behavioral concerns among young people (Patrick et al., 2020; APA, 2020). This study provided an example of the use of school-based screening for mental health and behavioral challenges, via self-report online surveys, as one method to identify students eligible for more intensive services, such as the COPE program. Second, it is possible to implement a culturally responsive approach (e.g., identifying culturally related strengths and supports for students) through the delivery of the COPE program, while still maintaining treatment fidelity. As a result, this study may encourage other providers using cognitive-behavioral therapy to incorporate a culturally responsive framework for their practice.

Third, although no positive effects for the intervention were found, the COPE program does provide an alternative to exclusionary discipline practices (e.g., suspensions, expulsions). Literature demonstrates that exclusionary practices are ineffective and perpetuate the placement of students into the juvenile justice system (APA, 1993; Skiba et al., 2014). Further, these practices are disproportionately applied to students based on their race/ethnicity. Thus, it is important to challenge the systemic racism that permeates these discipline practices. Rather than exclude students from

school, the COPE program provides a way to respond to aggressive behavior by providing students with effective intervention, keeping them in school, and potentially improving their emotional and behavioral well-being. As aggressive behaviors among adolescents are linked to negative outcomes, responding to these behaviors through mental health programming has the potential to benefit students, their families, and society overall.

Social Appropriateness of Procedures

Treatment procedures should be socially appropriate in terms of (a) ethics, (b) cost, and (c) practicality (Wolf, 1978). First, the World Health Organization explicitly recommends interventions for supporting children (e.g., life skills development programs) to promote youth mental health (WHO, 2018). In line with this recommendation, the COPE program is designed to foster cognitive-behavioral skills among adolescents to improve their overall mental health. Further, the study received ethics approval from the IRB-SB at the University of California, Riverside, before it was implemented. Second, the COPE program was delivered through the school district, and services were provided free of charge. This mode of delivery provided all eligible students with access to mental health care, regardless of social factors (e.g., socioeconomic status). Third, as the study was conducted during the COVID-19 pandemic, students were participating in remote/online learning. To adhere to public safety guidelines, the COPE program was delivered virtually rather than in-person.

Social Importance of Intervention Effects

Finally, social validity also encompasses whether the participants are satisfied with the results of the intervention, including unplanned results (Wolf, 1978). The COPE Program Evaluation form sought to bring student voices to the forefront. The form was used to help the researcher understand if students were satisfied with the program itself. Current literature on mental health programming for children and youth calls for the views of young people to be incorporated more fully. Failing to include the voices of young people in mental health programs has been described as a serious oversight in the literature (O'Mara & Lind, 2013), and whether or not a program is genuinely helpful to a participant may only be evaluated by the consumer (Wolf, 1978). Despite the absence of an intervention effect in this study, students reported learning new skills on the COPE Program Evaluation form (e.g., problem-solving skills, managing negative thoughts). Student perspectives, for at least two out of the three participants, indicated that they were in fact satisfied with the results of the COPE program.

Virtual Delivery of COPE

Due to the ongoing COVID-19 pandemic, the COPE program was delivered virtually in this study. There is only one other study that has evaluated the virtual implementation of COPE during the pandemic; Harper and Brewer (2021) investigated whether the COPE program would improve anxiety and depression symptoms among adolescents in a homeschool cooperative setting. The COPE program was delivered virtually for eight adolescent students. The Generalized Anxiety Disorder 7-item Scale (GAD-7) and Patient Health Questionnaire-9 Modified for Teens (PHQ-A) were used to

assess anxiety and depression symptoms pre-COPE intervention, post-COPE intervention, and one month after completing the COPE intervention. A Friedman test was used to evaluate differences between means on the GAD-7 and PHQ-A. Changes in median scores on the GAD-7 and PHQ-A were not statistically significant. Although not statistically significant, median scores on the PHQ-A demonstrated a decreasing trend from pre-COPE to post-COPE to the one-month follow up.

Similar to the results of the current study, significant effects were not found when the COPE program was virtually delivered. However, the majority of participants in Harper and Brewer (2021; 87.5%) indicated on the COPE Program Evaluation form that the program was a helpful experience. The current study provides further support for the idea that adolescents perceive the COPE program to be a positive experience when virtually delivered.

Treatment Fidelity and Culturally Responsive Practice

According to the observations, the researcher completed 100% of the steps for each observed session. The steps on the TF form included core components specific to the COPE program and an additional component on culturally responsive practice (a component which was not explicitly mentioned in the COPE program). Results from the TF form suggest that culturally responsive practice may be feasibly incorporated into manualized, cognitive-behavioral interventions, without compromising treatment integrity. It would be beneficial for the COPE program to explicitly embed culturally responsive practices within each session of the manual. When cultural responsivity is

identified as a core component of the program, practitioners may be more likely to engage in culturally responsive practices during program implementation.

Given the lower likelihood of students from minoritized backgrounds to have access to mental health services, embedding culturally responsive programs within school-based mental health programs will help reduce disparities (Alegría et al., 2015). It is critical for school-based practitioners to embrace individual differences, cultural strengths, and validate experiences of oppression expressed by students (Hays, 2009). Historically, schools have often been hostile and challenging towards minority students (Alegría et al., 2015; APA, 1993). However, through efforts to embed culturally responsive practices within school-based interventions, minority students may begin to build trust in the school system and avoid the disproportionate impact of exclusionary discipline practices (Alegría et al., 2015).

Social Determinants of Mental Health

Adolescents are greatly influenced by environmental factors. There is a growing body of literature suggesting that the circumstances in which people live, also known as *social determinants*, have a strong impact over their mental health outcomes (Alegría et al., 2018; Trent et al., 2019). In fact, the World Health Organization recognizes that multiple social, psychological, and biological factors will determine the mental health of a person at any given time (WHO, 2018). Previous reviews of mental health programming for children and adolescents call upon researchers to begin examining social determinants of mental health more closely (O'Mara & Lind, 2013). Social

determinants of mental health include adverse childhood experiences, family systems, and societal factors (Alegría et al., 2015).

Adverse Childhood Experiences

Challenging behaviors, such as aggression, may be a result of childhood trauma. Adverse childhood experiences (e.g., neglect, family violence, poverty) have disruptive and lasting effects on both physiological development and mental health of adolescents (Alegría et al., 2015; Schilling et al., 2007). They are strongly predictive of mental health disorders, highlighting the need for support across individual, family, and community levels. Moreover, parents with adverse childhood experiences are more likely to experience parenting stress, which is strongly associated with adverse child outcomes, including child behavior problems (Steele et al., 2016).

Reducing the effects of adverse childhood experiences may take the form of parent support programs in the community. For example, screening for adverse childhood experiences among parents may help to identify risk factors for problematic parenting, allow professionals to identify areas requiring support, and subsequently provide them with trauma-informed health services (Steele et al., 2016). Specifically, parent support programs could be tailored to parents with aggressive tendencies. The programs could teach parents non-violent strategies for managing behavior challenges and help them develop plans to limit childhood exposure to community drug use or neighborhood violence (Alegría et al., 2015). Overall, children who experienced adverse childhood events will need support, not only for themselves, but for their families and communities.

Family Systems

Familial relationships may have a strong influence over one's mental health (Alegría et al., 2018), and family structure is closely related to adverse childhood experiences. To wit, children living in single-parent households and in stepfamilies are more likely to experience family violence and maltreatment (Alegría et al., 2015). Further, parenting style has been associated with childhood internalizing and externalizing problems (Paulussen-Hoogeboom et al., 2008; Zubizarreta et al., 2019). Parenting styles that are less neglecting or punishing, and more accepting and supportive of emotions, are related to improved emotional regulation and less externalizing behavior in adolescents (Havighurst et al., 2015).

Fortunately, interventions targeting family structures have proven to be effective. COPE is a student-focused intervention, but it is also relevant to provide parent-focused intervention for students struggling with mental health. Providing parents and guardians with the skills to help their children, rather than focusing solely on providing interventions directly to the child, has proven to be effective for managing challenging behaviors among youth. For example, research has shown that telephone-assisted self-help interventions for parents of children with externalizing behavior are effective in the reduction of disruptive behavior problems, even one-year after implementation (Ise et al., 2015). Moreover, programs which seek to increase father involvement (in fragile families) have resulted in increased parental cooperation, increased parent-child contact, and increased child support payments (Alegría et al., 2015).

Further, Mingebach and colleagues (2018) examined 28 meta-analyses to evaluate the effectiveness of parent-based intervention programs for children under 13-years-old with externalizing behavior problems (e.g., aggressive behavior, defiant behavior). Examples of parent-training programs included in the analysis were the Triple P (Positive Parenting Program), PCIT (Parent Child Interaction Therapy), and home visitation programs. It was found that parent-based interventions yielded significant and moderate effects on child externalizing behavior problems, which remained stable during follow-up (Mingebach et al., 2018). The authors conclude that parent-focused interventions are in fact effective for reducing externalizing behavior problems, thus encouraging mental health providers to implement evidence-based interventions for parents of children with challenging behaviors (Mingebach et al., 2018).

Societal Factors

While the COPE program directly targets individual mental health problems, there is an additional need for community interventions to reduce disparities within social, economic, and political conditions (Alegría et al., 2015). While the COPE program may be used as a tool to help increase coping skills, adolescent students should be provided with additional support across school and community contexts. For example, mental health support may be provided for a greater number of students through mental health screening in schools. Specifically, mental health screening measures utilizing a dual-factor approach, which identify personal strengths in addition to symptoms of distress, provide schools with valuable strengths-based information (Kim et al., 2014;

Moore et al, 2015). By recognizing the strengths of each student, the focus shifts away from deficit-thinking towards enhancing the skills they already have (Kim et al., 2014).

The broader community context presents additional challenges to mental health. For example, discrimination, whether it be by race/ethnicity, immigration status, and/or sexual orientation, is associated with negative mental health outcomes in North America (Alegría et al., 2018). An adolescent experiencing discrimination may benefit from individual mental health support, however, intervention is required at the systems-level in order for real change to occur. Social and political institutions which sustain racism, discrimination, and prejudice will need to be challenged and intervened upon. Further, reviews of mental health programs for children and adolescents indicate a lack of studies examining socially excluded groups (O'Mara & Lind, 2013). As a result, there is a stark need for youth mental health researchers to identify and test interventions which would improve social and environmental conditions for marginalized youth (Alegría et al., 2015).

Limitations

Stigma of Aggressive Label

There are several limitations of this study. First, there is stigma associated with labeling behavior as "aggressive." When recruiting participants (i.e., researcher phone calls to families of students eligible for participation in the study), many parents were initially very interested in having their child participate in a brief mental health intervention. However, once the researcher described that the purpose of the study was to decrease aggressive behavior, parents became more hesitant or declined to participate.

For example, during the recruitment process, several parents made it clear that they did not want their child to be associated with aggressive behavior, and subsequently declined participation in the study.

Future research may explore framing aggressive behaviors in a way that is less stigmatizing for students and their families. For example, refraining from using terms like "aggressive" to describe behaviors and shifting towards terms that may be considered less stigmatizing, such as "emotional and behavioral challenges" or "challenges with self-regulation". It is critical to shift towards terms that are less stigmatizing because, as suggested by the researcher's experiences in this study, stigmatizing terms may prevent families from accepting support or services for children who could otherwise benefit from them.

Moreover, while aggressive behavior was the sole outcome variable in this study, the COPE program provided students with skills that were not directly measured in this study (as evident by responses on the COPE program evaluation form). For example, two out of three students stated that they learned new ways to manage negative thoughts, feelings, and behaviors. While these changes in feelings, thoughts, and behaviors were documented by the students themselves, only changes in aggressive behaviors were observed in this study. It may be beneficial for future research to examine the effects of the COPE program using multiple outcome variables among students (e.g., problem-solving skills, self-esteem).

Study Design

Multiple Baseline Design. This study evaluated the changes in behavior of three individual students who participated in the COPE program. While no intervention effect was found, the majority of participants did report that the program was a helpful experience. Future studies may want to examine the delivery of the COPE program to larger groups of students (e.g., classrooms) to gain a better understanding of the intervention effect. For example, evaluating three classrooms through a multiple-baseline design, rather than three individual students, would provide a more robust evaluation of the program.

Dependent Variables. The outcome measures in this study included the frequency and intensity of aggressive behaviors. While no change was found in these variables, there were self-reported changes in behavior (e.g., increases in positive self-talk, confidence, problem-solving skills) that the study failed to capture. The visual analysis of data, including the supplementary statistical analysis, failed to capture the skills learned (as self-reported on the COPE Program Evaluation form) by Students B and C. Harper and Brewer (2021) noted similar findings in their evaluation of whether the COPE program reduced anxiety and depression symptoms among adolescents. They note that, although study results were not statistically significant, a majority of participants reported the COPE program as a helpful experience. They acknowledge that participants gained "new skills that were not reflected on the quantitative instruments" (Harper & Brewer, 2021, p. 6). Another study (Schwarzrock, 2021) implemented COPE during the

pandemic and found that COPE improved overall resiliency and self-efficacy scores, and students indicated that the program was beneficial for them.

While the focus of this study was to decrease an observable, challenging behavior (i.e., aggression), it may be more beneficial to focus on prosocial behaviors and skills which have been gained after participating in the COPE program. The COPE Program Evaluation form has provided valuable information regarding skills learned among participants across studies (Harper & Brewer, 2021; Hart Abney et al., 2019; Kozlowski et al., 2015; Melnyk et al., 2014).

Quality of Measurement. Since direct observations of student behavior were completed by human observers (e.g., parents and guardians) in the home setting, there is the possibility that the target behaviors were not recorded consistently (Kazdin, 2011). Direct observation of behavior requires the observer to make a judgment about the behavior, which may lead to errors (e.g., overlooking a behavior, inaccurately recording the occurrence of a behavior; Kazdin, 2011). The parents and guardians of participants were the sole raters of aggressive behavior among participants, therefore, there is potential for error during the data collection process.

The study used a single observer (e.g., parent, guardian) for each student participant. There are several potential issues with using a single observer that are not able to be assessed in the absence of multiple raters, including possibilities for (a) a change in the observer's definition of the behavior over time, (b) the observer becoming more stringent or lenient in applying the operational definition of the behavior, and (c) perceiving the intervention as altering the behavior, even if no changes actually occur

(Kazdin, 2011). Ideally, multiple raters would have directly observed the behavior of each participant, and IOA would have been assessed. The scores from IOA would allow the researcher to evaluate the consistency of the observation scores (Kazdin, 2011). Further, IOA would help reveal any potential biases that an individual observer may have (particularly with parents rating their own children). Unfortunately, due to the pandemic and observations taking place in the home, it was not possible to have multiple raters for each participant to complete interobserver agreement. Since it was not possible to collect IOA for this study, the accuracy and consistency of the direct observation scores may be called into question.

Frequency Count Reaching Ceiling. Since the frequency of aggressive behavior had a set range (i.e., 0-10) on the observation form, frequency counts for each student reached a ceiling at 10 occurrences of aggressive behavior within the observation period. For Student B, the frequency reached the ceiling during multiple observation sessions in the baseline phase. It is possible that Student B's behaviors were occurring at a much higher frequency (e.g., 15 occurrences, 20 occurrences) during the baseline observation sessions, and there was a greater immediacy of effect during intervention phase (as the behaviors were on a downward trend during the intervention phase). Subsequently, a greater effect may have taken place. However, the observation form did not adequately capture frequency counts beyond 10, potentially minimizing the magnitude of effect of COPE on Student B's behavior.

Parent Training. Moreover, the parents and guardians received minimal training in completing the behavior observations. Due to the pandemic, it was not possible to meet

with parents in-person. The parents and guardians preferred communication via e-mail, phone calls, and text message. Parent training took place over the telephone, and the researcher consulted with the parents throughout the COPE program.

Pandemic Considerations

This study was conducted during the COVID-19 global pandemic. Ideally, the COPE program would be delivered to adolescents in-person, whether it be delivered within a clinical or school setting (Kozlowski et al., 2015; Melnyk & Lusk, 2014). Successful school-based interventions, specifically those targeting emotional and behavioral problems, typically incorporate strategies to be used across settings (e.g., classroom, home, peer environments; Hoagwood et al., 2001). Because of the pandemic restrictions, students were spending more time at home, and less time at school and with their peers. Although skills learned in the COPE program may be applied to other settings, it would have been beneficial for participants to practice these skills in real-time, as they learn them, during the program (e.g., homework assignments). This would allow participants to apply the knowledge and skills learned in the COPE program, not only at home, but across various contexts in their daily life (e.g., school, social gatherings).

Another limitation to virtual delivery was limited access to video. Some students chose to have their cameras turned off during sessions and made the researcher aware of this prior to starting the program. The COPE instructor had the camera turned on for every session. When the program is delivered in person, the COPE instructor and students are provided with face-to-face interaction. It is possible that the program may have demonstrated greater effectiveness if it was provided to students in-person. The

implementation of the COPE program directly in a school context would have provided more information regarding the feasibility of cognitive-behavioral programs for adolescents within school settings. Further, if implemented at school, the program may have been accessible to a greater number of students (as opposed to virtual delivery at home).

Follow Up Data

Due to the COPE program being completed at the end of the school year, it was not possible to follow up with participants and collect data on the maintenance of the COPE program in reducing aggressive behavior. Like any new skill, skills gained in the program should be practiced. The participants should have opportunities to practice the new skills they learned in the COPE program, and their home and school environment should include support from adults to help to maintain these skills. Future studies should evaluate whether or not the skills learned in the program were maintained after completion of the program.

Conclusion

A broad view of mental health encompasses both inward- and outward-directed expressions of distress (McLeod et al., 2012). Mental health concerns are rising among adolescents and have intensified since the COVID-19 pandemic (APA, 2020). It is important to consider that adolescence is a period of development encompassed by rapid physical, cognitive, and psychosocial growth (WHO, 2020). During this period, young people are expected to cope with increased academic demands, navigate peer relationships, and manage environmental stressors, while their self-regulatory systems are

not yet fully developed (Magson et al., 2021). These increased demands and difficulties understandably are associated with mental health challenges among adolescents, subsequently pressing a response from broader systems of support. Outward-directed expressions of distress, such as aggressive behaviors, are particularly concerning. Adolescents engaging in aggressive behaviors are vulnerable to a host of negative outcomes, including poor academic achievement (Nelson et al., 2004; McLeod et al., 2012), co-occurring internalizing problems (Ritakallio et al., 2005; Lee & Stone, 2012), suicide-related outcomes (Twenge et al., 2018), and increased involvement with the juvenile justice system (McCarter, 2017; APA, 1993).

This study examined whether parent-rated aggressive behaviors among adolescents would decrease in response to providing them with an evidence-based mental health program through their local school district. The results of visual analyses suggested that, in this instance, COPE did not produce directly observable decreases in the frequency and intensity of aggressive behavior among high school students in the home setting. Supplementary statistical analysis indicated varied results among participants, ranging from small, moderate, to no effects. For Student A, there was a small decline in the frequency of behavior, but no improvement of intensity level. For Student B, there was a small decline in the frequency of behavior, and a moderate improvement of intensity level. For Student C, there were no declines in frequency of behavior and no improvements in intensity level.

Although direct observations from parents and guardians of students did not indicate significant behavior change as a function of the COPE program, student

perspectives indicated that COPE was a beneficial experience for them. All three participants perceived the COPE program as a helpful way to manage stress and would recommend it to their peers. While quantitative data failed to demonstrate an intervention effect, qualitative reports indicate the majority of participants found the COPE program to be useful, with one participant even sharing the skills learned to help a parent maintain mental health. Moreover, the study demonstrated that it is feasible to incorporate culturally responsive practice into manualized, cognitive-behavioral interventions and still maintain treatment fidelity.

Despite its limitations, this study identifies several points that may help inform future mental health research for adolescents. First, previous research on mental health has traditionally focused on internalizing disorders (e.g., anxiety, depression); however, more attention should be directed towards mental health support for externalizing challenges. Future research should consider a broad perspective of mental health, encompassing not only inward expressions of distress, but also outward expressions of distress, such as aggression. This study's results indicated that participating adolescents struggled with co-occurring internalizing and externalizing problems; while parents reported the presence of externalizing problems (e.g., direct observations), students themselves reported the presence of internalizing problems (e.g., COPE Program Evaluation responses). Moreover, students reported that adults do not seem to understand the amount of stress they experience. Thus, viewing aggressive behavior a sign of distress, rather than a problem behavior to be punished, may elicit more empathic responses from caregivers.

Second, this study highlights the importance of social validity measures within single-case designs. The COPE Program Evaluation form brought student voices to the forefront, and without the form, it would appear the COPE program did not produce any desirable effects. However, the majority of students indicated that the program was in fact beneficial and useful for them. Since the students were the direct consumers of the intervention, their perspectives on the utility of the program are worth close examination. Supplementing quantitative data with qualitative data, particularly when evaluating mental health programs, may provide useful information that quantitative data alone may not adequately capture.

Third, study results suggest that mental health challenges among adolescents characterized by aggression may not be resolved through the implementation of a single, brief, remote-delivered program. Adolescents are influenced by social determinants of mental health, including adverse childhood experiences, family systems, and societal factors. Mental health programs are only one tool that may be implemented to help adolescent students manage maladaptive thoughts and behaviors. Improving the emotional and behavioral well-being of adolescents must be continuously supported by one's home, school, and community environments. While evidence-based programs may help teach new skills to alleviate mental health problems, the maintenance of mental health is an ongoing task that continues throughout the lifespan.

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List of Tables

Table 1

Participant Characteristics

Student	Frequency of behavior	Age	Grade	Gender	Race/ Ethnicity	Primary Language	Educational Curriculum
A	Bi-weekly	16	11	Male	Hispanic	English	General education
B	Bi-weekly	14	9	Female	Hispanic	English	General education
C	Weekly	14	9	Male	Asian	Spanish	General education

Table 2

Overview of the Seven-Session COPE Teen Program

Session	Session Title	Topics Covered
1	Thinking, Feeling and Behaving: What is the Connection?	Self-esteem, connection between thoughts and behaviors, mindfulness.
2	Thinking, Feeling and Behaving/Positive Self Talk	Changing self-talk, positive statements about self.
3	Stress and Coping	Defining stress, identifying signs of stress, positive ways to deal with stress, setting goals, identifying barriers to goals, rating emotions.
4	Problem Solving and Setting Goals	Four steps of problem-solving, strategies to overcome barriers.
5	Dealing with Your Emotions in Healthy Ways Through Positive Thinking and Effective Communication	Identify strategies for regulation of emotions (including positive self-talk, exercise, and seeking help), guided imagery.
6	Coping and Stressful Situations	Expressing feelings, managing conflict, managing criticism.
7	Pulling It All Together for a Healthy You	Review concepts covered in previous sessions.

Table 3

Summary Statistics for Frequency of Aggressive Behavior by Phase

	Phase	Mean	Median	Range	SD
Student A	A	5.7	5.0	4.0-8.0	1.7
	B	5.4	5.0	2.0-9.0	2.3
Student B	A	9.6	10.0	8.0-10.0	0.8
	B	8.6	9.0	8.0-9.0	0.5
Student C	A	1.0	1.0	0.0-3.0	1.1
	B	0.9	0.0	0.0-2.0	1.0

Table 4

Summary Statistics for Intensity of Aggressive Behavior by Phase

	Phase	Mean	Median	Range	SD
Student A	A	8.0	8.0	8.0	0.0
	B	7.7	8.0	6.0-9.0	0.9
Student B	A	9.2	9.0	9.0-10.0	0.4
	B	8.6	9.0	8.0-9.0	0.5
Student C	A	1.3	1.0	0.0-4.0	1.4
	B	0.7	0.0	0.0-2.0	0.8

Table 5

Effect Size Estimates

Case	Outcome	LRRd	SE	95% CI
Student A	Frequency	-0.05	0.27	-0.59, -0.49
	Intensity	-0.04	0.05	-0.13, 0.06
Student B	Frequency	-0.11	0.05	-0.20, -0.02
	Intensity	-0.06	0.03	-0.12, -0.01
Student C	Frequency	-0.21	0.54	-1.27, 0.85
	Intensity	-0.66	0.56	-1.75, 0.44

Table 6

Summary of Results: COPE Program Evaluation Form

	Student A	**Student B**	**Student C**
Helpfulness	Not Helpful	Helpful	Helpful
Likes	Nothing	Interactive sessions	New ways to manage stress, (breathing techniques, visual imagery)
Dislikes	Simplicity of program	Nothing	Repetitive concepts
Changes after COPE	No changes	Happier, more active, less procrastination	Changed way of thinking, prioritize mental health
Strategies for managing stress	None	Managing negative thoughts	Optimism Confidence
Skills for future use	None	Positive self-talk	Managing stress Positive self-talk Positive thinking
Things to change	Not telling teens what to do "according to a book"	No changes	Focus more on stress experienced by teens
Homework helpful?	No	Yes	Yes
Program duration	Too short	Good duration	Too short
Parent involvement	No	Yes	No

Telling friends about COPE	Recommends for those who have recently started feeling depressed	Helpful program to take while in school	Program helps with mental health
Program dissemination	May benefit students who recently struggle with mental health	Each student could benefit in some way	May benefit students who already struggle with mental health
New ways to manage thoughts?	No	Yes	Yes
New ways to manage feelings?	No	Yes	Yes
New ways to manage behaviors?	No	Yes	Yes

List of Figures

Figure 1

Screening Procedure.

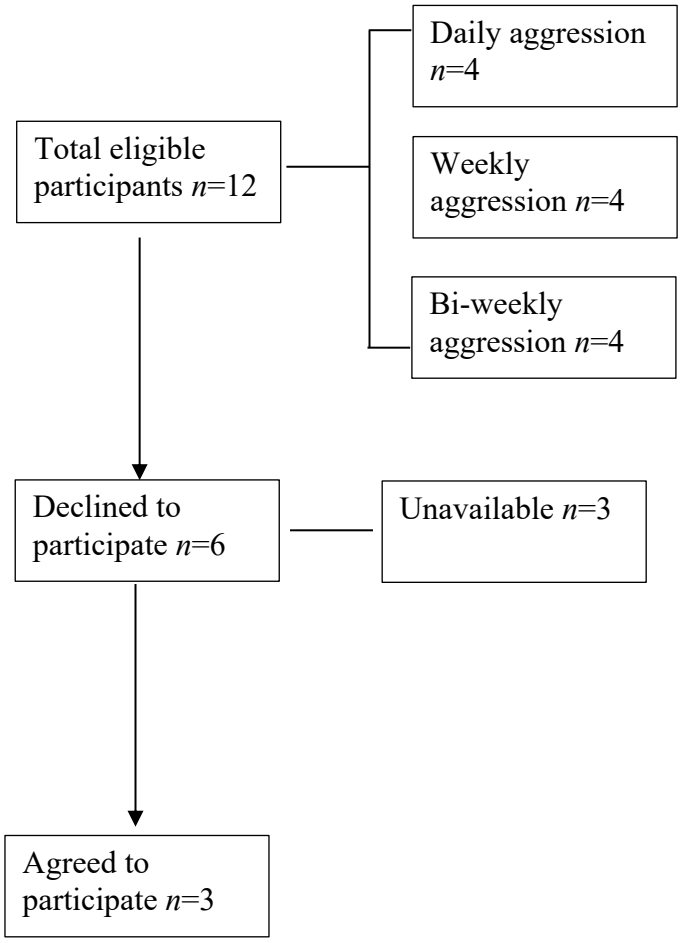


Figure 2

Multiple-Baseline Data for Frequency of Aggressive Behavior

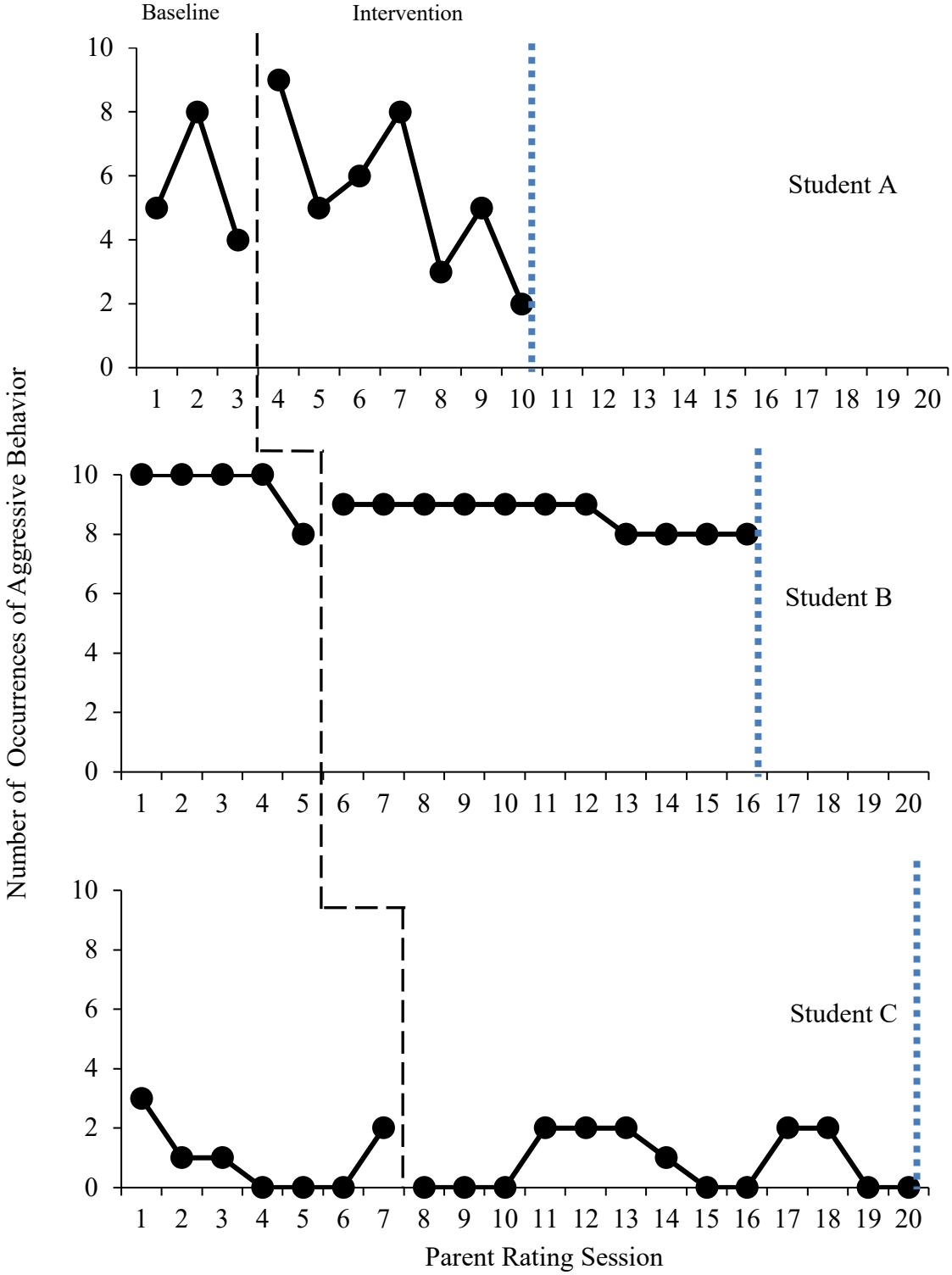
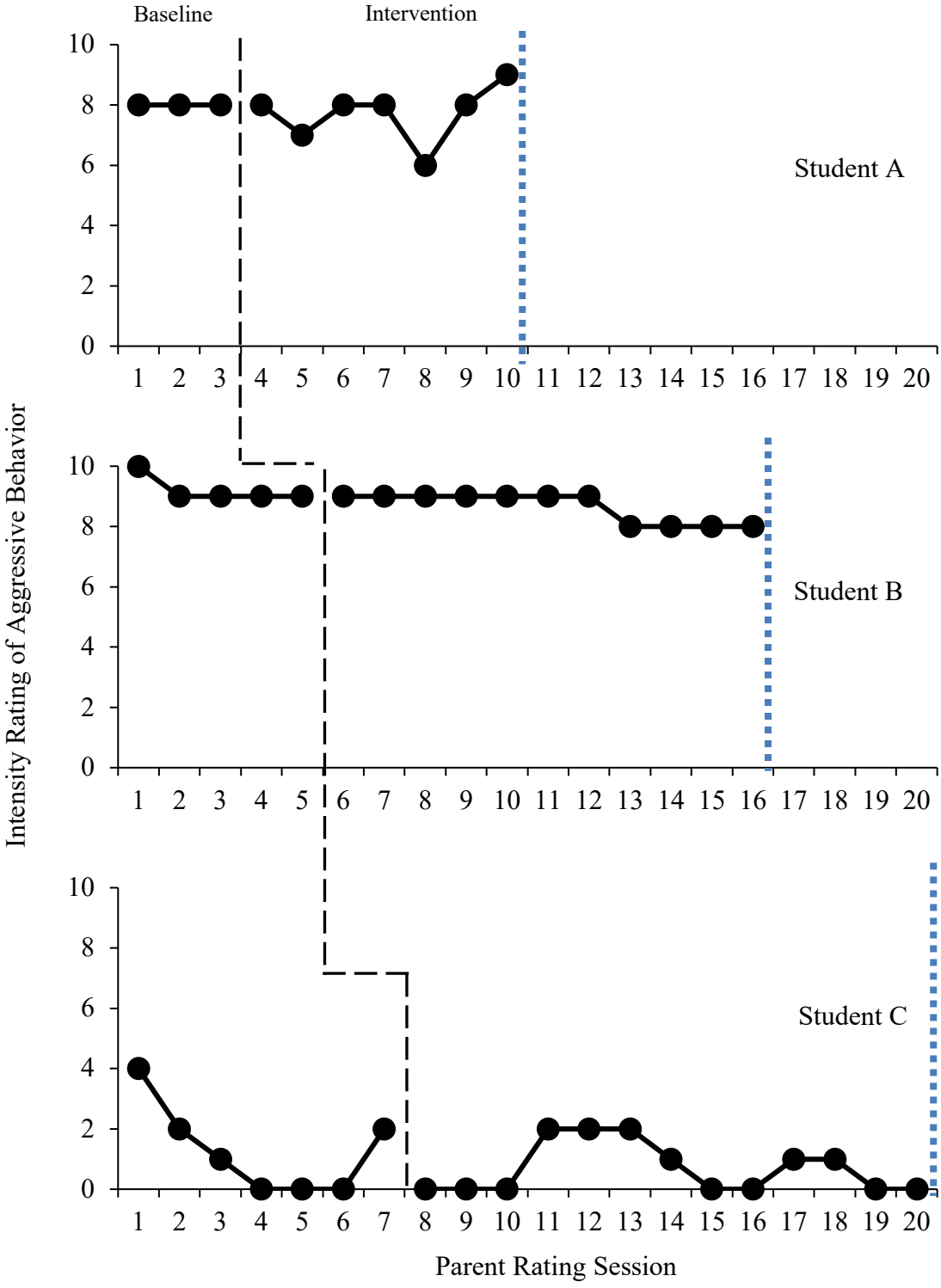


Figure 3

Multiple-Baseline Data for Intensity of Aggressive Behavior



Appendix A

IRB Approval Notice

UC RIVERSIDE | Research Integrity

IRB Socio-Behavioral (IRB-SB)
DATE: April 27, 2021

APPROVAL NOTICE

INVESTIGATOR: Katic, Barbara; Johnson, Austin
Faculty Advisor: Johnson, Austin

DEPARTMENT: Graduate School of Education
Administrator: Johnson, Austin

PROJECT TITLE: **"Evaluation of a Cognitive-Behavioral Intervention for Adolescents with Aggressive Behavior"**

IRB-SB. NUMBER: **HS - 21-057**
APPROVAL: April 27, 2021
EXPIRATION: Not Applicable

FUNDING SOURCE: N/A

SPECIAL CONDITIONS: None

NOTE: Approval by the Institutional Review Board does not, in and of itself, constitute approval for the implementation of this research. Given the COVID-19 pandemic, allowable research activities are dependent on the current status of the University's Campus Return level. Researchers should reference the Principles and Framework Guiding a Phased Approach for Ramp-Up and Ramp-Down of On-Campus Research-Related Activity (https://campusreturn.ucr.edu/media/61/download) for details on the types of research allowed during each phase. Additionally, other institutional clearances and approvals may be required (e.g., EH&S, IACUC, IBC, other institutional IRBs). **Accordingly, the project should not begin until the campus status allows it and/or all required approvals have been obtained.**

THE UCR IRB-SB HAS REVIEWED THE PROPOSED USE OF HUMAN PARTICIPANTS IN THE REFERENCED APPLICATION AND APPROVED IT BASED ON THE FOLLOWING DETERMINATIONS:

1. Level of Review - 45 CFR 46.110 (#7) Expedited
2. Special Population - 45 CFR 45 Subpart D (Children)
3. Risk - Minimal
4. The risks to participants are minimized by using procedures consistent with sound research design that do not unnecessarily expose participants to risk.
5. The risks are reasonable in relation to the anticipated benefits to individual participants and the importance of the knowledge that may reasonably be expected to result.
6. The selection of participants is reasonable and equitable.
7. The PI has had the appropriate human subjects research training.
8. Consent - Signed Consent and Assent Approved (signed and verbal)

IRB-SB approval is effective from date of this notice and good for the date indicated. Review *may be* required to keep project active.

THE INVESTIGATOR SHALL PROMPLTY REPORT THE FOLLOWING TO THE IRB-SB:
(1) Changes to the application (e.g., increase the number of participants, or changing the participant population, recruitment methods, procedures, documents) via an amendment, or
(2) Unanticipated problems involving risk to participants or others (please contact the IRB-SB for instructions).

DATE APPROVED April 27, 2021

DR. TUPPETT YATES, INTERIM CO-CHAIR, IRB-SB
DR. JENNIFER MEROLLA, INTERIM CO-CHAIR, IRB-SB
DESIGNATED UCR IRB-SB MEMBER

Appendix B

Parent Consent and Student Assent Forms

UCR School Psychology

UC Riverside
Research Informed Consent
Parental Permission Form

Title of research study	Evaluation of a cognitive-behavioral intervention for adolescents with aggressive behavior
Investigator	Barbara Katic, PhD Candidate
Researcher	Barbara Katic, MS, MA, PPS PhD Candidate in School Psychology Graduate School of Education Email: bkati001@ucr.edu Phone: 760-537-9820
Faculty Advisor	Austin Johnson, PhD, BCBA, LP Assistant Professor Graduate School of Education Email: austin.johnson@ucr.edu

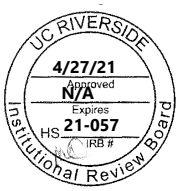
Key information about this research study: This section provides highlights of this research study to help you decide whether or not you should participate. Carefully consider this information and the more detailed information provided below the section. Please ask questions about any of the information you do not understand before you decide whether to participate.

- **Purpose:** This is a research study about reducing aggressive behaviors among teens by providing them with a 7-session mental health intervention.
- **Procedures:** Participation in this study will involve both the parent/guardian and student. First, the parent/guardian will complete a rating scale to determine whether the student

could benefit from an intervention targeting aggressive behavior. Not all students will be eligible, so a parent/guardian may consent to participate but, after completing the rating scale, be told that your student does not meet criteria to participate, in which case your participation in the study will end and all information pertaining to you and your child will be deleted. The rating scale indicates whether or not the child presents aggressive behavior, and a score lower than 60 would suggest that the student does not present significant aggressive behavior, making them ineligible for the study.

  - Basic demographic data will be collected, including name, contact information, race/ethnicity, age, grade, history of prior intervention, and any history of disciplinary action. By the end of the study, all information will be de-identified.

- If the student is eligible to participate, then it is anticipated that your participation will last **4-5 weeks.**
  - Step 1: The researcher and parent/guardian will meet online for approximately 20 minutes (via Zoom). This meeting includes a brief training on how to use the behavior rating form.
  - Step 2: The parent/guardian will begin to rate the student's behavior for approximately **1 week** and will submit the ratings through an online form.
  - Step 3: The student will receive the mental health intervention **1-2 times per week, for a total of 7 sessions (approximately 4 weeks total)**. During this time, the parent/guardian of the student will rate the student's behavior 2-4 times per week (14 ratings total) and submit each rating through an online form.
  - Step 4: Student will complete an online COPE program evaluation form.
- **Study location:** All these procedures will be done via Zoom (online sessions). The program will be implemented by the lead investigator. For 2 out of 7 sessions, one member of the research team will observe the sessions.
- **Risks:** Risks of this study are minimal. Some of the foreseeable risks of student participation include sadness, discomfort, and/or irritability when discussing their own thoughts, feelings, and behaviors. During the program, students do not have to discuss anything that makes them feel uncomfortable. In addition, support is available to them through the school's ERMHS team.
- **Benefits:** You may directly benefit from this research. Some of the benefits that may be expected for students include both a decrease in aggressive behaviors and improved



mental health outcomes (e.g., improved self-esteem, communication skills, problem-solving skills).

- **Alternatives:** Your alternative to participating in this research study is to not participate.
- **Compensation:** You will not be paid for your participation.
- **Voluntary Participation:** Your participation in this study is voluntary. You can decide to participate or not to participate, or to withdraw from it at any point without penalty or loss of benefits to which you are otherwise entitled to or already have.

What happens to the information collected for the research?

Information collected for this research will be de-identified during data collection (e.g., "Student A", "Student B", "Student C"…). Data will be maintained on the researcher's password-protected computer on a password-protected file for a total of one year. If you choose to withdraw from the study, the de-identified data that has been already collected will be kept as part of the study results. De-identified data may be used for future publication of this research study.

Will information about me be kept private?

We will do our best to make sure that the personal information gathered for this study is kept private. However, we cannot guarantee total privacy and if required by the law, your personal information may be disclosed. If information from this study is published or presented at scientific meetings, your name and other personal information will not be used. Authorized representatives from the following organizations may review your research data for the purpose of monitoring or managing the conduct of this study:

- The Institutional Review Board (IRB) that reviewed this research
- Representatives of the University of California

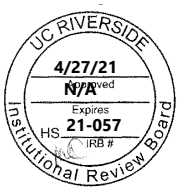
Can I stop being in the study at any time?

You can stop taking part in the study at any time. If you would like to stop, please contact the researcher, Barbara Katic, at 760-537-9820 or bkati001@ucr.edu

Whom can I talk to?

If you have questions, concerns, or complaints, talk to the research team at 760-537-9820 or bkati001@ucr.edu.

If you have questions about your rights or complaints as a research subject, please contact the IRB Chairperson at (951) 827 - 4802 during business hours, or to contact them by email at irb@ucr.edu.



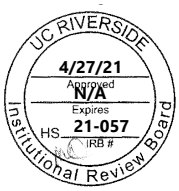
CONSENT

You have been given a copy of this consent form to keep.

Participation in research is voluntary. The decision to participate, or not participate, is solely up to you. You have the right to decline to be in this study, or to withdraw from it at any point without penalty or loss of benefits to which you are otherwise entitled to or already have.

The person being considered for this study is unable to consent for himself/herself because he/she is a minor. By signing below, you are giving your permission for your child to be included in this study.

Date	Parent or Legal Guardian Name (Print)
	Parent or Legal Guardian Signature
	Student Name (Print)



Appendix B – Student Assent Form

UCR School Psychology

UC Riverside
Research Informed Consent
Student Assent Form

Title of research study	Evaluation of a cognitive-behavioral intervention for adolescents with aggressive behavior
Investigator	Barbara Katic, PhD Candidate
Researcher	Barbara Katic, MS, MA, PPS PhD Candidate in School Psychology Graduate School of Education Email: bkati001@ucr.edu Phone: 760-537-9820
Faculty Advisor	Austin Johnson, PhD, BCBA, LP Assistant Professor Graduate School of Education Email: austin.johnson@ucr.edu

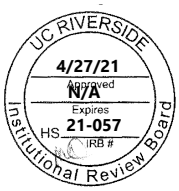
Key information about this research study: This section provides highlights of this research study to help you decide whether or not you should participate. Carefully consider this information and the more detailed information provided below the section. Please ask questions about any of the information you do not understand before you decide whether to participate.

- **Purpose:** This is a research study about reducing aggressive behaviors among teens by providing them with a 7-session mental health intervention.
- **Procedures:** Participation in this study will involve both yourself and your parent or guardian. First, your parent/guardian will complete a rating scale to determine whether you could benefit from an intervention targeting aggressive behavior. Not all students

will be eligible, so a parent/guardian may consent to participate but, after completing the rating scale, be told that you do not meet criteria to participate, in which case your participation in the study will end and all information pertaining to you and parent or guardian will be deleted. The score on the rating scale helps show whether or not the behaviors are present.

  - Basic demographic data will be collected, including name, contact information, race/ethnicity, age, grade, history of prior intervention, and any history of disciplinary action. By the end of the study, all information will be de-identified.

- If you are eligible to participate, then it is anticipated that your participation will last **4-5 weeks.**
  - Step 1: The researcher and your parent/guardian will meet online for approximately 20 minutes (via Zoom). This meeting includes a brief training on how to use the behavior rating form.
  - Step 2: Your parent/guardian will begin to rate your behavior for approximately 1 week and will submit the ratings through an online form.
  - Step 3: You will receive the mental health intervention **1-2 times per week, for a total of 7 sessions (approximately 4 weeks total)**. During this time, your parent/guardian will rate your behavior 2-4 times per week (14 ratings total) and submit each rating through an online form.
  - Step 4: You will complete an online COPE program evaluation form.
- **Study location:** All these procedures will be done via Zoom (online sessions). The program will be implemented by the lead investigator. For 2 out of 7 sessions, one member of the research team will observe the sessions.
- **Risks:** Risks of this study are minimal. Some of the foreseeable risks of your participation include sadness, discomfort, and/or irritability when discussing your own thoughts, feelings, and behaviors. During the program, you do not have to answer questions or discuss anything that makes you uncomfortable. There is also support available to you at your school through the ERMHS team.
- **Benefits:** You may directly benefit from this research. Some of the benefits that may be expected include both a decrease in aggressive behaviors and improved mental health outcomes (such as improved self-esteem, communication skills, problem-solving skills).
- **Alternatives:** Your alternative to participating in this research study is to not participate.
- **Compensation:** You will not be paid for your participation.



- **Voluntary Participation:** Your participation in this study is voluntary. You can decide to participate or not to participate, or to withdraw from it at any point without penalty or loss of benefits to which you are otherwise entitled to or already have.

What happens to the information collected for the research?

Information collected for this research will be de-identified during data collection (e.g., "Student A", "Student B", "Student C"…). Data will be maintained on the researcher's password-protected computer on a password-protected file for a total of one year. If you choose to withdraw from the study, the de-identified data that has been already collected will be kept as part of the study results. De-identified data may be used for future publication of this research study.

Will information about me be kept private?

We will do our best to make sure that the personal information gathered for this study is kept private. However, we cannot guarantee total privacy and if required by the law, your personal information may be disclosed. If information from this study is published or presented at scientific meetings, your name and other personal information will not be used. Authorized representatives from the following organizations may review your research data for the purpose of monitoring or managing the conduct of this study:

- The Institutional Review Board (IRB) that reviewed this research
- Representatives of the University of California

Can I stop being in the study at any time?

You can stop taking part in the study at any time. If you would like to stop, please contact the researcher, Barbara Katic, at 760-537-9820 or bkati001@ucr.edu

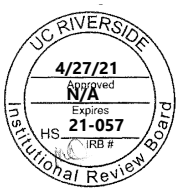
Whom can I talk to?

If you have questions, concerns, or complaints, talk to the research team at 760-537-9820 or bkati001@ucr.edu.

If you have questions about your rights or complaints as a research subject, please contact the IRB Chairperson at (951) 827 - 4802 during business hours, or to contact them by email at irb@ucr.edu.

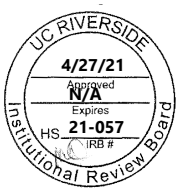
STUDENT ASSENT

You have been given a copy of this assent form to keep.



Participation in research is voluntary. The decision to participate, or not participate, is solely up to you and your parent or guardian. You have the right to decline to be in this study, or to withdraw from it at any point without penalty or loss of benefits to which you are otherwise entitled to or already have.

Date	Student Name (Print)
	Student Signature



Appendix C

Participant Screening

ERMHS Social-Emotional Needs Survey

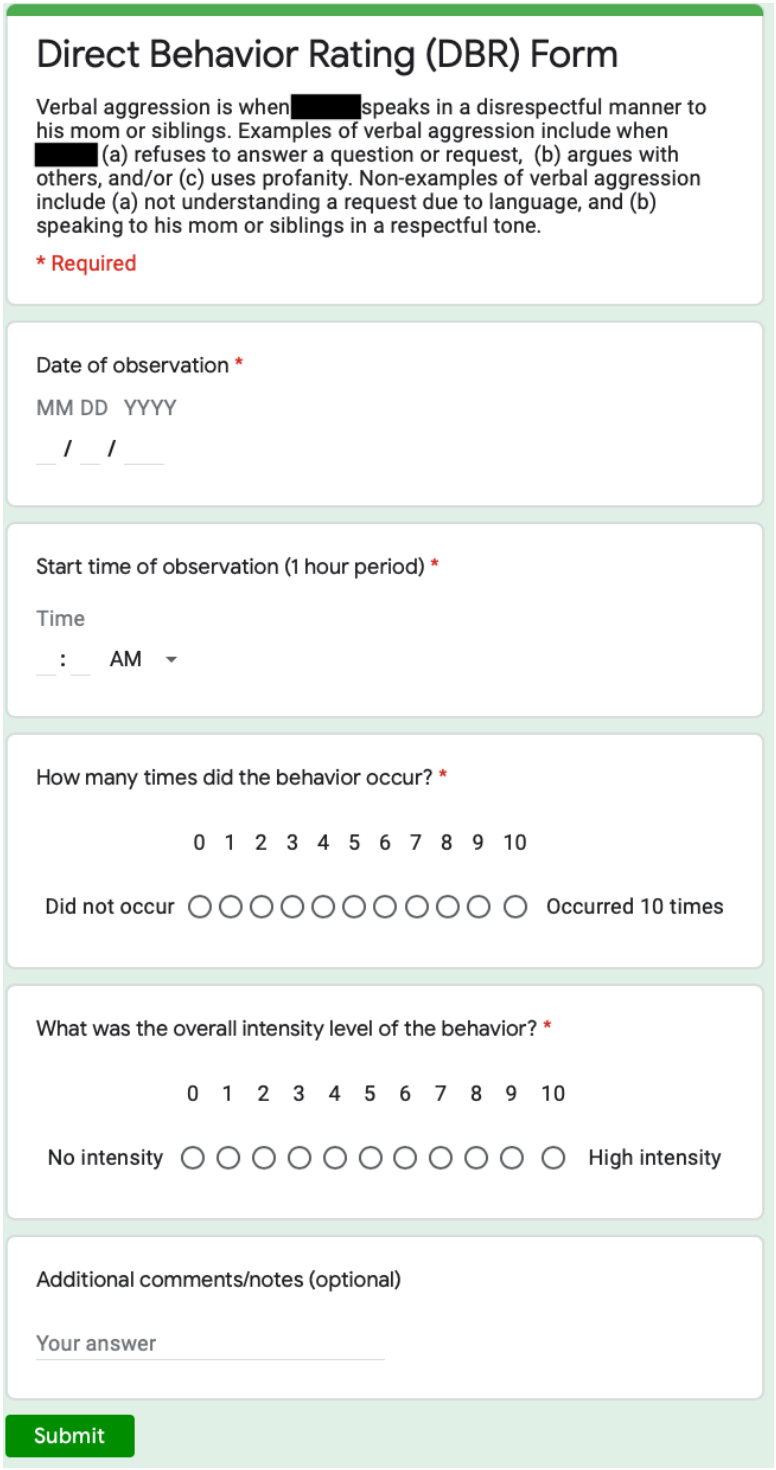
In the past 30 days, have you had challenges with the following:

1. How have you been affected by Covid-19 and state shutdown this past year? Please check all that apply.
    a. Loss of employment
    b. Grief (loss of a loved one)
    c. Change of housing/moved
    d. Positive COVID exposure
    e. Family Conflict
    f. Financial troubles
    g. Sleep disruptions (stay up late & wake up late, nightmares restless sleep)
    h. Unhealthy eating habits
    i. Health issues
    j. Legal issues (CPS involvement, probation, immigration, incarceration of self or a loved one)
    k. Substance use (self or loved one)
    l. Other
2. Do you have food at home?
3. Do you have a place to sleep?
4. Have you experienced or witnessed a traumatic event in the past 6 months? Trauma is defined as: experienced or witnessed a scary event that caused you lots of emotional distress and/or physical injury to yourself or a loved one.
5. Have you experienced any of the following feelings: Frequency? (Never, Sometimes, A Lot or Always)
    a. Worry
    b. Sad

    c. Angry
    d. Scared
    e. Grief (related to loss or major change)
6. How have you been sleeping?
7. How much time do you spend on screens per day?
    a. Television
    b. Video Games
    c. Phone
    d. Computer (not related to school)
8. How much time do you spend on social media per day?
9. Do you find it difficult to focus and concentrate?
10. Have you lost pleasure in things you used to do?
11. Have you become so angry that you have lost control over yourself and became destructive? Frequency? (Daily, Weekly, Bi-Weekly, Monthly)
    a. Harmed Yourself
    b. Destroyed Property
    c. Verbally or Physically Aggressive Towards Others
12. Have you used any over the counter medications, drugs and or alcohol to cope with feelings when you are overwhelmed?

Appendix D

Sample Frequency/Intensity Behavior Observation Form



Direct Behavior Rating (DBR) Form

Verbal aggression is when [redacted] speaks in a disrespectful manner to his mom or siblings. Examples of verbal aggression include when [redacted] (a) refuses to answer a question or request, (b) argues with others, and/or (c) uses profanity. Non-examples of verbal aggression include (a) not understanding a request due to language, and (b) speaking to his mom or siblings in a respectful tone.

* Required

Date of observation *

MM DD YYYY

__ / __ / ____

Start time of observation (1 hour period) *

Time

__ : __ AM

How many times did the behavior occur? *

0 1 2 3 4 5 6 7 8 9 10

Did not occur ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ Occurred 10 times

What was the overall intensity level of the behavior? *

0 1 2 3 4 5 6 7 8 9 10

No intensity ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ High intensity

Additional comments/notes (optional)

Your answer

Submit

Appendix E

COPE Program Evaluation

Please answer the following questions:

1. Did you find the COPE program helpful? Yes No
2. If you found the COPE program helpful, in what ways did it help you?
3. If you did not think the program was helpful, please describe why it was not helpful?
4. What did you like best about the COPE program?
5. What did you like least about the COPE program?
6. What, if anything, has changed since you started the COPE program?
7. What was the most helpful topic in the COPE program for you?
8. Why was this topic helpful?
9. What topic in the COPE program would you have liked to spend more time on?
10. What topic in the COPE program would you have liked to spend less time on?
11. What new or different thoughts do you have now about dealing with stress, concerns, or things that worry you?
12. What things that you learned in the COPE program do you plan to continue to use?
13. What would you change about the COPE program?
14. Was the homework/skills building after each session in the COPE program helpful to you? Yes No
15. If the homework was helpful, how was it helpful?
16. Did you like the length of COPE sessions?
    a. Yes (If yes, why?)
    b. No (If no, why?)
17. Have you talked to your parent(s)/guardian about things you have learned in the COPE program?
    a. Yes (If yes, why?)
    b. No (If no, why?)

18. What would you tell a friend about the COPE program?
19. Do you think all teens should get the COPE program?
    a. Yes (If yes, why?)
    b. No (If no, why?)
20. Did you learn new ways to deal with your thoughts? Yes No
21. Did you learn new ways to deal with your feelings? Yes No
22. Did you learn new ways to deal with your behaviors? Yes No
23. What else would you like to share about this C.O.P.E. experience?

Retrieved from:
https://www.cope2thrive.com/cope-instructor-resources

Appendix F

Treatment Fidelity Checklist

Seven-Session COPE Teen Program

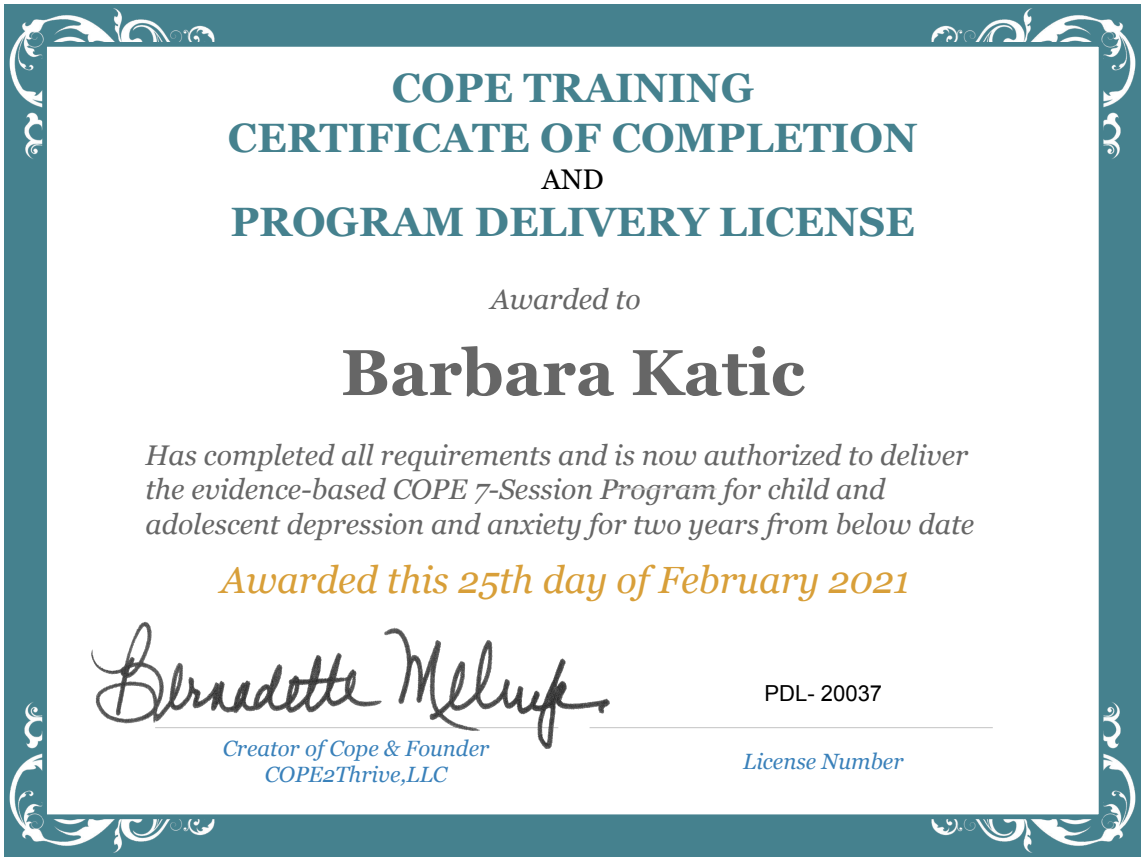
Name of observer:
Date:

Session Number:___ out of 7 **Student Name:**	
Instructor step	**Completed? Y/N**
(1) Homework from previous week is reviewed with student. * **N/A for Session 1*	
(2) Instructor completes at least 90% adherence to the text presented in the manual.	
(3) Student is provided with opportunities to respond.	
(4) Student is provided with at least one activity.	
(5) Instructor checks for understanding and/or answers student questions.	
(6) Instructor engages in culturally respectful behavior (at least one) *(e.g., does not challenge core cultural beliefs, identifies culturally related strengths and supports, validates self-reported experiences of oppression, questions the helpfulness - rather than validity - of a thought/belief).*	
(7) Homework instructions are provided for next week.* **N/A for Session 7*	

Total steps completed (out of 7):
Observer initials:

Appendix G

COPE Program Delivery License



COPE TRAINING
CERTIFICATE OF COMPLETION
AND
PROGRAM DELIVERY LICENSE

Awarded to

Barbara Katic

Has completed all requirements and is now authorized to deliver the evidence-based COPE 7-Session Program for child and adolescent depression and anxiety for two years from below date

Awarded this 25th day of February 2021

Bernadette Melnyk

Creator of Cope & Founder
COPE2Thrive,LLC

PDL- 20037

License Number