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Supporting Perceived Academic Stress: An Online Delivered Counseling Intervention for Middle School Students

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Abstract

Stress is a common feeling for youth in the school setting. The need to address academic stress related concerns to support students' social emotional wellbeing during academic time is essential for coping and growth. During times of change, uncertainty, and amidst a historical pandemic, stress is high for youth and the adults who educate them. School counseling interventions have been thoroughly researched and have been shown to support student stress and educate youth with healthy coping strategies in school settings. Offering an online-delivered counseling intervention within a school setting for youth to actively learn and utilize stress reducing skills through a systematic, evidence-based approach would serve as a worthwhile part of a student's time. The intervention in this study was delivered as an optional online counseling intervention to support academic stress for participating students in 6^{th} – 8^{th} grade. A multiple baseline design was used to determine the effects of stress reducing skills during times of academic stress. Research will reflect teachers' *Direct Behavior Ratings*, counselors' *Systematic Direct Observations*, and students' self-monitoring reports among 4 middle school students at a charter school in a city in the western United States. After identifying the key results there were not any significant effects of the online counseling intervention on participants' academic engagement and perceptions of academic stress levels. Recommendations for future research include further examining middle school students' perceptions of academic stress, and for counselors and educators to be able to better address the needs middle school aged youth have relating to academic demands, stress, and engagement. By increasing available online-delivered counseling interventions,

resources and strategies, middle school students can then start to recognize the resources they have to access, cope, and generate successful responses to stress, supporting more positive reactions to stressful situations.

Keywords: academic stress, academic engagement, multiple baseline design, direct behavior rating, systematic direct observation, self-monitoring

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Chapter I: Introduction

The period of transition from elementary to middle school is filled with change and can exude stressful experiences for youth. Stress is common for secondary school students as the academic demands and pressures to perform start to increase (Pascoe, Hetrick, & Parker, 2020). A recent study by Borman et al. (2019) emphasized the importance of mental health support for middle school youth, addressing that positive student attitudes led to a decrease in negative behaviors due to increased positive behaviors and thinking during academic times.

Stress in secondary education can stem from an increase in expectations to perform academically and cultivate fear of not being able to meet these demands, causing students to focus on test scores, homework, and academic stressors more often. External expectations on student performance can lead students to feel inadequate in their self-perceptions or hopeless in their academic performance. Expectations from guardians, teachers, and even peers could have negative mental health effects on middle school youth, producing an overwhelming feeling of stress and need to live up to the influencer's expectations. Reported by Elgart (2017) schools are under a mandate to continually improve and increase academic achievement scores, creating an environment where the academic demands are higher and expectations to perform are increasing at a younger age.

The current study aimed at measuring perceived academic stress among middle school students and the effects of academic engagement throughout an 8-week online counseling intervention. The study intended to address the gap in literature of online stress reduction counseling interventions upheld in secondary school educational settings that support perceived academic stress, specifically for middle school youth populations. Select materials from the *YOUTH Positive* curriculum (Dahl, 2018) were applied as treatment skills that were learned from

the online-delivered counseling sessions by youth participating in this study. Lessons from the *YOUTH Positive* curriculum (Dahl, 2018) were delivered through pre-recorded online videos by the researcher. *YOUTH Positive* is stated as a curriculum providing “both a philosophy and a way of life, encouraging teens and children to "live positive" and to take an active participatory role in their lives, especially in their education” (*YOUTH Positive*).

The *YOUTH Positive* curriculum was developed in Genoa, Nevada by Molly Dahl (2018) to support positive overall wellbeing as well as social, emotional, and academic youth development. The developer intended for the materials to “give youth a personal connection to and with their strengths and values, their life philosophy, and their goals” (*YOUTH Positive*). *YOUTH Positive* programs have been used in the states of Nevada and California and internationally in Adelaide, Australia. Programs have supported kindergarten through 12th grade populations during health classes, core curriculum time, and as an inclusive practice in school settings. *YOUTH Positive* programs have not been utilized within counseling settings as of the beginning of this study.

Problem Statement

Stress is common for individuals of all ages. The unique transition a middle school aged youth has when entering secondary school may be an especially stressful time. Excelling in school may be challenging for students who do not have stress reducing skills on which to fall back (Wuthrich, Jagiello, & Azzi, 2020). Middle school offers students an opportunity to become more independent while taking away some level of dependence and support from teachers and other support staff with whom students may have had interactions throughout their elementary school grades (Thompson, 2012; Wuthrich, Jagiello, & Azzi, 2020). Stress reduction is the first step to support youth with an overall happy, healthy, and stress-free middle school experience.

Middle school students undergo stress in and out of the school setting while trying to fit into different social groups and juggling more challenging academic workloads (Wuthrich, Jagiello, & Azzi, 2020). Students are being exposed to many stressful scenarios and topics such as anxiety, depression, suicide ideation, and much more during middle school, creating a need for collaboration among school and community supports. School and mental health counselors are available for youth during their primary and secondary school grades in many school districts across the United States (ASCA, 2020). School counselors assist students in the U.S. through the American School Counseling Association (ASCA) domains of academic, career, and social/emotional development which also include specific standards that are delivered to students by school counselors to support college and career readiness skills. Some districts hire mental health counselors to assist students when school counselors may not be able to meet the demands of students' mental health needs (ASCA, 2020). School counselors collectively work with community-based agencies and outside mental health personnel through advocacy efforts to support student's needs (ASCA, 2020).

Stress can present itself during various academic times in middle school environments; while engaging in classroom lessons, studying, taking tests, or at home completing homework, making any or all of these tasks difficult and even overwhelming to complete (Bedewy and Gabriel, 2015). Students may perceive their academic stress levels differently depending on their academic engagement, overall effort during class times, or effort towards accomplishing academic related goals. Negative academic stress could have effects on many aspects of a student's life such as mental health, substance use, sleep, physical health, achievement, and even school dropout (Proctor, Guttman-Lapin, & Kendrick-Dunn, 2020). Counselors are advocates for students and support students through proactive and reactive counseling interventions in the

school setting (Proctor et al., 2019). Interventions supported by counselors at the school level include classroom guidance lessons, small group counseling, individual counseling, and referring to outside mental health professionals or support services (ASCA, 2020).

Researchers have hypothesized that perceived academic stress is correlated to an increase in depressive and anxious symptoms (Fisher & Pidgeon, 2018). In the current time amidst a global pandemic, the norm for most schools includes online learning or a hybrid model of learning, which offers partial virtual learning accompanied with in-class instruction. Learning in one way or another via the internet is what 21st century learning is all about, regardless of a pandemic's interruptions of traditional school-based learning. Past research has demonstrated that online-delivered interventions can improve student academic engagement (Carboni et al., 2013; Klatt et al., 2013; Napoli et al., 2005). By offering an online-delivered counseling intervention, middle school students can access a stress-reduction program within their learning environment, whether it is at school during a free period, or when they are home and available to view it weekly.

Middle school students may not have been exposed to stress reducing skills before their middle school years, making de-stressing during academic times almost impossible for them to do. Understanding how to care for mental health is important especially as it relates to stress (Bedewy & Gabriel, 2015). By teaching students stress reducing skills, not only will the hope be to help ease them into the middle school environment, but it may also support their overall perception of their selves, help them excel in the classroom by exhibiting increased academic engagement strategies while decreasing negative disruptive behaviors, and increase respect to others and their self within academic and non-academic environments.

Research on the effects of online-delivered counseling interventions has focused on different aspects of mental health but there has been little work exploring youth's perceptions of academic stress as it relates to the effects of an online-delivered counseling intervention at the middle school level.

Purpose of the Study

The purpose of this study was to investigate the effectiveness of a guided online counseling intervention to support individual middle school students with improving their responses to perceived academic stress. The study aimed to determine the success of a weekly online-delivered counseling intervention to decrease perceived academic stress and disruptive behaviors and increase the application of learned stress reduction skills, overall academic engagement, and respectful behaviors during academic learning. This study utilized a multiple-baseline single case research design to intentionally explore the effects of a weekly online-delivered counseling intervention on student's perceived academic stress levels and overall academic engagement within participant's most stressful identified class.

Research Questions

Three research questions were addressed within this study.

Research Question 1: Will participation in a weekly, online-delivered, counseling intervention increase academic engagement and decrease perceived academic stress in adolescent students within an educational setting: (1) As measured by teacher direct behavior rating (DBR)? (2) As measured by systematic direct observation (SDO)? (3) As measured by participant self-report?

Research Question 2: Will effects of a weekly online-delivered counseling intervention be maintained at 3-week follow-up relating to student academic engagement and perceived levels of academic stress?

Research Question 3: Do participants perceive a weekly, online-delivered, counseling intervention to be helpful to support overall academic engagement and perceptions of academic stress?

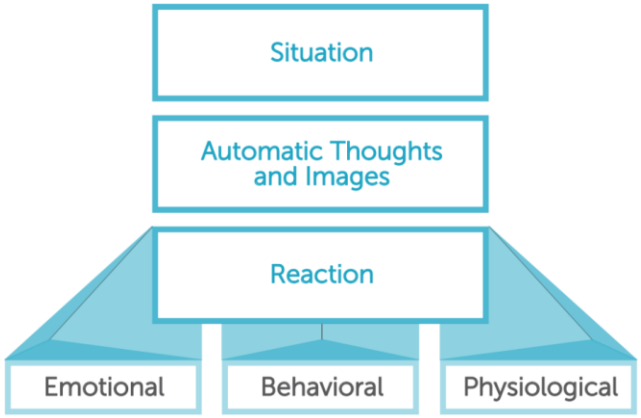
Theoretical Foundation

The theoretical framework for the current study was based on three theoretical foundations: cognitive behavioral theory (CBT; Beck, 1964), social cognitive theory (Bandura, 1986), and the transactional theory of stress and coping (Lazarus & Folkman, 1984). All three theories were useful to understand youth perceptions of academic stress at the middle school level.

Aaron Beck expanded on cognitive theory through the creation of his cognitive model, describing how perceptions of situations and automatic thoughts influence behaviors. Beck's (1964) cognitive model (see Figure 1 below) describes the cognitive process of reacting to situations happen by first identifying the stressful situation, evaluating automatic thoughts, and reacting to those automatic thoughts or images. CBT helps clients become more aware of their own thoughts to help recognize the thoughts may influence their emotions, behaviors, or physiological reactions.

Figure 1.

Beck's Cognitive Model

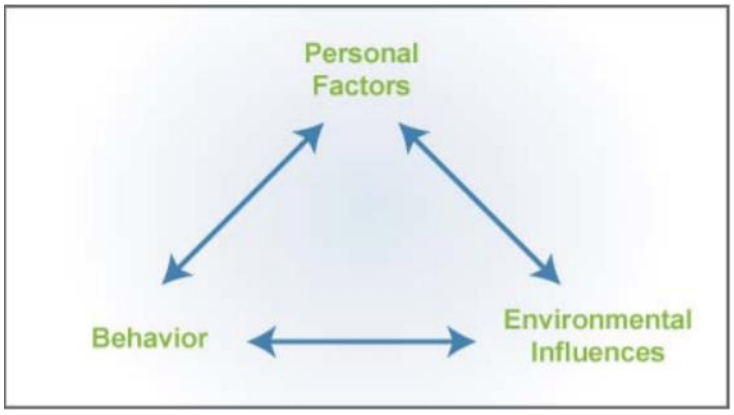


Graphic from https://beckinstitute.org/cognitive-model/

Social cognitive theory emerged in 1986, stemming from social learning theory developed in the 1960s by Albert Bandura. SCT discusses the influence of social reinforcement on human behavior in regard to the interaction of the environment. Elements of modifying behavior are inclusive of self-control, self-efficacy, and reinforcement within SCT. Goal-setting and self-monitoring have been stated to be effective within interventions utilizing SCT (Bandura, 1986; McLeod, 2015). SCT's key component of reciprocal determinism addresses that an individual can both be an agent for change and a responder to change, referring to the influence role models, teachers, peers, guardians, the environment, and reinforcements have on the individual to help promote healthy behaviors (Bandura, 1986). SCT provides a foundation to identify behaviors that can be modified while explaining human behaviors in relation to the relationships between the individual's personal factors, behavior, and environmental influences (Koo et al., 2019) (see Figure 2 below).

Figure 2.

Bandura's Social Cognitive Theory Model



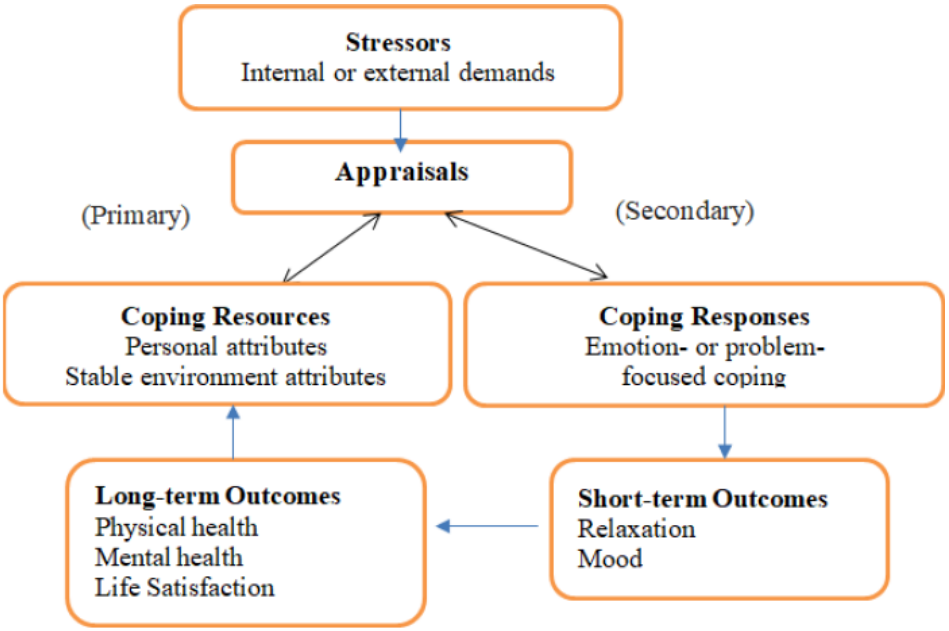
(Bandura & National Inst of Mental Health, 1986)

Created by Richard Lazarus (1966) the transactional theory of stress and coping identifies that stress is a mental process where an individual reflects on their environment and recognizes they do not have the resources available to cope with the identified stressor. Similar to social cognitive theory, stress is a result of interactions between the individual and their environment. This theory is a framework to evaluate the practice of coping with stress. The individual identifies that their emotions are caused by the stressor. The individual then assesses their coping resources and strategies to control their emotions and address their stress. Coping helps to regulate distress and serves as the management of the problem caused from the stress (Lazarus & Folkman, 1984). Supporting students with increased resources to adopt learned coping skills and strategies would help them progress their perceived stressor(s) and be able to cope successfully. Two cognitive appraisals are identified within the transactional model of stress and coping (see Figure 3 below). During primary appraisal, the individual questions what is at stake during a stressful, threatening situation while within secondary appraisal the individual questions what they can do about the stress to respond to the threat (Margaret, Simon, & Sabina, 2018). For

example, if the student recognizes that they have the resources to cope with their perceived stressor then they will pull from their available coping resources to support a stable response to result in a better mood and relaxed demeanor for an immediate short-term outcome to the situation.

Figure 3.

Lazarus's Transactional Model of Stress and Coping



(Lazarus & Folkman, 1984)

Stress can stem from many factors in a youth's life. During middle school, students may undergo stress from an increase in academic rigor, high stakes testing, homework demands, pressure to perform, or trying to prove to guardians, teachers, or peers their academic worth. Perceptions of academic stress expand from the ideas of attaining and maintaining a certain GPA, expectations of being an "A-student," unrealistic goals that come from others' ideas of goal setting, personal self-esteem, confidence, time-management skills, stress-management skills, or fear of failure.

Bedewy and Gabriel (2015) define perceived academic stress as a distinctive set of academic stressors that are specific to the individual student. Saravanan and Wilks (2008) defined perceived academic stress as the response to academic-related demands that exceed adaptive skills of the student. Cognitive models suggest that "the way people perceive their experiences influences their emotional, behavioral, and physiological reactions" (Weiner & Craighead, 2010, p. 1). Perception is individual to the participant and can create unwanted responses and reactions. Adjusting misunderstandings and changing negative behaviors and thinking can create better responses to stressful situations (Weiner & Craighead, 2010). Studies have reported that students in secondary educational settings experiencing ongoing stress, anxiety, or depression have resulted in a negative impact on their student learning and academic achievement (Chapell et al., 2005; Fergusson et al., 2007; Fröjd et al., 2008; Humensky et al., 2010; Hysenbegasi, et al., 2005; Pascoe et al., 2020; Ross & Mirowsky, 2006).

Assumptions

The assumption that stress is a factor in the student's academic learning is presumed to be true for each student participating in the research study. This assumption is necessary to reach change because the participating student admits to feeling stressed from his or her academics. Assumptions relating to the counseling intervention include the following: (1) online-delivered CBT is an effective intervention for middle school student populations; (2) online-delivered CBT interventions are effective in decreasing negative behaviors and thinking for middle school student populations; and (3) online-delivered CBT is effective in increasing academic engagement and respectful behaviors in middle school student populations.

Scope and Delimitations

This study will focus on analyzing perceptions of academic stress as it relates to academic engagement for participating middle school students. Data from students participating in a weekly, online-delivered counseling intervention will measure effects of academic engagement and perceived academic stress as measured by direct behavior rating, systemic direct observation, and participant self-report. The focus of this study was not to diagnose a mental health disorder, conclude that participating students have symptoms relating to anxiety or depression based on reported symptoms, or diagnose behavioral disorders based on observations and reports. The findings from this study will not presume that the intervention was the sole factor for data relating to change in level, rate of change, immediacy of effect which is also identified as latency of change, slope, trend, or mean differences amongst participants or phases.

The design of this study may not allow for significant change based on the boundaries of students only participating in a group experience once a week during the intervention, watching the online counseling intervention once a week throughout the duration of the study, meeting weekly with their assigned counselor, or the student's own accountability to practice the skills and strategies between sessions. The sampling procedures were purposeful because of the overall intent of the research intervention to educate students to utilize coping strategies and skills to support their perceived academic stress levels, meaning that participants were invited and recruited *if* they would benefit from learning stress reducing skills.

Objectives of decreasing perceived academic stress and increasing academic engagement may not be suitable to the population as other factors may be in the select middle school population. Data collection procedures, instruments, and questions the researcher asked may

prove to be beneficial to support the intervention being upheld, although other data collection procedures, instruments, and questions may also have been suitable for the intended study.

The main focus of this project was to analyze the perceptions of academic stress on middle school youth over the course of an 8-week online counseling intervention, teaching participating students stress relieving techniques to use during academic times. There were other related problems that could have been assessed but were excluded. Deciding on the participating population, the school setting, and the topic of interest relating to addressing perceptions of academic stress, were decided by the researcher but could have changed based on accessibility of interested participating educational settings and populations available at the time of the research study. This study does not intend to cover mental health concerns other than stress related to academics, although there may have been mental health concerns that could be determined through the research if the researcher intended to analyze and diagnose symptoms and behaviors.

Research questions in this study relating to perceived academic stress could vary based on the scope and data that are intended to be measured directly from the research intervention. The delivery of the research intervention through an online platform could be adjusted to suit various populations. This intervention design was intended to support student populations that understand goal setting procedures, where the student populations understand the practice of learned skills is expected, and who are responsible enough to watch the pre-recorded video each week before meeting with the counselor or researcher. The addressed intervention may not be feasible in other environments, but variations could be explored. The researcher had to consider that the intervention may be disrupted due to the ever-changing school environment during the 2020-2021 academic year due to the Coronavirus-19 pandemic.

The students were involved in an online-counseling intervention that encouraged utilizing stress management skills and strategies with the intention to increase academic engagement and decrease perceived levels of academic stress. The intervention may have been limited for student learning outcomes through the delivery of the online instruction. Reducing perceived academic stress levels, educating students on stress reduction techniques, and encouraging students to be a more active participant in their learning environments were goals of this study. Some assumptions were made as a factor of practical design. All interested participants at the select school were able to participate in this study.

Limitations

This study was limited by several factors. Some limitations of this study are inclusive of the way of recruitment, the small sample size, and possible sample bias based on convenience sampling. The students who were asked to participate or students who showed an interest in participating were from the select school, limiting the population who could therefore be involved in the study. The use of convenience sampling thus impacts external validity, limiting the generalizability of the findings to other populations. The limitation of individual results data from a single case dataset pertains only to each individual student participant. This research data does not produce the same results between participants and may not be synonymous to similar demographics and populations. The population that was accessible and convenient for this study does not represent a population that may have the highest percentage of academic stress.

Access to educational records and academic grades of students in their academic courses, data relating to the perceptions of stress from family members, and student behavioral and attendance data were limited for the study because the researcher was not an employee of the school where the research took place. Since the researcher was an outside entity of the school

setting, there was limited access to the participating students during students' academic and free times. Therefore, the lack of time the researcher could spend in the school setting was limited by these parameters.

Observing student participants in their classroom environment during the transition back to school at the height of a global pandemic may have been limiting for data collection. Two additional factors relating to the above may include (1) the students not attending in person school for about 6 months, since March of 2020, and getting used to in-person learning again, and (2) when observers are in the classroom or observing the student participant on the online platform for 15-30 minutes each week the observer effect may cause the participant to alter behaviors because of the presence of an outside observer in their immediate environment. Observer bias could affect data measurement of academic engagement, respectful behavior, and disruptive behavior by the teachers and observers alike. Collecting data from students through teacher and counselor observation may have limited the results of this study.

Limitations may be found in the method of data collection. Looking at this research through a qualitative lens or case study design may have provided more depth and understanding of where perceived academic stress was stemming from for each individual participant by interviewing multiple persons close in contact with each student of interest. Alternate methods of data collection may have provided the researcher with more depth on perceptions of stress from possible familial concerns, social issues, or external circumstances outside of the student's control.

The data received from the questionnaires relied on self-report where the participants' responses may have been influenced by gaps in memory or knowledge. Student self-report by survey instruments could have been problematic due to time constraints or from the participant's

perception of not having enough time to complete the instrument. The limitation with survey instruments is due to the interpretation being left to the participant based on the text and delivery of the questions being asked. If an in-depth interview were upheld with each participant, clarifying questions could then be addressed by the participant or researcher and addressed by the researcher to clarify understanding. Also, self-reporting by student participants to the counselor and researcher may have been a limitation due to the students not being truthful or not feeling as if the relationship has developed enough trust at the point of the research intervention.

There may be limitation in the scope and validity of the utilized survey instruments as well in the choice of methodology used within the current study. Utilizing the methodology of a single case design may be appropriate for the current study while other methods of data collection may also serve as suitable designs to address the intended research questions. The theoretical frameworks identified attending cognitive behavior therapeutic interventions, and social cognitive theory and the transactional theory of stress and coping could be limitations as other theories could be chosen for similar studies to support the intervention and current study.

While there are many limitations, this study addresses a major gap in the literature surrounding online-based counseling interventions to support academic stress. This study will contribute to research relating to online-delivered stress-reduction interventions for youth at the school setting. There is a need for further exploration of online-delivered counseling interventions at the school setting in relation to other treatment strategies. This study will add to the current research by analyzing program completion and program fidelity and how these factors impact the overall outcome of student success in an online-delivered brief cognitive-behavioral intervention. Attending to students' needs and experiences in the current study will

also support the gap in the research by understanding what helps students succeed through an online-learning platform.

Significance of the Study

To date, little research has been completed on the effects of academic stress for middle school youth relating to online delivered counseling interventions. As of this study, no research specifically utilizing the *YOUTH Positive* curriculum in a counseling environment has been completed. The present study will be the first to measure perceived academic stress levels and effects of academic engagement for middle school students while involved in an online counseling intervention addressing stress reducing skills and strategies from the *YOUTH Positive* curriculum.

The study is believed to be significant and contributing to the research in online-delivered counseling interventions placed under a CBT framework. CBT is based on the cognitive model of mental illness (Beck, 1964) and hypothesizes that individuals' behaviors and emotions are influenced by their perceptions (Fenn & Byrne, 2013). The cognitive behavioral, social cognitive, and the transactional theory of stress and coping theories within the current study supported how self-perception and perceived stress may be conceptualized as the individual's beliefs and how they interpret a stressful situation in specific environments effect their emotional responses and intent to carry out necessary skills that are required to cope with stress and meet specific goals. This study aimed at exploring students' perceptions of stress in relation to learned stress management skills and academic engagement behaviors during academic times.

The need for this study was determined by focusing on how students perceive academic stress along with teaching youth strategies to cope with their perceived stress in academic environments. I have witnessed students facing the weight of stress as it pertains to academic

goals and influences as a counselor in both the school and clinical settings over the past 10 years. It is for the best interest that I investigate such phenomenon and commence this study in hopes to better prepare youth for the rigor their academic futures may bring. Findings from this study can support my future work as a school counselor educator, clinical practicing counselor, and researcher by bringing recently found data and knowledge to guide school and community counselors in their careers.

By examining perceptions of academic stress, counselors and educators may be able to better address the needs middle school aged youth have in a more proactive response relating to academic demands, stress, and engagement. This study will fill the gap in literature relating to online counseling interventions in the middle school environment.

Definitions

Direct behavior rating is a method in data collection for teachers to identify the percentage of time on task with a specified behavior. In this study DBR is measuring percentage of class time where the identified student is academically engaged and displaying respectful and disruptive behaviors.

Systemic direct observation data can be collected by counselors, psychologists, and support staff that are looking to measure time on task relating to specific behaviors. In this study the counselor and researcher measured student behaviors of academic engagement, respectful behaviors, and disruptive behaviors during the same class period the teacher assessed the DBR.

Summary

Stress is experienced in many educational settings. The middle school environment may produce increased levels of stress for middle school students due to environmental factors, the middle school transition, increased academic expectations, social influences, and cognitive

perceptions relating to identified stressors. Stress reduction skills can be appropriately addressed within a CBT online-delivered counseling intervention to support middle school populations. Developmentally appropriate interventions, techniques and skills can teach youth to support and cope with their perceptions of academic stress while increasing academic engagement levels. School counseling interventions can educate and help youth cope with stressful situations in their academic and social environments effectively and proactively.

Chapter II: Literature Review

The purpose of this literature review is to provide a summary of the current body of research relating to the presenting problem. This study is believed to be significant and contributing to the research in online-delivered school counseling interventions placed under cognitive behavioral and social cognitive frameworks. Research has focused on the effects of online learning to support core class curriculum (Barbour et al., 2013; Greene et al., 2015; Hart et al., 2019; Harvey et al., 2014;), however limited research has been done relating to best practice of delivery and the effects of online counseling interventions at the middle school level (Cox, 2020; Spence, Prosser, March, & Donovan, 2020; Stjerneklar, Hougaard, McLellan, & Thastum, 2019). The need for this study was determined by aiming to understand how students perceive academic stress while involved in a pre-recorded online-counseling intervention. Strategies addressed during an 8-week intervention were taught to help youth cope with their perceived stress in academic environments. By examining perceptions of academic stress, counselors and educators may be better able to address the needs of middle school youth relating to academic demands, stress and mental health, and overall academic engagement in a proactive manner.

The aim of this project was to analyze the perceptions of academic stress on middle school youth over the course of 8-weeks when involved in an online counseling intervention. The intention was to teach participating students stress relieving techniques to utilize during academic times. Multiple factors were considered prior to reviewing the literature of online-delivered school-based counseling intervention programs designed to support perceived academic stress and overall academic engagement. This study will fill the gap in literature by addressing effective design-based research relating to learning stress reduction strategies through

an online counseling program to support future online counseling interventions in the middle school environment.

Major sections to be covered in this chapter will include an overview of recent cognitive behavioral and social cognitive interventions within the school setting, online learning literature in the middle school setting, research on stress in middle school including the effects of stress on mental health and the impact on learning for middle school youth, a review of the school counseling literature relating addressing the American School Counseling Association (ASCA) standards used by school counselors, self-monitoring and reporting within school counseling settings, and single case research in school counseling. The conclusion of this chapter will review the research questions being examined.

Literature Search Strategy

The search strategy for this review included the use of ERIC, JSTOR, and PsycInfo databases to search for peer-reviewed articles while also utilizing the snowball method to include articles from select literature within each search addressing relevant topics to consider. Literature included in the review consisted of articles and online resources published in the historical context of the past 20 years of 2000-2020 but included other relevant literature when significant. The search terms used to locate articles included *academic stress, mental health in middle school, mental health in school, youth mental health, school counselor, school counselor's role, ASCA, American School Counseling Association, ACA, American Counseling Association, middle school, secondary school, stress, online stress, online learning stress, CBT, cognitive behavioral therapy, cognitive behavioral theory, social cognitive theory,* and *impact of middle school stress on mental health.*

Theoretical Foundation

Relevant literature relating to stress and academic demands exists for student populations, although much of the research has been conducted with higher education student populations (Pascoe et al., 2019). School counselors have a vital role in supporting the success of student populations in secondary school settings, preparing students academically and emotionally for college and career readiness (ASCA, 2019). Students in middle school settings are experiencing high levels of stress relating to academic demands where increased levels of stress have been seen at younger ages (Pascoe et al., 2019). Looking at combating stress in middle school through a cognitive behavioral and social cognitive lens while integrating the transactional theory of stress and coping were useful to understand the impact of stress on behaviors and cognitive processes for youth.

Cognitive theories are rooted in the belief that an individual's thoughts play a major role in their development of emotional and behavioral responses (Gonzalez-Prendes & Resko, 2012). CBT attempts to explain human behavior by understanding the individual's thought process, an individual's beliefs to a situation, how they interpret a situation, and how that person then carries out necessary skills that are required to meet specific goals (Beck, 2000). Social cognitive theory (SCT) discusses human behavior in regard to the interaction of personal factors, environmental influences, and behavior (Bandura, 1986). The transactional theory of stress and coping addresses that individuals are continuously assessing stressors within their environment, adapting to their surroundings and their need to cope with identified stress using resources that are available to them (Lazarus and Folkman, 1984).

CBT, SCT, and the transactional theory of stress are reliable theories to utilize within educational and therapeutic settings to help address maladaptive thinking and behaviors while

attending to learned coping strategies. These theoretical approaches help students develop positive social skills, assisting in the growth of academic and emotional functioning. The three addressed theories were applied to the current study to help answer the identified research questions.

Cognitive Behavioral Theory

Cognitive behavioral theories have developed from the significance of behavioral and cognitive approaches utilized within counseling settings. Three assumptions emphasize cognitive behavioral models: (1) the processes utilized within CBT approaches are known; (2) thinking facilitates responses to the environment, meaning that the way an individual thinks influences how they respond, and (3) thoughts can be recognized and therefore changed (Gonzalez-Prendes & Resko, 2012).

Aaron Beck (1967) has been thought to be the father of CBT, adopting the idea that an individual's thoughts determine their feelings and behaviors. Individuals who undergo anxious feelings have been found to portray maladaptive thinking and assumptions (Beck, Epstein, & Harrison, 1983). Cognitive behavioral therapies have shown to be effective to support cognitive thoughts and perceptions of individuals as addressed within many studies, including Butler and Beck's (2000) meta-analysis of CBT. Counselors in the school and community settings use specific techniques to coach students through the duration of the CBT intervention. The counselor encourages the participant to practice specific skills and strategies within their own social interactions between counseling sessions (Fazio-Griffith & Ballard, 2014). Teaching individuals how to manage stress through the practice of relaxation techniques, including deep breathing exercises, positive self-talk, and distraction in the form of imagery, are common interventions used within CBT practices.

Social Cognitive Theory

Self-confidence is identified within SCT as a key element of self-efficacy, influencing the individual to take action to support behavior change despite the challenges presented in their life. Academic self-efficacy has been defined as an individual's judgment about their abilities to achieve academic goals (Honicke & Broadbent, 2016; Mao et al., 2020; Talsma et al., 2018). Social cognitive theory supports student growth through individual goal setting to incorporate personal by-in, individual self-control, and awareness of skills through self-monitoring and self-regulation practices (Glanz & Bishop, 2010). Cognitive therapies have been found to support youth in school settings, helping students strive to increase engagement both academically, socially, and emotionally through problem-focused strategies that address underlying distress (James, 2017; Haugland et al., 2020). Coping strategies are identified from cognitive, behavioral, and emotional resources to support stress reduction within the current study.

Transactional Theory of Stress and Coping

Students are constantly evaluated within the school environment, making their identity potentially threatened. Within the transactional theory of stress and coping, self-esteem, beliefs, personal control, and commitment are addressed as influencing the experiences an individual has in each given situation, these antecedents are categorized into personal and situational components (Berjot & Gillet, 2011). How students react to situational threats, be it social or academic, and how they adjust psychologically to the perceived stress, are fundamental components within the transactional theory of stress and coping (Berjot & Gillet, 2011; Lazarus & Folkman, 1984).

Understanding how students perceive stress within their immediate academic environments can be applied through the transactional theoretical lens of stress and coping

accompanied by cognitive behavioral and social cognitive theoretical methods. From a cognitive behavioral, social cognitive, and transactional perspective, supporting students within the school setting to better manage academic stressors could then support their developmental needs, coping skills, and perceptions of self.

Literature Review

There has been an increased need to incorporate mental health services into the school setting because of the unmet need of students who may struggle with cognitive disorders or need additional academic, behavioral, emotional, or social support (Mychailyszyn et al., 2012; Wuthrich, 2020). Perceived stress from academic and social demands have presented youth with increased anxiety and depressive symptoms (Pascoe et al., 2019). Stress impacts a youth's concentration, social relationships, self-perception, and academic outcomes (Fröjd et al., 2008) which could lead to long-term social, emotional, or psychological effects.

Online Learning

Online learning research has been performed since the 1990s (Marsteller & Bodzin, 2017) and continues to grow as an educational platform (Mislevy et al., 2020; Pazzaglia et al., 2016). Online learning is defined as a type of instruction that is delivered primarily electronically, through the Internet (Pazzaglia et al., 2016). However, research is limited relating to middle and high school student experiences with online learning (Harvey et al., 2014; Stjerneklar et al., 2019).

Harvey and colleagues' (2014) research addressed perceptions of students within an online learning environment. The research included 140 students where 112 reported as high school aged, 22 reported being in middle school, and 6 did not identify a school level (Harvey et al., 2014). Most of the participants reported enjoyment in taking online classes (n = 82, 58.6%),

and 17 participants (12.1%) indicated they did not like taking online classes at all (Harvey et al., 2014). Questions were asked to participating students relating to their overall perceptions of their online learning environment, satisfaction with online peers and teachers, preferred mode of learning, interactions with peers and bullying within their online learning environments, and additional demographic information relating to each individual (Harvey et al., 2014). Descriptive data were collected relating to individual responses, where the researchers looked at between-group analyses on this data. A chi-square test looking at length of time spent participating in virtual schooling and time spent in extracurricular activities were analyzed, indicating a significant relationship between the two variables (p = .000). An independent sample *t* test compared results of participants who were enrolled in online classes. The majority of students indicated that peer interaction was not as prominent during online learning environments $t(122) = -2.01$, $p = 0.046$, $d = -.36$, and reported that they had less communication with friends while enrolled in online learning courses $t(126) = -2.44$, $p = .016$, $d = -.43$ (Harvey et al., 2014). The interactions students were receiving with their peers involved active participation in outside of school activities. Unfortunately, during the current state of the Coronavirus-19 pandemic, after school activities are not always an option or may be limited in numbers of students and venues to participate at for youth. By offering a weekly group interaction between students throughout the online-delivered intervention, social emotional learning would support peer connection and belonging, both critical for student growth and development.

Stjerneklar and colleagues' (2019) study examining an internet-based cognitive behavioral therapy program for youth with anxiety included 70 adolescents (13-17 years old) who presented with a DSM-IV diagnosis of an anxiety-related disorder. A semi-structured interview was conducted with the adolescents and one parent, measuring anxiety, depression,

self-efficacy, mental well-being, computer experience, treatment satisfaction, program support and program activity. Results indicated a large effect size (Cohen's $d = .80$) with a two-tailed $\alpha = .05$ (Stjerneklar et al., 2019; Cohen, 1988). Group differences were evaluated between the treatment group and control group. Significant differences were found with youth participating in the treatment group at post-measurement data collection, where 40 percent of youth were free from their primary anxiety diagnosis concluding the program, $\chi_2(1) = 4.89$, p = .027, while results indicated that more participants in the group receiving treatment were classified as recovered $\chi_2(1) = 11.56$, $p = .001$ (Stjerneklar et al., 2019). The study of the ChilledOut Online Program resulted in significant improvements for participating adolescents compared to non-participating youth relating to diagnostic severity and level of anxiety related symptoms displayed by each individual (Stjerneklar et al., 2019). Counselor guided online-based counseling interventions are indicated from the results in this study to be a great resource for adolescents with anxiety.

In the study conducted by Muntajeeb Baig (2011), it was concluded that participants learning through an online classroom performed better than the in-person classroom participants. Participants included 40 students enrolled in tenth grade, where teachers analyzed student achievement in the online physics class (Baig, 2011). The results of this study addressed that learners were able to interact with and manipulate learning objects to help develop a greater imagination to support their learning, indicating that students achieved better test results through the online-learning physics course compared to students learning in person, $t(38) = -6.4$, $p < .05$.

Conversely, online learning may be troublesome for students who are not able to self-regulate as well as others, needing more help to foster their independence (Marsteller & Bodzin, 2017). Within Marsteller and Bodzin's (2017) article, online environments gave students more time to reflect and participate in the class or lesson's activities. Within this study, the research

included participation from 83 ninth grade high school students enrolled in a biology class. Measures included assessments, discussion forums, questionnaires, prediction, monitoring and reflection forms, and field notes to determine effectiveness of the research questions addressed. Marsteller and Bodzin's (2017) research questions looked at measuring effectiveness of the online curriculum to promote student reasoning, the student's self-regulation as a predictor of their online-learning success, and the correlation between self-regulation and online-learning for participating students. Results from this study indicated that there were significant results in test scores for students, however, no significant correlations were made between online-learning and the identified research questions (Marstellar & Bodzin, 2017). Online learning environments have been shown to have positive effects for students who may not learn as well in a traditional classroom environment but may not be the best solution for all student populations.

Addressed by Mislevy and colleagues (2020) evidence of recent experimental studies have shown mixed results of online learning, stating that some students may benefit under certain circumstances, where others may not. Evidence of the effectiveness of online learning programs is concluded to be limited (Mislevy, et al., 2020), readdressing that there continues to be minimal published research discussing students' perspectives in online learning environments (Barbour, Siko, Sumara, & Simuel-Everage, 2012). Most of the previous research relating to online interventions and learning has related to opinions or experiences of practitioners of virtual school (Barbour, Siko, Sumara, & Simuel-Everage, 2012) and has not addressed the student's perspective. Attending to student voice and experiences would serve to be beneficial methods to support this gap in the research. Understanding what helps students succeed through an online-learning platform could help guide future online learning curriculum and research.

Continued and ongoing support during adolescent development is necessary for student success. Scaffolding has been identified as an efficient support within educational environments to address each individual's specific needs and abilities to address comprehension and personal achievement (Berk & Winsler, 1995). This finding reinforces the need in the current study to employ scaffolding efforts and additional supports for participating students. Students who are able to meet individually on a weekly basis with their counselor to monitor goals relating to their perceived stress, successes, and struggles throughout the intervention could relieve perceived stressors throughout the intervention. The student is seen as the expert in his or her own situations as addressed by Durfee and Rosenberg (2009), therefore asking students throughout the intervention how their learning is progressing or if they are having a hard time would support this finding and give the student autonomy and voice while increasing their buy in to apply learned coping skills.

Social interactions and online learning. Harvey and colleagues (2014) address the need for social interactive opportunities in addition to online-learning coursework. This supports the decision in the current study to involve a weekly group experience for the students to be a part of, fostering a socially interactive arrangement. As discussed within Greene and colleagues (2015) self-learning interventions, inclusive of on online-learning, are directive at first with clear instructions, leading into modeling done by the instructor, and lastly where the student then experiences a guided practice with instruction, having more time to practice on their own. The study done by Harvey and colleagues (2014) addressed that participating middle and high school students liked the most about online learning included working online, learning in their own way, and being at home while learning. Students who may not enjoy online-learning or who may be

unsuccessful at it could provide more information on what they may need to be successful throughout the intervention process (Harvey et al., 2014).

Improving and incorporating social and technology proficiencies into student outcomes and skills would support developmental and social progression for students as they grow and mature (Barbour and Reeves, 2009). Multiple benefits are associated with virtual school environments inclusive of greater educational access, high quality learning, improvement of students' skills, and allowing for greater student choice in the education they receive (Barbour and Reeves, 2009). However, students engaged in online courses may have little contact with other students (Winterwood, 2010), making the need for social interactions greater while involved in the online learning environment. Middle school students depend on peers to model skills. Throughout middle school years, students are learning how to self-regulate and think about personal identity. Students learn from peers and teachers during this time while interacting with youth their same age. Cox (2020) discussed that there is not much literature on the effects of online learning relating to child development, stating that most research has looked on the effects of virtual learning and college aged students.

Stress in Middle School

The middle school environment consists of grades 6 through 8 in the United States. As youth enter their first years of secondary school typically they are met with increased academic expectations, workloads, and rigor. Youth in middle school are adapting academically, behaviorally, and socially (Dawes et al., 2020). The middle school transition is a time where students adjust positively or negatively across different areas of their development. Change brings about stress and a period of adaptation. The study addressed within Dawes and colleagues (2020) research utilized developmentally appropriate interventions to support student's

adjustment and distress to the middle school environment and the expectations that were warranted through the transition. Stress stems from social and academic situations in the middle school environment. Academic stress is a common area of distress for youth (Huan et al., 2008; Ivancic et al., 2014; Wuthrich, Jagiello, & Azzi, 2020) and should be addressed within this transition phase.

Middle school students are developing at their own pace, learning, and understanding their strengths and limitations. Middle school is a period for students to learn about self-regulating skills, including becoming aware of learning needs (Marsteller & Bodzin, 2017). Self-regulation during online-learning can be seen within the individual student's ability to plan, where the student demonstrates how they can utilize strategies effectively and monitor his or her learning (Greene et al., 2015). Self-regulation strategies have been utilized within many self-monitoring practices (Greene et al., 2015; Harris, Graham, & Santangelo, 2013; Perels, Gurtler & Schmitz, 2005; Labuhn et al., 2008; Adodo, 2013; Cleary & Zimmerman, 2004). However, do middle school students have the ability to self-regulate and utilize taught stress reducing skills during this era of increased academic stress and digital involvement? And are they actively practicing learned coping strategies to support their individual needs?

In a review of the literature over the past 50-100 years by Wuthrich, Jagiello, and Azzi (2020) that included a search for articles relating to stress in secondary school, stress has been associated with multiple factors in a youth's life. Within this systematic review of literature relating to academic stress within the final years of schooling, it was concluded that students had high levels of stress across samples. Evidence was found addressing the correlation between increased stress in students and individual demographics, familial stressors, and school factors (Wuthrich, Jagiello, & Azzi, 2020). Youth distress results from various areas within their life,

inclusive of identified demographics; individual differences; gender; predisposed anxiety; negative academic or personal cognitions; perfectionism; coping strategies; motivation; academic or personal self-efficacy; the capacity to withstand academic setbacks; physiological factors; social and familial influences; home and school environments; and fear or perceived pressures (Wuthrich, Jagiello, & Azzi, 2020). Within the study by Cunha and Paiva (2012), lower levels of anxiety of perceived academic related stressors were associated with utilizing stress relieving mindfulness techniques.

Effects of stress on mental health. School has been reported by teenagers, aged 13 to 17, as the most common source of stress within the American Psychological Association's *2013 Stress in America*™ report (2014). High levels of stress have been found to impact mental and physical health (Chusid, 2020; Kaffenberger & Seligman, 2003; Pascoe et al., 2020). Negative perceptions of academic stress could have effects on many aspects of a student's life, including mental health, substance use, sleep, physical health, academic and personal achievement, and even school dropout (Pascoe et al., 2020). The need to educate youth on the effects of stress and how to cope in a healthy way are recommended by the APA (2014) to support youths' future mental and physical health.

There is a need for collaboration among school and community mental health providers to best serve youth populations. This need has been consistent in the literature since the number of behavioral, emotional, and mental problems have "significantly increased" (Arnold, 2011, p. 4) over the years (AIR, 2017). Anxiety disorders are stated to be the most prevalent mental health problems for adolescence at the current time (Huagland et al., 2020). Teens have reported that "managing stress is extremely important" (APA, 2014, p. 35), where 39 percent of teens report feeling anxious. Unfortunately, many students who have anxiety or an anxiety related

disorder often are unidentified and do not receive the treatment they need (Huagland et al., 2020). “Schools must now have plans in place to address more supportive environments” (Arnold, 2011, p. 3). Increased anxiety has been associated with poorer academic performance (Wuthrich, Jagiello, & Azzi, 2020) and students with lower self-efficacy were reported with increased anxiety relating to academic achievement (Erzen & Odaci, 2016). Younger generations have a harder time managing stress, where 52 percent of teens have reported that stress has an impact on their mental health (APA, 2014). Huagland and colleagues (2020) have reported that additional research evaluating youth distress during academic and non-academic periods across grade levels is needed.

Impact of stress on learning. Academic demands typically increase as youth advance in grade levels. Within educational environments, positive behaviors are typically rewarded, helping reinforce desired behaviors while supporting the student’s self-perception (Wright, 2012), where negative behaviors are not as favorable within educational environments or society. Youth may have trouble being successful academically during their transition to middle school, causing them to have higher levels of stress. Academic stress has been reported to influence “absenteeism, behavior problems, retention, lack of engagement, and low self-esteem” (Arnold, 2011, p.1). When students struggle to manage academic stressors within their lives, they may encounter academic burnout (Luo, Wang, Zhang, & Chen, 2016). There is a correlation between students’ relationships with others, behaviors, and their academic engagement and overall academic achievement (Dawes et al., 2020). Academic engagement has been found as an indicator of academic success when demonstrating respectful behaviors, while disruptive behaviors have been found to interrupt classroom engagement and learning, correlating to school-based failures (Miller et al., 2018).

Completing tasks for school, studying, and taking exams, social pressures, external expectations and demands, and other factors generate an increase in stress levels (Wuthrich, Jagiello, & Azzi, 2020). With this increased stress, middle school students may not have the tools needed to support stress in their lives when it is really needed most (Bedewy and Gabriel, 2015). According to APA's report on *Stress in America™ Generation Z* (2018), nearly 73 percent of respondents reported they could have benefited from more emotional support in previous years. Fisher and Pidgeon (2018) reported that perceived academic and nonacademic stress can lead to mental health concerns and vice versa.

The top ten stressors reported by students in Lin and Yusoff's (2013) research related to school and academics. Perceived academic stress has been defined as a unique set of academic stressors specific to the student's individual experience (Saravanan & Wilks, 2014; Bedewy & Gabriel, 2015; Fisher & Pidgeon, 2018). Females have reported as experiencing greater perceived levels of academic stress than males (Backovic et al., 2012; Leonard et al., 2015). Self-confidence and efficacy are stated to have major roles in academic outcome and performance (Erzen & Odaci, 2016) indicating that lower confidence or efficacy may equal lower performance. Time management skills are also considered to be problematic with an increase in stress levels surrounding academic demands (Akcoltekin, 2015). School based stressors may come from increased pressures to perform or increased learning requirements on top of home based stressors that stem from pressures to perform along with routines in sleep and diet, family pressures, or familial issues (Wuthrich, Jagiello, & Azzi, 2020). Academic pressure within the middle school environment may be complex, stemming from the relationships the student has within their school and home environments (Luo, Deng, & Zhang, 2020).

Borman and colleagues (2019) discussed how expectations to perform, and the demands put on youth have increased, especially relating to the focus on academics and academic performance, leading to negative implications on youth mental health. Elgart (2017) reported the recent school mandate has been to improve and increase academic achievement scores, putting even more pressure on youth and teachers to produce higher scores. Students need support from guardians and teachers during their primary school years and through their transition into the secondary school setting. Perceptions of academic stress can be caused by the environment that a student is in during the school day and at home. Positive student-teacher and student-guardian relationships have been found to support students' academic resilience (Chao, Fu, & Wang, 2018). Students' perceptions of academic stress have been significantly correlated with their relationships with teachers and perceptions of emotional warmth eluded from their guardians (Luo, Deng, & Zhang, 2020). Students in middle school undergo social stress relating to social interactions and their social groups (Wuthrich, Jagiello, & Azzi, 2020), adding to their overall perceived levels of stress.

As stated within Luo, Deng, and Zhang's (2020) article relating to academic stress in middle school students in China, there is a need to further examine what factors influence academic stress among middle school student populations in order to develop effective interventions to ease stress. Twenge (2018) reported that teens who spend more time with screen time are more likely to suffer anxiety and depression. Emotional developmental factors such as temperament or coping skills, and the messages a child receives from other people, peers, or caregivers, can have a great effect on the impact of a youth's self-esteem (Oswalt, 2015). In conclusion, stress and mental health may have a negative impact on learning and academic

achievement (Chapell et al., 2005; Hysenbegasi, et al., 2005; Fergusson et al., 2007; Fröjd et al., 2008; Humensky et al., 2010; Pascoe et al., 2020; Ross & Mirowsky, 2016).

School Counseling

There are many advantages to having mental health access in the school setting. The integration of mental health in schools has become the norm in recent years (Morley, 2015). The school counselor's professional knowledge, skills, and expertise can help remove barriers within schools that impede access to services for students (Proctor, Guttman-Lapin, & Kendrick-Dunn, 2019). School based mental health is accessible through school counseling, meeting students where they are (Weist et al., 2003) while community mental health agencies may not be as readily accessible for many populations (Morley, 2015). Collaboration or partnership is essential to be able to advocate effectively for school based mental health support (DesGeorge, 2019). An example of a collaborative effort would be when school counselors or school based mental health providers collaborate as part of interdisciplinary teams (Ziomek-Daigle, 2016). These teams are inclusive of the counselor, administrator(s), educational support staff, and teachers who work together to support the student they are servicing. Collaboratively the interdisciplinary team addresses specific evidence-based interventions and resources that they believe will work the best for the student's developmental level. It is a counselor's duty to recognize these discrepancies and work collaboratively with other professionals to serve students with developmentally appropriate interventions.

The school counselor's role has been underestimated in the past (Astramovich, Hoskins, & Markos, 2007), where today many schools have counselors as a resource to support students with academic, career, social emotional, and personal needs (ASCA, 2019). School counselors are in high demand in the 21st century where their tasks have expanded from dealing with the

typical behavior student, scheduling, and handing out college applications to supporting students and their families with an array of mental health needs and familial issues (Junek, 2020). School counselors collaborate with other professionals in their school settings and through community resources. Multidisciplinary teams come together to collaborate in educational settings, identifying and proactively supporting struggling students with developmentally appropriate interventions. Counselors are a main part of this support team in the school setting. Counselors try to remove systemic barriers that hinder student access to appropriate supports. The American School Counselor Association (ASCA) was established in 1952 to support counselors influencing student development, and the ASCA national model has been recently developed to better meet the needs of all students (Wingfield et al., 2010). Counselors advocate for students within the school setting who are not yet able to advocate for themselves.

Counselors in schools are recommended to have a student ratio of 1 to 250, but many states have upwards of a 1 to 960 ratio (Vercelletto, 2018), where 30 percent of school counselors have reported their workloads to be unmanageable (O'Dea et al., 2017). Even with a counselor in a school they may not be able to support each student's emotional or mental health concerns as they arise (Astramovich, Hoskins, & Bartlett, 2010). Recent focus in school counseling has related to reactive responses to crisis, such as school shootings, opposing to supporting students' mental health with a systematic approach (Walker, 2018). "Counselors have little if any time to focus on each student as an individual" (Vercelletto, 2018, para. 2). One of the many goals of school counselors is to serve as an advocate for students who are at a higher risk for inequity (Arnold, 2011). School counselors advocate for students by delivering direct and indirect services (ASCA, 2019), proactively and reactively supporting student populations

with counseling interventions and resources in the school setting (Proctor, Guttman-Lapin, & Kendrick-Dunn, 2019).

While the mental health needs of youth continue to rise (Kaffenberger & Seligman, 2003) the ASCA continues to advocate for school counselors, supporting school counselor growth and development through education and training of evidence based school counseling interventions to proactively support student populations. Michelle Obama's campaign entitled Change Direction is an example of mental health advocacy that brought awareness to challenges with mental health to help end stigma relating to mental health support (Lu, 2015). Proactive school-based mental health services help students learn necessary coping skills through counseling interventions during times of stress and crisis (Morley, 2015). A school counselor assesses the overall school-counseling program through program assessments to ensure that it is achieving the best results for all students (ASCA, 2019). School counselors plan specific program activities, goals, and supports based on program assessment data. Current recommendations for the delivery of online-based counseling interventions in schools are implied within the ASCA (2019) recommendations. ASCA (2019) states that school counselors providing counseling at the virtual setting advocate the same standards and adherence to ethics through the ASCA domains as the in-person ASCA counselor does.

Cognitive Behavioral Therapy in Schools

Youth are developing cognitively through their grade school years. Behaviors are learned during this time of development from social interactions and are enforced or ridiculed by authority figures inclusive of teachers, administrators, and guardians based on appropriate or inappropriate behavioral interactions. Cognitive theory is supported through cognitive behavioral

therapy (CBT) in the school setting. CBT targets irrational thoughts and behaviors and is structured to support student change (Boelen, 2007).

Assumptions of CBT. Corey (2016) states that behavior therapy is supported through the scientific view implying that a systematic and structured approach to counseling supports change. The assumption that humans are not born bad or good but are born with a blank slate (Wright, 2012) suggests that humans enter the world without knowledge. A main belief of CBT, or behaviorism, is that behaviors are a result of experiences the student encounters within their personal environment (Wright, 2012). Behaviors an individual learns growing up through interactions they have may result in the behaviors that are upheld later in life.

Human beings are a product of conditioning, where behaviors are learned, and since behaviors are learned, they can change. Elbert Ellis (2004) states that the way a person thinks influences how they feel resulting in an action or behavior. Therapeutic interventions that are put in place within CBT may involve changing or altering the individual's behaviors and thoughts. Through a structured counseling approach in the school setting, a student can unlearn negative behaviors that may be the root cause of their stress (Eremie & Margaret, 2016).

Conceptual Framework of CBT. Theoretical concepts that are addressed within CBT focus on how thinking can change behaviors and feelings. Automatic thoughts a student has may be irrational (Wright, 2012). Since these thoughts are automatic, the counselor's role in CBT is to teach the student new ways of thinking (Wright, 2012). CBT focuses on present thoughts and goals to support change. The encouragement of positive thoughts to replace negative thoughts can be upheld through brief therapeutic interventions that are oriented towards problem solving.

Process(es) of CBT. Cognitive behavioral therapists establish a trusting relationship to support the student. The counselor must be able to collaboratively work with the student in a

trusting relationship to set counseling related goals. These goals are prioritized, helping to set an agenda and action plan for the counseling intervention. Throughout a cognitive behavioral intervention, the counselor teaches the student to challenge inaccurate beliefs. Instead of having irrational thoughts we "think like scientists" (Wright, 2012, p. 204). Educating the student to approach thinking in a rational way and focusing on present thoughts and goals can support change.

Throughout the process of a CBT intervention, homework is given to support the learning of behaviors. Practicing what was learned outside of the counseling session can support appropriate thoughts, interactions, and behaviors within other social environments (Wright, 2012). The counselor meets with the student weekly or every other week for continued support (Wright, 2012). When the counselor meets with the student, the counselor reviews the homework to support further cognitive behavioral change. Since CBT is brief, the counseling process works fast (Weiner & Craighead, 2009).

Characteristic Techniques of CBT in the School Setting

In a school setting, rewarding positive behaviors helps to reinforce the desired behavior while supporting the individual's self-perception (Wright, 2012). Cognitive behavioral approaches encourage the development of positive social skills while addressing maladaptive thinking and behaviors. Cognitive behavioral therapists help clients strive to increase their engagement and enjoyment in activities (James, 2017). Interventions in CBT can help increase levels of academic and emotional functioning (Fazio-Griffith & Ballard, 2014). Counselors use techniques to help coach the student through the intervention, encouraging the client to use specific techniques within their own academic and social environments.

CBT in schools is short in duration with ten sessions or less, separated by weekly meetings between the counselor and student (Wright, 2012). CBT is structured and goal-oriented, focusing on distortions in thinking (Fazio-Griffith & Ballard, 2014; Wright, 2012). CBT educates the student to appropriately use problem-solving or coping skills to help with behavioral change. Techniques that can be used in a cognitive behavioral intervention within the school setting include modeling, roleplay, or puppetry, rewarding appropriate behaviors, using positive self-talk and thinking, or integrating bibliotherapy (Fazio-Griffith & Ballard, 2014).

CBT in the school setting emphasizes the student's involvement in the process to practice skills that are learned throughout counseling interventions with personal buy-in of the goals that are set and integrating homework between sessions. School-related interventions can be supported through individual counseling, small group, or within whole-class guidance lessons (Fazio-Griffith & Ballard, 2014). Modeling behaviors can be supported in any one of these settings but is effective when students have buy-in and show an interest to practice the desired behavior. James (2017) mentions that students "may have difficulty linking thoughts, feelings, and situations" (p. 18), but youth can be taught these skills through psychoeducation. CBT can include techniques that adapt learning materials or language to support the developmental level of the student.

The counselor encourages support from and involvement of the individual's parent(s), guardian(s), or teacher(s) during CBT interventions by applying repetition and reminding the student of positive behaviors and thinking (James, 2017). Involvement of stakeholders who are consistently in contact with the student seeking support can be beneficial within CBT. Through a collaborative team effort, the counselor can help youth learn how to uphold meaningful relationships and cope with stress during academic times, which in turn can then support positive

coping skills when challenges are presented in other areas of life (Fazio-Griffith & Ballard, 2014).

CBT in the school setting. CBT is evidence-based (Morley, 2015) and implies that an individual can unlearn negative behaviors that may be the root cause of their stress (Eremie & Margaret, 2016). The core principles of CBT interventions address how thoughts effect behaviors, how control of these thoughts is useful and proactive, and how applying skills learned through CBT interventions can effect behavior change (Brigman & Campbell, 2003; Hetrick, Cox, Merry, 2015; Huagland et al., 2020; Stjerneklar et al., 2019; Webb, Brigman, & Campbell, 2005).

CBT has proven to have multiple positive effects on youth with various clinical disorders (Hetrick, Cox, & Merry, 2015; Mennuti & Christner, 2012). CBT is based on the cognitive model of mental illness (Beck, 1964; Weiner & Craighead, 2010) and hypothesizes that an individuals' behaviors and emotions are influenced by their perceptions (Fenn & Byrne, 2013). Elbert Ellis (2004) states that the way a person thinks influences how they feel, resulting in an action or behavior. CBT is a widely utilized therapeutic approach (Weiner & Craighead, 2009) within clinical and school settings that targets irrational thoughts and behaviors (Boelen, 2007).

Utilizing CBT within the school setting is an ideal theoretical approach for school counselors since these interventions are typically short in duration with ten sessions or less. Weekly counseling sessions are either held individually with the student or in small psychoeducational groups (Wright, 2012). CBT is structured and goal-oriented, perfect for the developing middle school mind, focusing on misrepresentations in thought processes and assumptions students may have (Fazio-Griffith & Ballard, 2014; Wright, 2012). A school counselor utilizes CBT to educate students to problem-solve and cope, helping to address

academic and social situations. Recent research has addressed the need for more "school-based targeted prevention studies" (Huagland et al., 2020, p. 553) to support anxiety. There is limited evidence of the effects of brief CBT compared to standard CBT as stated within Huagland and colleague's (2020) study.

CBT techniques are inclusive of modeling, roleplaying, rewarding of appropriate behaviors, and positive thinking (Fazio-Griffith & Ballard, 2014). The student receiving the CBT intervention is actively involved within the CBT process in the school setting, continually practicing skills learned throughout the intervention, having personal buy-in by establishing what goals are set, and by doing the intended homework between sessions (Fazio-Griffith & Ballard, 2014). Roleplaying and modeling behaviors can be supported in CBT interventions but are most effective when students have buy-in and practice the behaviors with others between sessions or while learning the specific strategy. The school counselor encourages collaboration between stakeholders who are involved in the student's life throughout a CBT intervention. Through a collaborative effort, the counselor can help the student establish meaningful relationships with others in their lives, supporting the student with positive coping skills when challenges are presented later in life (Fazio-Griffith & Ballard, 2014).

CBT in the school setting is similar to other scaffolding techniques teachers utilize within their classroom, adapting techniques, learning materials, and language to support the developmental need of the student. The CBT school counselor uses repetition and reminders to support the student to practice positive behaviors and thinking throughout the intervention (James, 2017). Efficacy of CBT within the school setting has been demonstrated in various studies (Fisak, Richard, & Mann, 2011; Hetrick, Cox, & Merry, 2015; Huagland et al., 2020; Werner-Seidler et al., 2017). Multiple advantages are exhibited within a brief therapeutic school-

based CBT intervention that includes 8-10 hours of counselor-student interactions. The brief CBT intervention within the school setting proves to be lower in cost, requiring the student to have less absences from school to attend therapeutic interventions, and is preventative in nature (Huagland et al., 2020).

Cognitive behavioral therapists in the school and community settings help clients strive to increase their engagement and enjoyment in activities, both academic and social (James, 2017). Wright (2012) stated a core belief in CBT is that the individual enters the world without knowledge, learning through interactions and practice. Interventions in CBT utilize techniques such as practice of skills and homework, roleplaying and modeling, and positive thinking exercises to help increase levels of academic and emotional functioning (Fazio-Griffith & Ballard, 2014).

Cognitive processes are related to motivation, correlating with academic achievement (Zyromski & Joseph, 2008). Stated within Mychailyszyn and colleagues' (2012) work, there is a significant relationship between emotional well-being and academic success. CBT research relating to academic achievement, perceived academic stress, and academic readiness has grown to support the increased need of students and focus on academic success in recent years (Zyromski & Joseph, 2008). Research has addressed more evidence showing the effects of CBT within the school setting (Mennuti & Christner, 2012) within the last twenty years (Ginsburg et al., 2008). More recent research has addressed empirically supported interventions and resources that are designed for school use, specifically through online platforms (Gee et al., 2020; Haugland et al., 2020; Hetrick, Cox, & Merry, 2015; Stjerneklar et al., 2019; Werner-Seidler et al., 2017).

Direct school-based CBT interventions have shown to reduce students' anxiety symptoms (Haugland et al., 2020) and provide more access to evidence-based care for more students (Ginsburg et al., 2019). Haugland and colleagues (2020) looked at the effectiveness of brief CBT compared to standard duration CBT in a school-based setting with 313 adolescents, where 118 were in the standard CBT group, 91 were in the brief CBT group, and the remaining participants were on the waitlist. Analyses were performed and concluded that brief and standard CBT produce similar results with the research population. Internet delivered brief CBT has been suggested as a cost-effective way for youth to access counseling interventions (Stjerneklar et al., 2019) and has been successful in showing treatment effects for youth (Huagland et al., 2020).

Most recently published studies relating to predictors of outcome following youth anxiety treatment have focused on face-to-face therapy (Spence et al., 2020). Internet-delivered cognitive behavioral therapy has been identified as a counseling support to increase the access to therapy (Spence et al., 2020). Current research on CBT have addressed the need for further exploration of online-delivered CBT interventions in the school setting in relation to other treatment strategies (Haugland et al., 2020; Spence et al., 2020; Stjerneklar et al., 2019; Werner-Seidler et al., 2017). Further research is needed relating to what the ideal intervention is for youth at the school setting along with additional training and supervision for counselors within the school setting on effective programs and interventions (Ginsburg et al., 2019). More research is needed to support the relationship between program completion and fidelity and how these may impact the overall outcome of student success from a CBT intervention (Wener-Seidler et al., 2017). Additionally, more high-quality trials of school-based interventions to support anxiety would deem beneficial to the research and both school and community counseling settings (Gee et al., 2020).

Social Cognitive Theory and Self-Monitoring

Self-report in educational settings has been described to be efficacious in the school setting. Self-report and survey research have recently played a large role in educational system data collection (Rosen et al., 2014). Counselors have utilized self-report measures to assess bullying and related stressors within the middle school setting (Cornell & Mehta, 2011). Self-monitoring is a form of self-reporting and can also be referred to as self-correcting or self-management (Guzman et al., 2018). "Independent measures of self-monitoring of [behaviors] includes variations of self-monitoring procedures" (Guzman et al., 2018, p. 163). Within the school counseling environment, determining where the student is at in their learning and self-identification of behaviors or stressors is beneficial to support positive change and growth (Guzman et al., 2018).

Self-reported measures of self-monitoring are inclusive of "anxiety, attitude changes, social skills, acceptance and avoidance of cognitions, [and] measures of risk" (Harper, et al., 2013, p. 445). Findings within self-monitoring literature have direct implications for educators working with students who may be off task during academic times (Guzman et al., 2018). Dependent variables of self-monitoring can include academic outcomes, where the incorporation of active student self-monitoring can be utilized by integrating a think sheet or weekly journal booklet to track academic performance (Rock, 2005). Other examples of self-monitoring could measure student's accuracy levels in reading, productivity levels, main ideas and summarization generation, and on-task behavior during instructional time (Rock, 2005).

Wilson and Dixon (2010) stated that self-monitoring while incorporating an intervention may improve the student's buy-in and success throughout the program over self-monitoring alone. Having the student self-monitor perceived academic stress and overall academic

engagement can help the student keep track of their own performance by actively monitoring progress while keeping a visual representation of scores (Guzman et al., 2018). Fuller and Fitter (2020) address that by creating a self-monitoring checklist to track frequency of behaviors throughout the day, week, or month may be able to assist both the student and counselor in tracking behavior change.

SCT is developed from social learning theory and has been enthusiastically applied within counseling interventions (Glanz & Bishop, 2010). SCT addresses how individuals learn from personal experiences as well as through the observation of others (Glanz & Bishop, 2010). Children are developing cognitively, academically, socially, and emotionally throughout their middle school years, stemming from interactions with peers and feedback they receive from those around them. Student-centered learning is practiced within classroom environments where students are learning through interacting with materials and one another. Attending to social emotional learning strategies supports growth and development (Weissberg & Cascarino, 2013). Student voice is important to integrate into a student's learning to support collaborative learning to empower the student in their learning and growth (McCarthy, 2015). Every day, students are affected by their environments and experiences; each situation affects their well-being, learning, and social interactions (Weissberg & Cascarino, 2013). SCT emphasizes interactions between individuals or the environment and has been applied in several interventions (Burgess-Champoux et al., 2008; Gaines & Turner, 2009; and Koo, Poh, & Ruzita, 2019).

Guided self-help in school counseling. Middle school students seek increased independence during their transition out of elementary and into middle school. Landerville et al. (2016) describe guided self-help as a technique used during mental health interventions that allow clients to learn to use strategies from home or at school independently. Stress in middle

school can be supported through learned coping strategies. When students learn new skills in counseling interventions, the learning is guided by instructions given by the counselor that are either written or recorded, building on the procedures or skills through in-person or distance learning methods (Landerville et al., 2016). The length of communication and engagement with the student are typically shorter in guided self-help interventions than during regular methods of psychotherapy and counseling.

The counselor's role within guided self-help interventions is typically more limited in scope and practice supporting the student in their journey to growth and independence (Landerville et al., 2016). By utilizing a self-monitoring booklet or by filling out a weekly self-monitoring form, students can address and reflect on their individually reported time spent in a stressful state or worrying. This benefits the student to recognize their stress levels and progression throughout the intervention. Landerville and colleagues (2016) utilized a self-monitoring booklet within their intervention to evaluate participants' feelings of agitation and tension. "Participants indicated the intensity of the emotion on a scale of 0-100 and five intervals were grouped into categories (e.g., extremely: 81-100, a lot: 61-80, etc.) in order to guide participants in this task" (Landerville et al., 2016, p.1073).

Single Case Research in School Counseling

Single case research design (SCRD) in school counseling and related educational research provides data connecting changes in behavior across sessions and time, measuring individual behaviors (Guzman et al., 2018). A multiple baseline intervention in SCRD is appropriate to use when the target behavior is not reversible. This design is utilized when more than one person or group needs the intervention or when then intervention is useful to implement in more than one setting. Multiple baseline designs can be used when it is not ethically

appropriate to withdraw the intervention to support experimental control. Multiple baseline designs utilize consecutive interventions that are similar to what a school counselor typically practices.

Sallese and Vannest (2020) conducted a SCRD intervention where the recording of rates of the identified behavior were monitored for 15-minutes. The observers discussed findings from each observation at each session's end regarding the behavior targeted to discuss the inter-rater agreement on a final count to report. Each behavior was established as a goal frequency count of practice by each participant and discussion of progress towards the goal was upheld each day. Participants were asked to practice the target behavior daily following a specific script of practice.

Within the SCRD presented within Landreville and colleagues (2016), three participants were included in a multiple-baseline study. "Data were collected using daily self-monitoring, standardized clinician ratings, and self-report questionnaires at pretest, posttest, and 6-month and 12-month follow-ups (Landreville et al., 2016, p. 1070). Intervention treatment included present awareness or mindfulness training, interventions supporting anxiety treatment and coping mechanisms, relaxation training, exploration of pleasurable activities, and prevention support (Landreville et al., 2016). Participants were required to support their anxiety levels with weekly readings and at-home exercises between weekly support calls with their counselor.

An AB design compares behaviors before and after the treatment or intervention. Using an AB design with replication can support experimental control by comparing data across groups and settings. Single case research designs "demonstrate experimental control by allowing each participant to serve as both the control and experimental participant" (Guzman et al., 2018, p. 161). A SCRD focuses on the changed or stagnant data for each individual. A SCRD focuses on

one participant's behavior(s) to support that individual's development in a specific area. Findings by Wilson and Dixon (2010) suggest the need to examine the potential for mindfulness-related interventions as measures of behavior change.

SCRD is a practical design to interpret efficacy of an intervention (Lenz, 2015) where participants serve as their own comparison during and after the intervention (Egel & Barthold, 2010; Rubin & Belamy, 2012). By integrating a SCRD within the school counseling setting, the counselor can assess the benefit of the intervention which could be evaluated across other applicable counseling settings. SCRD has been identified over the years as "the best kept secret" in school counseling related research (Cook et al., 2017; Foster, 2010). Outcome research in counseling helps facilitate a better understanding of human behavior, SCRD helps school counselors measure just that (Cook et al., 2017; Foster, 2010).

Research Questions

Research Question 1: Will participation in a weekly, online-delivered, counseling intervention increase academic engagement and decrease perceived academic stress in adolescent students within an educational setting: (1) As measured by teacher direct behavior rating (DBR)? (2) As measured by systematic direct observation (SDO)? (3) As measured by participant self-report?

Research Question 2: Will effects of a weekly online-delivered counseling intervention be maintained at 3-week follow-up relating to student academic engagement and perceived levels of academic stress?

Research Question 3: Do participants perceive a weekly, online-delivered, counseling intervention to be helpful to support overall academic engagement and perceptions of academic stress?

Summary and Conclusions

The current study was intended to explore the effects of an online-delivered counseling intervention while focusing on perceptions of academic stress for youth enrolled in middle school. As of the time this study commenced, research has not specified that online-delivered counseling interventions addressing coping skills for academic stress may produce positive results for youth in secondary middle school academic settings. Therefore, this study utilized the existing curriculum of *YOUTH Positive*, modifying it accordingly to support the counseling method of delivery, during the online prerecorded intervention to best serve participants in the study population. The intervention was designed to support youth personally reporting high levels of academic stress. Effects on outcome measures for social validity, perceptions of stress, and academic engagement were measured.

Chapter III: Research Method

The purpose of this research was to investigate perceived academic stress among four middle school students and how perceived academic stress affects overall academic engagement, inclusive of disruptive and respectful behaviors during class time. Change was reflected by student's perceived academic stress measured by student self-report relating to identified goals and perceived academic stress, teacher *Direct Behavior Rating*, and counselor *Systematic Direct Observation* of behaviors throughout an 8-week online-delivered counseling intervention.

The variables of interest within this study include the independent variable of the online counseling intervention, and the dependent variables reflecting participant change in three identified behaviors. The independent variable of the counseling intervention was intended to educate participants on stress reduction skills in times of academic stress. The skills taught participants how to be aware of perceived stress while decreasing worry during academic times. The online-delivered counseling intervention lessons were designed to follow three stress-relieving practices outlined in the book *YOUTH Positive* by Molly Dahl (2018). The primary dependent variable included academic engagement, and the secondary dependent variables were respectful and disruptive behaviors observed and reported.

The dependent variable of academic engagement was operationally defined as participating actively or passively in a classroom activity (e.g., answering a question, discussing a lesson, listening to the teacher, looking at class related materials, hand raising, reading, or writing (Chafouleas et al., 2012; Minkos, 2016). Academic engagement skills were observed through the DBR and SDO observations and self-reported by each student participant as meeting or exceeding personal academic goals, class participation goals, and completion of homework goals.

The single case design aimed at seeing if an online-delivered counseling intervention would (1) decrease perceived academic stress as measured by observations and reports by student participants, teachers, and counselors, and (2) increase academic engagement as measured by teacher *Direct Behavior Ratings*, researcher and trained observer *Systematic Direct Observations*, and participant self-reports. Participant responses, teacher reports, and counselor observations to the online-delivered counseling intervention reflected how stress reduction skills affected perceptions of academic stress, academic engagement, and the percentage of time presenting respectful or disruptive behaviors during classroom learning.

Methodology

Single case research design protocol along with concepts from cognitive behavioral frameworks address the use of step-by-step practicing of skills to outline the necessary steps to take within the intervention. A protocol is necessary to support the independent variable of the counseling intervention, describing the program and its implementation with clarity (Wampold, Lichtenberg, & Waehler, 2002), while also supporting the program with fidelity in single case design (Chambless & Hollon, 1998). Within the online-counseling intervention a step-by-step protocol will be available, accompanying the use of protocols to support the supervision of both teacher and counselor accountability and observations to maintain fidelity (Chambless & Hollon, 1998). Requiring participating educators to complete an assessment of training and implementation also supported procedural fidelity and the integrity of the independent variable to help support change (Ray, 2015). These instruments are addressed within this section to support the research study.

Participants

Participants from this study were enrolled full-time at a charter school of approximately 630 students located in a western state of the United States within a city with a population of approximately 250,000 people. School demographics are outlined in Figure 4 (below). Four 6-8th grade youth were invited to participate in the research study. Participants included youth who were between the ages of 12-15 years of age, with a representation of 50% female and 50% male participants. Participating youth reported having low academic outcomes, experienced or admitted to having limited or no coping mechanisms for stress or addressed their interest and need for this intervention because of academic or counseling support.

Figure 4.

School Demographics

Grade	Race/Ethnicity	Gender
Kindergarten – 16% 1st grade – 15% 2nd grade – 11% 3rd grade – 11% 4th grade – 11% 5th grade – 11% 6th grade – 8% 7th grade – 8% 8th grade – 9%	American Indian – .3% Pacific Islander – .1% Asian – 5% Hispanic – 13% African American – .2% Caucasian – 74% 2 or more ethnicities – 7%	Female – 53% Male – 47%

Participant demographics are outlined in Figure 5 (below).

Figure 5.

Participant Demographics

Participant	Special Education	Age	Gender	Parent Education (Mother/Father)	Grades/GPA	Race/Ethnicity	Grade
1	Yes	15	F	Bachelor's/Bachelor's	A's/B's	Caucasian	8
2	No	12	M	H.S./GED/Bachelor's	A's/B's	Latino	7
3	No	13	F	Bachelor's/Bachelor's	A's/B's	Caucasian	7
4	Yes	14	M	Bachelor's/Bachelor's	A's/B's	Caucasian	8

Participant one, identified as a 15-year-old Caucasian female student in the 8th grade. At pre- and post- intervention data collection, participant one reported receiving individual counseling services outside of the school setting.

Participant two identified as a 12-year-old Latino male student in the 7th grade. At pre- and post- intervention data collection, participant two reported receiving individual counseling services outside of the school setting.

Participant three identified as a 13-year-old Caucasian female student in the 7th grade. At pre- and post- intervention data collection, participant three reported receiving individual counseling services outside of the school setting.

Participant four identified as a 14-year-old Caucasian male student in the 8th grade. At pre- and post- intervention data collection, participant four reported receiving individual counseling services outside of the school setting.

Recruitment Procedures

Participants self-identified to be a part of the study or were identified by a classroom teacher, school administrator, parent/guardian, or counselor following the delivery of an online email list serve, verbal in-person message, or upon receiving a written invitation letter to students, parents, and staff introducing the study. Identified youth participants expressed interest in personal and/or academic growth relating to heightened perceptions of stress. Participants were expected to identify an interest to engage in activities and actively support their academic stress with the identified interventions. These criteria were intended to confirm participant involvement and follow-through. After participants were identified and all necessary consent forms were acquired, participants met one-on-one with the researcher to complete pre-intervention social validity measures (see appendices).

Inclusion/exclusion criteria. Participants self-identified or were identified by a classroom teacher, principal, assistant principal, counselor, and/or parent/guardian to be a part of the current study. Four 6-8th grade youth were interested in participating and were invited to participate in the research study. Students self-identified or were identified by the recruiting individual as having low academic outcomes measured by having a B- or below for 2 or more classes, applying and/or showing low to no positive behaviors, experiencing or admitting to having low to no positive self-esteem, or identified their interest and need for the online counseling program because of the need for more support with their academics, behaviors, stress, or mental health reasons. If there were more than 7 students of interest, they were put on the waiting list of intended participants. There were not more than 4 students interested at the time of recruitment so this was not needed. Teachers, counselor, and/or parents or guardians were able to nominate a student who meets the stated criteria above.

Youth who were currently receiving services from a mental health professional such as a psychologist, social worker, and/or counselor will be excluded from the study if there are other students not receiving these outside services interested in participating. For this study all 4 interested participants were seeing a therapist in the past, were currently seeing a therapist at the time of recruitment or would be seeing a therapist outside of the intended online counseling intervention at some point throughout the intervention time frame.

If a participant were expecting to miss more than two days of the program intervention, they were informed they would be placed on the waiting list. None of the 4 participants were expecting to miss any time during the intervention phases as discussed by the participants and at least one guardian during the pre-baseline phase. Participants included within the intervention must be able to function on their own without the support of an aide or additional support staff to

be included in the study. Participants were not considered for the study if they were not within normal limits for hearing and vision. Participants also must understand how to use basic technology such as using the calendar and email applications on their computer, connecting to Zoom meetings, and understand how to watch the YouTube videos shown to them.

The participating participants identified as students within the school where recruitment took place and all 4 students were verified as enrolled full-time in the school setting by the counselor. The participant, teacher, counselor, administrator, and/or guardian identified a need for increased academic participation, academic success, personal growth, and/or reduced academic stress as an area of support for the youth to be involved in the intervention.

Procedures for Data Collection

Primary data collected for each participant included participant response to his or her gender, race or ethnicity, birth date, primary language spoken at home, grades the participant usually receives, the highest level of education for the participant's mother and father, and the participant's perceptions of classroom engagement, classroom learning, and classroom mindset data. This information was gathered by administering three sections of the Panorama Education student survey (2020) questions. Perceived academic stress was measured through a modified 18-item Likert scale questionnaire developed by Bedewy and Gabriel (2015).

Phases of the research and data collection are expressed within this section but can be viewed in summary (see Figure 6 below).

Figure 6.

Phases of Research and Data Collection

Pre-Baseline	**Phase I: Baseline**	**Phase II: Intervention**	**Phase III: Post Intervention**	**Phase IV: Post Follow-up Maintenance Measure**
1. Email announcement of study (recruitment) 2. 3-5 student participants 3. Initial meeting with students (20 min) and researcher - Social validity measures - Goal setting - Student demographics/information (504, IEP) 4. Self-monitoring training: student (20 min) 5. Behavior-monitoring training: teachers as a group (25-40 min) 6. Observer training: counselor (20 min)	1. Students self-monitor daily for at least 5 points in time - Academic stress levels - Academic engagement 2. Teacher daily class ratings for at least 5 points in time - Participant behaviors recorded by teacher on DBR form during class times 3. Counselor/researcher SDO ratings during DBR ratings 4. Student check-in mtg. after baseline data collection of self-monitoring. Meeting 1:1 with researcher (20 min) and set up a time to meet weekly (online) during the intervention	1. 8-week pre-recorded online video series intervention - Students watch each session weekly before 1:1 meeting - Each student meets 1:1 with counselor the following week (20-25 min) 2. Counselor and student go over self-monitoring form and perceived academic stress levels 3. Teacher of student rates DBR of student 1-2x each week 4. Researcher and counselor observe student by measuring SDO at the same time teacher collects DBR (total of minimum 5 for each student)	1. Researcher meets 1:1 with each student (20 min) - Post-intervention assessments 2. Researcher asks teacher, counselor, and/or parent/guardian to fill out post-intervention social validity scales	1. Teachers asked to complete a direct behavior observation form for the participating student, students complete one final self-report rating on behaviors, and counselor and/or researcher complete one final SDO rating for each participant 2. Each student participant meets 1:1 with researcher to do a final recording of perceived stress and discuss their overall academic engagement during the phases of the study

Intervention

The online-delivered counseling intervention incorporated an 8-session pre-recorded video series over an 8-week period that was available weekly to each participant via YouTube (see Appendix O, Program Overview). The nature of the intervention treatment was to reduce perceived levels of academic stress for the participant. The intervention consisted of stress reduction training, breathing exercises, relaxation training, time management techniques, and positive self-talk practices. The Panorama Education student survey (see Appendix G) was given to participants during pre- and post-intervention phases. Social validity measures were upheld at post-intervention phases, measuring each student's overall perceptions of the program to support their academic stress and academic engagement. The perceived academic stress questionnaire (see Appendix H) was given to participants during baseline, intervention, and post-follow up phases. Participants received weekly supportive one-on-one meetings (online) with their counselor. Each participant's school counselor ensured the perceived academic stress questionnaire was complete for each participant during the individual weekly meetings, where participants filled out a virtual form during the one-on-one weekly meeting to gain insight on current perceptions of stress and record responses of the participant's perceptions of stress. Participants filled out a weekly self-monitoring form, created by the researcher and delivered via Google Forms, to address behaviors during class times, and behaviors performed during in-school and at-home practice of stress reduction exercises.

The teacher, counselor, and researcher observed baseline measures of academic engagement at identified times each week during the teaching period(s) for each individual while each participant self-reported perceptions of stress. Lobo et al. (2017) reported that within multiple baseline design procedures, interventions have not been introduced to the participant at

baseline therefore baseline measures are measuring observed behaviors without any introduction to the intervention as baseline continues to report day-to-day evaluations of the behavior. The intervention phase was started when baseline behaviors of academic engagement were stable or not improving. The participant recorded self-reported perceived stress levels during the baseline phase. The researcher and counselor through data collection measure of the *Systematic Direct Observation* forms observed and recorded participant behaviors of academic engagement, respectful and disruptive behaviors during baseline measures. The teacher also recorded academic engagement, respectful and disruptive behaviors via the *Direct Behavior Rating* form during the baseline phase. Data were collected through measures of student self-report, teacher *Direct Behavior Rating*, (see Appendix L) and counselor *Systematic Behavior Rating* (see appendix M) items that were filled out regularly from baseline to the end of intervention treatment and then again during the 3-week post-intervention follow up period.

Participants identified a class that caused the highest perceived stress levels and were in attendance of the identified class two times per week for the entire semester and duration of the study. Participants were expected to fill out the self-monitoring measure once per week over the course of the intervention, reflecting on their identified class. Participants watched weekly pre-recorded YouTube videos delivered online that were produced by the researcher and created solely for the research intervention. The intervention exercises within the intervention videos included (1) stress reduction relaxation exercises, (2) imagery exercises, and (3) awareness exercises addressed within the YOUTH Positive curriculum (Dahl, 2018). Videos can be found on the researcher's YouTube channel (https://www.youtube.com/c/JessieKoltz28/videos).

Archival Data

Archival data were collected through student self-report and attendance addressing weekly participant attendance and current grades, accessed by the counselor each week she met with the participant. The identified counselor collected data on grades, GPA, and if the student was in attendance for the weekly 1:1 session each week. The counselor reported weekly data of each participant to the researcher by filling out an online form. Data were collected once per week per participant throughout the duration of the 8-week intervention and once during the post-follow up maintenance measure.

Instrumentation and Operationalization of Constructs

The researcher created a procedural fidelity measure to ensure procedures of the online-delivered counseling intervention were upheld with fidelity for each video session that was pre-recorded. A panel of experts reviewed each online-delivered counseling video session before the study commenced to determine intervention validity to address academic stress reducing skills and strategies. The panel was compromised of Colleen Camenisch, Molly Dahl, and Debb Oliver.

Colleen Camenisch has been teaching Mindfulness Based Stress Reduction programs along with other meditation courses over a decade. Colleen’s other professional experience includes a master’s degree in business and a bachelor’s degree in marketing. Additionally, she completed a post-graduate course in international business and trade law at the United Nations International Labor Organization.

Molly Dahl holds a master's degree in educational leadership. Molly has taught high school Spanish for 15 years, working 7 years in private education and 8 years in public. Molly also taught freshman English for 2 years and has coached women's volleyball, basketball, and

co-ed cross country in her time as an educator. She is the author of a three-book series, *YOUTH Positive, Exploring the Unique Genius of Every 21st Century Adolescent*, which includes high school and middle school editions and teacher's guide. Molly presents education workshops around the country for school personnel from teachers' aides to district level leadership, and everyone in between, including parents and students!

Dr. Debb Oliver is an accomplished Senior Executive, Entrepreneur, Public Speaker and Learning Specialist with more 30 years of success in K-12 and higher education, international education affairs, and non-profits. She has built lasting relationships as she consulted with public and private organizations throughout the United States and abroad regarding change management, leadership development, instructional technology, STEM, SEAD, and innovative learning scenarios. Her current leadership experience includes being the Executive Director of Nevada Association of School Boards. She is also the author of *Learning Transformation: A Guide to Blended Learning for Administrators* (Lead and Learn Press/Houghton Mifflin Harcourt, 2015).

The panel completed an inter-rater reliability scale to ensure the program was developmentally appropriate for the population, addressed sequential stress relieving skills, and supported the overall nature of an online-delivered brief counseling intervention. The advisory panel reviewed the sessions to ensure objectives and messages were clear and developmentally suitable for the intended population. All three members of the advisory panel indicated that the intervention supported the overall goal to educate participants on stress reduction skills to reduce stress during academic times. Inter-rater reliability of more than 80-85 percent agreement indicated that the panel agreed, with 100% agreement that the intervention lesson plans, pacing, and overall layout were developmentally appropriate and addressed the intended research

questions relating to perceptions of academic stress. It was suggested to make some of the following edits to the pre-recorded videos which were completed.

I adjusted the sound within the educational video itself, so the sound was clear and loud enough. I adjusted this by using an expert camera operator to record the video sessions. I also made the adjustment to discuss myself presenting the content of the lesson weekly over a PowerPoint presentation. I also adjusted the length of the videos to be between 4-6 minutes in length. The suggestion to make the video sessions shorter to view then better supported the developmental levels of students and their attention spans. I also loosened up a bit as suggested, using more kid friendly language instead of having the presentation be too academic for their developmental level. One of the panel members suggested that I look at the camera, memorize some of the main points, and create stories around them as if I were engaging with them in person so I did this as well. Another suggestion was to simplify some of the concepts, for example, when talking about the sympathetic and parasympathetic nervous system I referred to these as fight, flight, freeze and rest and digest and gave more examples to bring the concept to life in a story to help content stick more. Further suggestions addressed thinking more about the 30,000-foot view of getting the intended message across and finding a way to embody it for the audience.

Social validity measure. The researcher provided each participant, participant's teacher, and/or the participant's counselor, and one of the participant's parents/guardians a revised version of the social validity assessment of mindfulness education and practices among high school students created by Luiselli et al. (2017) during the post-intervention follow-up phase to assess access to the intervention and stress reduction skills learned by each participant. The social validity scale was developed for high school students by Luiselli et al. (2017) to support a

10-week instructional mindfulness education program. Conclusions of the assessment addressed as having high social validity in the study by Luiselli et al. (2017). This scale suits the appropriateness of the data collected for a middle school population by resembling the skills and strategies utilized within the current study.

Perceived Academic Stress scale. The *Perceived Academic Stress* scale created by Bedewy and Gabriel (2015) was given to participants during pre- and post- intervention and baseline phases and verbally given by each participant's counselor during the one-on-one weekly meeting to measure each participant's perception of academic stress. This scale was developed for university-aged students (Bedewy & Gabriel, 2015) and suits the appropriateness of the data collected for the middle school population involved in the current study by measuring levels of perceived academic stress by ensuring participants understood the questions being asked and rewording and modifying language used within the scale to support the developmental age of the participants. Permission was received from the developer to use the instrument via email (see Appendix Y).

The developed academic stress scale showed overall face, content, and convergent validity. The academic stress scale reported within Bedewy and Gabriel (2015) has shown an internal consistency reliability of 0.7 Cronbach's alpha. These values were established by a follow-up discussion and high agreement on the relevance of the items by 12 experts (Bedewy & Gabriel, 2015). "Convergent validity was demonstrated by the positive significant correlations between the three factors, especially by the significant positive correlation between the scores of Factor 1, "Pressures to perform," and the scores of the other three factors" (Bedewy & Gabriel, 2015, p. 7).

Direct Behavior Rating scale. The *Direct Behavior Rating* scale (see Appendix L) measured three standard behaviors by each identified teacher for each participant through a rating form. The *Direct Behavior Rating Scale* has shown to be valid and reliable instrument of behavior monitoring (Christ, Riley-Tillman, & Chafouleas, 2009; von der Embse, Scott, & Kilgus, 2014; Kilgus et al., 2019; Miller et al., 2018). The identified teacher measured *Direct Behavior Ratings* for the identified participant's academic engagement, respectful behavior, and disruptive behavior, reflecting the percentage of total time the student exhibited each target behavior during the identified class. This scale was accessed through the UConn *Direct Behavior Rating* website (dbr.education.uconn.edu) and suits the appropriateness of the data collected for this population by addressing three operationally defined behaviors to monitor and report. This form was appropriate for the current study by measuring behaviors that support positive academic engagement and interactions with teacher and peers to support perceived levels of academic stress. This behavior rating scale has been utilized in many settings to measure observed behaviors.

Systematic Direct Observation form. The researcher and the additional observer, the counselor, used the *Systematic Direct Observation* form (see Appendix M) to measure direct behaviors of participants during the identified academic class time. Academic engagement, respectful, and disruptive behaviors were monitored and recorded by observers. This scale has been utilized by psychologists and behavioral practitioners (Hintze, 2001). This type of observational method suits the appropriateness of the data collected for this population by recording observed behaviors in a naturalistic setting with already established observational procedures in place. *Systematic Direct Observation* methods of school-based behavior

assessment has been shown to be valid and reliable (Shapiro & Heick, 2004; Suen & Ary, 1989; Wilson & Reschly, 1996).

Data Analysis

All data collected throughout the 8-week intervention, baseline data, and pre- and post-intervention measures were analyzed. The *Direct Behavior Rating* form was completed by each teacher 1-2 times per week and collected via Google Forms during each submission to make it accessible during the online-delivered intervention and online-learning. Each of the data collection periods for the observations lasted approximately 15 minutes and the time periods were pre-identified by the participating teachers as coinciding with the same time and day they would be recording the *Direct Behavior Ratings*. During each observation, the observer recorded academic engagement, respectful, and disruptive behaviors for the identified participant using the *Systematic Direct Observation* form. After the first observation was completed, the procedures were repeated at least four additional times for each participant. To measure for integrity among the interobserver rating agreements (IOA), the computation of a Cohen's Kappa value was used to determine ratings as equaling or exceeding 80% agreement (Hintz, 2005; Riley-Tillman et al., 2008) measuring interval-by-interval IOA throughout the study's duration.

Academic Engagement

Data were analyzed to conclude the effectiveness of the 8-week intervention that was implemented to participants. Analyses of the *Direct Behavior Rating* and *Systematic Direct Observation* data were analyzed by visual inspection. To determine the rate of change for the variables across phases, the researcher examined behavioral data graphs. The researcher analyzed the mean (the rate of academic engagement and perceived academic stress levels) and level (change of academic engagement and perceived academic stress levels) from one phase to

the other. The slope (trend line) and immediacy of effect or latency (the time between a start of a phase and seeing change in variables) were analyzed across phases to conclude the rate of change for both academic engagement and perceived academic stress levels.

Effect size. Effect size was measured by Cohen's *d* (Soloman & Howard, 2015) and Tau-*U* (Brossart et al., 2018). Cohen's *d* is an effect size that standardizes the average difference between two independent phases in single case research, divided by a within-phase standard deviation (Soloman & Howard, 2015). Specifically, Cohen's *d* was calculated by utilizing the following equation:

$$\text{Cohen's } d = \frac{M_1 - M_2}{SD_{pooled}}$$

Cohen's *d* utilized the following benchmark criteria: 1st quartile = 1.81, Median = 2.44, and 3rd quartile = 3.55 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html . The equation for Cohen's *d* reflects the following, where M_1 = mean of intervention data points; M_2 = mean of baseline data points; and SD_{pooled} = the standard deviation of data points in the intervention and baseline phases combined.

Tau-*U* was measured to analyze data between baseline to intervention phases and was calculated by following the equation of:

$$\text{Tau-U} = \frac{S_P - S_A}{mn + m(m-1)/2} = \frac{2n}{2n+m-1}\text{Tau} - \frac{m-1}{2n+m-1}t_A$$

The equation for Tau-*U* reflects the following, where S_P = Kendall's S statistic calculated for the comparison between phases; S_A = Kendall's S statistic calculated on the baseline trend; *m* =

baseline phase observations; *n* = treatment phases observations; Tau = $S_P/(mn)$ and is a linear re-scaling of the NAP statistic from the range of -1 to 1; and t_A = Kendell's rank correlation between phase A outcome data and session numbers, where the result is used to adjust Tau (Pustejovsky, 2016). Tau-*U* calculations were acquired from the following website published by Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016): http://www.singlecaseresearch.org/calculators/tau-u and utilized the following Tau-*U* effect size criteria: Small = 65% or lower, Medium = 66% - 92%, Large = 93% - 100% (Vannest et al., 2016). Tau-*U* was corrected for baseline trend due to significant p-value of </= .05 (Brossart et al., 2018).

A summary table (Table 6) was developed to summarize each participant's effect sizes as measured by DBR, SDO, and self-report ratings across phases, analyzing changes in academic engagement. Analyzing the *Direct Behavior Rating* observation and the *Systematic Direct Observation* data assessed changes in the secondary variables of respectful and disruptive behaviors.

Procedural Integrity

Procedural integrity was assessed for fidelity by filling out the baseline checklist for each student participant before baseline measures could be started, *Procedural Fidelity Checklist for Baseline* (Appendix B), and by filling out a weekly *Procedural Fidelity Checklist for Counselor during Session* (Appendix C). Procedural fidelity was measured by dividing the total number of steps that were answered with a rating of "0 or 1" for the baseline checklist, and with a rating of "0, 1, 2, or N/A" for the checklist to support each participant's meeting with the counselor weekly, where the total rating was divided by the total number of possible steps then multiplied by 100%. Analyzing data from the post-intervention measures assessed participant, teacher, and

parent/guardian perceptions to support social validity. Means and standard deviations of social validity assessments were calculated and analyzed appropriately. This checklist included essential goals of the individual counseling session with each participant weekly. Overall, each participant had a mean greater than 80% where the counselor reported that the intervention was implemented with integrity for Participant 1, 95% of the time, Participant 2, 99.2% of the time, Participant 3, 100% of the time, and Participant 4, 93.3% of the time (see Table 10). The most common step that was not applicable to sessions with participant's was number 5, Address expectations (as needed) throughout sessions. Reasons for this step not being applicable related to the participant's engaging with the counselor during their individual session each week and not being off task or focused on something other than the session.

Inter-observer Agreement

Rates of SDO inter-observer agreement (IOA) observations across the study can be found in Table 2 where DBR ratings were performed 100% of the time when SDO data observations were conducted. What Works Clearinghouse (2020) standards address that within single case design methods the interrater assessor must collect data during at least 20 percent of the data points in each baseline and intervention conditions across each participant and meet minimal thresholds which are at least .80 agreement. IOA SDO observations were upheld with integrity throughout all phases of the study. IOA for SDOs relating to the dependent variable of academic engagement across the study was calculated using an interval-by-interval procedure and by calculating kappa. Cohen's kappa *(k)* effect size of IOA for SDOs interval-by-interval measures for the dependent variable of academic engagement can be shown in Table 11, showing IOA of SDOs across the study. Measures of IOA exceeded threshold requirements addressed in contemporary single-case design standards (WWC, 2020). Interval-by-interval IOA of each

participant was at the 80% agreement rate or higher which is identified as excellent (WWC, 2020), where there was not a measure below 86% throughout the study. The overall kappa scores for each participant was above .70 throughout the study.

Threats to Validity

Attempts were made to control for threats to internal and external validity (Isaac & Michael, 1981). Threats to control for history effect and maturation were addressed as best possible throughout all phases of the research study. Relating to instrumentation used, threats to validity were made by utilizing the same instruments at pre- and post- test and throughout all phases of the study.

External Validity

The student participants are enrolled in a public charter middle school setting, which does not support an overall generalizability across populations. Participant demographics are outlined in Figure 5 and were inclusive of youth ages 12-15, identifying as 50% male and 50% female, where 75% of the participants' parents attended a 4-year college; this is not typical to generalize to the greater population. Participant grades and GPA cannot be considered generalizable because the mean GPA was reported being between 3.0 – 4.0. Therefore, the validity of applying the conclusions from this study can be generalizable within populations that are similar in demographics. External situations such as the Covid-19 pandemic, the school's quarantine protocol, the school's holiday and break schedule, smoke and snow days, school or grade level wide social emotional lessons, etc., were not controlled for.

Internal Validity

Participants were not chosen randomly but based off recruiting efforts and interested parents recommending each of the participants to further learn stress relieving skills to support

their student's perceived levels of stress. Teachers were identified based on each student participant's decision of their own perceived stress levels in one of their classes. Participants entered the intervention phase based off the amount of baseline data collected and if baseline rating were stable to implement intervention phases.

A multiple baseline research design can be utilized to establish the functional relation between an IV and DV. The behavior of the participant who is exposed to the intervention is expected to change from the introduction of the IV when the behaviors of other participating individuals would be expected to maintain their behaviors at baseline phases, where levels are not fluctuating.

Ethical Procedures

Education and training of procedures and intervention phase regulations were addressed by researcher at the beginning of the study with involved teachers, observers, and participants. School specific policies and procedures were in place and rules were followed throughout the study. Permission from the university's IRB and the school were granted before starting any phase or communication of research. Monitoring of research and related work by researcher was done by the PI. The researcher utilized intervention checklists throughout the study to support research fidelity.

Design and Procedures

Pre-Baseline

Procedures for the study were approved by the university's IRB. The study was introduced to the school, inclusive of all students, teachers, administrators, the counselor, and parents or guardians via an online news email distribution list. The researcher waited for at least four participants to express interest in the study. After obtaining participant interest and

recommendations from teachers, parents, counselor, and/or administrators, the student participants were introduced to the pre-baseline phase of the study by the researcher during the initial contact meeting where informed consent and informative forms regarding the study were distributed. The study was introduced to the students as an online-counseling intervention to provide students with stress reducing skills to support their perceived levels of academic stress. The time the intervention would take, potential benefits and risks were addressed to the participants during the initial meeting. Informed consent was obtained from participants' parent/guardian and participants were given the choice to assent to not participate in the current study. All of the 4 participants were interested in participating. Parents/guardians were offered the opportunity to meet with the researcher if they would like more information regarding the study via a Google Meet online meeting.

Self-monitoring training: Participant. After parent/guardian and participant informed consent were obtained for the four student participants, an initial meeting was held with each participant with the researcher. This meeting included identifying personal academic, behavioral, and homework related goals, discussing days and times the counselor and participant would meet weekly, and answering questions or concerns from the participant relating to the intervention materials or surveys already given to the participant.

Behavior monitoring training: Teacher. The teachers who were identified by each student participant met with the researcher for a minimum of 15-minutes to discuss procedures of gathering behavioral data during baseline and intervention phases with the participating student. Each teacher was asked to complete the online delivered training offered through the University of Connecticut's *Direct Behavior Rating* training site: https://dbrtraining.education.uconn.edu/. Each teacher engaged in the online training for approximately 25-40 minutes. The training

discussed how to monitor the identified behaviors for the current study and asked teachers to follow-up with her/his identified student to support her/his self-monitoring through the study.

Observer training: Counselor. The researcher trained one observer to assist with the *Systematic Direct Observation* data collection. The observer was the counselor at the school. The additional observer had prior training and experience with *Systematic Direct Observation* procedures. The observer training included the researcher providing an overview of the study and reviewing operational definitions of the behaviors to be observed during the behavior observation periods. Operational definitions were provided for academic engagement, respectful, and disruptive behaviors. The observer was given copies of the systematic observation form and was instructed to discuss understanding of the systematic observation periods with the researcher and identified teacher before implementing any behavioral observations. The observer was also required to submit the systematic observation forms directly to the researcher after each observational period virtually.

Phase I: Baseline

Throughout the baseline phase, students completed weekly self-monitoring forms reporting perceived academic stress levels. Student participants were instructed to record their perceived stress levels and address their overall academic engagement and secondary dependent variables of respectful and disruptive behaviors by filling out the self-monitoring forms. Teachers of selected student participants completed one to two ratings a week of each participant's behaviors inclusive of academic engagement, respectful, and disruptive behaviors. These data were used together to establish baseline levels of student engagement and perceived academic stress. The teachers recorded student behaviors on the *Direct Behavior Rating* form after observing the student during a period of class time. These data collection periods were the

same periods and classes the students would later be observed in during the intervention phase. Teachers were asked to uphold instruction as usual during the baseline phase so data would reflect typical student behaviors. To meet single-case design protocol, a minimum of 5 baseline ratings were completed for each participant (Kratochwill et al., 2010) before moving on to the next phase of data collection.

Phase II: Intervention

An 8-week pre-recorded stress reduction intervention was introduced to each participant once baseline data were collected. Student participants were instructed to watch each weekly online delivered session to learn and practice stress-reducing strategies throughout the 8-week period. The identified teacher was instructed to rate the identified student participant within their class using the *Direct Behavior Rating* form one time per week when the student was in attendance. The researcher and/or trained observer collected data during the intervention phase through the *Systematic Direct Observation* form. A minimum of 5 *Direct Behavior Ratings* and *Systematic Direct Observations* were completed for each participant throughout the intervention phase to meet current single-case design protocol standards (Kratochwill et al., 2010).

Each participant met weekly with the counselor to check in about the skills learned. The counselor would verbally ask the participant questions from the *Perceived Stress Rating Scale* while audio recording the session, the counselor would monitor student responses via an online secure form to record each answer during weekly individual meetings. The counselor would ensure that the student recorded their self-monitoring assessments before or during this time also. The weekly meetings would last up to 20 minutes in duration to support student comprehension and follow-through of weekly skills learned.

Phase III: Post-intervention Follow-up

The post-intervention follow-up phase incorporated the researcher meeting one-on-one with each participant to measure post-intervention assessments. These meetings were approximately 20 minutes in length to discuss their experiences throughout the 8-week intervention. Student participant's parents or guardians were informed that the intervention study had finished. After concluding the post-intervention follow-up meetings, the researcher allowed the participating students, teachers, counselors, and parents to view data on the student's academic engagement and perceived academic stress.

Phase IV: Post Follow-up Maintenance Measure

At the 3-week post intervention mark, teachers were asked to complete a direct behavior observation form for the participating student during a class time of their choice when the counselor was able to observe the student behavior at the same time. Student participants were called to meet one-on-one with the researcher to complete a final recording of their perceived stress and overall academic engagement in the specified class discussing their overall perceptions of the intervention. If interested, participating students, teachers, counselors, and parents were able to view the data of overall engagement and stress levels throughout the baseline, intervention, and follow-up phases.

Research Design and Rationale

Academic engagement was rated by each participant's self-report, the classroom teacher *Direct Behavior Rating* data, and by researcher observations of *Systematic Direct Observation* data. Academic engagement skills were self-monitored by each student who participated in the study and were reported through *Direct Behavior Rating*s by the student's identified class teacher. Each participant at the beginning of the intervention identified personal academic goals while meeting individually with their counselor relating to the class they identified as the most

stressful. The identified class teacher was then trained on how to rate the student on academic engagement during their class period while taking into consideration the student's personal goals and already established classroom expectations. Each participant identified and monitored their identified goal grade in the identified class and his/her overall GPA over the 28-weeks of the study during baseline, intervention, and maintenance measure phases of the current study. The participant reported his or her motivation and involvement during class, the latency period of starting class or homework, and the time spent in a stressed-out state or worrying about work.

Variables coinciding with the dependent variable of academic readiness included displaying respectful and disruptive behavior. The classroom teacher and the researcher observed and reported participant behavior as respectful or disruptive. Respectful behavior was operationally defined by Chafouleas (2011) as student response to teacher direction and interaction with peers "as compliant and polite behavior (e.g., following teacher direction, pro-social interaction with peers, positive response to an adult request, verbal or physical disruption without negative tone/connotation)" (p. 583). Disruptive behavior was operationally defined as student behavior that interrupted classroom learning (e.g., acting aggressively, fidgeting, getting up from seat, talking or yelling about things that are unrelated to class instruction) (Chafouleas, 2011).

The Online-counseling Intervention

The requirements of the intervention included the participants viewing all the online lessons (see appendix O) and meeting one-on-one with their counselor once per week throughout the duration of the study. Each lesson was pre-recorded and delivered via a YouTube video by the researcher. Weekly lessons explained and demonstrated the stress reducing practice and discussed the take-home practice exercises. The purpose of utilizing stress reduction skills and

strategies within the intervention was to learn and actively practice how to not be negatively reactive or overwhelmed during times of academic stress. Negative reactions may cause individuals to act disruptively within various settings; this intervention aimed at supporting students with techniques to relieve stress, so disruptive behaviors could possible occur less frequently. The independent variable utilized the skills of awareness, breathing, and imagery within the 8-week curriculum.

A recording of the lessons was created and pre-tested with 3 volunteer youth participants to guarantee comprehension. The lessons for the intervention, included within the Program Overview (see Appendix N) were developed by the researcher with consultation of an advisory team of educators and the main curriculum writer, Molly Dahl. School counseling interventions are typically solution focused and brief; interventions may range from 6-12 weeks in duration to support participant involvement (Wright, 2012). Relaxation therapy is used by school counselors to reduce stress, encouraging participant involvement of up to 10-minutes a day of practice (Wright, 2012). The online-delivered counseling intervention was established based on guidelines from the American School Counseling Association (ASCA), recommending that online-delivered curriculum be the same as in-person counseling interventions, which are weekly in frequency and duration (ASCA, 2020). Language and delivery were developmentally appropriate for each weekly individual meeting session with each participant and were approximately 20 minutes in duration, which is typical of the time within individual school counseling sessions.

Direct Behavior Rating. Studies have shown that *Direct Behavior Rating* (see Appendix K) is a valid behavioral assessment tool to record behaviors as they occur (Briesch et al., 2012; Chafouleas et al., 2013; Riley-Tillman, et al., 2008). Moderate to high correlations between

Direct Behavior Rating scales and *Systematic Direct Observation* scales have been determined (on-task behavior: r = .811, $p < .01$; disruptive behavior: r = .874, $p < .01$) (Riley-Tillman, et al., 2008). Each participant's teacher completed a *Direct Behavior Rating* form throughout the duration of the study to identify three separate ratings of behavior at least one time per week.

The *Direct Behavior Rating* scale included rating the identified behaviors of academic engagement, respectful behavior, and disruptive behavior. The teacher marked each behavior in an overall percentage of time throughout the duration of the class period indicated what the participant displayed. The three questions on the *Direct Behavior Rating* scale asked the teacher to indicate the degree to which the student was engaged, respectful, or disruptive with a range of 1-10, indicating a percentage of time. Each point on the scale was explained by a description of the percentage point; "never" indicated 0 or 0%, while "always" indicated 10 or 100% of the time.

Systematic Direct Observation. The researcher used a momentary time sampling procedure for the *Systematic Direct Observation* since academic engagement is continuous. Time sampling is beneficial when observing several behaviors at one time (Hintze, 2001) and momentary time sampling "provides the least biased estimate of behavior as it actually occurs" (p. 1001). The *Systematic Direct Observation* forms included space to rate behaviors over a 15-minute period using a 10-second interval. At the beginning of each interval the observer recorded if the participant was academically engaged, respectful, and/or disruptive according to the operational definition of the behavior assessed (Cooper et al., 2007; Minkos 2016; Riley-Tillman et al., 2008).

Systematic Direct Observation data were gathered during the same period of class time identified by the teacher rating the student's direct behaviors (i.e., at a pre-specified time during

baseline phases and one day of the week during intervention phases). The time and day of the week was determined by the researcher and respected teacher during the pre-intervention training session. In order to meet current single-case design standards, *Systematic Direct Observation* measures were completed across participants and phases concurrently during at least 40% of the *Direct Behavior Rating* data collection points (Kratochwill et al., 2010) (see Table 2). This table shows rates of SDO and inter-rater agreement (IOA) of observations across the study. *Kappa* (k) was utilized as the correlational statistic, which provides an average agreement between observers, that is corrected for the probability of agreement based on just chance (Kazdin, 2011). The researcher and counselor are going to have some agreement based on chance alone. To calculate for *kappa,* the researcher must look at the relative observed agreement, then subtract the probability of agreement based on chance, then divide by one minus the probability of agreement based on chance (Kazdin, 2011).

Kappa was calculated with the following formula from Kazdin (2011):

$$k = \frac{\mathrm{Po} - \mathrm{Pc}}{1 - \mathrm{Pc}}$$

A second observer was trained to conduct the *Systematic Direct Observations* for at least 20% of the time. Observations were conducted over Zoom classroom times 100% of the time for all participants. Attempts to protect against participant reactivity were imposed to not create threats to the validity of *Systematic Direct Observation* data or the possibility that the participants' behavior was influenced by their awareness that they were being observed (Kazdin, 2011). The researcher and trained observer maintained this by waiting for at least 3 minutes after entering the online classroom to begin *Systematic Direct Observation* data collection to provide time for the participant to adjust to the observer's presence.

Summary

This study looked at perceptions of academic stress as measured by participant self-monitoring ratings weekly throughout the intervention phases. One primary and two secondary dependent variables identified ratings from participant self-report, teacher DBR, and counselor and/or researcher SDO ratings. Overall data measurements addressed effect sizes of the variables for each participating student and looked at differences between student participants. The independent variables taught academic engagement and stress relieving skills of awareness, breathing, and imagery within the 8-week online counseling curriculum.

Chapter IV: Results

Results of the present study are addressed within this chapter, organized by individual research question and by participant with a summary comparing and contrasting participants at the end. Information on descriptive school-based data and secondary dependent variables are also addressed.

Results presented discuss findings from each participant in the study and their teacher's direct behavior rating data, the counselor/researcher's systematic direct observation data, and participant's individual self-report data. Each participant's data will be presented initially in this chapter, followed by interpretations of individual results, and concluding with overall interpretations.

Research Question 1: Will participation in a weekly, online-delivered, counseling intervention increase academic engagement and decrease perceived academic stress in adolescent students within an educational setting:

a. **As measured by teacher direct behavior rating (DBR)?**
b. **As measured by systematic direct observation (SDO)?**
c. **As measured by participant self-report?**

This research question focused on whether or not the participation in a weekly, online-delivered, counseling intervention would increase academic engagement as measured by direct behavior rating, systemic direct observation, and/or participant self-report. This question focused on research demonstrating that weekly counseling interventions and support from a trusted individual can effectively improve student levels of academic engagement and lower overall stress levels (Dawes et al., 2020; Luo, Wang, Zhang, & Chen, 2016; Ozbay et al., 2007). Academic engagement has been found as an indicator of academic success and supporting lower

academic stress (Miller et al., 2018). Academic engagement data across participants and phases are illustrated in figures 7, 8, and 9 below. Secondary data of respectful and disruptive behaviors will be addressed later in the results section and can be found in figures 10-15.

Figure 7.

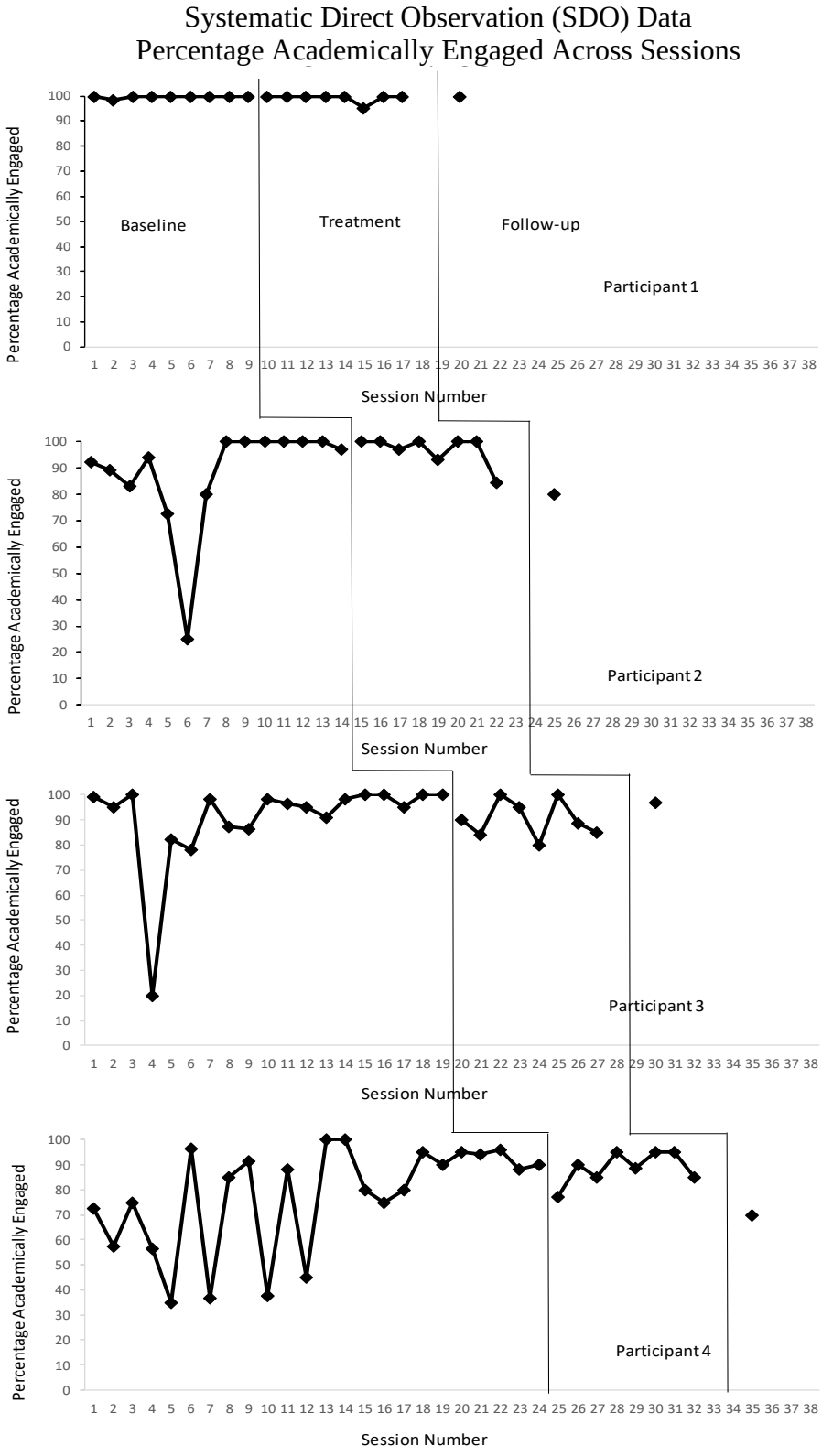


Figure 7. Systematic Direct Observation (SDO) Data: Percentage Academically Engaged Across Sessions

Figure 8.

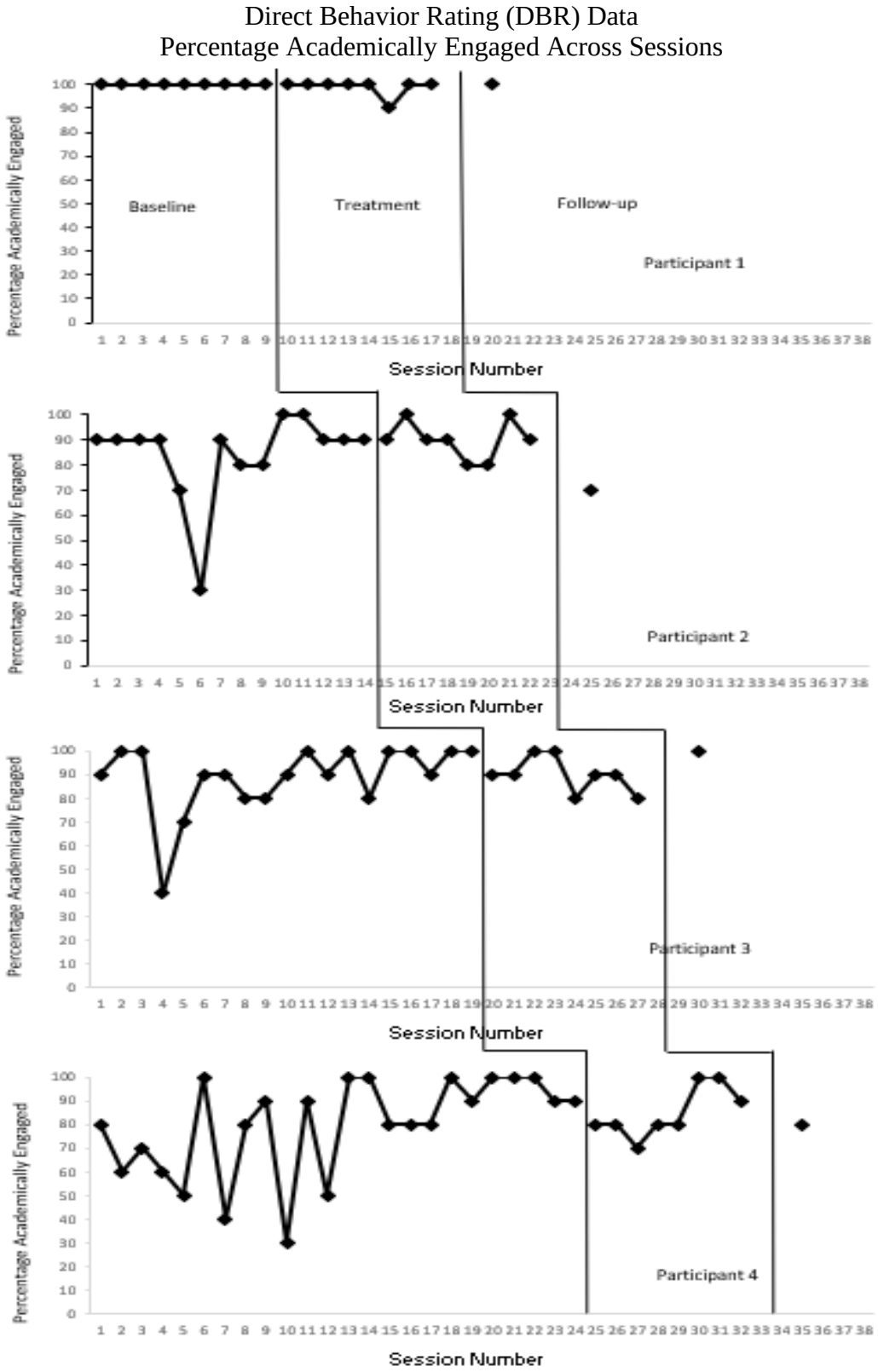


Figure 8. Direct Behavior Rating (DBR) Data: Percentage Academically Engaged Across Sessions

Figure 9.

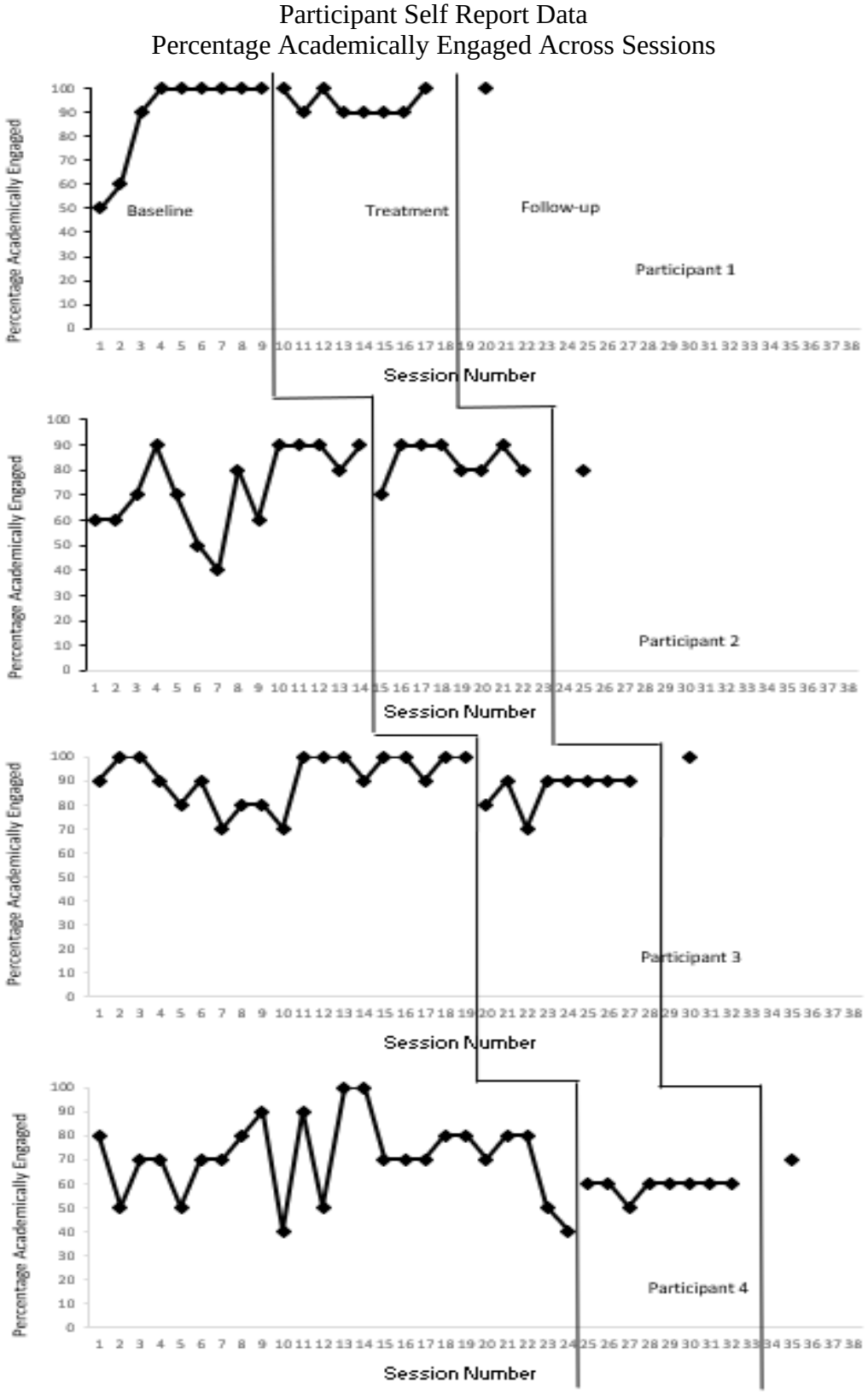


Figure 9. Participant Self Report Data: Percentage Academically Engaged Across Sessions

Averages of DBR, SDO, and self-report data for academic engagement, respectful, and disruptive behavior ratings are summarized across phases and participants and can be found in Tables 3, 4, and 5. Effect sizes for academic engagement can be found in Table 6, as measured by Cohen's *d* for all phases and Tau-*U* effect size scores for baseline to intervention phases. Cohen's *d* was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009) (Cohen, 2013) and can be found under the effect size calculators website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html. Changes in dependent variables between phases using visual analysis and effect size techniques are summarized in Table 7, 8 and 9. The slope, or trend line, and immediacy of effect or latency, the time between a start of a phase and seeing change in variables, and overlap were analyzed across baseline to intervention phases to conclude the rate of change for both academic engagement and perceived academic stress levels. To assess for overlap, the PI must look at how many data points overlap from one phase to another (Chen et al., 2015). If there is a smaller percentage of overlapping data points there is a greater demonstration of an effect on the introduction to the phase (Chen et al., 2015; IES, 2013).

Participant 1. Prior to the intervention phase, Participant 1 displayed the most consistent baseline levels out of the four participating students, where she displayed high levels of academic engagement as measured by both DBR (M = 100%) and SDO (M = 99.8%) measures. Both DBR and SDO ratings identified zero-celerating trends in baseline where DBR ratings showed no variability (DBR: SD = 0.00) and SDO ratings showed minimal variability (SDO: SD = 0.53). Participant 1 engaged in the intervention during all 18 of the possible 18 days of the baseline, intervention, and follow-up stages of the online-counseling intervention. Participant 1

was engaged as reported by teacher with the direct behavior ratings, and by the counselor and researcher during SDO times.

Upon implementation of the intervention, engagement levels of Participant 1 stayed relatively the same as measured by both DBR (*M* = 98.75%) and SDO (*M* = 99.4%). There was moderate variability in the DBR data (*SD* = 3.07) and minimal variability in SDO data (*SD* = 1.65). There was 100% overlap for SDO data, 94% overlap for DBR data, and 89% overlap as displayed in Figures 7, 8, and 9 between baseline and intervention phases for Participant 1. Both DBR and SDO data presented with a decrease in consistency for academic engagement of Participant 1 where there was zero-celerating trend from baseline to intervention phases. Both DBR and SDO data presented with no change in immediacy between phases. Cohen's *d* and Tau-*U* effect size calculations reported that the online-counseling intervention had a trivial to medium effect on academic engagement levels of Participant 1 according to the DBR measures (Cohen's *d* = 0.51, Tau-U = -0.13) and a trivial to small effect according to the SDO measures (Cohen's *d* = 0.33, Tau-U = -0.03).

Perceptions of academic stress and academic engagement were measured from individual participant self-report throughout baseline, intervention, and follow-up phases of the study. Ratings of Participant 1's academic engagement can be seen in Figure 9 (above) where there was a stable trend in baseline and zero-celerating trend into and throughout the intervention phase. Participant 1's self-report measures of academic engagement at baseline were perceived as showing her academic engagement mean at 88.9% of the time (*SD* = 18.5) and increasing to a mean of 93.8% (*SD* = 4.84) during the intervention phase, where she perceived herself as having 100% academic engagement at follow-up measure. Overall Participant 1's academic engagement did improve from implementation of this intervention to follow-up as measured from self-report.

Prior to intervention, Participant 1 displayed low to moderate perceptions of academic stress as displayed in both Tables 21 and 22, identifying means and standard deviations of individual questions from the inventory in Table 21, and the four overall categories of the inventory in Table 22. The 18 questions identified 4 sections within the *Perceptions of Academic Stress* measure, which included Academic Self-Perception (M = 4.00, SD = 0.31), Time Constraints (M = 2.40, SD = 0.29), Pressures to Perform (M = 3.10, SD = 0.42), and Perceptions of Workload and Exams (M = 2.94, SD = 1.16). Each area showed low variability throughout the baseline measures for Participant 1.

Upon implementation of the intervention, perceptions of academic stress for Participant 1 increased in all areas slightly as addressed in Table 22, showing all four of the areas of Academic Self-Perception (M = 4.50, SD = 0.25), Time Constraints (M = 2.58, SD = 0.24), Pressures to Perform (M = 3.64, SD = 0.30), and Perceptions of Workload and Exams (M = 3.22, SD = 0.27) increased in their mean values, where Participant 1 identified a greater overall increase in stress in three of the four sections while positively displaying an overall increase in her academic self-perception. A decrease in variability was evident during the intervention phase for each section of the self-report for perceived academic stress levels by Participant 1. At follow up, Participant 1 identified an overall maintenance of perceptions of academic stress levels as measured by two of the four identifying areas within the self-report inventory, Time Constraints (M = 2.60, SD = 1.36), and Perceptions of Workload and Exams (M = 3.00, SD = 1.22), as well as her positive report at the maintenance phase of her Academic Self Perception (M = 4.50, SD = 0.87). There was a slight increase in self-report measures of Pressures to Perform (M = 4.60, SD = 1.36) by Participant 1 at the follow-up phase, which may have been due to Participant 1's middle of the semester exams (see Table 30 and discussion section.

Overall effect sizes of Participant 1's *Perceptions of Academic Stress* measures from baseline to intervention can be found in Table 29, where each area was addressed by measuring Cohen's *d* benchmark criteria and Tau-*U* effect size scores. In the Academic Self-Perception area, Participant 1 showed a benchmark criteria in the 1st quartile range of Cohen's *d*, however not in a favorable direction for the intervention itself (Cohen's *d* = -1.78). She showed a small effect size in Tau-*U* (Tau-*U* = 0.26) in a positive direction. Time Constraints for Participant 1 showed variable negative and positive 1st quartile benchmark ratings of Cohen's *d* to trivial effect size of Tau-*U* scores (Cohen's *d* = -0.68, Tau-U= 0.04); Pressures to Perform also showed negative and positive 1st quartile Cohen's *d* and trivial Tau-*U* effect size scores (Cohen's *d* = -1.48, Tau-U = 0.18). Perceptions of Workload and Exams showed 1st quartile benchmark Cohen's *d* and trivial Tau-*U* effect sizes and were varying with a positive and a negative directions(Cohen's *d* = -0.33, Tau-*U* = 0.10). Overall Participant 1's perceptions of Academic Stress were counter-therapeutic in relation to this intervention. Select questions relating to Participant 1's perceptions of Academic Stress can be found in Figure 16.

Participant 2. Prior to the intervention phase, Participant 2 had some variability in baseline DBR and SDO ratings where they displayed moderate to high academic engagement at baseline DBR (*M* = 84.3%) and SDO (*M* = 88.1%). Both DBR and SDO data indicated variable accelerating trends during baseline where both DBR and SDO ratings showed moderate variability (DBR: *SD* = 16.8, SDO: *SD* = 19.5). Participant 2 engaged in the intervention 23 out of 23 possible days of data collection. Academic engagement levels of Participant 2 increased dramatically when the intervention phase was introduced as evidenced by both DBR (*M* = 90.0%) and SDO (*M* = 96.8%) measures. There was a decrease in variability in both DBR and SDO data (DBR: *SD* = 7.07, SDO: *SD* = 5.24), however, there was still moderate variability.

There was 96% overlap between baseline and intervention phases in all three measures of SDO, DBR, and self-report data as displayed in Figures 7, 8, and 9 between baseline and intervention phases for Participant 2. Consistency between baseline and intervention phases improved in both DBR and SDO measures. There presented to be an increase in immediacy in DBR measures and no change in SDO measures. Cohen's *d* and Tau-*U* effect size calculations suggest that the intervention had small to trivial effect in academic engagement for Participant 2. A negative benchmark in the 1st quartile was identified for Cohen's *d* and a trivial positive effect in Tau-*U* was addressed for Participant 2 according to DBR measures (Cohen's *d* = -0.61, Tau-*U* = 0.14) where there was also a 1st quartile positive benchmark rating in Cohen's *d* and a small positive Tau-*U* effect according to SDO measures (Cohen's *d* = 0.21, Tau-*U* = 0.29).

Perceptions of academic stress and academic engagement were measured from individual participant self-report throughout baseline, intervention, and follow-up phases of the study. Ratings of Participant 2's academic engagement can be seen in Figure 9 where there was a variable accelerating trend during baseline phases to a stable accelerating trend during the intervention phase. Self-report measures of academic engagement from Participant 2 show at baseline to be perceived at a mean of 72.9% of the time (*SD* = 16.2) and increasing to a mean of 83.8% (*SD* = 6.96) during the intervention phase, where they perceived themself as having 80% academic engagement at follow-up measure. Overall, Participant 2's academic engagement improved in relation to the implementation of the intervention as measured by self-report.

Prior to intervention, Participant 2 displayed low to moderate perceptions of academic stress as displayed in Tables 23 and 24 where four factors of stress are addressed within the *Perceptions of Academic Stress* measure, inclusive of Academic Self-Perception (*M* = 3.00, *SD* = 1.80), Time Constraints (*M* = 3.45, *SD* = 1.32), Pressures to Perform (*M* = 4.60, *SD* = 1.62), and

Perceptions of Workload and Exams (*M* = 4.38, *SD* = 0.99). Each area showed low variability throughout the baseline measures for Participant 2. Upon implementation of the intervention, perceptions of academic stress for Participant 2 increased in one area slightly as addressed in Table 24, showing an increase in the area of Academic Self-Perception (*M* = 3.66, *SD* = 1.10). The other three areas showed a decrease in perceptions of academic stress where Time Constraints (*M* = 3.28, *SD* = 1.18), Pressures to Perform (*M* = 3.10, *SD* = 1.89), and Perceptions of Workload and Exams (*M* = 3.66, *SD* = 1.27) decreased in mean, where Participant 2 identified an overall decrease in stress in three of the four sections and an increase in overall academic self-perception, which supports evidence of the intervention implementation for the first research question. A decrease in variability was evident during the intervention phase for three out of the four sections of the self-report for perceived academic stress levels by Participant 2. The follow up measure identified an increase in overall perceptions of academic stress as reported by Participant 2 in 2 or the 4 areas measured, Academic Self-Perception (*M* = 4.00, *SD* = 0.71) and Perceptions of Workload and Exams (*M* = 4.00, *SD* = 0.71), which may have been due to Participant 2's tests at the end of the semester (see Table 30 and discussion section), and a decrease in the areas of Time Constraints (*M* = 2.40, *SD* = 0.80) and Pressures to Perform (*M* = 2.60, *SD* = 1.74).

Overall effect sizes of Participant 2's *Perceptions of Academic Stress* measures from baseline to intervention can be found in Table 29, where each area was addressed by measuring Cohen's *d* benchmark criteria and Tau-*U* effect size scores. In the Academic Self-Perception area Participant 2 showed a 1st quartile benchmark for Cohen's *d*, not in a favorable direction, where it was negative (Cohen's *d* = -0.44), and they showed a trivial effect size in Tau-*U* (Tau-*U* = 0.27) in a positive direction. Time Constraints for Participant 2 showed a 1st quartile positive

benchmark for Cohen's *d* (Cohen's *d* = 0.14) and a trivial negative effect size for Tau-*U* (Tau-*U* = -0.24), where this factor's Tau-*U* had to be corrected for baseline trend. The Pressures to Perform factors showed variable scores, where Cohen's *d* was positive in the 1st quartile benchmark and Tau-*U* had a negative trivial effect size (Cohen's *d* = 0.84, Tau-U = -0.10). Perceptions of Workload and Exams showed a 1st quartile positive Cohen's *d* benchmark and a trivial negative Tau-*U* effect size, which were also varying with positive and a negative directions (Cohen's *d* = 0.63, Tau-U = -0.33). Overall Participant 2's perceptions of Academic Stress were varying in relation to this intervention and were counter-therapeutic. Select questions relating to Participant 2's perceptions of Academic Stress can be found in Figure 17.

Participant 3. Prior to the intervention phase, Participant 3 had moderate to high Academic Engagement ratings as measured by DBR and SDO data collection (DBR: *M* = 88.9%, SDO: *M* = 90.6%). Moderate variability was displayed in both DBR and SDO data (DBR: *SD* = 14.7, SDO: *SD* = 18.3). Participant 3 engaged in the intervention 28 out of the possible 28 days. Upon implementation of the intervention, Participant 3's academic engagement was variable and did not improve dramatically (DBR: *M* = 90.0%, SDO: *M* = 90.4%). Variability in DBR (*SD* = 7.07) and SDO (*SD* = 6.95) reduced dramatically. There was 100% overlap present between baseline and intervention phases for all three measures of SDO, DBR, and self-report ratings as displayed in Figures 7, 8, and 9 between baseline and intervention phases for Participant 3. A variable accelerating trend was present in both DBR and SDO baseline measures for academic engagement, however as Participant 3 approached the intervention phase both DBR and SDO data showed a decelerating trend, which was counter-therapeutic. Consistency improved from baseline to intervention phases overall in both DBR and SDO measures, where there was a decrease in immediacy. Cohen's *d* benchmark criteria and Tau-*U* effect size calculations suggest

that the intervention had a trivial effect on academic engagement levels for Participant 3 according to DBR measures (Cohen's *d* = -0.10, Tau-*U* = -0.09) and also a trivial effect according to SDO measures (Cohen's *d* = 0.01, Tau-*U* = -0.59) while accounting for baseline trend with the Tau-*U* measure.

Ratings of Participant 3's academic engagement can be seen in Figure 9 where there was a variable increase in trend during baseline phase and a stable increase in trend during intervention phase. Self-report measures of academic engagement from Participant 3 show at baseline to be perceived at a mean of 91.1% of the time (*SD* = 8.99) and decreasing to a mean of 86.3% (*SD* = 6.96) during the intervention phase, where they perceived themself as having 100% academic engagement at follow-up measure. Overall, Participant 3's academic engagement improved in relation to the implementation of the intervention.

Perceptions of academic stress were measured from individual participant self-report. Prior to intervention, Participant 3 displayed low to moderate perceptions of academic stress as displayed in Tables 25 and 26 where four factors were addressed within the *Perceptions of Academic Stress* measure inclusive of Academic Self-Perception (*M* = 4.44, *SD* = 1.41), Time Constraints (*M* = 2.85, *SD* = 1.90), Pressures to Perform (*M* = 1.85, *SD* = 1.15), and Perceptions of Workload and Exams (*M* = 1.56, *SD* = 0.79). Each area showed low variability throughout the baseline measures for Participant 3. Upon implementation of the intervention, perceptions of academic stress for Participant 3 decreased in all four areas slightly as addressed in Table 26, showing a decrease in the areas of Academic Self-Perception (*M* = 4.25, *SD* = 1.60), Time Constraints (*M* = 2.73, *SD* = 1.97), and Perceptions of Workload and Exams (*M* = 1.22, *SD* = 0.48). The area of Pressures to Perform, maintained the same through intervention phase (*M* = 1.22, *SD* = 0.41).

Overall effect sizes of Participant 3's *Perceptions of Academic Stress* measures from baseline to intervention can be found in Table 29, where each factor was addressed by measuring Cohen's *d* and Tau-*U* effect size scores. In the Academic Self-Perception area, Participant 3 showed a 1st quartile benchmark in a positive direction for Cohen's *d* (Cohen's *d* = 0.12) and showed a trivial positive effect in Tau-*U* (Tau-*U* = 0.08) which had to be corrected for baseline trend. Time Constraints for Participant 3 showed a trivial 1st quartile benchmark in a positive direction for Cohen's *d* (Cohen's *d* = 0.06) and a trivial positive effect for Tau-*U* (Tau-*U* = 0.05). The Pressures to Perform factor showed no differences for both measures (Cohen's *d* = 0.00, Tau-U = 0.00). Perceptions of Workload and Exams showed trivial 1st quartile benchmark in a positive direction for Cohen's *d* and a trivial negative Tau-*U* (Cohen's *d* = 0.54, Tau-*U* = -0.17). Overall Participant 3's perceptions of Academic Stress were mostly positive, which is counter-therapeutic to this intervention. Select questions relating to Participant 3's perceptions of Academic Stress can be found in Figure 18.

Participant 4. Prior to intervention phase, Participant 4 displayed low to moderate levels of academic engagement as measured by both DBR (*M* = 79.6%) and SDO (*M* = 77.5%). Moderate variability was evident in both DBR and SDO data (DBR: *SD* = 20.5, SDO: *SD* = 20.8). Participant 4 engaged in the intervention on 33 out of the possible 33 days. Upon implementation of the intervention phase, academic engagement levels of Participant 4 increased dramatically according to both DBR (M = 85%) and SDO (*M* = 88.0%) ratings, where the variability in both DBR (*SD* = 10.0) and SDO (*SD* = 5.97) reduced considerably. There was 100% overlap between the baseline and intervention phases in all three measures of SDO, DBR and self-report ratings as displayed in Figures 7, 8, and 9 between baseline and intervention phases for Participant 4. Consistency improved for both DBR and SDO ratings. There was a

variable accelerating trend at the beginning of baseline for Participant 4 according to DBR ratings, where he then showed a variable accelerating trend in the intervention phase. According to SDO ratings trend was similar in that baseline presented a variable accelerating trend and intervention showed a stable accelerating trend. Effect size was calculated using Cohen's *d* benchmark criteria and Tau-*U* calculations, which suggest that the intervention had a negative 1st quartile Cohen's *d* and a trivial positive Tau-*U* score in DBR measures (Cohen's *d*= -0.33, Tau-*U*= 0.04) and a negative 1st quartile Cohen's *d* benchmark and small negative Tau-*U* score for SDO measures (Cohen's *d*= -0.74, Tau-*U* = -0.27) while accounting for baseline trend. Participant 4's academic engagement improved from baseline to intervention phases in this study.

Perceptions of academic stress were measured from individual participant self-report. Prior to intervention Participant 4 displayed moderate perceptions of academic stress as displayed in Tables 27 and 28 where the four factors were addressed within the *Perceptions of Academic Stress* measure, inclusive of Academic Self-Perception (*M* = 3.96, *SD* = 0.73), Time Constraints (*M* = 3.53, *SD* = 1.56), Pressures to Perform (*M* = 2.50, *SD* = 1.59), and Perceptions of Workload and Exams (*M* = 3.88, *SD* = 1.27). Each factor showed low variability throughout the baseline measures for Participant 4. Upon implementation of the intervention, perceptions of academic stress for Participant 4 decrease in all areas slightly as addressed in Table 28, showing decreases in the four areas of Academic Self-Perception (*M* = 3.75, *SD* = 1.52), Time Constraints (*M* = 2.85, *SD* = 1.80), Pressures to Perform (*M* = 2.00, *SD* = 1.90), and Perceptions of Workload and Exams (*M* = 3.63, *SD* = 0.27).

Ratings of Participant 4's academic engagement can be seen in Figure 9 where there was a variable zero-celerating trend during baseline phase and a stable zero-celerating trend during

intervention phase. Self-report measures of academic engagement from Participant 4 show at baseline to be perceived at a mean of 70.8% of the time (*SD* = 16.6) and decreasing to a mean of 58.8% (*SD* = 3.31) during the intervention phase, where he perceived himself as having 70% academic engagement at follow-up measure. Overall Participant 4's self-report of academic engagement did not change from beginning to the end of the study.

Overall effect sizes of Participant 4's *Perceptions of Academic Stress* measures from baseline to intervention can be found in Table 29, where each area was addressed by measuring Cohen's *d* and Tau-*U* effect size scores. In the Academic Self-Perception area, Participant 4 showed a 1st quartile benchmark rating for Cohen's *d* in a positive direction (Cohen's *d* = 0.66), and he showed a trivial effect for Tau-*U* (Tau-*U* = 0.04) in a positive direction. Time Constraints for Participant 4 showed a 1st quartile benchmark in Cohen's *d* (Cohen's *d* = 0.40) and a trivial negative effect for Tau-*U* (Tau-*U* = -0.07), where this factor's Tau-*U* had to be corrected for baseline trend. The Pressures to Perform factor showed variable effects where Cohen's *d* identified a 1st quartile benchmark in a positive direction and Tau-*U* identified a trivial positive effect (Cohen's *d* = 0.29, Tau-*U* = -0.09) and was corrected for baseline trend. Perceptions of Workload and Exams showed 1st quartile positive benchmark for Cohen's *d* and a trivial negative Tau-*U* effect (Cohen's *d* = 0.27, Tau-*U* = -0.13). Overall Participant 4's perceptions of Academic Stress were varying in relation to this intervention and varied from Cohen's *d* to Tau-*U* data and were counter-therapeutic to this intervention. Select questions relating to Participant 4's perceptions of Academic Stress can be found in Figure 19.

Overall, Participant 1's academic engagement did not change in relation to this intervention; Participant 2's academic engagement improved in relation to the implementation of the intervention; Participant 3's academic engagement improved in relation to the

implementation of the intervention; and Participant 4's academic engagement improved from baseline to intervention phases in this study according to DBR and SDO measures. All four participants' academic engagement ratings may have been effected by the breaks during the regular academic school year, where there was a 2-week Christmas break, and a 2-week Spring break at the beginning and the end of the study phases, as well as other factors which will be discussed in the discussion section. Overall, all four participating students showed an increase in academic engagement while introduced to the intervention phases of this research study as measured by both DBR and SDO measures.

In summary for perceptions of academic stress, Participant 1's perceptions of academic stress were counter-therapeutic in relation to this intervention; Participant 2's perceptions of academic stress were varying in relation to this intervention and were counter-therapeutic; Participant 3's perceptions of academic stress were mostly positive, which is also counter-therapeutic to this intervention; and Participant 4's perceptions of academic stress were varying and counter-therapeutic to this intervention. The participating students did not improve in their perceptions of academic stress as measured by the academic stress inventory used throughout all phases of this study.

Research Question 2: Will effects of a weekly online-delivered counseling intervention be maintained at 3-week follow-up relating to student academic engagement and perceived levels of academic stress?

This research question focused on whether or not the effects of a weekly, online-delivered, counseling intervention will be maintained at 3-week follow-up relating to participant academic engagement and perceptions of academic stress levels. This question focused on research that has demonstrated that involvement of online counseling interventions can be

maintained at 3-week follow-up (Roddy et al., 2020). Prior research has identified that online-delivered counseling interventions can help maintain student academic engagement and help lower overall academic stress levels after interventions have terminated (Bedewy and Gabriel, 2015).

Academic engagement. In follow up, Participant 1's academic engagement levels as measured by DBR, SDO, and self-report remained the same from baseline and intervention phases (DBR: *M*= 100; see Table 3, SDO: *M* = 100; see Table 4, Self-Report *M* = 100; see Table 5). Variability was not measured for follow up since there was only one measurement of both DBR and SDO data at follow up. Participant 1 showed an improving level as reported by DBR and self-report measures from intervention to follow-up, with no change in SDO measures. Cohen's *d* was calculated for DBR, SDO, and self-report data from intervention to follow-up and baseline to follow-up phases (see Tables 6-9) where Participant 1 has a negative 1st quartile benchmark in Cohen's *d* for DBR, SDO, and self-report measures from intervention to follow up (DBR Cohen's *d* = -0.55, SDO Cohen's *d* = -0.51, self-report Cohen's *d* = -1.81). There was no effect from baseline to follow-up for DBR, and negative 1st quartile benchmarks for SDO and self-report measures (SDO Cohen's *d* = -0.53, self-report Cohen's *d* = -0.85). Tau-*U* effect size calculations were not identified as there were only one set of data for both DBR and SDO measures at follow-up for academic engagement for each participant.

In follow up, Participant 2's academic engagement levels as measured by DBR and SDO decreased from baseline to follow up, and also from intervention to follow up (DBR: *M* = 70%, SDO: *M* = 80%), however self-report measures increased slightly (*M* = 80%). Participant 2 showed a decreasing level from intervention to follow up for all three ratings of DBR, SDO, and self-report (see Table 8) and a decreasing level from baseline to follow up for DBR and SDO

ratings, but an increasing level from baseline to follow up from self-report measures. They showed a 3rd quartile positive benchmark for all two of the three measures from intervention to follow up (DBR Cohen's *d* = 4.00, SDO Cohen's *d* = 4.53) where self-report Cohen's *d* showed a 1st quartile benchmark (Cohen's *d*= 0.77). All three had met 1st quartile benchmarks from baseline to follow up (DBR Cohen's *d* = 1.20, SDO Cohen's *d* = 0.59, self-report Cohen's *d* = -0.62) where DBR and SDO were positive and self-report was negative.

Participant 3's academic engagement levels as measured by DBR, SDO, and self-report measures increased from both baseline to follow-up and intervention to follow-up phases (DBR *M* = 100%, SDO *M* = 97%, Self-Report *M* = 100%; see tables 3-5). Participant 3 showed an increasing level from both DBR and self-report measures from intervention to follow-up and no change from SDO data (see Table 8), where there was an increasing level from all three measures from baseline to follow up (see Table 9). They met a 1st quartile benchmark from intervention to follow-up for all three measures (DBR Cohen's *d* = -2.00, SDO Cohen's *d* = -1.34, Self-Report Cohen's *d* = -2.78) and also from baseline to follow-up (DBR Cohen's *d* = -1.07, SDO Cohen's *d* = -0.49, Self-Report Cohen's *d* = -1.40).

Participant 4's academic engagement levels as measured by DBR increased slightly from baseline but decreased from intervention phase at follow-up (DBR *M* = 80%), while academic engagement levels decreased from both baseline and intervention phases according to SDO measures at follow-up (SDO *M* = 70%). Participant 4's self-report increased from intervention and decreased slightly from baseline (Self-Report *M* = 70%). Participant 4 showed a decreasing level from both intervention to follow-up and baseline to follow-up for both DBR and SDO measures but an increasing level in self-report data. He met 1st quartile benchmark criteria from intervention to follow-up for DBR and SDO measures (DBR Cohen's *d* = 0.70, SDO Cohen's *d*

= 4.47) and met 3rd quartile benchmark criteria in self-report (Cohen's *d* = -4.79). From baseline to follow-up Participant 4 showed a trivial negative 1st quartile benchmark for DBR, SDO and self-report measures (Cohen's *d* = -0.03, SDO Cohen's *d* = 0.51, Self-Report Cohen's *d* = 0.07).

Overall, academic engagement was not maintained at 3-week follow up for all participants with the exception of Participant 1, where academic engagement stayed relatively the same and for Participant 3, where academic engagement increased dramatically at follow-up.

Academic stress. Perceptions of academic stress were measured at 3-week follow-up for all 4 of the participants within this study. For Participant 1 perceptions of academic stress factors are summarized in Table 22, where academic self-perception stayed the same at 3-week follow-up (*M* = 4.50, *SD* = 0.87), time constraints increased slightly (*M* = 2.60, *SD* = 1.36), pressures to perform increased (*M* = 4.60, *SD* = 1.36), and perceptions of workload and exams decreased (*M* = 3.00, *SD* = 1.22) from the intervention phase. Graphs of select questions from the *Academic Stress Inventory* for Participant 1 (Baseline = 4, Intervention = 9, Follow up = 1) are shown in Figure 16 (below)

Figure 16.

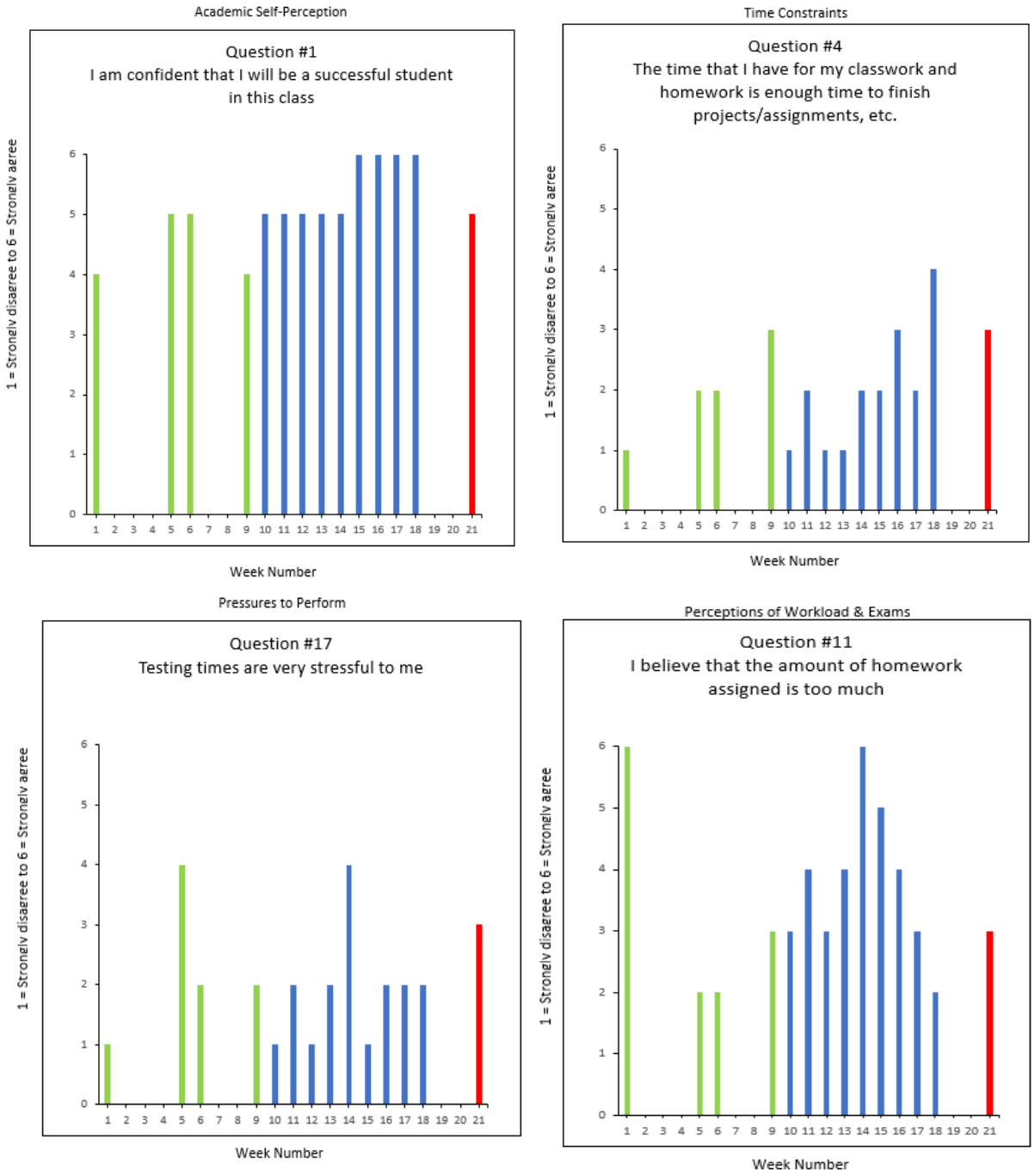


Figure 16. Graphs of Select Questions from the Academic Stress Inventory: *Participant 1*

Participant 2 showed variable follow-up data (see Table 24). The factor of academic self-perception increased from intervention (M = 4.00, SD = 0.71), time constraints decreased (M = 2.40, SD = 0.80), pressures to perform decreased (M = 2.60, SD = 1.74), and perceptions of workload and exams increased (M = 4.00, SD = 0.71) from intervention phase. Graphs of select

questions from the *Academic Stress Inventory* for Participant 2 (Baseline = 4, Intervention = 8, Follow up = 1) are shown in Figure 17 (below).

Figure 17.

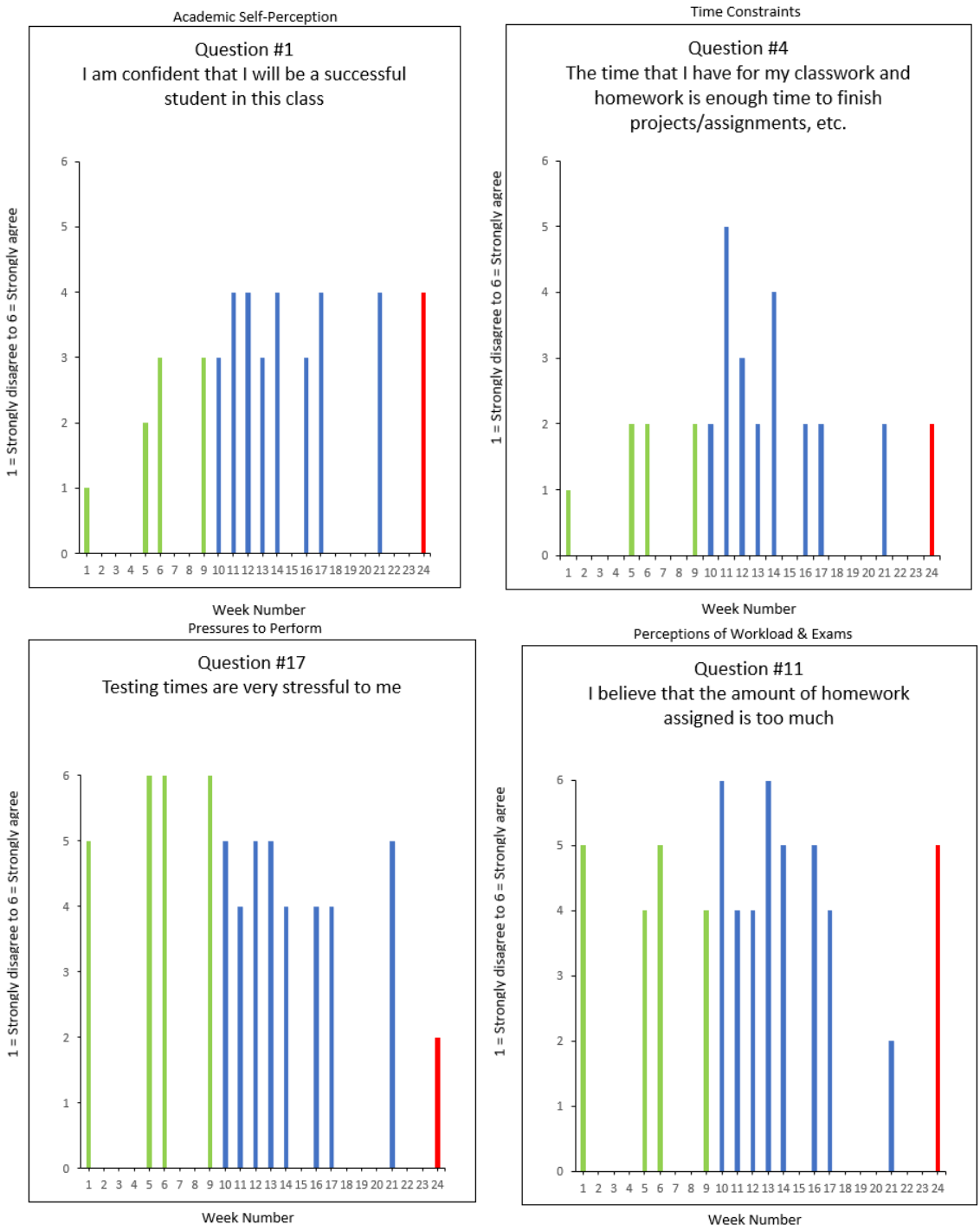
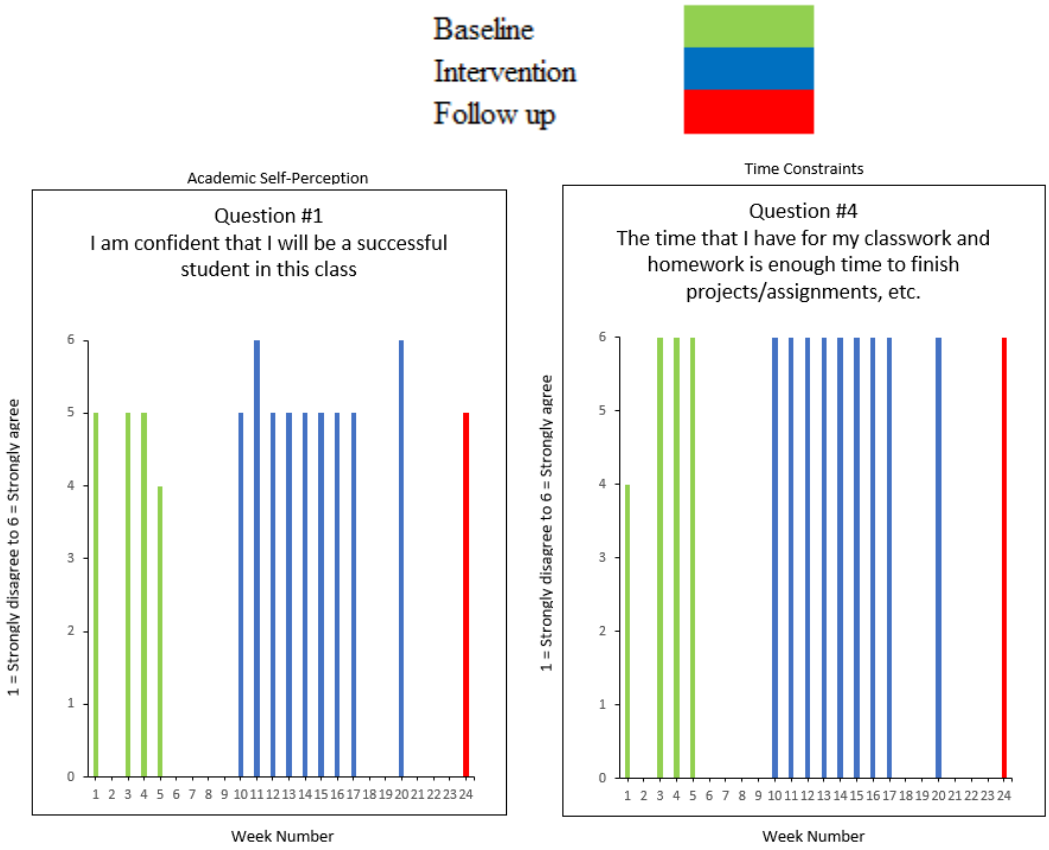


Figure 17. Graphs of Select Questions from the Academic Stress Inventory: *Participant 2*

Participant 3 showed variable follow-up data (see Table 26) where the factor of academic self-perception increased slightly form intervention phase (M = 4.38, SD = 2.00), time constraints increased slightly from intervention phases (M = 2.90, SD = 2.02), pressures to

perform decreased (*M* = 1.40, *SD* = 0.80), and perceptions of workload and exams showed a slight increase (*M* = 1.38, *SD* = 0.48) from intervention to follow-up phase. Graphs of select questions from the *Academic Stress Inventory* for Participant 3 (Baseline = 4, Intervention = 9, Follow up = 1) are shown in Figure 18 (below).

Figure 18.



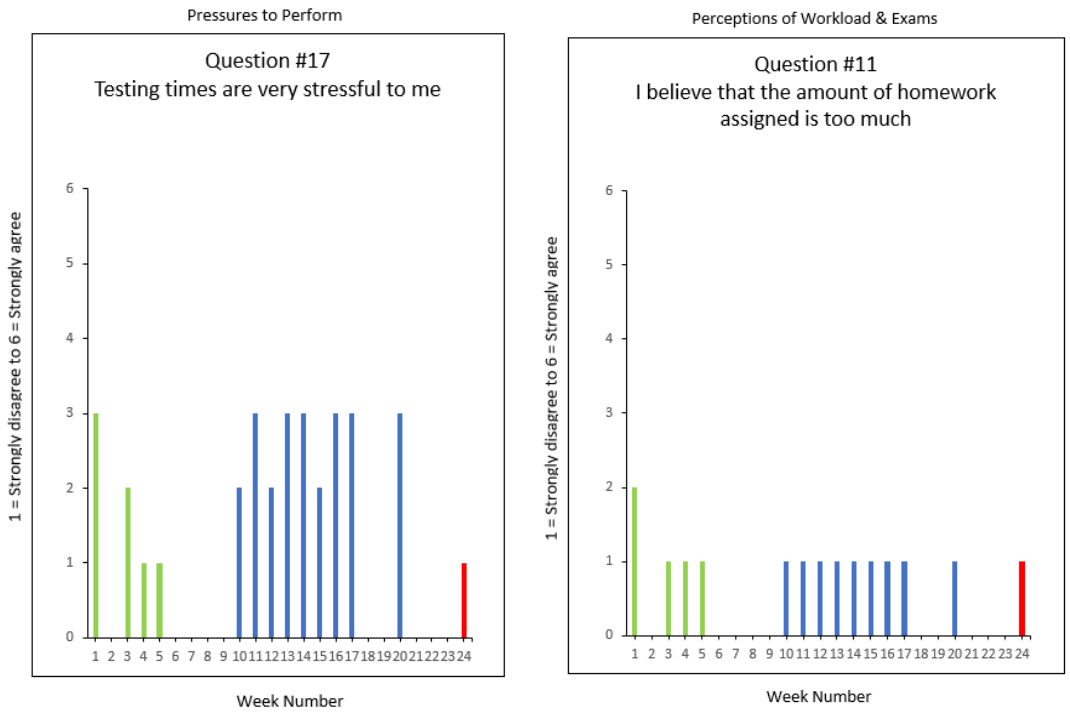


Figure 18. Graphs of Select Questions from the Academic Stress Inventory*: Participant 3*

Participant 4 showed an overall decrease in perceptions of academic stress as measured by the self-rating inventory (see Table 28) where academic self-perception decreased (*M* = 2.50, *SD* = 0.87), time constraints decreased (*M* = 2.00, *SD* = 0.89), pressures to perform increased slightly (*M* = 2.20, *SD* = 2.01), and perceptions of workload and exams decreased (*M* = 2.00, *SD* = 1.73). Graphs of select questions from the *Academic Stress Inventory* for Participant 4 (Baseline = 6, Intervention = 8, Follow up = 1) are shown in Figure 19 (below).

Figure 19.

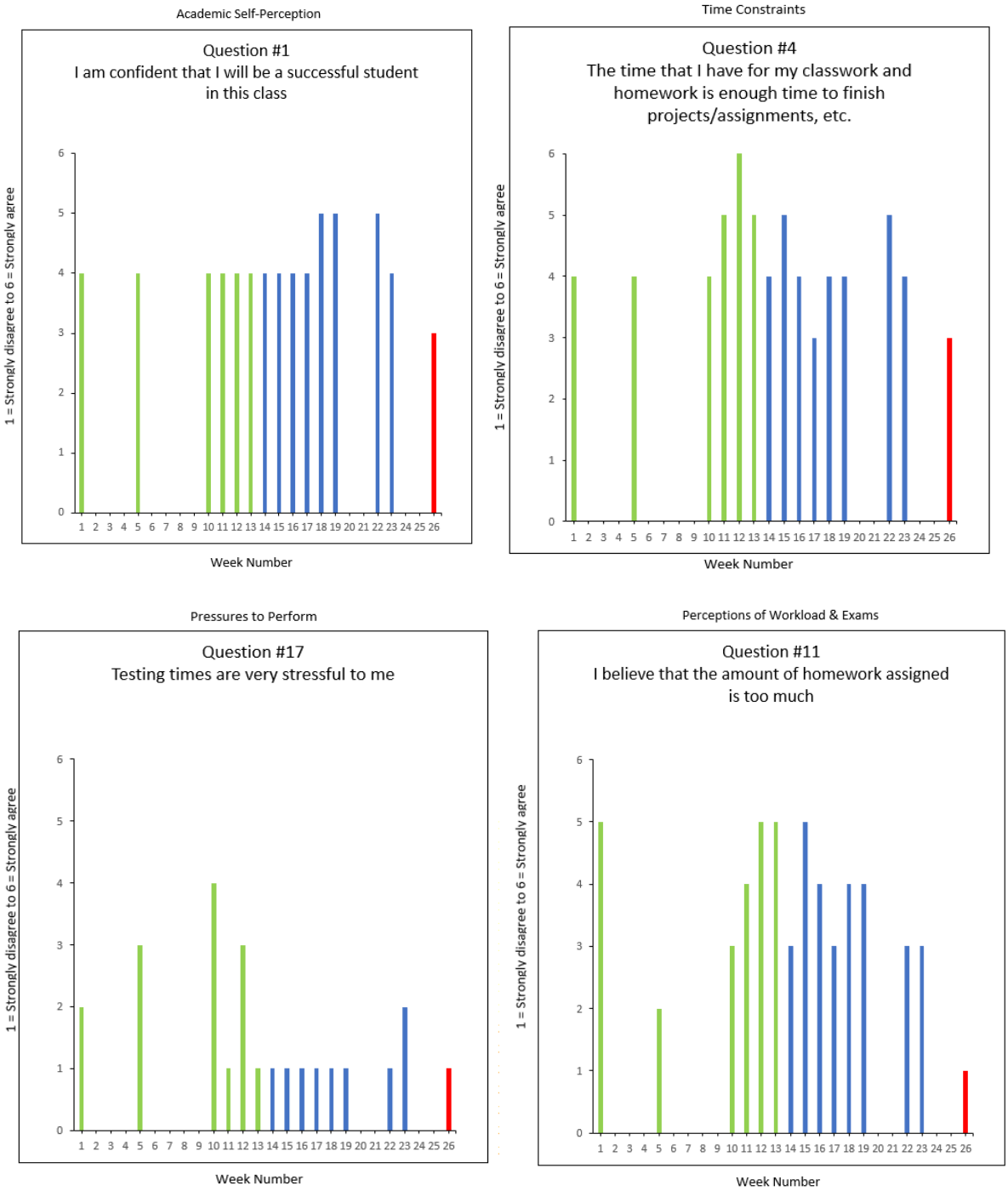


Figure 19. Graphs of Select Questions from the Academic Stress Inventory: *Participant 4*

Research Question 3: Do participants perceive a weekly, online-delivered, counseling intervention to be helpful to support overall academic engagement and perceptions of academic stress?

This research question focused on if participants would perceive that a weekly, online-delivered, counseling intervention is helpful to support academic stress. This question was based on research that self-confidence and overall self-perception increase with exposure to supportive environments (Honicke & Broadbent, 2016; Mao et al., 2020; Talsma et al., 2018) and understanding that the self is in control of one's own perceptions and involvement in one's academic life (Akcoltkin, 2015; Erzen & Odaci, 2016). Self-confidence and efficacy are stated to have major roles in academic outcome and performance (Erzen & Odaci, 2016) indicating that lower confidence or efficacy may equal lower performance and higher perceptions of academic related stress.

Results from the post-intervention social validity measure identified ratings from participants in the study and their teacher(s), counselor, and/or parent/guardian (see Tables 12 through 17) to support the overall effectiveness of the intervention of academic engagement and perceptions of academic stress levels for participating students. Means and standard deviations were measured for questions within this measure to assess for overall social validity of the online-delivered counseling intervention. Participants perceived the online-counseling intervention to be a positive experience in Table 12 where the mean was between agree and strongly agree for the 4 participants as identified in question 1 (M = 5.25, SD = 1.30); participants also identified that the intervention helped them to be less stressed when preparing for and taking tests, as identified in question 8 (M = 5.25, SD = 0.43). Participants also identified in Table 14 that they enjoyed the stress reduction practices they learned and will continue to use

them in the future as addressed in question 3, section two (*M* = 5.25, *SD* = 0.83) and also in question 9 where participants identified that the hands-on practice helped them be less stressed in class (*M* = 4.75, *SD* = 1.30). As identified in Table 15, participants identified that the average amount they practice stress reduction strategies when walking around campus/school was 2.25 times in a typical week (*SD* = 1.30).

The ratings of the stress reduction practices taught within the online-delivered counseling intervention pre-recorded videos were measured (see Table 16) on a scale of 1 (not good) to 4 (very good) and overall the four participants rated the highest stress reduction strategy to be the Imagery exercise #1: Up and Down Breathing (*M* = 4.00, *SD* = 0.00), the second highest two strategies being the Relaxation exercise #2: Three Deep Breaths and Happy Place/Space Visualization (*M* = 3.75, *SD* = 0.43) and the Imagery exercise #2: Up and Down Breathing with Gratitude (*M* = 3.75, *SD* = 0.43). Overall, the participants identified an average rating of 5.75 (*SD* = 0.43) on a scale of 1 (strongly disagree) to 6 (strongly agree) that the online-delivered counseling intervention was a valuable experience for them, as identified in Table 17, question 2.

Analysis of Secondary Dependent Variables

Respectful behavior. Prior to the intervention phase Participant 1 displayed stable levels of respectful behavior as measured by both DBR and SDO measures (DBR: *M* = 100%, *SD* = 0.00, SDO: *M* = 99.8%, *SD* = 0.54; see Tables 3 and 4). Upon implementation of the intervention, Participant 1's respectful behavior maintained a zero-celerating trend in both DBR and SDO measures. Intervention DBR data indicated a decreasing level with a positive 1st quartile Cohen's *d* of 0.51 (*M* = 98.75%, *SD* = 3.30) where there was no change in immediacy and a decline in consistency. Overlap was calculated for secondary dependent variables and Participant 1 showed a 94% overlap in DBR data, and 100% overlap in both SDO and self-report

data. Intervention SDO data indicated an improving level with a 1st quartile negative Cohen's *d* of -0.52 (*M* = 100%, *SD* = 0.00) where there was no change in immediacy, an increase in consistency, and no overlap effect sizes were calculated.

Participant 2 displayed varying respectful behaviors during baseline measures by both DBR and SDO data (DBR: *M* = 92.1%, *SD* = 8.60, SDO: *M* = 90.8%, *SD* = 14.3; see Tables 3 and 4). Upon implementation of the intervention, Participant 2's respectful behavior had a zero-celerating trend in both DBR and SDO measures. Intervention DBR and SDO data increased (DBR: *M* = 95.0%, *SD* = 10.0, SDO: *M* = 98.1%, *SD* = 5.16) in respectful behaviors for Participant 2, where there was an increase in level for each set of data. For DBR respectful behavior measures there was a negative 1st quartile Cohen's *d* of -0.21, where the immediacy increased, and consistency declined. For SDO data, there presented with a 1st quartile negative Cohen's *d* of -0.68, no change in immediacy, and improved consistency. Overlap was calculated for secondary dependent variables and Participant 2 showed a 95% overlap in SDO and DBR data, and 77% overlap in self-report data.

Participant 3 presented with variable to stable accelerating trends for both DBR and SDO measures at baseline (DBR: *M* = 97.4%, *SD* = 6.34, SDO: *M* = 91.0%, *SD* = 17.9; see Tables 3 and 4). Where intervention supported this participant with zero-celerating trends and an increase in level for both DBR and SDO measures, with negative 1st quartile Cohen's *d* for both set of data (DBR: Cohen's *d* = -0.58, SDO: Cohen's *d* = -0.71). Both DBR and SDO measures showed no change in immediacy and immensely improved consistency (DBR: *M* = 100.0%, *SD* = 0.00, SDO: *M* = 100.0%, *SD* = 0.00). Overlap was calculated and Participant 3 showed a 100% overlap in SDO, DBR, and self-report data.

Participant 4 showed a zero-celerating trend in baseline for the DBR measures (DBR: *M* = 98.6%, *SD* = 6.00) and showed a variable accelerating trend at baseline for the SDO measures (SDO: *M* = 86.5%, *SD* = 21.0; see Tables 3 and 4). Intervention supported a positive increase in both DBR and SDO measures for Participant 4 (DBR: *M* = 98.6%, *SD* = 3.31, SDO: *M* = 96.3%, *SD* = 4.84). There was no change in DBR measures with a 0.00 Cohen's *d*, no change in immediacy, and improved consistency. However, SDO measures showed a 1st quartile negative Cohen's *d* of -0.64, an increase in immediacy, and improved consistency at the intervention phase. Overlap was calculated and Participant 4 showed a 97% overlap in SDO data, 88% overlap in DBR data, and 100% overlap in self-report data.

Overall, the four participating students showed an increase in respectful behaviors at the intervention phases of the research study as reported by both DBR and SDO data.

Disruptive behavior. Participant 1 showed no concerns for disruptive behaviors showed minimal change in her disruptive behavior rating from all three measures of DBR, SDO, and self-report throughout the study (see Tables 3-5) where baseline measures from SDO were the only area of any disruptive behaviors observed (DBR: *M* = 0.00%, *SD* = 0.00, SDO: *M* = 0.18 %, *SD* = 0.51, Self-Report: *M* = 0.00%, *SD* = 0.00). During intervention Participant 1 showed zero disruptive behaviors from all three data collection measures (DBR: *M* = 0.00%, *SD* = 0.00, SDO: *M* = 0.00%, *SD* = 0.00, Self-Report: *M* = 0.00%, *SD* = 0.00). At follow up, Participant 1 also showed zero disruptive behaviors observed or reported (DBR: *M* = 0.00%, SDO: *M* = 0.00%, Self-Report *M* = 0.00%).

Table 7 shows an overall summary of the changes in dependent variables from baseline to intervention phases where Participant 1 showed no change in disruptive behaviors as reported by DBR and self-report measures from baseline to intervention. SDO measures showed a decrease

in disruptive behaviors with a 1st quartile positive Cohen's *d* (0.50) and improved consistency from intervention to follow-up. Participant 1 showed 100% overlap in SDO and self-report data of disruptive behaviors from baseline to intervention and 94% overlap in DBR data.

Participant 2 showed some disruptive behaviors throughout the study's data collection periods where there was moderate to low disruptive behaviors observed and reported at baseline measures (DBR: *M* = 13.6%, *SD* = 17.2, SDO: *M* = 10.3%, *SD* = 14.9, Self-Report: *M* = 7.14%, *SD* = 8.81). During the intervention phase, Participant 2 improved in SDO and self-report measures while staying consistent with DBR data reported (DBR: *M* = 13.6%, *SD* = 12.2, SDO: *M* = 1.93%, *SD* = 5.13, Self-Report: *M* = 7.50%, *SD* = 4.33). At follow up, Participant 2 improved in DBR data collection and declined in SDO and self-report data, showing increases in disruptive behavior rating (DBR: *M* = 10.0%, SDO: *M* = 10.0%, Self-Report *M* = 10.0%). From baseline to intervention phases, Participant 2 showed a decrease in level from DBR and SDO data and an improving level for disruptive behaviors from self-report measures. There was a 1st quartile positive Cohen's *d* for DBR and SDO ratings (DBR: 0.75, SDO: 0.75) and a 1st quartile negative Cohen's *d* from baseline to intervention from self-report data (Cohen's *d*= -0.05). There was a decrease in immediacy from both DBR and SDO, and an increase from Participant 2's self-report where there was improved consistency for all three measures. Participant 2 showed 86% overlap in DBR data, 97% overlap in SDO data, and 81% overlap in self-report data of disruptive behaviors from baseline to intervention phases.

Participant 3 showed low disruptive behaviors throughout the study where baseline measures of DBR and SDO showed some disruptive behaviors and self-report identified zero disruptive behaviors during the observation periods (DBR: *M* = 8.42%, *SD* = 14.4, SDO: *M* = 8.97%, *SD* = 17.9, Self-Report: *M* = 0.00%, *SD* = 0.00). Throughout the intervention phase,

Participant 3 showed a decrease in disruptive behaviors as reported from DBR and SDO measures, and an increase from self-report perceptions (DBR: *M* = 2.50%, *SD* = 4.33, SDO: *M* = 0.00%, *SD* = 0.00, Self-Report: *M* = 5.00%, *SD* = 7.07). At follow up, Participant 3 showed an increase in DBR and SDO disruptive behavior data and a decrease in self-report perceptions (DBR: *M* = 10.0%, SDO: *M* = 2.00%, Self-Report *M* = 0.00%). From baseline to intervention phases Participant 3 showed a decrease in level for DBR and SDO ratings, and an increase from student self-report, where DBR and SDO had a 1st quartile positive Cohen's *d* (DBR Cohen's *d* = 0.56, SDO Cohen's *d* = 0.71) and self-report Cohen's *d* also presented with 1st quartile negative results (-1.00). There was no change in immediacy for DBR data, a decrease in immediacy for SDO data, and an increase with self-report data. Consistency improved for both DBR and SDO and declined for self-report data from baseline to intervention for Participant 3. Participant 3 showed 85% overlap in DBR data, 73% overlap in SDO data, and 89% overlap in self-report data of disruptive behaviors from baseline to intervention phases.

Participant 4 showed low to moderate disruptions during the baseline phases as observed and reported by all three measures (DBR: *M* = 11.7%, *SD* = 19.5, SDO: *M* = 11.6%, *SD* = 20.3, Self-Report: *M* = *2*.50%, SD = 10.1). During intervention phase, Participant 4 showed a decrease in all three ratings for disruptive behaviors (DBR: *M* = 2.50%, *SD* = 4.33, SDO: *M* = 1.25%, *SD* = 3.31, Self-Report: *M* = 3.75%, *SD* = 6.96). At follow-up, Participant 4 presented with a decrease in DBR and self-report measures and a slight increase in SDO (DBR: *M* = 0.00%, SDO: *M* = 5.00%, Self-Report *M* = 0.00%). There was a decreasing level for both DBR and SDO from baseline to intervention and an increase for self-report. Baseline to intervention data showed a 1st quartile positive Cohen's *d* for DBR and SDO (DBR Cohen's *d* = 0.65, SDO Cohen's *d* = 0.71) and 1st quartile negative Cohen's *d* for self-report (-0.14). There was no change in immediacy for

DBR from baseline to intervention and an increase for both SDO and self-report. Consistency declined for both DBR and self-report data from baseline to intervention and improved for SDO ratings. Participant 4 showed 81% overlap in SDO data, 78% overlap in DBR data, and 97% overlap in self-report data of disruptive behaviors from baseline to intervention phases.

Overall, disruptive behaviors decreased with the introduction of the intervention phase and were maintained at follow-up measures for the four participating students.

Chapter V: Discussion

Research relating to the effects of online learning has been performed since the 1990s (Marsteller & Bodzin, 2017) and continues to grow as an educational platform (Mislevy et al., 2020; Pazzaglia et al., 2016) with the advancement of technology and ease of learning while at home. Research is limited relating to middle school student perceptions and experiences with online learning (Harvey et al., 2014; Stjerneklar et al., 2019) especially as it relates to perceptions of academic stress on the student. Online counseling program research has previously reported significant improvements for participating students compared to non-participating youth's level of anxiety related symptoms (Stjerneklar et al., 2019). Counselor guided online-based counseling interventions are indicated to be a great resource for youth with anxiety and academic stress. However, there continues to be minimal published research discussing students' perspectives in online learning environments (Barbour, Siko, Sumara, & Simuel-Everage, 2012; Mislevy, et al., 2020). Previous research of online interventions has related to opinions or experiences of practitioners during virtual schooling (Barbour, Siko, Sumara, & Simuel-Everage, 2012) and has not addressed the student's perspective.

Thirty-nine percent of teens report feeling anxious from academic stressors (APA, 2014). Many students who have anxiety or an anxiety related diagnosis often are unidentified and do not receive the treatment they need from school or community based counseling support (Huagland et al., 2020). But teens do understand that managing their own stress is important to their overall well-being in and out of the academic setting (APA, 2014). Completing tasks for school, taking exams, social pressures, external expectations, and other factors generate an increase in stress levels for youth (Wuthrich, Jagiello, & Azzi, 2020). With increased stress, middle school students may not have the tools needed to support stressors in their lives when it is really needed

most without supports or interventions to access (Bedewy and Gabriel, 2015). Excelling in school may be challenging for students who do not have stress reducing skills to fall back on (Wuthrich, Jagiello, & Azzi, 2020). Internet delivered brief CBT is a cost-effective way to access counseling interventions (Stjerneklar et al., 2019), especially in the school setting.

Middle school offers students an opportunity to become more independent while taking away some level of dependence and support from teachers and other staff that students may have had interactions with throughout their elementary school grades (Thompson, 2012; Wuthrich, Jagiello, & Azzi, 2020). Stress reduction is the first step to support youth with an overall happy, healthy, and stress-free middle school experience. Students are being exposed to many stressful scenarios and topics in middle school such as anxiety, depression, suicide ideation, and much more, creating a need for collaboration among school and community supports. School and community mental health counselors are available for youth during their primary and secondary school grades in many school districts across the United States (ASCA, 2020). Huagland and colleagues (2020) have reported that additional research evaluating youth distress during academic and non-academic periods across grade levels is needed.

Research on the effects of online-delivered counseling interventions has focused on different aspects of mental health but there has been little work exploring youth's perceptions of academic stress as it relates to the effects of an online-delivered counseling intervention at the middle school level. Multiple baseline across participant designs do not require a withdrawal of the independent variable (Carr, 2005). During certain interventions such as the one within this study, withdrawing the IV is impractical or impossible (Carr, 2005). Multiple baseline designs can demonstrate experimental control when the IV is applied to one participant showing baseline stability while the other participants then do not show any effect based on the intervention being

introduced to the first participant, where the introduction of the IV is then replicated through repeated measures with the other participants (Carr, 2005). Utilizing a multiple baseline design with replication can support experimental control by comparing data across individuals, groups, behaviors, or settings. Single case research designs (SCRD) "demonstrate experimental control by allowing each participant to serve as both the control and experimental participant" (Guzman et al., 2018, p. 161). A SCRD focuses on the changed or stagnant data for each individual. A SCRD looks at one participant's behavior(s) to support that individual's development in a specific area. SCRD is a practical design to interpret efficacy of an intervention (Lenz, 2015) where participants serve as their own comparison during and after the intervention (Egel & Barthold, 2010; Rubin & Belamy, 2012). By integrating a SCRD within the school counseling setting, the counselor can assess the benefit of the intervention which could be evaluated across other applicable counseling settings. SCRD has been identified over the years as "the best kept secret" in school counseling related research (Cook et al., 2017; Foster, 2010). Findings by Wilson and Dixon (2010) suggest the need to examine the potential for mindfulness-related interventions as measures of behavior change. Outcome research in counseling helps facilitate a better understanding of human behavior, where SCRD helps school counselors measure just that (Cook et al., 2017; Foster, 2010).

The current SCRD aimed at researching if an online-delivered counseling intervention would (1) decrease perceived academic stress as measured by observations and reports by student participants, teachers, and counselors, and (2) increase academic engagement as measured by teacher *Direct Behavior Ratings*, researcher and trained observer *Systematic Direct Observations*, and participant self-reports. Participant responses, teacher reports, and counselor observations to the online-delivered counseling intervention reflected how stress reduction skills

affected perceptions of academic stress, academic engagement, and the percentage of time presenting respectful or disruptive behaviors during online classroom learning. An overview of the time frame in the current study is identified below:

10/20/20 – Pre-baseline: PI met with counselor to discuss study, upheld counselor training, and initiated recruitment of student participants

10/29/20 – Teacher DBR & student self-monitoring training completed

11/2-11/6/20 – PI met 1:1 with each family and/or student to ensure pre-intervention surveys are complete and to answer any questions relating to the study. PI set up Zoom meeting times and dates with participating teachers to be able to observe student participants during online learning times.

11/6/20 – Start of self-monitoring, DBR, and SDO for participating students (baseline begins)

5/3/21 – Final social validity measurement completed (28 weeks from pre-baseline to post-intervention follow-up phases)

Interpretation of Results

The researcher analyzed the mean, the rate of academic engagement and perceived academic stress levels, and level, the change of academic engagement and perceived academic stress levels, from one phase to the other. The slope, or trend line, and immediacy of effect or latency, the time between a start of a phase and seeing change in variables, and overlap were analyzed across baseline to intervention phases to conclude the rate of change for both academic engagement and perceived academic stress levels. The results of this research study may have been consistent with previous research that indicated academic engagement can increase with self-monitoring of behaviors, and active support from stakeholders (Graham-Day et al., 2010;

Schardt et al., 2019), and that academic stress can be decreased by implementing problem-focused interventions and strategies during individual counseling services (Bedewy & Gabriel, 2015; Iqbal et al., 2015). However, since there was not a functional relation between the DV and IV, we do not know if the intervention itself was effective on increasing academic engagement and decreasing academic stress. The increase in academic engagement and decrease in academic stress may have been related to an outside factor other than the intervention.

Follow-up confirmation notes. Follow-up confirmation was done with counselor about data points relating to variability and change in level during baseline ratings for participants in the study. Data points that were identified before the intervention phase started for the first participant with the timeline for these points being after the holiday break, there was variability. The counselor identified that during the 8th – 14th data point dates it was typical at the time that students were engaging in the end of the year and end of the semester celebrations and/or beginning of the semester goal setting and re-focusing lessons with their classroom teachers. The counselor concluded that there is more engagement and focus on finishing up the semester strong and re-starting to improve grades, focus, and follow through for the 2nd semester. This is typical for school settings, especially middle school settings when school-based interventions that include goal setting and time management, when using agendas or trackers are introduced and readdressed by many key stakeholders within the school settings (Durlak et al., 2011). Unfortunately, these typical school-based interventions interfered with maintaining experimental control in the present study, as a result a functional relation was not demonstrated.

It is important to discuss the lack of a functional relation within the study when the intervention was introduced in the tiers of the multiple baseline design. A few key points to address include that the end of the semester and the beginning of the semester in December and

the beginning of January occurred during the baseline phase of data collection. There was a transition to and back from break for all four participants, which produced baseline variability and/or an increase in baseline data percentages for academic engagement and the secondary variables for participants 2, 3, and 4. At the participants' school, the end of the semester also included class wide SEL lessons that were integrated into classes as reported by the counselor at follow-up and upheld by individual teachers for both 7th and 8th grade levels. The classroom teachers confirm this was in fact what occurred when the PI investigated this upon the conclusion of the study. Goal setting practices are typical at the beginning of the semester in a middle school setting and celebrations are common at the end of the semester within this school setting as reported by the counselor (Durlak et al., 2011). At the beginning of the semester, rules, goals, and supports help students to enhance their involvement and participation within their classes. This was indeed weaved into the participating students' classes by all teachers who were involved in this study. Engagement and goal setting can be upheld within 7th and 8th grade classes to help support grades, attentiveness in class, completion of homework, attention to upcoming tests and/or quizzes, and other items (Durlak et al., 2011). The above may explain the cause of baseline data points 8-14 to improve around the same time for the participating students.

It is also important to discuss Participant 4 who produced an increase in variability of data points at the end of the 2020 Fall semester during his baseline phase. This student was identified as needing stable schedules and routines as reported by the counselor at follow-up discussion. When the routine of the semester was concluding and not as consistent, his DBR, SDO, and self-report ratings started varying significantly during the end of the 2020 semester and beginning of the 2021 semester.

At the beginning of February there was also a transition phase in one of participant 4's classes where his mother who used to be the teacher was not his teacher any longer in his ELA class. He then worked with a different teacher at the time and through the remainder of the semester because his mother transferred to a different school site at this time. Participant 4's observations were upheld during his math class time, which he identified as his most stressful class. However, the effect of not having his mother in the building may have supported his overall engagement in his classes even outside of the immediate ELA class.

During the end of January and beginning of February, Participant 4 was identified by his primary teacher in the study, his math teacher, as getting into trouble and continuing having a lack of focus from the semester prior. Participant 4 had a discussion with an authority figure at school, the principal, to support his understanding of paying attention within his classes, where he was then disciplined after he threw a pen in class and was reprimanded by his actions. This behavior and consequence could have triggered a change in his attentiveness and understanding of class rules from that point forward. This information was confirmed and communicated by counselor to PI at follow-up conversation.

After speaking with participant 4's counselor, she disclosed that participant 4 identified that the medication he was taking for his ADHD diagnosis was not working well during the end of the Fall 2020 semester and beginning of January 2021. At the time of disclosure, the end of January, the counselor identified that his parents confirmed with the counselor that his dosage was increased at the end of December since this had been an issue for some time in the fall semester. Since non-stimulant medications typically take about 2-6 weeks to be effective, and this change was made over the winter break at the end of December, through the beginning of January, this could, therefore, be an indicator of the change in the participant's behaviors starting

at the end of January and beginning of February, data points 13-24. At this time DBRs were maintaining a high percentage as well as SDO ratings maintained a high percentage of academic engagement, and self-report was identified as more academically engaged during this time.

The variability at baseline from the above factors influenced the dependent variables from the events within and outside of the school setting. These types of variables may be able to be controlled in future studies to support the overall results of the research, but this was not discussed or communicated until follow-up discussion for the present study.

As seen in Table 30, the 4 participants shared the effects of weekly stress throughout the phases of the intervention. As addressed above, there were times of increased stress due to effects of the semester, end of grading period testing, quizzes, increased homework during various weeks, and other contributing factors that effected participants' perceptions of stress throughout baseline, intervention, and follow-up phases. Participant 1 showed moderate time spent stressed each day at the beginning of her baseline phase, where the middle and end of baseline she showed no stress daily as reported from her self-monitoring responses. At the beginning of her intervention phase, she started to feel more stressed which could be due to the beginning of the second semester where students may be tasked with more assignments and establishing more intensive academic goals to support their overall learning and growth. Overall, Participant 1's stress reportedly stemmed from her perceptions of homework, feeling overwhelmed with the work to do on her own, communicating with her teacher(s), and completing tests or assessments throughout the phases of the research study. Participant 1 showed less stress overall towards the end of the intervention and at the follow-up phase as self-reported from her self-monitoring data.

Participant 2 started the baseline phase with considerable stress as reported by his self-monitoring measurements (see Table 30). He decreased slightly with his overall stress levels at the end of the semester, but during the last few baseline data points his stress increased considerably; again, from possible new expectations and goals set at the beginning of the semester. When intervention phase started for Participant 2, he shared that his stress levels decreased from more open communication with stakeholders and an increase in understanding how to support his overall stress levels from utilizing skills learned from the intervention itself. At the end of the intervention phase, Participant 2 showed a slight decrease in stress levels daily as reported from his self-report measures. Much of Participant 2's stress levels were contributed from missing work, overthinking assignments and stressing out due to perceived anticipation of assignments due, homework, and getting behind on his class and homework from week to week throughout the study. Overall, Participant 2's daily stress, as measured by self-monitoring report, decreased from the beginning of baseline to the follow-up phase of the study.

At the beginning and throughout baseline measures, Participant 3 showed variable stress levels from low to moderate stress experienced daily as reported by self-monitoring data collected (see Table 30). Many of Participant 3's stressors stemmed from the new school or personal schedules she had, socializing and talking to friends late at night where she forgot to complete homework, and completing homework. During the intervention phase, Participant 3's stress levels increased as reported by self-monitoring data. She concluded with the follow-up phase as reporting some stress daily as measured by self-monitoring data.

Participant 4 shared at the beginning of baseline measures that his stress was quite high due to social issues with his brother, not academic related (see Table 30) however his stress decreased over the first couple of data points measured at baseline where he shared no stress

from data point 4 on through the end of the intervention phase. Participant 4's stressors stemmed from homework, reading, being in school, missing work, and feeling tired. Participant 4 shared that his stress increased from no stress to 1-10 minutes per day average of stress at the last data point of the intervention and also at the follow-up measure as reported from his self-monitoring of perceived stress levels.

Academic engagement. Academic engagement skills were observed through DBR and SDO observations and self-reported by each student participant. Data were analyzed to conclude the effectiveness of the 8-week intervention that was implemented to participants. Analyses of the *Direct Behavior Rating*, *Systematic Direct Observation*, and self-report data were analyzed by visual inspection. Visual analysis of graphic displays are utilized, where the split-middle technique is common when interpreting single case design graphs (Lane & Gast, 2014). To determine the rate of change for the variables across phases, the researcher examined behavioral data graphs of DBR, SDO, and self-report of each participating student. Visual inspection of academic engagement data had some variability and trivial overlap between baseline and intervention phases for the four participating students as well as some high academic engagement levels at baseline.

Results indicated there was only one improvement of DBR ratings of academic engagement, which was for Participant 1. There was an increase in level for academic engagement when implementing the intervention for Participants 2, 3, and 4 but not for Participant 1. Analysis of trend for Participant 1 showed zero-celerating trend to zero-celerating trend between baseline and intervention phases where Participant 2 and 3 showed a variable accelerating trend to a variable decelerating trend. Participant 4 showed a variable accelerating trend to a variable accelerating trend for DBR measures between phases.

Effect sizes while addressing Cohen's *d* and Tau-*U* supported conclusions for visual analysis where Participant 1 showed a 1st quartile positive benchmark criteria for Cohen's *d* and trivial negative effect for Tau-*U*. Participant 2 showed a 1st quartile negative benchmark criteria for Cohen's *d* and 1st quartile positive effect for Tau-*U* effect sizes. Participant 3 showed a 1st quartile negative benchmark criteria or effect for both rating scores, and Participant 4 showed a 1st quartile negative benchmark criteria or effect for both scores. Participant 1 was the only student who showed positive effects of academic engagement as reported by teacher with the DBRs during the intervention phase.

Visual analysis of academic engagement as measured by counselor SDO data showed similar effectiveness of the implementation of the intervention. An improving level was prominent for Participants 2 and 4 according to SDO measures, where Participants 1 and 3 showed a decrease in level from baseline to intervention phases. Participant 1 showed zero-celerating trend to zero-celerating trend according to SDO data from baseline to intervention phases, where Participant 2 and 3 both showed a variable accelerating trend to a slight decelerating trend, and Participant 4 showed a variable accelerating trend to a stable accelerating trend. There was less overlap for Participants 1 and 3, and 100% overlap for Participants 2 and 4, concluding that there was a loss of a functional relation for all participants.

Benchmark criteria and effect sizes for Cohen's *d* and Tau-*U* concluded that SDO measures indicated varying benchmark criteria or effects. For Participant 1, effect size measures identified a 1st quartile positive benchmark criteria for Cohen's *d* and a trivial negative effect for Tau-*U* scores; Participant 2 showed small positive effects for both measures; Participant 3 showed a trivial positive benchmark criteria for Cohen's *d* and small negative effect for Tau-*U*; and Participant 4 showed medium to small negative benchmark criteria and effect size for

Cohen's *d* and Tau-*U* scores. Participant 2 was the only student who showed positive effects of academic engagement as reported by the counselor and researcher during SDO times during the intervention phase.

Overall, Participant 1, 2, and 3's academic engagement showed improvement from implementation of this intervention to follow-up as measured from self-report where Participant 4's self-report showed no-change. Effect sizes of Tau-*U* and benchmark criteria of Cohen's *d* supported visual analysis conclusions, indicating that the online-counseling intervention had a trivial to small effect on academic engagement levels of Participant 1. Cohen's *d* and Tau-*U* effect size calculations suggest that the intervention had variable effects for academic engagement for Participant 2 and 3, and negative effects of academic engagement for Participant 4. Because one DBR, SDO, and self-report measure were upheld at follow-up, maintenance of effects could not be assessed fairly by these measures.

Respectful behavior. Conclusions from visual analysis techniques indicated that the online-counseling intervention had no effect for DBR, SDO, and self-report measures relating to respectful behavior ratings. There was no overlap calculated for both secondary dependent variables.

Participant 1's baseline to intervention DBR data indicated a decrease in level with a 1st quartile Cohen's *d* benchmark criteria where there was no change in immediacy, and a decline in consistency for respectful behaviors. DBR, SDO, and self-report data for Participant 1 showed zero-celerating trend to zero-celerating trend from baseline to intervention phases. Participant 1's baseline to intervention SDO data indicated an increase in level with a small negative Cohen's *d* benchmark criteria where there was no change in immediacy and an increase in consistency.

SDO, DBR, and self-report measures for Participant 1 showed no change from baseline to intervention.

Participant 2's respectful behavior data had variable zero trend to zero-celerating trend for DBR data, where Participant 2 showed variable to stable accelerating trend to zero-celerating trend for SDO data. Participant 2 also showed variable accelerating trend to stable accelerating trend for their self-report data. Participant 2 showed a 1st quartile benchmark criteria according to Cohen's *d* for all three measures of DBR, SDO, and self-report, where there was an increase in level for all three, an increase in immediacy for DBR, no change in immediacy for SDO, and a decrease in immediacy for self-report. Participant 2 had improved consistency for SDO and self-report measures and decreased consistency for DBR measures.

Participant 3 had zero to stable accelerating trends at baseline to zero-celerating trends at intervention for all three measures. Participant 3 showed an increase in level for both DBR and SDO measures and a decrease for self-report. Participant 3 also showed 1st quartile benchmark criteria for Cohen's *d* for DBR and SDO data measures, however, self-report showed a large positive effect. Participant 3 showed no change in immediacy for DBR data and a decrease in immediacy for SDO and self-report. All three measures showed improved consistency for all measures.

Participant 4 baseline to intervention SDO and self-report data showed an increase in level with no change in DBR measures. There was zero-celerating trend to zero-celerating trend for DBR measures from baseline to intervention phases, variable accelerating trend to variable decelerating trend for SDO measures, and variable accelerating trend to stable accelerating trend for self-report. Participant 4's data showed a 1st quartile benchmark criteria for Cohen's *d* for all three measures of SDO, DBR, and self-report. Participant 4 had no change in immediacy for

DBR, an increase for SDO, and a decrease for self-report. He also had improved consistency for both DBR and SDO measures and declined consistency for self-report from baseline to intervention phases.

Overall, the four participating students showed a negative effect of respectful behaviors at the intervention phases of the research study as reported by DBR, SDO, and self-report data. These results were inconsistent with previous research relating to effective increase in respectful behaviors and academic engagement during involvement of evidence-based interventions and strategies (Simonsen et al., 2008). Recent research on evidence-based interventions have typically improved middle school learning environments (Caldarella et al., 2019).

Disruptive behavior. Analysis of graphs through visual inspection reveal that disruptive behaviors did not decrease with the introduction of the intervention for the four participating students which was not congruent with current literature stating that reduction in problem behaviors with implementation of evidence-based interventions and practices supports inappropriate classroom behaviors (Simonsen et al., 2008). Two of the four participants identified accelerating trends in self-report of disruptive behavior from baseline to intervention phases which is counter-therapeutic.

Participant 1 showed no change in level for disruptive behaviors as reported by DBR and self-report measures from baseline to intervention phases, where SDO and DBR measures showed a decrease in disruptive behaviors with 1st quartile benchmark criteria for Cohen's *d* and improved consistency from baseline to intervention phases. All three measures showed zero-celerating trends to zero-celerating trends from baseline to intervention phases.

Participant 2 showed a decrease in level from DBR and SDO data and an increase in level for disruptive behaviors from self-report measures. There were 1st quartile benchmark criteria

Cohen's *d* for all three measures of DBR, SDO, and self-report ratings from baseline to intervention data. There was a decrease in immediacy from both DBR and SDO, an increase from Participant 2's self-report, and improved consistency for all three measures. DBR and SDO measures showed decelerating trends from baseline to intervention where self-report showed accelerating trends.

Participant 3 showed a decrease in level for DBR and SDO ratings, and an increase from student self-report, where DBR, SDO, and self-report also had 1st quartile benchmark criteria for Cohen's *d*. There was no change in immediacy for DBR data, a decrease in immediacy for SDO data, and an increase with self-report data. Consistency improved for both DBR and SDO and declined for self-report data from baseline to intervention for Participant 3. DBR and SDO measures showed decelerating trends from baseline to intervention where self-report showed accelerating trends.

Participant 4 showed a decrease in level as well for both DBR and SDO data and an increase with self-report of disruptive behaviors from baseline to intervention phases. Participant 4's DBR data showed 1st quartile benchmark criteria for Cohen's *d* with no change in immediacy and improved consistency. SDO data also resulted in 1st quartile benchmark criteria for Cohen's *d* with an increase in immediacy and improved consistency. Self-report data for Participant 4 showed 1st quartile benchmark criteria for Cohen's *d* as well with an increase in immediacy and decline in consistency. All three measures showed zero-celerating trends to zero-celerating trends from baseline to intervention phases.

Overall, disruptive behaviors did not decrease as measured by DBR, SDO, and self-report measures with the introduction of the intervention for the four participating students. This was not congruent with current literature stating that online intervention supports can decrease

participant disruptive behaviors during academic learning times (Semple et al., 2010; Sinha & Kumar, 2010).

Perceived academic stress. Analysis of graphs through visual inspection reveal the participating students in this research study did not improve in their perceptions of academic stress as measured by the academic stress inventory used throughout all phases of the study. These results were inconsistent with previous research identifying the reduction in perceptions of academic stress while improving academic performance and engagement (Sohail, 2013). Previous studies have identified that problem-focused strategies and emotion-focused interventions can alleviate stress along with student counseling services (Iqbal et al., 2015).

Participant 1 showed 1st quartile benchmark criteria in Cohen's *d* in the academic self-perception factors and a small positive effect for Tau-*U*. Time constraints for Participant 1 showed variable negative and small to medium positive effect sizes. Pressures to perform showed small to large negative and positive effect sizes. Perceptions of workload and exams showed small effect sizes and were also varying with positive and a negative directions of the effect. Overall Participant 1's perceptions of academic stress were counter-therapeutic in relation to this intervention.

Participant 2 showed 1st quartile benchmark criteria in Cohen's *d*, and a small positive effect size in Tau-*U* in the academic self-perception factors. Time constraints for Participant 2 showed 1st quartile benchmark criteria in Cohen's *d* and a small negative effect size for Tau-*U*. The pressures to perform factors showed variable small to large negative and positive effect sizes. Perceptions of workload and exams showed small to medium effect sizes and were also varying. Overall Participant 2's perceptions of academic stress were varying in relation to this intervention and were counter-therapeutic.

Participant 3 showed 1st quartile benchmark criteria for Cohen's *d* and showed a small effect size in Tau-*U* in a positive direction for the academic self-perception factors. Time constraints for Participant 3 showed 1st quartile benchmark criteria for Cohen's *d* and a small positive effect size for Tau-*U*. The pressures to perform factors showed no effect differences and perceptions of workload and exams showed small to medium effect sizes and were varying with a positive and a negative direction of the effect. Overall Participant 3's perceptions of academic stress were mostly positive, which is counter-therapeutic to this intervention, where she experienced more stress during the intervention phase of the study.

Participant 4 showed a 1st quartile benchmark criteria for Cohen's *d* where he showed a small positive effect size in Tau-*U* for the academic self-perception area. Time constraints for Participant 4 showed a 1st quartile benchmark criteria in Cohen's *d* and a small negative effect for Tau-*U*. The pressures to perform factors showed variable negative and positive small effects. Perceptions of workload and exams showed 1st quartile benchmark criteria or effect sizes in both Cohen's *d* and Tau-*U* effect size scores and were varying with a positive and a negative direction. Overall Participant 4's perceptions of academic stress were varying in relation to this intervention and varied from Cohen's *d* to Tau-U effect reports which were counter-therapeutic to this intervention.

In summary of perceptions of academic stress, Participant 1's perceptions of academic stress were counter-therapeutic in relation to this intervention; Participant 2's perceptions of academic stress were varying in relation to this intervention and were counter-therapeutic; Participant 3's perceptions of academic stress were mostly positive, which is also counter-therapeutic to this intervention; and Participant 4's perceptions of academic stress were varying and therefore counter-therapeutic to this intervention. The participating students did not improve

in their perceptions of academic stress as measured by the academic stress inventory used throughout all phases of this study. Results were inconsistent that perceptions of academic stress would reduce with integration of evidence-based interventions and strategies identified within previous research (Harikiran et al., 2012; Iqbal et al., 2015).

Social Validity

Descriptive data from participants from pre and post intervention measures along with social validity measures identified participants having an overall positive experience from the intervention as reported by social validity measures. Student's ratings of the stress reduction practices taught within the online-delivered counseling intervention pre-recorded videos were measured and overall, the four participants rated the highest stress reduction strategy to be the Imagery Exercise #1: Up and Down Breathing; the second highest two strategies being the Relaxation Exercise #2: Three Deep Breaths and Happy Place/Space Visualization, and the Imagery Exercise #2: Up and Down Breathing with Gratitude. Overall, the participants identified an average rating of agree to strongly agree that the online-delivered counseling intervention was a valuable experience for them.

Social validity measures from teachers, counselors, and/or parent/guardian reported high ratings of a mean score of 4.14-5 out of a 6-point Likert scale for the social validity scale and overall appropriateness of the intervention for the student involved. Participants' ratings were just slightly higher, ranging from 4.25-5.50 on the same scale (see Tables 12-17).

Overall, all four participants rated themselves unanimously as happier overall, grateful for who they are, supporting others who need help, asking for help when they need it, and getting better at maintaining grades than they were before the program (see Table 19).

Limitations and Directions for Future Research

This study aimed to meet current single-case design standards necessary to confirm a functional relation (Kratochwill et al., 2010) of having at least three replications where we had four participating students throughout all phases of the study's intervention. Attempts were made to control for threats to internal and external validity, for example, initiating random assignment of phases for the participants. However, this study was limited by several factors where some limitations of this study include the way of recruitment, the small sample size, and possible sample bias based on convenience sampling. The students who were asked to participate or students who showed an interest in participating were from the select school, limiting the population who could therefore be involved in the study. The population that was accessible and convenient for this study does not represent a population that may have the highest percentage of academic stress. Inclusion criteria may also have limited the number of interested participating students. The use of convenience sampling thus impacts external validity, limiting the generalizability of the findings to other populations. Participants were chosen by their teacher, counselor, or parent(s) who volunteered their student to be a part of the research study.

The limitation of individual results data from a single case dataset pertains only to each individual student participant. These research data did not produce the same results between participants and may not be synonymous to similar demographics and populations. The data received from the self-report questionnaires relied on study self-report where the participants' responses may have been influenced by gaps in memory or knowledge from week-to-week.

There was no access to educational records and academic grades of students in their academic courses; therefore, the researcher was actively relying on self-report and not verifying that each student was working on their select homework, GPA, and attendance-related goals.

Data relating to the perceptions of stress from family members, and student behavioral and attendance data were limited for the study because the researcher was not an employee of the school where the research took place. Self-reporting by student participants to the counselor and researcher may have been a limitation due to the students not being truthful or not feeling as if the relationship has developed enough trust at the point of the research intervention. Since the researcher was an outside entity of the school setting, there was limited access to the participating students during students' academic and free times, therefore, the lack of time the researcher could spend observing the students' classes were limited by these parameters and admitted entry from each teacher during their Zoom class time.

Observing student participants in a Zoom classroom environment during the transition period where students were attending school both at home and physically at school each week may have been limiting for data collection. Observing student participants during the height of a global pandemic may have also been limiting for data collection. Two additional factors relating to the above may include (1) the students not attending in person school on a consistent basis for about six months, since March of 2020, and adjusting from online to in-person learning week-in and week-out, and (2) when observers are observing the student participant on the online platform for 15-30 minutes each week the observer effect may cause the participant to alter behaviors because of the presence of an outside observer in their immediate online environment. Observer bias could have affected data measurement of academic engagement, respectful behaviors, and disruptive behaviors by the teachers and observers alike. Collecting data from students through teacher and counselor observation may have also limited the results of this study where qualitative data may have provided more in-depth exploration of participants' perceptions of academic stress.

Confounding variables such as family matters, friendships, other counseling related activities or events, social-emotional curriculum, etc., may have contributed to the ineffectiveness of the intervention on the students' overall academic engagement and perceptions of academic stress levels within this study. Future research may try to control for these factors. Furthermore, the use of stress reductions skills may have been affected by other variables such as involvement in physical activities outside of school or the intervention itself, involvement in clubs or other extracurricular activities.

Since limitations may have been found in the method of data collection, looking at the research questions through a qualitative lens or a case study design may have provided a more in-depth understanding of where perceived academic stress was stemming from for each individual participant by interviewing multiple persons close in contact with each student of interest. Alternate methods of data collection may have provided the researcher with more depth perceptions of stress from familial concerns, social issues, or external circumstances outside of the student's control. There may have also been limitations within the use of the survey instruments due to the interpretation being left to the participant based on the text and delivery of the questions being asked. If an in-depth interview were upheld with each participant, clarifying questions could then be addressed by the participant or researcher to clarify understanding. Utilizing the methodology of a single case research design may be appropriate for the current study while other methods of data collection may also serve as suitable designs to address the intended research questions. There may also be limitation in the scope and validity of the utilized survey instruments as well. The theoretical frameworks identified attending cognitive behavior therapeutic interventions, social cognitive theory, and the transactional theory of stress and

coping could be limitations as other theories could be chosen for similar studies to support the intervention and current study.

It is important to understand that there was a threat to experimental control since the counselor was aware of the study phases, questions to be asked during 1:1 intervention, and research questions identified before the study began. Experimental control may have been more valid if the counselor was blind to the phases or research questions.

Implications for Teaching, Research, Practice, and Theory

While there are many limitations, this study addressed a gap in the literature surrounding online-based counseling interventions to support academic stress. This study contributes to research relating to online-delivered stress-reduction interventions for youth at the school setting. There is a need for further exploration of online-delivered counseling interventions at the school setting to support academic related stress where interventions and strategies utilized within this study could be further explored to show effectiveness in different settings and with varying populations. This study adds to the current research by analyzing program completion and program fidelity and how these factors impact the overall outcome of student success in an online-delivered brief cognitive-behavioral counseling intervention. Attending to students' needs and experiences in the current study also supports the gap in the research by understanding what helped students succeed through an online-learning platform.

Since Participant 1 displayed high levels of academic engagement at baseline, future research may consider not accepting a participant showing ratings and observations with an already maximum academic engagement at baseline phase to continue to the intervention phase of the study. Generalizing the results would be a factor to support future research. This study was limited in the fact that there were two male and two female participants, where two participants

needed special education services and two were enrolled as general education students, and also the fact that all four students have been involved with previous or current mental health support at the time the intervention phases started. Generalizing the results to other populations of students with more diverse backgrounds, from various socio-economic backgrounds and ethnicities, and by including a greater number of students from different settings would be ideal to support this research in the future.

There were also limitations with the frequency of follow-up data, where there were fewer data points in the follow-up phases compared to the other phases of the research. Future research would look at adding at least two more data points from 5-week and 7-week follow up to support maintenance measure data collection in all three measures of DBR, SDO, and self-report; this would help to not restrict conclusions of maintenance of effects. The answers from the teacher, parent, and participant social validity survey answers would further support future research studies, taking into consideration questions where there were lower scores and qualitative data identified within the final comments of the measures. Working with different populations would support different perspectives relating to the outcome of the validity of the intervention with the participants involved.

Identifying a larger case study while comparing various classrooms or schools while implementing the interventions would support more consistency with stress relieving techniques. Also, having the stress relieving techniques in future studies be less variable may also support validity and follow-up use of strategies learned, repeating the skills more often may help student participants remember to utilize the techniques learned. Stress relieving techniques learned classroom or school wide may produce more buy in to support student engagement and overall lower students' perceptions of academic stress. Group buy-in to help engage with others and

having teachers actively support and model techniques in person or virtually may support greater effect sizes. Continued research on the effects of perceptions of academic stress and overall academic engagement will help support further conclusions about possible causality of changes.

This research contributed further implications to support contributions to the field through the use of short YouTube videos to support a wider audience outside of the middle school environment they were intended for within the study. The stress relieving curriculum and videos could be utilized to support staff, school teachers, school leaders, etc. to improve social-emotional well-being, confidence and/or confidence within various environments, or by looking at what the current study addressed, perceptions of stress as stress relates to the individuals' workspace, workplace, or working relationships. The videos created for the current study could also contribute as an active or available YouTube channel for middle school students in various locations, contributing to the field of social-emotional well-being, online-counseling interventions, and may even produce broader videos for wider audience viewing in the future because of their creation.

Future research may look at controlling for factors such as school-based or school-wide social-emotional curriculum and/or grade-level lessons. This may be done by incorporating a wider participating group and or groups to be involved within the online-delivered counseling intervention utilized within the current study. Future research may incorporate these interventions school or grade-level wide in lieu of other social-emotional and/or stress-reducing curriculum used. There may have been a difference for students when interacting with the intervention and skills while physically in school rather than online, therefore future research may look at comparing or contrasting the two different interventions within these parameters.

Conclusion

The goal of the study was to decrease participants' perceptions of academic stress while identifying their level of academic engagement throughout the phases of the online-delivered counseling intervention. This study contributes to the research in support of online-counseling and stress relief interventions while involved in online learning environments and supporting teacher and student awareness and connections to address and recognize academic engagement, respectful, and disruptive behaviors to support positive student outcomes.

Lazarus (1966) reported that stress is reflected by one's environment and concluded that individuals have the ability recognize they have the resources to cope, where Beck (1964) identified that one's perceptions of automatic thoughts influence behaviors. Counselors can incorporate cognitive behavioral interventions to help students better react to negative automatic thoughts after evaluation and identification of stressful situations to support emotions, behaviors, or reactions to (Beck, 1964). Where interactions between an individual and their environment can be supported to help regulate emotions, to help cope, and regulate distress (Lazarus & Folkman, 1984).

By increasing resources and strategies, individuals can recognize the coping resources they have access to and generate successful responses to stress to support more stable reactions to stressful situations. Bandura (1986) identified that social reinforcement on human behaviors can support interactions with their environment by encouraging the individual to ask for support, acknowledging their stressful situations by monitoring self-control and goal-setting. This study aimed at exploring students' perceptions of stress in relation to learned stress management skills and academic engagement behaviors during academic time. The (1) cognitive behavioral, (2) social cognitive, and (3) the transactional theory of stress and coping theories can be reflected

within the current study to conceptualize (1) how to support self-perception and perceived stress during stressful situations where the individual's beliefs may be negative, (2) understanding how the individual interprets a stressful situation in specific environments and looking at how that may affect their emotional responses, and (3) identifying the individual's intent to carry out necessary skills that are required to cope with stress and meet specific goals.

The need for this study was determined by focusing on how students perceived their academic stress along with supporting online-delivered CBT strategies to students to cope with their perceived stress in academic environments. Findings from this study will support my future work as a school counselor educator, clinical practicing counselor, and researcher by bringing recently found data and knowledge to guide school and community counselors in their careers. By examining perceptions of academic stress, counselors and educators may be able to better address the needs middle school aged youth have in a more proactive response relating to academic demands, stress, and engagement. This study supports a gap in literature relating to online counseling interventions in the middle school environment.

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Tables and Figures

Table 1

Demographic Profile of Participating School

Number of Classroom Teachers in the Study	5
Grade Levels of Participants in the Study	7 – 8
Total Students	4
Ethnically Diverse Students	1 (25%)
Participants Receiving Special Education Services	2 (50%)
Participants Eligible for Free or Reduced Lunch	1 (25%)

Table 2

Rates of *Systematic Direct Observation (SDO)* Probes and *Inter-observer Agreement (IOA)* Observations Across Study

	Baseline	Intervention	Follow-up	Total
Participant 1				
% SDO Probes	100%	100%	100%	100%
% IOA Observations	50%	60%	100%	70%
Participant 2				
% SDO Probes	100%	100%	100%	100%
% IOA Observations	50%	70%	100%	73%
Participant 3				
% SDO Probes	100%	100%	100%	100%
% IOA Observations	50%	80%	100%	77%
Participant 4				
% SDO Probes	100%	100%	100%	100%
% IOA Observations	50%	80%	100%	77%

	Baseline Totals	Intervention Totals	Follow-up Totals	Study Totals
% SDO Probes	100%	100%	100%	100%
% IOA Observations	50%	73%	100%	74%

Note: % SDO Probes refers to the % of DBR data points in which SDO probes were conducted. % IOA Observations refers to the % of SDO probes and procedural integrity (PI) checklists in which IOA data was collected.

Table 3

Direct Behavior Rating (DBR) Data across Phases and Participants

	Baseline	Intervention	Follow-Up
	M (SD) Range	*M (SD) Range*	*M (SD) Range*
Participant 1			
Acad. Engaged	100% *(0.00)* N/A	98.75% *(3.07)* 90-100	100%
Respectful	100% *(0.00)* N/A	98.75% *(3.30)* N/A	100%
Disruptive*	0.00% *(0.00)* N/A	0.00% *(0.00)* N/A	0.00%
Participant 2			
Acad. Engaged	84.3% *(16.8)* 30-100	90.0% *(7.07)* 80-100	70.0%
Respectful	92.1% *(8.60)* 80-100	95.0% *(10.0)* 70-100	90.0%
Disruptive*	13.6% *(17.2)* (0-50)	13.6% *(12.2)* 0-50	10.0%
Participant 3			
Acad. Engaged	88.9% *(14.7)* 40-100	90.0% *(7.07)* 80-100	100%
Respectful	97.4% *(6.34)* 70-100	100% *(0.00)* N/A	100%
Disruptive*	8.42% *(14.4)* 0-60	2.50% *(4.33)* 0-10	10.0%
Participant 4			
Acad. Engaged	79.6% *(20.5)* 30-100	85.0% *(10.0)* 70-100	80.0%
Respectful	98.6% *(6.00)* 70-100	98.6% *(3.31)* 90-100	90.0%
Disruptive*	11.7% *(19.5)* 0-60	2.50% *(4.33)* 0-10	0.00%

**Note:* for the *disruptive* scale, lower scores are desirable.

Table 4

Systematic Direct Observation (SDO) Data across Phases and Participants

	Baseline	Intervention	Follow-Up*
	M (SD) Range	*M (SD) Range*	*M (SD) Range*
Participant 1			
Acad. Engaged	99.8% *(0.53)* 98.3-100	99.4% *(1.65)* 95-100	100%
Respectful	99.8% *(0.54)* 98.3-100	100% *(0.00)* N/A	100%
Disruptive*	0.18% *(0.51)* 0-1.6	0.00% *(0.00)* N/A	0.00%
Participant 2			
Acad. Engaged	88.1% *(19.5)* 25-100	96.8% *(5.24)* 80-100	80.0%
Respectful	90.8% *(14.3)* 50-100	98.1% *(5.16)* 84.4-100	90.0%
Disruptive*	10.3% (*14.9)* 0-50	1.93% *(5.13)* 0-15.5	10.0%
Participant 3			
Acad. Engaged	90.6% *(18.3)* 20-100	90.4% *(6.95)* 80-100	97.0%
Respectful	91.0% *(17.9)* 20-100	100% *(0.00)* N/A	100%
Disruptive*	8.97% *(17.9)* 0-79.1	0.00% *(0.00)* N/A	2.00%
Participant 4			
Acad. Engaged	77.5% *(20.8)* 35-100	88.9% *(5.97)* 77-100	70.0%
Respectful	86.5% *(21.0)* 35-100	96.3% *(4.84)* 90-100	80.0%
Disruptive*	11.6% *(20.3)* 0-72.5	1.25% *(3.31)* 0-10	5.00%

**Note:* for the *disruptive* scale, lower scores are desirable. One SDO was completed for each student in Follow-up; therefore, standard deviations and ranges are not reported for that phase.

Table 5

Participant Self-Report Data across Phases and Participants

	Baseline	Intervention	Follow-Up*
	M (SD) Range	*M (SD) Range*	*M (SD) Range*
Participant 1			
Acad. Engaged	88.9% *(18.5)* 50-100	93.8% *(4.84)* 90-100	100%
Respectful	100% *(0.00)* N/A	100% *(0.00)* N/A	100%
Disruptive*	0.00% *(0.00)* N/A	0.00% *(0.00)* N/A	0.00%
Participant 2			
Acad. Engaged	72.9% *(16.2)* 40-90	83.8% *(6.96)* 70-90	80.0%
Respectful	80.7% *(19.4)* 50-100	95.0% *(7.07)* 80-100	80.0%
Disruptive*	7.14% *(8.81)* 0-20	7.50% *(4.33)* 0-10	10.0%
Participant 3			
Acad. Engaged	91.1% *(8.99)* 70-100	86.3% *(6.96)* 70-90	100%
Respectful	95.8% *(4.89)* 90-100	91.3% *(3.31)* 90-100	100%
Disruptive*	0.00% *(0.00)* N/A	5.00% *(7.07)* 0-20	0.00%
Participant 4			
Acad. Engaged	70.8% *(16.6)* 40-100	58.8% *(3.31)* 50-60	70.0%
Respectful	85.0% *(15.0)* 70-100	86.3% *(25.0)* 30-100	100.0%
Disruptive*	2.50% *(10.1)* 0-50	3.75% *(6.96)* 0-20	0.00%

**Note:* for the *disruptive* scale, lower scores are desirable. One DBR was completed for each student in Follow-up; therefore, standard deviations and ranges are not reported for that phase.

Table 6

Effect Sizes for Academic Engagement as Measured by *Direct Behavior Rating (DBR), Systematic Direct Observation (SDO), and Participant Self-Report Ratings*

		Intervention to Baseline			Intervention to Follow-up			Baseline to Follow-up		
		Value	Qualitative Descriptor	Direction of Effect	Value	Qualitative Descriptor	Direction of Effect	Value	Qualitative Descriptor	Direction of Effect
Participant 1										
DBR	Cohen's *d*	0.53	1st quartile	Positive	-0.55	1st quartile	Negative	N/A	N/A	N/A
	Tau-U*	-0.13	Trivial Effect	Negative						
SDO	Cohen's *d*	0.31	1st quartile	Positive	-0.51	1st quartile	Negative	-0.53	1st quartile	Negative
	Tau-U*	-0.03	Trivial Effect	Negative						
Self-Report										
	Cohen's *d*	-0.36	1st quartile	Negative	-1.81	1st quartile	Negative	-0.85	1st quartile	Negative
	Tau-U**	-0.44	Small Effect	Negative						
Participant 2										
DBR	Cohen's *d*	-0.60	1st quartile	Negative	4.00	3rd quartile	Positive	1.20	1st quartile	Positive
	Tau-U*	0.14	Trivial Effect	Positive						
SDO	Cohen's *d*	0.21	1st quartile	Positive	4.53	3rd quartile	Positive	0.59	1st quartile	Positive
	Tau-U*	0.29	Small Effect	Positive						
Self-Report										
	Cohen's *d*	-0.87	1st quartile	Negative	0.77	1st quartile	Positive	-0.62	1st quartile	Negative
	Tau-U*	0.36	Small Effect	Positive						
Participant 3										
DBR	Cohen's *d*	-0.10	1st quartile	Negative	-2.00	1st quartile	Negative	-1.07	1st quartile	Negative
	Tau-U*	-0.09	Trivial Effect	Negative						
SDO	Cohen's *d*	0.01	1st quartile	Positive	-1.34	1st quartile	Negative	-0.49	1st quartile	Negative
	Tau-U**	-0.59	Small Effect	Negative						
Self-Report										
	Cohen's *d*	0.60	1st quartile	Positive	-2.78	3rd quartile	Negative	-1.40	1st quartile	Negative
	Tau-U*	-0.35	Small Effect	Negative						
Participant 4										
DBR	Cohen's *d*	-0.33	1st quartile	Negative	0.70	1st quartile	Positive	-0.03	1st quartile	Negative

	Tau-U**	-0.47	Small Effect	Negative						
SDO	Cohen's *d*	-0.74	1st quartile	Negative	4.47	3rd quartile	Positive	0.51	1st quartile	Positive
	Tau-U**	-0.27	Small Effect	Negative						
Self-Report										
	Cohen's *d*	1.00	1st quartile	Positive	-4.79	3rd quartile	Negative	0.07	1st quartile	Positive
	Tau-U*	-0.52	Medium Effect	Negative						

Note: Cohen's *d*, used the following benchmark criteria: 1st quartile = < 2.06, Median = 2.06-2.73, and 3rd quartile = < 2.73 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html
*Tau U calculations acquired from http://www.singlecaseresearch.org/calculators/tau-u
Using Tau-U effect size criteria: Small = 65% or lower, Medium = 66% - 92%, Large = 93% - 100%
**Tau U was corrected for baseline trend due to significant p-value of </= .05 (Brossart et al., 2018)
Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis.* (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Tuesday 25th May 2021. Available from singlecaseresearch.org
Tau-U effect sizes were not calculated for DBR's, SDO's, or Participant Self Report for follow-up phases as there were only one DBR and SDO data point for each participant for this phase. These instead were assessed using visual analysis (see Tables 8 & 9).

Table 7

Summary of Change in Dependent Variables from Baseline to Intervention

	Level[a]	Cohen's *d* [b]*	Immediacy[c]	Consistency[d]	Overlap[e]**	Trend[f]
Participant 1						
DBR						
Acad. Engage.	Decreasing	(0.53) 1st quartile, positive	No change	Declined	94%	Zero-celerating trend to zero-celerating trend
Respectful	Decreasing	(0.51) 1st quartile, positive	No change	Declined	94%	Zero-celerating trend to zero accelerating trend
Disruptive	No change	N/A	No change	No change	100%	Zero-celerating trend to zero-celerating trend
SDO						
Acad. Engage.	Decreasing	(0.31) 1st quartile, positive	No change	Declined	100%	Zero-celerating trend to zero-celerating trend
Respectful	Improving	(-0.52) 1st quartile, negative	No change	Improved	100%	Zero-celerating trend to zero-celerating trend
Disruptive	Decreasing	(0.50) 1st quartile, positive	No change	Improved	94%	Zero-celerating trend to zero-celerating trend
Self-Report						
Acad. Engage.	Improving	(-0.36) 1st quartile, negative	Decrease	Improved	89%	Stable accelerating trend to zero-celerating trend
Respectful	No change	N/A	No change	No change	100%	Zero-celerating

						trend to zero-celerating trend
Disruptive	No change	N/A	No change	No change	100%	Zero-celerating trend to zero-celerating trend
Participant 2						
DBR						
Acad. Engage.	Improving	(-0.60) 1st quartile, negative	Increase	Improved	96%	Variable accelerating trend to variable decelerating trend
Respectful	Improving	(-0.21) 1st quartile, negative	Increase	Declined	95%	Variable zero trend to zero-celerating trend
Disruptive	Decreasing	(0.75) 1st quartile, positive	Decrease	Improved	86%	Variable decelerating trend to stable decelerating trend
SDO						
Acad. Engage.	Improving	(0.21) 1st quartile, negative	No change	Improved	96%	Variable accelerating trend to slight decelerating trend
Respectful	Improving	(-0.68) 1st quartile, negative	No change	Improved	95%	Variable to stable accelerating trend to zero-celerating trend
Disruptive	Decreasing	(0.75) 1st quartile, positive	Decrease	Improved	87%	Variable decelerating trend to zero-celerating trend
Self-Report						
Acad. Engage.	Improving	(-0.87) 1st quartile, positive	No change	Improved	96%	Variable accelerating trend to stable accelerating trend
Respectful	Improving	(-0.98) 1st quartile, negative	Decrease	Improved	77%	Variable accelerating trend to stable accelerating trend

Disruptive	Improving	(-0.05) 1st quartile, negative	Increase	Improved	81%	Variable decelerating trend to slight accelerating trend
Participant 3						
DBR						
Acad. Engage.	Improving	(-0.10) 1st quartile, negative	Decrease	Improved	100%	Variable accelerating trend to variable decelerating trend
Respectful	Improving	(-0.58) 1st quartile, negative	No change	Improved	100%	Zero-celerating trend to zero-celerating trend
Disruptive	Decreasing	(0.56) 1st quartile, positive	No change	Improved	85%	Variable decelerating trend to zero-celerating trend
SDO						
Acad. Engage.	Decreasing	(0.01) 1st quartile, positive	Decrease	Improved	100%	Variable accelerating trend to slight variable decelerating trend
Respectful	Improving	(-0.71) 1st quartile, negative	No change	Improved	74%	Variable to stable accelerating trend to zero-celerating trend
Disruptive	Decreasing	(0.71) 1st quartile, positive	Decrease	Improved	73%	Variable to stable decelerating trend to zero-celerating trend
Self-Report						
Acad. Engage.	Decreasing	(0.60) 1st quartile, positive	Decrease	Improved	100%	Variable increase Trend to stable increase trend
Respectful	Decreasing	(1.09) 1st quartile,	Decrease	Improved	100%	Stable accelerating

		positive				trend to zero-celerating trend
Disruptive	Improving	(-1.00) 1st quartile, negative	Increase	Declined	89%	Zero-celerating trend to zero-celerating trend
Participant 4						
DBR						
Acad. Engage.	Improving	(-0.33) 1st quartile, negative	Decrease	Improved	100%	Variable accelerating trend to variable accelerating trend
Respectful	No change	(0.00) 1st quartile, N/A	No change	Improved	97%	Zero-celerating trend to zero-celerating trend
Disruptive	Decreasing	(0.65) 1st quartile, positive	No change	Improved	81%	Variable to stable decelerating trend to zero-celerating trend
SDO						
Acad. Engage.	Improving	(-0.75) 1st quartile, negative	Decrease	Improved	100%	Variable accelerating trend to stable accelerating trend
Respectful	Improving	(-0.64) 1st quartile, negative	Increase	Improved	88%	Variable slight accelerating trend to variable decelerating trend
Disruptive	Decreasing	(0.71) 1st quartile, positive	Increase	Improved	78%	Variable to stable decelerating trend to zero-celerating trend
Self-Report						
Acad. Engage.	Decreasing	(1.00) 1st quartile, positive	Decrease	Declined	100%	Variable zero trend to stable zero trend
Respectful	Improving	(-0.06) 1st quartile, negative	Decrease	Declined	100%	Variable accelerating trend to stable

Disruptive	Improving	(-0.14) 1st quartile, negative	Increase	Declined	97%	accelerating trend Zero-celerating trend to zero-celerating trend

Note: DBR refers to Direct Behavior Rating. SDO refers to Systematic Direct Observation. N/A: Effect sizes were not calculated for secondary dependent variables. A decrease in level and immediacy on the Disruptive scale of DBR is desirable.
Level[a]*:* Improving, decreasing, or no change in mean value of baseline to mean value of intervention phase
Cohen's *d*[b]*: used the following benchmark criteria: 1st quartile = < 2.06, Median = 2.06-2.73, and 3rd quartile = < 2.73 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html
Immediacy[c]*:* Increase, Decrease, of No Change between mean of final 3 baseline DBR data points & mean of first 3 intervention DBR data points or between final baseline SDO data point and first intervention SDO data point
Consistency[d]*:* Improved, Declined, or No Change (using standard deviation as measure)
Overlap[e]**: Percentage of baseline data points and intervention data points that are overlapping
Trend[f]*:* Comparison of baseline trend to intervention trend utilizing the split-middle technique
Cited from Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis.* (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Tuesday 25th May 2021. Available from singlecaseresearch.org

Table 8

Summary of Change in Dependent Variables from Intervention to Follow Up

	Level[a]	Cohen's *d*[b]*	Immediacy[c]	Consistency[d]	Overlap[e]**	Trend[f]
Participant 1						
DBR						
Acad. Engaged	Improving	(-0.55) 1st quartile, negative	N/A	N/A	89%	N/A
SDO						
Acad. Engaged	No change	(0.33) 1st quartile, positive	N/A	N/A	89%	N/A
Self-Report						
Acad. Engaged	Improving	(-1.81) 1st quartile, negative	N/A	N/A	44%	N/A
Participant 2						
DBR						
Acad. Engaged	Decreasing	(4.00) 3rd quartile, positive	N/A	N/A	0%	N/A
SDO						
Acad. Engaged	Decreasing	(4.53) 3rd quartile, positive	N/A	N/A	0%	N/A
Self-Report						
Acad. Engaged	Decreasing	(0.77) 1st quartile, positive	N/A	N/A	44%	N/A
Participant 3						
DBR						
Acad. Engaged	Improving	(-2.00) 1st quartile, negative	N/A	N/A	33%	N/A
SDO						
Acad. Engaged	No change	(-1.34) 1st quartile, negative	N/A	N/A	33%	N/A
Self-Report						
Acad. Engaged	Improving	(-2.78) 3rd quartile, negative	N/A	N/A	0%	N/A

Participant 4						
DBR						
Acad. Engaged	Decreasing	(0.70) 1st quartile, positive	N/A	N/A	56%	N/A
SDO						
Acad. Engaged	Decreasing	(4.47) 3rd quartile, positive	N/A	N/A	0%	N/A
Self-Report						
Acad. Engaged	Improving	(-4.79) 3rd quartile, negative	N/A	N/A	0%	N/A

Note: DBR refers to Direct Behavior Rating. SDO refers to Systematic Direct Observation. N/A: Not applicable to follow-up as there were only one data point for follow up from each of the DBR, SDO, and Self-Report measures
Level[a]*:* Improving, decreasing, or no change in mean value of baseline to mean value of intervention phase
Cohen's *d* [b]*: used the following benchmark criteria: 1st quartile = < 2.06, Median = 2.06-2.73, and 3rd quartile = < 2.73 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html
Immediacy[c]*:* Increase, Decrease, of No Change between mean of final 3 baseline DBR data points & mean of first 3 intervention DBR data points or between final baseline SDO data point and first intervention SDO data point
Consistency[d]*:* Improved, Declined, or No Change (using standard deviation as measure)
Overlap[e]***: Percentage of baseline data points and intervention data points that are overlapping
Trend[f]*:* Comparison of baseline trend to intervention trend utilizing the split-middle technique
Cited from Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis.* (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Tuesday 25th May 2021. Available from singlecaseresearch.org

Table 9

Summary of Change in Dependent Variables from Baseline to Follow Up

	Level[a]	Cohen's *d* [b]*	Immediacy[c]	Consistency[d]	Overlap[e]**	Trend[f]
Participant 1						
DBR						
Acad. Engaged	No change	N/A	N/A	N/A	100%	N/A
SDO						
Acad. Engaged	Improving	(-0.53) 1st quartile, negative	N/A	N/A	90%	N/A
Self-Report						
Acad. Engaged	No change	(-0.85) 1st quartile, negative	N/A	N/A	70%	N/A
Participant 2						
DBR						
Acad. Engaged	Decreasing	(1.20) 1st quartile, positive	N/A	N/A	20%	N/A
SDO						
Acad. Engaged	Decreasing	(0.59) 1st quartile, positive	N/A	N/A	13%	N/A
Self-Report						
Acad. Engaged	Improving	(-0.62) 1st quartile, negative	N/A	N/A	40%	N/A
Participant 3						
DBR						
Acad. Engaged	Improving	(-1.07) 1st quartile, negative	N/A	N/A	45%	N/A
SDO						
Acad. Engaged	Improving	(-0.49) 1st quartile, negative	N/A	N/A	45%	N/A
Self-Report						
Acad. Engaged	Improving	(-1.40) 1st quartile, negative	N/A	N/A	33%	N/A

Participant 4						
DBR						
Acad. Engaged	Decreasing	(-0.03) 1st quartile, negative	N/A	N/A	48%	N/A
SDO						
Acad. Engaged	Improving	(0.51) 1st quartile, positive	N/A	N/A	36%	N/A
Self-Report						
Acad. Engaged	Decreasing	(0.07) 1st quartile, positive	N/A	N/A	56%	N/A

Note: DBR refers to Direct Behavior Rating. SDO refers to Systematic Direct Observation. N/A: Not applicable to follow-up as there were only one data point for follow up from each of the DBR, SDO, and Self-Report measures
Level[a]*:* Improving, decreasing, or no change in mean value of baseline to mean value of intervention phase
Cohen's *d* [b]*: used the following benchmark criteria: 1st quartile = < 2.06, Median = 2.06-2.73, and 3rd quartile = < 2.73 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html
Immediacy[c]*:* Increase, Decrease, of No Change between mean of final 3 baseline DBR data points & mean of first 3 intervention DBR data points or between final baseline SDO data point and first intervention SDO data point
Consistency[d]*:* Improved, Declined, or No Change (using standard deviation as measure)
Overlap[e]**: Percentage of baseline data points and intervention data points that are overlapping
Trend[f]*:* Comparison of baseline trend to intervention trend utilizing the split-middle technique
Cited from Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis.* (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Tuesday 25th May 2021. Available from singlecaseresearch.org

Table 10

Intervention *Procedural Integrity (PI)* Data across Participants

	M	*(SD)*	*Range*
Participant 1	95.0%	(0.07)	85-100
Participant 2	99.2%	(0.02)	92.8-100
Participant 3	100%	N/A	N/A
Participant 4	93.3%	(0.07)	85-100

Note: Standard deviation and range are not reported for Student 3, as all PI values were 100%.

Table 11

Inter-observer Agreement (IOA) for *Systematic Direct Observation (SDO)* across study.

	Interval-by-Interval			Kappa		
	M	*(SD)*	*Range*	*M*	*(SD)*	*Range*
Participant 1	98.5%	(1.40)	95.0-100%	0.99	(0.01)	0.95-1.00
Participant 2	90.8%	(3.05)	84.7-97.5%	0.72	(0.14)	0.45-1.00
Participant 3	92.3%	(4.19)	85.4-98.3%	0.80	(0.14)	0.48-1.00
Participant 4	86.8%	(3.72)	75.3-95-2%	0.83	(0.09)	0.63-0.96

Table 12

Means and Standard Deviations for Post-intervention Social Validity Measure: *Teacher, Counselor, and/or Parent/Guardian, Section One* (n = 12) & *Participant, Section One* (n = 4)

Question	*Teacher, Counselor and/or Parent/Guardian* *M*	(*SD*)	*Participant* *M*	(*SD*)
The online-delivered counseling intervention …				
1. … was a positive experience for the *student/me*	5.00	(0.58)	5.25	(1.30)
2. … helped the student become aware of *his/her/my* emotions	4.67	(0.75)	5.00	(0.71)
3. … has helped the student become more aware of *his/her/my* thoughts and feelings	4.83	(0.69)	4.75	(0.43)
4. … has helped *the student/me* be more present in his/her life	4.92	(0.76)	5.50	(0.50)
5. … has helped *the student/me* cope with stress and negative thinking	4.75	(1.01)	5.25	(0.83)
6. … has helped *the student/me* act with increased awareness	4.67	(0.62)	4.25	(1.30)
7. … has helped *the student/me* become more aware of his/her body	4.42	(0.76)	5.50	(0.50)
8. … has helped *the student/me* be less stressed when preparing for and taking tests	4.58	(0.86)	5.25	(0.43)
9. … has helped *the student/me* sleep at night (reported from guardian/participant only)	4.14	(0.76)	4.50	(2.06)
10. … has enhanced *the student's/my* pleasure and enjoyment of life	4.67	(0.75)	4.50	(0.86)
11. … has helped *the student/me* focus on *his/her/my* schoolwork	5.00	(1.00)	4.75	(0.83)
12. … has enhanced *the student's/my* participation in athletics, music, and/or performing arts	4.25	(0.83)	5.25	(0.83)
13. … has made *the student/me* be less afraid of other people's judgments	4.42	(0.95)	3.75	(1.64)

Note: Items on the post-intervention social validity measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 13

Means and Standard Deviations for Post-intervention Social Validity Measure: *Teacher, Counselor, and/or Parent/Guardian, Section Two* (n = 12)

Question	*M*	(*SD*)
Overall, the student had a positive reaction to the online-delivered counseling intervention.	5.00	(0.71)
The online-delivered counseling intervention was a valuable experience for the student.	4.92	(0.64)
All students at our school can learn stress reduction skills and use them in their daily life.	5.67	(0.47)
I think other students would benefit from learning stress reduction skills.	5.67	(0.47)
The online-delivered counseling intervention should be a requirement for all students at our school.	4.25	(1.01)
The online-delivered counseling intervention has been as valuable as academic classes at our school.	4.58	(1.11)
I think the student will continue to practice stress reduction skills and strategies in his/her future.	4.58	(0.95)
I would like to learn more about stress reduction skills and strategies to support my own students/team/family.	4.58	(0.76)

Note: Items on the post-intervention social validity measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 14

Means and Standard Deviations for Post-intervention Social Validity Measure: *Participant: Section Two* (n = 4)

Question	*M*	(*SD*)
The counseling intervention was presented and explained to me clearly	5.25	(0.83)
What I learned in the course was easy to use and apply in situations in my life	5.00	(0.71)
I enjoyed the stress reduction practices I learned and will continue to use them in the future	5.25	(0.83)
In a typical week I practice stress reduction strategies before a test, class presentation, or project	3.75	(1.09)
The activities we did relating to breathing should continue to be used in the counseling intervention	5.25	(0.83)
In a typical week I practice stress reduction strategies before going to sleep at night	4.50	(0.50)
The activities we engaged in served as a good resource	5.25	(0.83)
The practices I learned were easy to understand	5.50	(0.87)
The hands-on practice I was involved in helped me be less stressed in class	4.75	(1.30)

Note: Items on the post-intervention social validity measure were rated on a 1-6 scale (1=Strongly Disagree, 6=Strongly Agree). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 15

Means and Standard Deviations for Post-intervention Social Validity Measure: *Participant, Stress Reduction Practice* (n = 4)

Question	*M*	(*SD*)
In a typical week I practice stress reduction strategies when walking around campus/school	2.25	(1.30)
In a typical week I practice stress reduction strategies when eating meals	1.25	(0.43)

Note: Items on this section of the post-intervention social validity measure were rated on a 1-4 scale (1 = None, 2 = 1-2 times, 3 = 3-5 times, 4 = 6 or more times). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 16

Means and Standard Deviations for Post-intervention Social Validity Measure: *Participant, Ratings of Taught Stress Reduction Strategies* (n = 4)

Question	*M*	(*SD*)
Relaxation exercise #1: Three Deep Breaths Exercise	3.00	(0.71)
Relaxation exercise #2: Three Deep Breaths & Happy Place/Space Visualization	3.75	(0.43)
Relaxation Exercise #3: Three Deep Breaths exercise with positive affirmations	2.75	(0.43)
Awareness exercise #1: inSPIRE Check-in	2.75	(0.83)
Awareness exercise #2: 5+1=Right Now Awareness	2.50	(0.50)
Awareness exercise #3: inSPIRE Check In & 5+1=Right Now Awareness	2.75	(0.83)
Imagery exercise #1: Up & Down Breathing	4.00	(0.00)
Imagery exercise #2: Up & Down Breathing with gratitude	3.75	(0.43)

Note: Items on this section of the post-intervention social validity measure were rated on a 1-4 scale (1 = Not good, 2 = Fair, 3 = Good, 4 = Very Good). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 17

Means and Standard Deviations for Post-intervention Social Validity Measure: *Participant, Section Three* (n = 4)

Question	*M*	(*SD*)
Overall, I had a positive reaction to the online-delivered counseling intervention	5.75	(0.43)
The online-delivered counseling intervention was a valuable experience for me	5.75	(0.43)
All students at our school can learn stress reduction skills and use them in their daily life	5.00	(0.71)
I think my friends would benefit from learning stress reduction skills	5.50	(0.50)
The online-delivered counseling intervention should be a requirement for all students at our school	5.50	(0.50)
The online-delivered counseling intervention has been as valuable as academic classes at our school	5.00	(0.71)
I will continue to practice stress reduction skills in the future	5.50	(0.87)
I would like to learn more about stress reduction skills and strategies	4.50	(1.12)

Note: Items on the post-intervention social validity measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). Assessment adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Table 18

Results for Post Intervention Maintenance Measure: *Participants & Teachers/Parents* (n = 9)

Question *I am (student response)... **OR**, The student is (teacher/parent's response)...*	Yes	No
1. Still practicing some of the stress reducing techniques I or they learned from the online-delivered counseling intervention.	78%	22%
2. Happier overall.	89%	11%
3. Motivated to participate in class.	78%	22%
4. Using time-management techniques.	56%	44%
5. Talking to a trusted adult more regularly.	78%	22%
6. Seeking out a peer for support more regularly.	44%	56%
7. Less stressed overall.	67%	44%
8. Grateful for who I am/they are.	100%	0%
9. Supportive to others who need help.	78%	22%
10. Asking for help when I or they need(s) it.	89%	11%
11. Participating in class more than I or they was before the program.	78%	22%
12. Getting better or maintaining grades than I or they was before the program.	89%	11%

Note: Items on the post-intervention maintenance measure were rated on a “yes” or “no” rating scale.

Table 19

Results for Post Intervention Maintenance Measure: *Participant* (n = 4)

Question *I am (student response)…*	Yes	No
1. Still practicing some of the stress reducing techniques I or they learned from the online-delivered counseling intervention.	75%	25%
2. Happier overall.	100%	0%
3. Motivated to participate in class.	75%	25%
4. Using time-management techniques.	50%	50%
5. Talking to a trusted adult more regularly.	75%	25%
6. Seeking out a peer for support more regularly.	50%	50%
7. Less stressed overall.	75%	25%
8. Grateful for who I am/they are.	100%	0%
9. Supportive to others who need help.	100%	0%
10. Asking for help when I or they need(s) it.	100%	0%
11. Participating in class more than I or they was before the program.	75%	25%
12. Getting better or maintaining grades than I or they was before the program.	100%	0%

Note: Items on the post-intervention maintenance measure were rated on a “yes” or “no” rating scale.

Table 20

Results for Post Intervention Maintenance Measure: *Parent or Teacher* (n = 5)

Question *The student is (teacher/parent's response)...*	Yes	No
1. Still practicing some of the stress reducing techniques I or they learned from the online-delivered counseling intervention.	80%	20%
2. Happier overall.	80%	20%
3. Motivated to participate in class.	80%	20%
4. Using time-management techniques.	60%	40%
5. Talking to a trusted adult more regularly.	80%	20%
6. Seeking out a peer for support more regularly.	40%	60%
7. Less stressed overall.	60%	40%
8. Grateful for who I am/they are.	100%	0%
9. Supportive to others who need help.	60%	40%
10. Asking for help when I or they need(s) it.	80%	20%
11. Participating in class more than I or they was before the program.	80%	20%
12. Getting better or maintaining grades than I or they was before the program.	80%	20%

Note: Items on the post-intervention maintenance measure were rated on a “yes” or “no” rating scale.

Table 21
Means and Standard Deviations for Perceptions of Academic Stress Inventory: *Participant 1* (Baseline = 4, Intervention = 9, Follow up = 1)

Question	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
1. I am confident that I will be a successful student in this class	4.50 (0.50)	5.40 (0.50)	5.00 (0.00)
2. I am confident that I will be successful in my future career	4.50 (0.87)	5.10 (0.57)	5.00 (0.00)
3. I can make academic decisions easily	3.25 (0.43)	2.78 (0.63)	3.00 (0.00)
4. The time that I have for my classwork and homework is enough time to finish projects/assignments, etc.	2.00 (0.71)	2.00 (0.94)	3.00 (0.00)
5. I have enough time to relax after school	2.75 (1.09)	3.22 (0.79)	4.00 (0.00)
6. My teachers are critical of my academic performance (they pick out my flaws & judge my academic work)*	1.00 (0.00)	1.56 (0.96)	3.00 (0.00)
7. I fear failing courses this year*	3.75 (1.92)	4.67 (2.00)	5.00 (0.00)
8. I think that when I worry about tests it means I have a weakness of character*	2.75 (1.79)	5.67 (0.47)	6.00 (0.00)
9. Teachers have unrealistic expectations of me*	1.25 (0.43)	1.00 (0.00)	1.00 (0.00)
10. The size of the class workload is excessive (too much)*	3.00 (0.00)	2.78 (1.31)	2.00 (0.00)
11. I believe that the amount of homework assigned is too much*	3.25 (1.64)	3.78 (1.13)	3.00 (0.00)
12. I am unable to catch up if I get behind on work*	2.00 (1.22)	1.67 (3.11)	5.00 (0.00)
13. The unrealistic expectations of my parents stresses me out*	3.75 (0.83)	3.11 (1.20)	5.00 (0.00)
14. Competition with my peers for grades is quite intense*	5.75 (0.43)	6.00 (0.00)	6.00 (0.00)
15. This class's test questions are usually difficult*	4.25 (0.83)	4.78 (0.63)	5.00 (0.00)
16. This class's test time is too short to be able to complete the answers (not enough time to finish the test)*	4.00 (0.71)	5.00 (0.48)	4.00 (0.00)
17. Testing times are very stressful to me*	2.25 (1.09)	1.89 (0.87)	3.00 (0.00)
18. Even if I pass my tests in this class, I am worried about getting into high school or college*	1.25 (0.43)	1.56 (1.26)	2.00 (0.00)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). *Questions 6-18 are scored in reverse, where a higher rating indicates more stress on the participant in terms of each factor.

Table 22

Means and Standard Deviations for Perceptions of Academic Stress Inventory Factors: *Participant 1* (Baseline = 4, Intervention = 9, Follow up = 1)

Factor	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
Academic Self-Perception	4.00 (0.31)	4.50 (0.25)	4.50 (0.87)
Time Constraints	2.40 (0.29)	2.58 (0.24)	2.60 (1.36)
Pressures to Perform	3.10 (0.42)	3.64 (0.30)	4.60 (1.36)
Perceptions of Workload & Exams	2.94 (1.16)	3.22 (0.27)	3.00 (1.22)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree).

Table 23
Means and Standard Deviations for Perceptions of Academic Stress Inventory: *Participant 2* (Baseline = 4, Intervention = 8, Follow up = 1)

Question	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
1. I am confident that I will be a successful student in this class	2.25 (0.03)	3.63 (0.48)	4.00 (0.00)
2. I am confident that I will be successful in my future career	3.75 (0.43)	3.63 (0.86)	4.00 (0.00)
3. I can make academic decisions easily	1.25 (0.43)	2.50 (0.87)	3.00 (0.00)
4. The time that I have for my classwork and homework is enough time to finish projects/assignments, etc.	1.75 (0.43)	2.75 (1.09)	2.00 (0.00)
5. I have enough time to relax after school	2.50 (0.50)	2.88 (0.93)	2.00 (0.00)
6. My teachers are critical of my academic performance (they pick out my flaws & judge my academic work)*	3.50 (1.12)	2.13 (.60)	1.00 (0.00)
7. I fear failing courses this year*	4.75 (2.17)	4.88 (0.60)	5.0 (0.00)
8. I think that when I worry about tests it means I have a weakness of character*	5.25 (0.83)	1.75 (0.43)	2.00 (0.00)
9. Teachers have unrealistic expectations of me*	3.25 (0.43)	3.00 (0.71)	2.00 (0.00)
10. The size of the class workload is excessive (too much)*	4.00 (1.22)	3.38 (.1.11)	3.00 (0.00)
11. I believe that the amount of homework assigned is too much*	4.50 (0.50)	4.50 (1.22)	5.00 (0.00)
12. I am unable to catch up if I get behind on work*	5.00 (0.00)	3.75 (1.64)	4.00 (0.00)
13. The unrealistic expectations of my parents stresses me out*	5.75 (0.43)	6.00 (0.00)	6.00 (0.00)
14. Competition with my peers for grades is quite intense*	.75 (1.79)	1.13 (0.33)	2.00 (0.00)
15. This class's test questions are usually difficult*	4.75 (1.09)	3.13 (1.17)	4.00 (0.00)
16. This class's test time is too short to be able to complete the answers (not enough time to finish the test)*	4.75 (0.43)	4.00 (0.71)	2.00 (0.00)
17. Testing times are very stressful to me*	5.75 (0.43)	4.50 (0.50)	2.00 (0.00)
18. Even if I pass my tests in this class, I am worried about getting into high school or college*	4.25 (0.83)	3.63 (1.11)	4.00 (0.00)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). *Questions 6-18 are scored in reverse, where a higher rating indicates more stress on the participant in terms of each factor.

Table 24

Means and Standard Deviations for Perceptions of Academic Stress Inventory Factors: *Participant 2* (Baseline = 4, Intervention = 8, Follow up = 1)

Factor	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
Academic Self-Perception	3.00 (1.80)	3.66 (1.10)	4.00 (0.71)
Time Constraints	3.45 (1.32)	3.28 (1.18)	2.40 (0.80)
Pressures to Perform	4.60 (1.62)	3.10 (1.89)	2.60 (1.74)
Perceptions of Workload & Exams	4.38 (0.99)	3.66 (1.27)	4.00 (0.71)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree).

Table 25
Means and Standard Deviations for Perceptions of Academic Stress Inventory: *Participant 3* (Baseline = 4, Intervention = 9, Follow up = 1)

Question	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
1. I am confident that I will be a successful student in this class	4.75 (0.43)	5.22 (0.42)	5.00 (0.00)
2. I am confident that I will be successful in my future career	6.00 (0.00)	6.00 (0.00)	6.00 (0.00)
3. I can make academic decisions easily	4.00 (0.71)	4.11 (0.74)	5.00 (0.00)
4. The time that I have for my classwork and homework is enough time to finish projects/assignments, etc.	5.50 (0.87)	6.00 (0.00)	6.00 (0.00)
5. I have enough time to relax after school	4.25 (1.30)	3.78 (0.92)	5.00 (0.00)
6. My teachers are critical of my academic performance (they pick out my flaws & judge my academic work)*	1.50 (0.87)	1.00 (0.00)	1.00 (0.00)
7. I fear failing courses this year*	3.00 (1.58)	1.78 (0.42)	1.00 (0.00)
8. I think that when I worry about tests it means I have a weakness of character*	1.25 (0.43)	1.00 (0.00)	1.00 (0.00)
9. Teachers have unrealistic expectations of me*	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
10. The size of the class workload is excessive (too much)*	1.50 (.87)	1.22 (.42)	1.00 (0.00)
11. I believe that the amount of homework assigned is too much*	1.25 (0.43)	1.00 (0.00)	1.00 (0.00)
12. I am unable to catch up if I get behind on work*	2.25 (0.43)	1.89 (0.31)	2.00 (0.00)
13. The unrealistic expectations of my parents stresses me out*	3.75 (0.43)	3.56 (0.68)	1.00 (0.00)
14. Competition with my peers for grades is quite intense*	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
15. This class's test questions are usually difficult*	1.75 (0.83)	1.56 (0.50)	2.00 (0.00)
16. This class's test time is too short to be able to complete the answers (not enough time to finish the test)*	1.25 (0.43)	1.00 (0.00)	1.00 (0.00)
17. Testing times are very stressful to me*	1.75 (0.83)	2.67 (0.47)	1.00 (0.00)
18. Even if I pass my tests in this class, I am worried about getting into high school or college*	1.75 (0.83)	1.22 (0.42)	1.00 (0.00)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). *Questions 6-18 are scored in reverse, where a higher rating indicates more stress on the participant in terms of each factor.

Table 26

Means and Standard Deviations for Perceptions of Academic Stress Inventory Factors: *Participant 3* (Baseline = 4, Intervention = 9, Follow up = 1)

Factor	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up. M (SD)*
Academic Self-Perception	4.44 (1.41)	4.25 (1.60)	4.38 (2.00)
Time Constraints	2.85 (1.90)	2.73 (1.97)	2.90 (2.02)
Pressures to Perform	1.85 (1.15)	1.85 (1.15)	1.40 (0.80)
Perceptions of Workload & Exams	1.56 (0.79)	1.22 (0.41)	1.38 (0.48)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree).

Table 27
Means and Standard Deviations for Perceptions of Academic Stress Inventory: *Participant 4* (Baseline = 6, Intervention = 8, Follow up = 1)

Question	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
1. I am confident that I will be a successful student in this class	4.00 (0.00)	4.38 (0.48)	3.00 (0.00)
2. I am confident that I will be successful in my future career	4.00 (0.58)	4.13 (0.60)	3.00 (0.00)
3. I can make academic decisions easily	4.33 (0.92)	5.00 (0.87)	3.00 (0.00)
4. The time that I have for my classwork and homework is enough time to finish projects/assignments, etc.	4.67 (0.75)	4.13 (0.60)	3.00 (0.00)
5. I have enough time to relax after school	5.17 (1.68)	5.25 (0.83)	3.00 (0.00)
6. My teachers are critical of my academic performance (they pick out my flaws & judge my academic work)*	5.00 (0.58)	5.75 (0.43)	6.00 (0.00)
7. I fear failing courses this year*	3.50 (0.76)	1.50 (0.87)	1.00 (0.00)
8. I think that when I worry about tests it means I have a weakness of character*	1.17 (0.37)	1.00 (0.00)	1.00 (0.00)
9. Teachers have unrealistic expectations of me*	2.33 (1.10)	1.25 (0.43)	2.00 (0.00)
10. The size of the class workload is excessive (too much)*	3.83 (0.69)	3.63 (0.70)	1.00 (0.00)
11. I believe that the amount of homework assigned is too much*	4.00 (1.15)	3.63 (0.70)	1.00 (0.00)
12. I am unable to catch up if I get behind on work*	3.16 (0.37)	2.63 (1.22)	1.00 (0.00)
13. The unrealistic expectations of my parents stresses me out*	2.83 (0.90)	1.13 (0.33)	1.00 (0.00)
14. Competition with my peers for grades is quite intense*	1.17 (.37)	1.00 (0.00)	1.00 (0.00)
15. This class's test questions are usually difficult*	4.83 (0.69)	5.25 (1.64)	5.00 (0.00)
16. This class's test time is too short to be able to complete the answers (not enough time to finish the test)*	2.33 (1.49)	1.00 (0.00)	1.00 (0.00)
17. Testing times are very stressful to me*	2.33 (1.11)	1.13 (0.33)	1.00 (0.00)
18. Even if I pass my tests in this class, I am worried about getting into high school or college*	2.83 (1.46)	2.00 (0.71)	1.00 (0.00)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree). *Questions 6-18 are scored in reverse, where a higher rating indicates more stress on the participant in terms of each factor.

Table 28

Means and Standard Deviations for Perceptions of Academic Stress Inventory Factors: *Participant 4* (Baseline = 6, Intervention = 8, Follow up = 1)

Factor	*Baseline M* (*SD*)	*Int. M (SD)*	*Follow up M (SD)*
Academic Self-Perception	3.96 (0.73)	3.75 (1.52)	2.50 (0.87)
Time Constraints	3.53 (1.56)	2.85 (1.80)	2.00 (0.89)
Pressures to Perform	2.50 (1.59)	2.00 (1.90)	2.20 (2.01)
Perceptions of Workload & Exams	3.88 (1.27)	3.63 (0.27)	2.00 (1.73)

Note: Items on the *Perceptions of Academic Stress* measure were rated on a 1-6 scale (1 = Strongly Disagree, 6 = Strongly Agree).

Table 29

Effect Sizes for Perceptions of Academic Stress as Measured by *Participant*

		Intervention to Baseline			Intervention to Follow Up			Baseline to Follow Up		
		Value	Qualitative Descriptor	Direction of Effect	Value	Qualitative Descriptor	Direction of Effect	Value	Qualitative Descriptor	Direction of Effect
Participant 1										
Academic Self-Perception	Cohen's *d*	-1.78	1st Quartile	Negative	0.00	1st Quartile	N/A	-0.77	1st Quartile	Neg.
	Tau-*U**	0.26	Small Effect	Positive						
Time Constraints	Cohen's *d*	-0.68	1st Quartile	Negative	-0.02	1st Quartile	Negative	-0.20	1st Quartile	Neg.
	Tau-*U**	0.04	Small Effect	Positive						
Pressures to Perform	Cohen's *d*	-1.48	1st Quartile	Negative	-0.97	1st Quartile	Negative	-1.49	1st Quartile	Neg.
	Tau-*U**	0.18	Small Effect	Positive						
Perceptions of Workload & Exams	Cohen's *d*	-0.33	1st Quartile	Negative	0.25	1st Quartile	Positive	-0.05	1st Quartile	Neg.
	Tau-*U**	0.10	Small Effect	Positive						
Participant 2										
Academic Self-Perception	Cohen's *d*	-0.44	1st Quartile	Negative	-0.37	1st Quartile	Negative	-0.73	1st Quartile	Neg.
	Tau-*U**	0.27	Small Effect	Positive						
Time Constraints	Cohen's *d*	0.14	1st Quartile	Positive	0.87	1st Quartile	Positive	0.96	1st Quartile	Pos.
	Tau-*U***	-0.24	Small Effect	Negative						
Pressures to Perform	Cohen's *d*	0.84	1st Quartile	Positive	0.28	1st Quartile	Positive	1.19	1st Quartile	Pos.
	Tau-*U**	-0.10	Small Effect	Negative						
Perceptions of Workload & Exams	Cohen's *d*	0.63	1st Quartile	Positive	-0.33	1st Quartile	Negative	0.44	1st Quartile	Pos.
	Tau-*U**	-0.33	Small Effect	Negative						
Participant 3										
Academic Self-Perception	Cohen's *d*	0.12	1st Quartile	Positive	-0.07	1st Quartile	Negative	0.03	1st Quartile	Pos.
	Tau-*U***	0.08	Small Effect	Positive						
Time Constraints	Cohen's *d*	0.06	1st Quartile	Positive	-0.09	1st Quartile	Negative	-0.03	1st Quartile	Neg.
	Tau-*U**	0.05	Small Effect	Positive						
Pressures to Perform	Cohen's *d*	0.00	No Effect	N/A	0.51	1st Quartile	Positive	0.51	1st Quartile	Pos.
	Tau-*U**	0.00	No Effect	N/A						
Perceptions of Workload & Exams	Cohen's *d*	0.54	1st Quartile	Positive	-0.36	1st Quartile	Negative	0.28	1st Quartile	Pos.
	Tau-*U**	-0.17	Small Effect	Negative						

Participant 4

Academic Self-Perception	Cohen's *d* 0.66	1st Quartile	Positive	1.01	1st Quartile	Positive	1.82	1st Quartile	Pos.
	Tau-*U** 0.04	Small Effect	Positive						
Time Constraints	Cohen's *d* 0.40	1st Quartile	Positive	0.60	1st Quartile	Positive	1.20	1st Quartile	Pos.
	Tau-*U* **-0.07	Small Effect	Negative						
Pressures to Perform	Cohen's *d* 0.29	1st Quartile	Positive	-0.10	1st Quartile	Negative	0.17	1st Quartile	Pos.
	Tau-*U* **-0.09	Small Effect	Negative						
Perceptions of Workload	Cohen's *d* 0.27	1st Quartile	Positive	1.32	1st Quartile	Positive	1.24	1st Quartile	Pos.
& Exams	Tau-*U** -0.13	Small Effect	Negative						

Note: Cohen's *d*, used the following benchmark criteria: 1st quartile = < 2.06, Median = 2.06-2.73, and 3rd quartile = < 2.73 (Solomon & Howard, 2015), and was calculated using the Cohen's *d* calculator from Ellis, P.D. (2009), effect size calculators, website, *Effect Size Calculators*: https://www.polyu.edu.hk/mm/effectsizefaqs/calculator/calculator.html
*Tau-*U* calculations acquired from http://www.singlecaseresearch.org/calculators/tau-u
Using Tau-*U* effect size criteria: Small = 65% or lower, Medium = 66% - 92%, Large = 93% - 100%

Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis.* (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Tuesday 25th May 2021. Available from singlecaseresearch.org

Table 30
School-Related Factors Affecting Students' Perceptions of Academic Stress as Measured by *Participant Weekly Self-Report*

Phase	Data Point	Class	I was stressed out this week because…	My average time spent stressed out or worrying about homework AND classwork daily (on average) this week was approximately:
Participant 1				
Baseline	#1	ELA	Homework, weekly assignments	11-20 minutes/day
Baseline	#2	ELA	Homework	11-20 minutes/day
Baseline	#3	ELA	Homework/classwork	I did not spend any time stressed out or worried
Baseline	#5	ELA	Classwork/homework	I did not spend any time stressed out or worried
Baseline	#7	ELA	Asking the teacher for help, emailing the teacher The teacher not responding back immediately Homework and classwork	I did not spend any time stressed out or worried
Baseline	#9	ELA	Homework	I did not spend any time stressed out or worried
Intervention	#1	ELA	No stress this week or last	1-10 minutes/day
Intervention	#2	ELA	Classwork for math and other homework	It was just one day
Intervention	#3	ELA	Schoolwork, homework, project for class	1-10 minutes/day
Intervention	#4	ELA	New ELA teacher, learning Google classroom	1-10 minutes/day
Intervention	#5	ELA	Writing an essay, assessment for ELA	1-10 minutes/day
Intervention	#6	ELA	Homework, quiz, assessment for ELA	1-10 minutes/day
Intervention	#7	ELA	No stress this week, homework	I did not spend any time stressed out or worried
Intervention	#8	ELA	An essay	I did not spend any time stressed out or worried
Follow up	#1	ELA	Thinking about other problems	I did not spend any time stressed out or worried
Participant 2				
Baseline	#1	ELA/ Math	Homework, lack of energy	1 hour/day
Baseline	#2	ELA/ Math	Homework	1 hour/day
Baseline	#4	ELA/	Homework	1 hour/day

		Math		
Baseline	#6	ELA/ Math	Homework	1 hour/day
Baseline	#8	ELA/ Math	Projects, not having enough time to finish work, tests Essays, Google classroom, personal stressors	21-30 minutes/day
Baseline	#10	ELA/ Math	Upcoming work, missing work, homework	41-50 minutes/day
Baseline	#13	ELA/ Math	Staying focused, test, reading, homework for ELA and math Outside of school stressors	51 or more minutes/day
Intervention	#1	ELA/ Math	School work, reading, homework	21-30 minutes/day
Intervention	#2	Math/ ELA	Homework, test, communication with teacher	21-30 minutes/day
Intervention	#3	ELA/ Math	Missing work	11-20 minutes/day
Intervention	#4	Math/ ELA	Homework, missing Zoom in ELA, reading and homework	1-10 minutes/day
Intervention	#5	ELA/ Math	No answer	I did not spend any time stressed out or worried
Intervention	#6	ELA/ Math	Missing work, classwork, reading and homework, essay	I did not spend any time stressed out or worried
Intervention	#7	ELA	Essay, lost homework	1-10 minutes/day
Intervention	#8	ELA	No answer	11-20 minutes/day
Follow up	#1	ELA/ Math	Change in schedule, homework, reading, quiz	11-20 minutes/day
Participant 3				
Baseline	#4	ELA	Missing assignments	1-10 minutes/day
Baseline	#7	ELA	New schedule	I did not spend any time stressed out or worried
Baseline	#9	ELA/ Math	Social stress, talking to friend at midnight, forgot about homework	11-20 minutes/day
Baseline	#13	ELA/ Math	New schedule, getting work done on time	1-10 minutes/day
Baseline	#14	Math/ ELA	Exam, reading and ELA homework	I did not spend any time stressed out or worried
Baseline	#17	ELA/ Math	Social stress, talking to friend, forgot about homework	11-20 minutes/day
Baseline	#19	ELA/ Math	ELA homework	I did not spend any time stressed out or worried

Intervention	#1	ELA/ Math	Home related stress and consequences, not turning in assignment for school, homework	1-10 minutes/day
Intervention	#2	Math/ ELA	Outside of school stress, reading and homework	1-10 minutes/day
Intervention	#3	Math/ ELA	Boredom	1-10 minutes/day
Intervention	#4	ELA/ Math	Outside of school stress, reading and homework	1-10 minutes/day
Intervention	#5	Math	Missing assignments, homework	11-20 minutes/day
Intervention	#6	Math/ ELA	Personal stress, staying up all night to finish homework and reading	11-20 minutes/day
Intervention	#7	ELA/ Math	ELA homework	1-10 minutes/day
Intervention	#8	ELA/ Math	Essay for ELA, homework	1-10 minutes/day
Follow up	#1	ELA/ Math	Math homework	1-10 minutes/day
Participant 4				
Baseline	#1	Math	No answer	51 or more minutes/day
Baseline	#3	Math	Brother and his friends	21-20 minutes/day
Baseline	#6	Math	Completing work on time	1-10 minutes/day
Baseline	#7	Math	No answer	I did not spend any time stressed out or worried
Baseline	#10	Math	No answer	I did not spend any time stressed out or worried
Baseline	#11	Math	Tired	I did not spend any time stressed out or worried
Baseline	#15	Math	Tired, homework and reading	I did not spend any time stressed out or worried
Baseline	#19	Math	Dislikes school, classwork and homework	I did not spend any time stressed out or worried
Baseline	#23	Math	Reading and homework	I did not spend any time stressed out or worried
Intervention	#1	Math/ ELA	Reading and homework	I did not spend any time stressed out or worried
Intervention	#2	Math	Getting to classes on zoom, reading and homework	I did not spend any time stressed out or worried
Intervention	#3	Math	Reading and homework, missing work	I did not spend any time stressed out or worried

Intervention	#4	Math/ ELA	Test in math class, missing work, bad grades	I did not spend any time stressed out or worried
Intervention	#5	Math/ ELA	Reading and homework	I did not spend any time stressed out or worried
Intervention	#6	ELA/ Math	Homework	1-10 minutes/day
Intervention	#7	ELA/ Math	Reading and homework	I did not spend any time stressed out or worried
Intervention	#8	Math	Tired, reading and homework	1-10 minutes/day
Follow-up	#1	Math	Tired	1-10 minutes/day

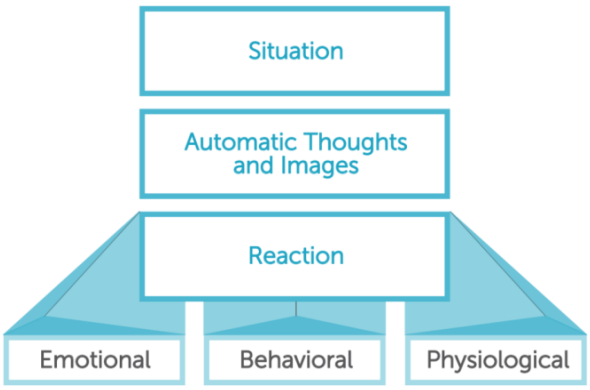


Figure 1. Beck's Cognitive Model (Graphic from https://beckinstitute.org/cognitive-model/)

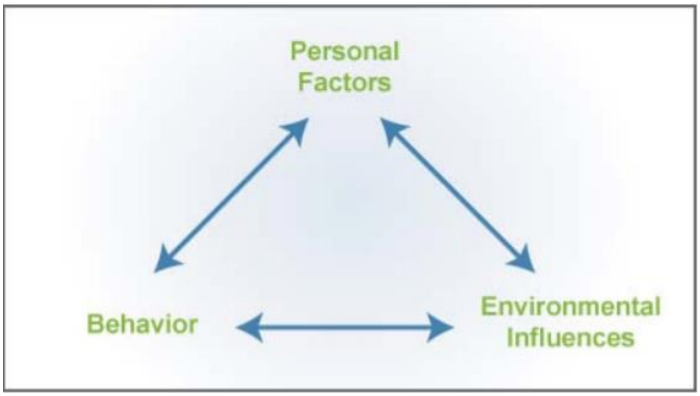


Figure 2. Bandura's Social Cognitive Theory Model (Bandura, & National Inst of Mental Health, 1986, p. 24)

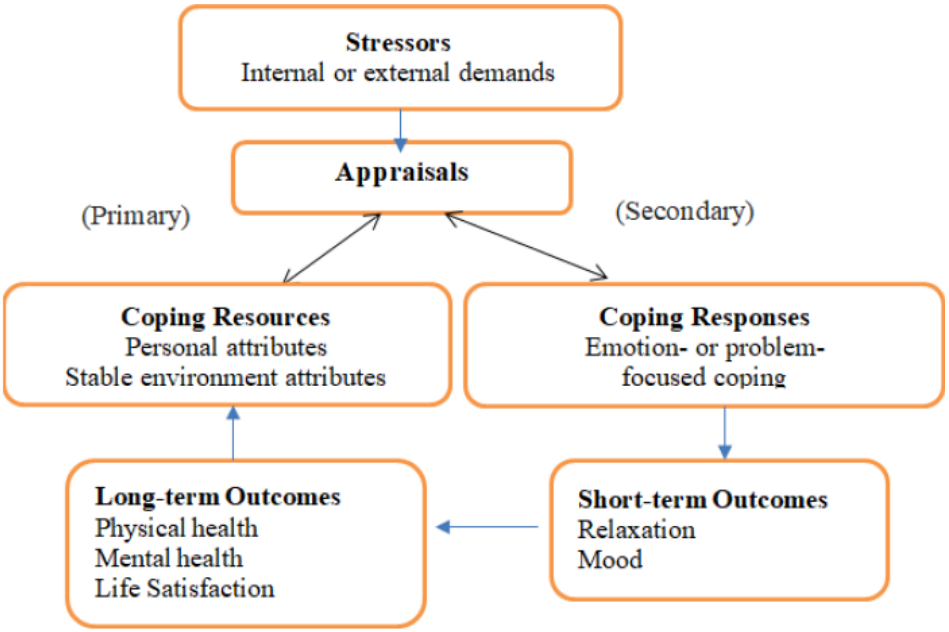


Figure 3. Lazarus's Transactional Model of Stress and Coping (Lazarus & Folkman, 1984)

Grade	Race/Ethnicity	Gender
Kindergarten – 16% 1st grade – 15% 2nd grade – 11% 3rd grade – 11% 4th grade – 11% 5th grade – 11% 6th grade – 8% 7th grade – 8% 8th grade – 9%	American Indian – .3% Pacific Islander – .1% Asian – 5% Hispanic – 13% African American – .2% Caucasian – 74% 2 or more ethnicities – 7%	Female – 53% Male – 47%

Figure 4. School Demographics

Participant	Special Education	Age	Gender	Parent Education (Mother/Father)	Grades/GPA	Race/Ethnicity	Grade
1	Yes	15	F	Bachelor's/Bachelor's	A's/B's	Caucasian	8
2	No	12	M	H.S./GED/Bachelor's	A's/B's	Latino	7
3	No	13	F	Bachelor's/Bachelor's	A's/B's	Caucasian	7
4	Yes	14	M	Bachelor's/Bachelor's	A's/B's	Caucasian	8

Figure 5. Participant Demographics

Pre-Baseline	Phase I: Baseline	Phase II: Intervention	Phase III: Post Intervention	Phase IV: Post Follow-up Maintenance Measure
1. Email announcement of study (recruitment) 2. 3-5 student participants 3. Initial meeting with students (20 min) and researcher - Social validity measures - Goal setting - Student demographics/information (504, IEP) 4. Self-monitoring training: student (20 min) 5. Behavior-monitoring training: teachers as a group (25-40 min) 6. Observer training: counselor (20 min)	1. Students self-monitor daily for at least 5 points in time - Academic stress levels - Academic engagement 2. Teacher daily class ratings for at least 5 points in time - Participant behaviors recorded by teacher on DBR form during class times 3. Counselor/researcher SDO ratings during DBR ratings 4. Student check-in mtg. after baseline data collection of self-monitoring. Meeting 1:1 with researcher (20 min) and set up a time to meet weekly (online) during the intervention	1. 8-week pre-recorded online video series intervention - Students watch each session weekly before 1:1 meeting - Each student meets 1:1 with counselor the following week (20-25 min) 2. Counselor and student go over self-monitoring form and perceived academic stress levels 3. Teacher of student rates DBR of student once each week 4. Researcher and/or counselor observe student by measuring SDO at the same time teacher collects DBR (total minimum 5 data points for each student)	1. Researcher meets 1:1 with each student (20 min) - Post-intervention assessments 2. Researcher asks teacher, counselor, and/or parent/guardian to fill out post-intervention social validity scales	1. Teachers asked to complete a direct behavior observation form for the participating student, students complete one final self-report rating on behaviors, and counselor and/or researcher complete one final SDO rating for each participant 2. Each student participant meets 1:1 with researcher to do a final recording of perceived stress and discuss their overall academic engagement during the phases of the study

Figure 6. Phases of Research and Data Collection

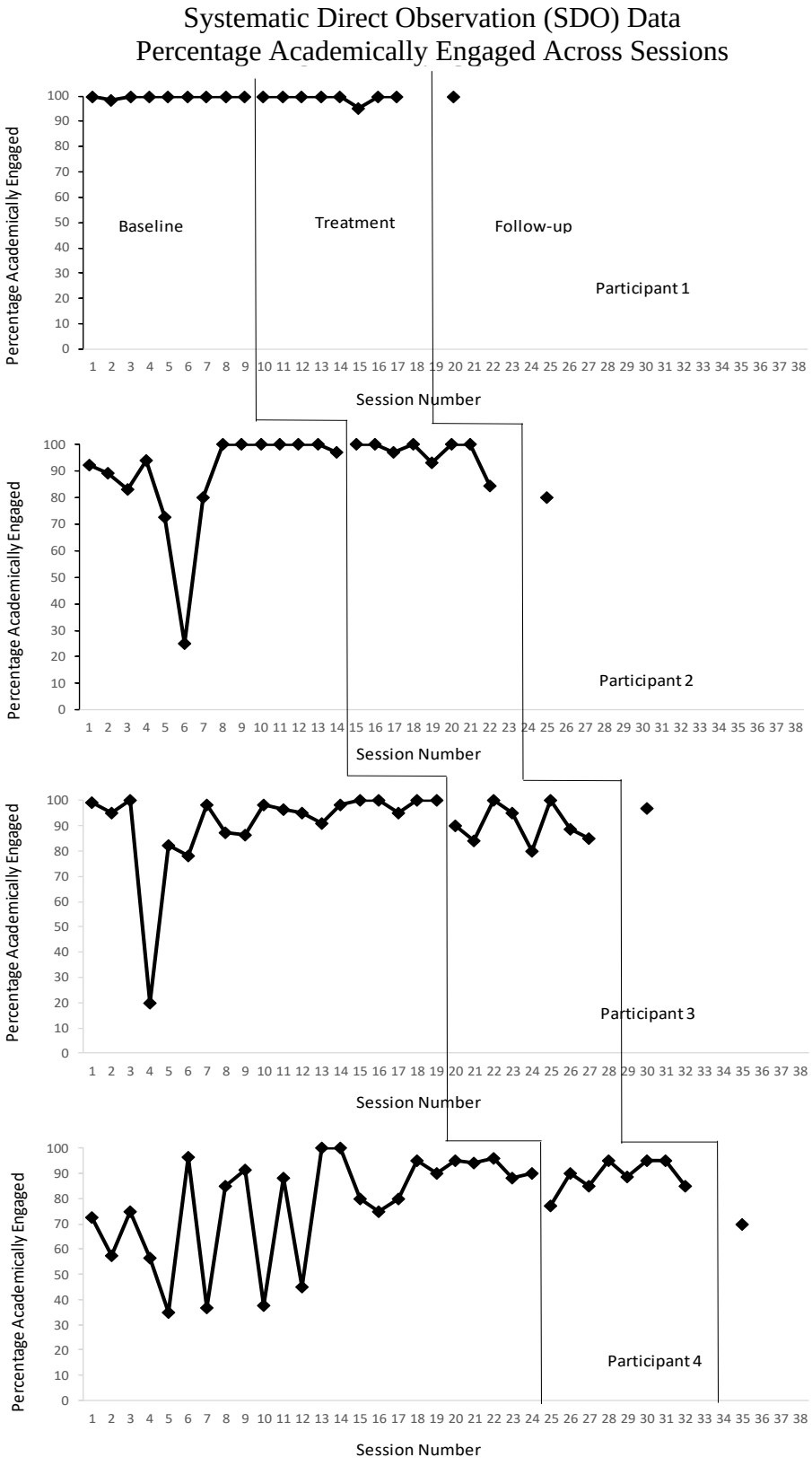


Figure 7. Systematic Direct Observation (SDO) Data: Percentage Academically Engaged Across Sessions

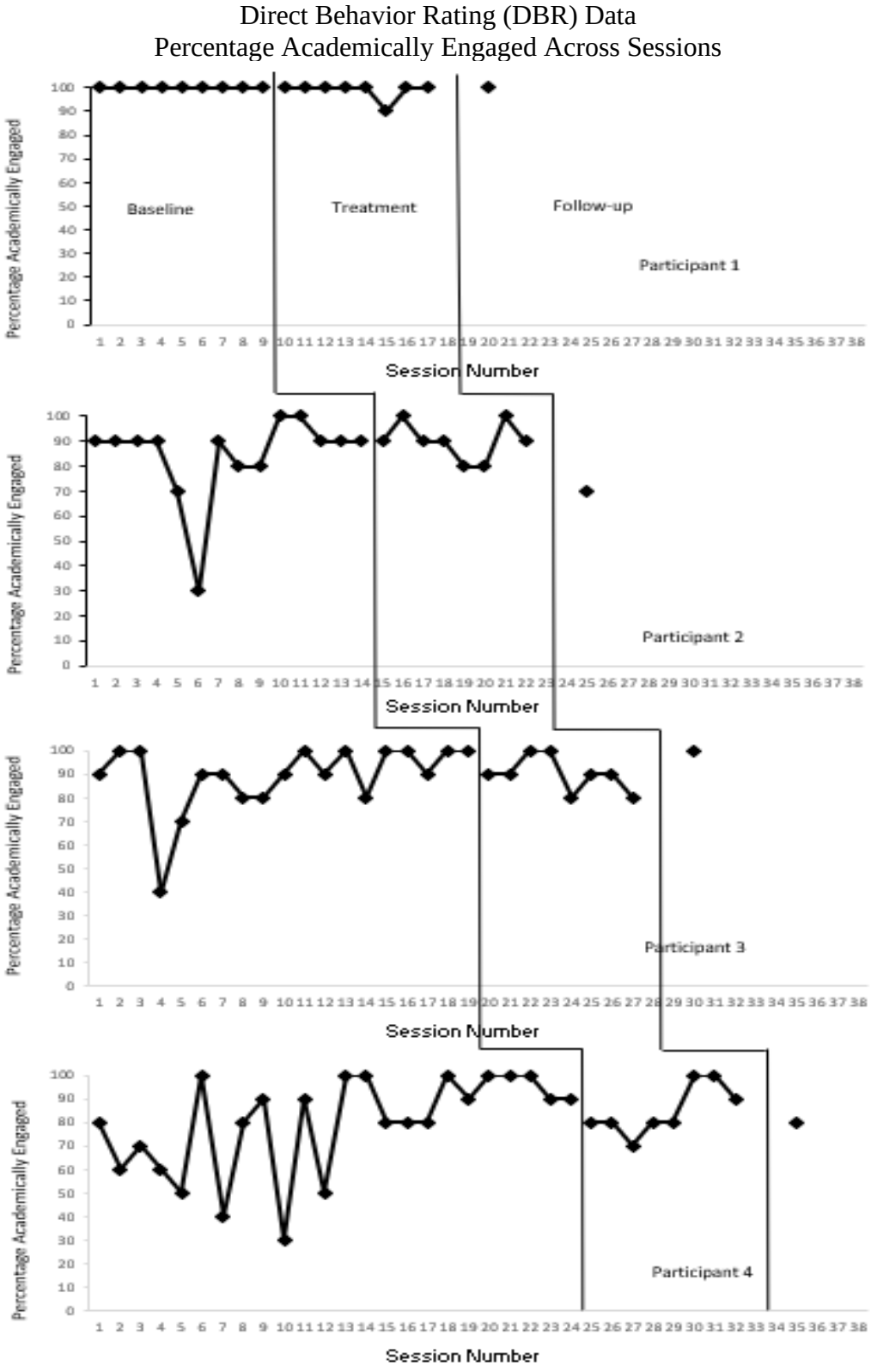


Figure 8. Direct Behavior Rating (DBR) Data: Percentage Academically Engaged Across Sessions

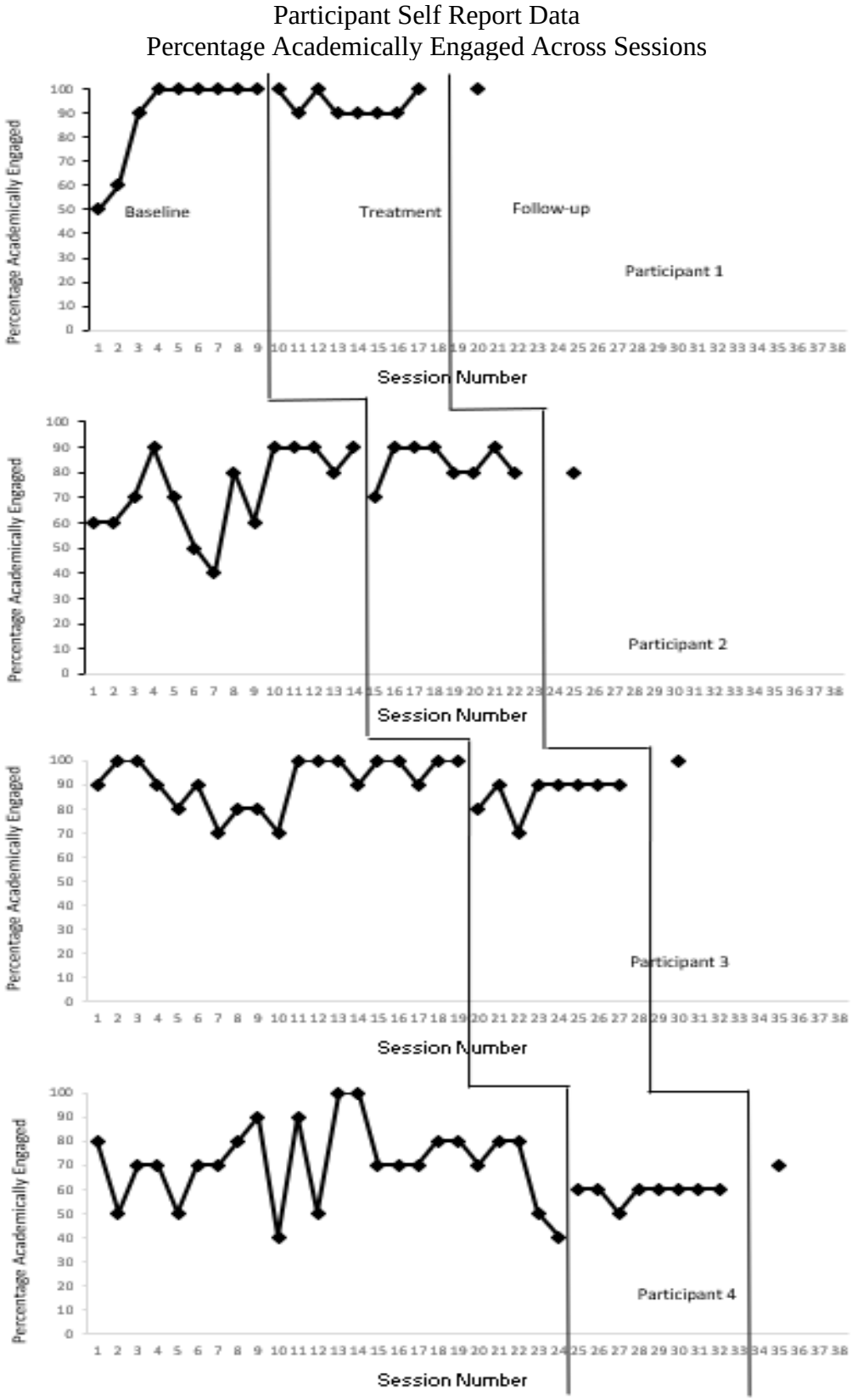


Figure 9. Participant Self Report Data: Percentage Academically Engaged Across Sessions

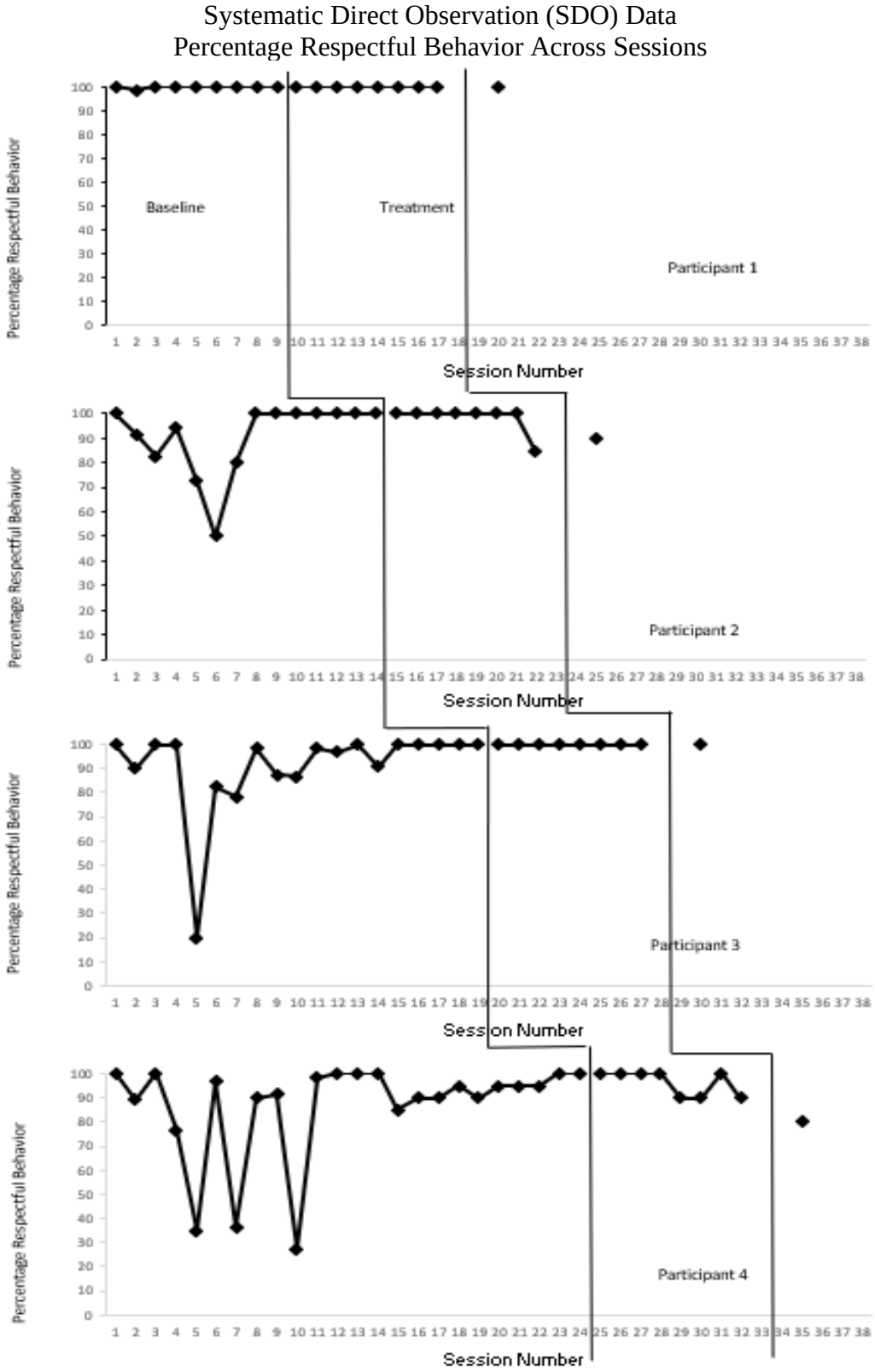


Figure 10. Systematic Direct Observation (SDO) Data: Percentage Respectful Behavior Across Sessions

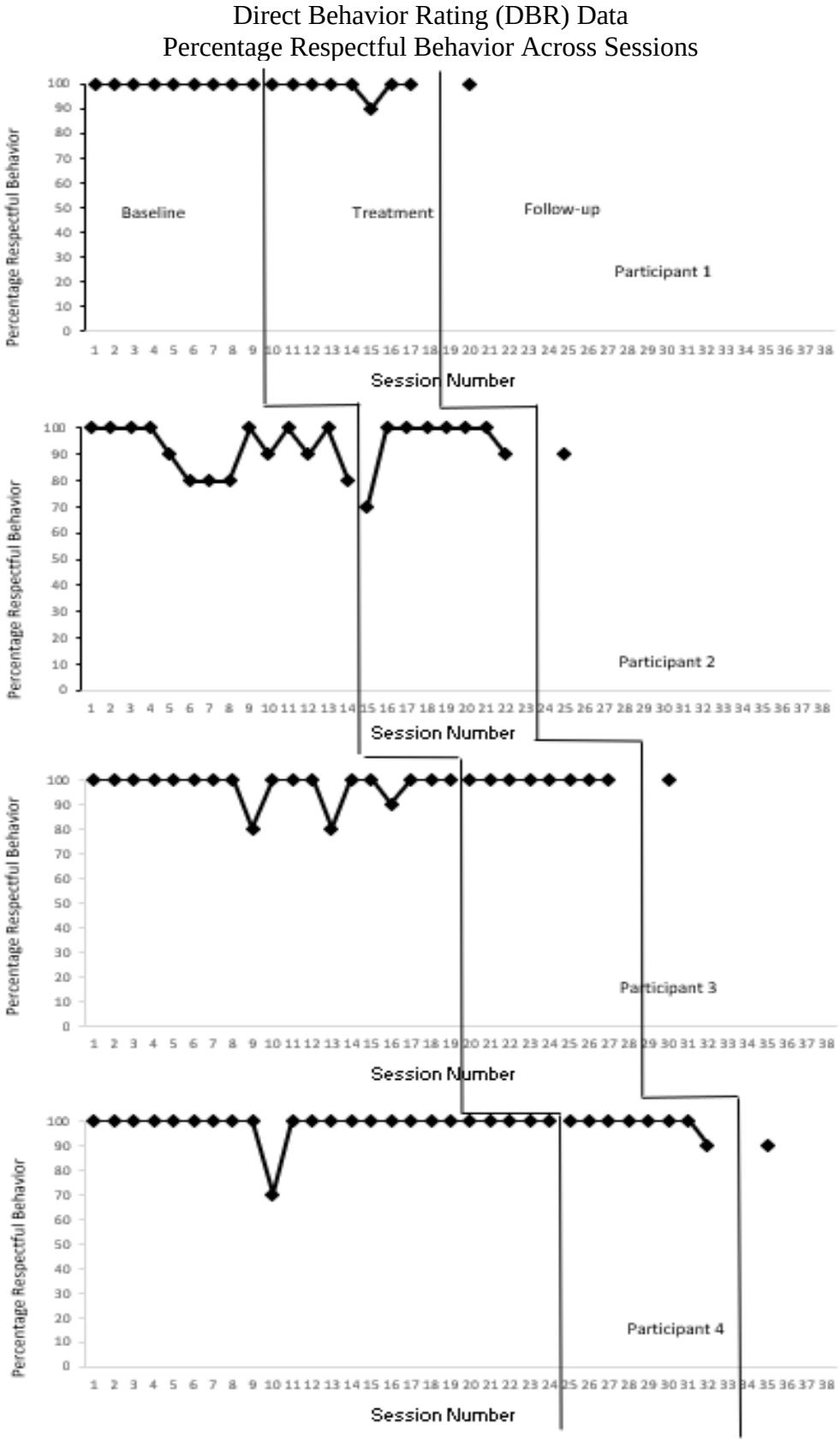


Figure 11. Direct Behavior Rating (DBR) Data: Percentage Respectful Behavior Across Sessions

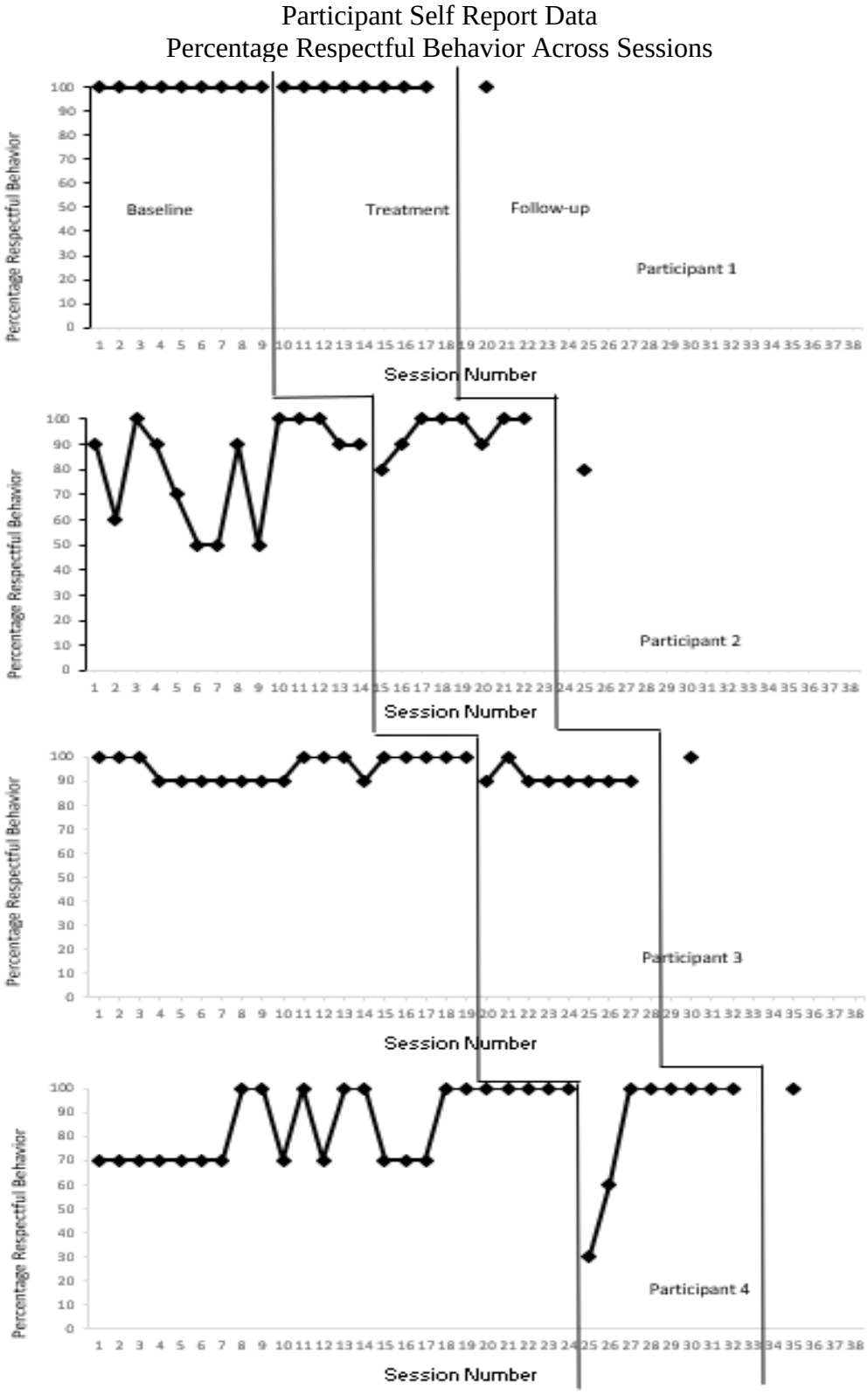


Figure 12. Participant Self Report Data: Percentage Respectful Behavior Across Sessions

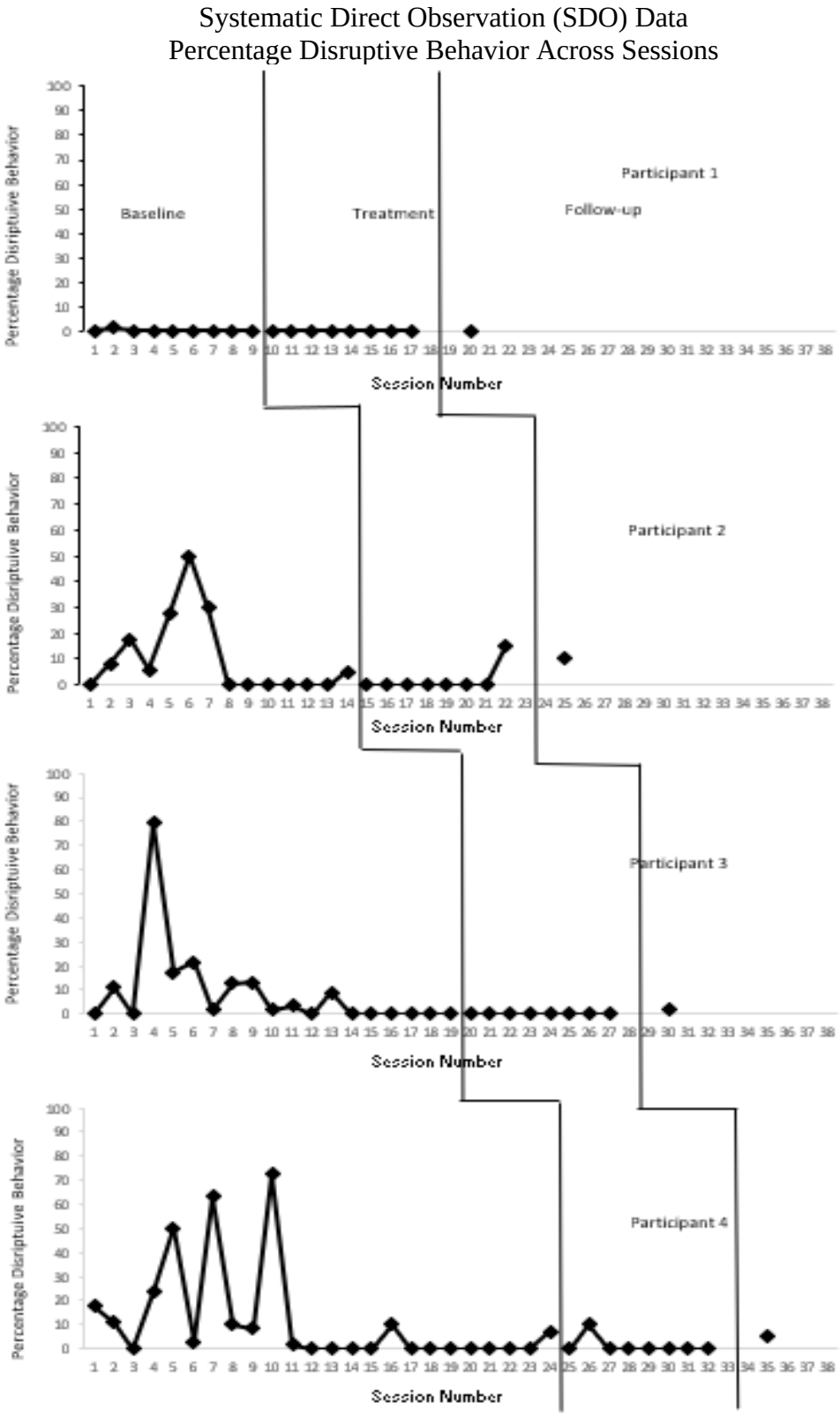


Figure 13. Systematic Direct Observation (SDO) Data: Percentage Disruptive Behavior Across Sessions

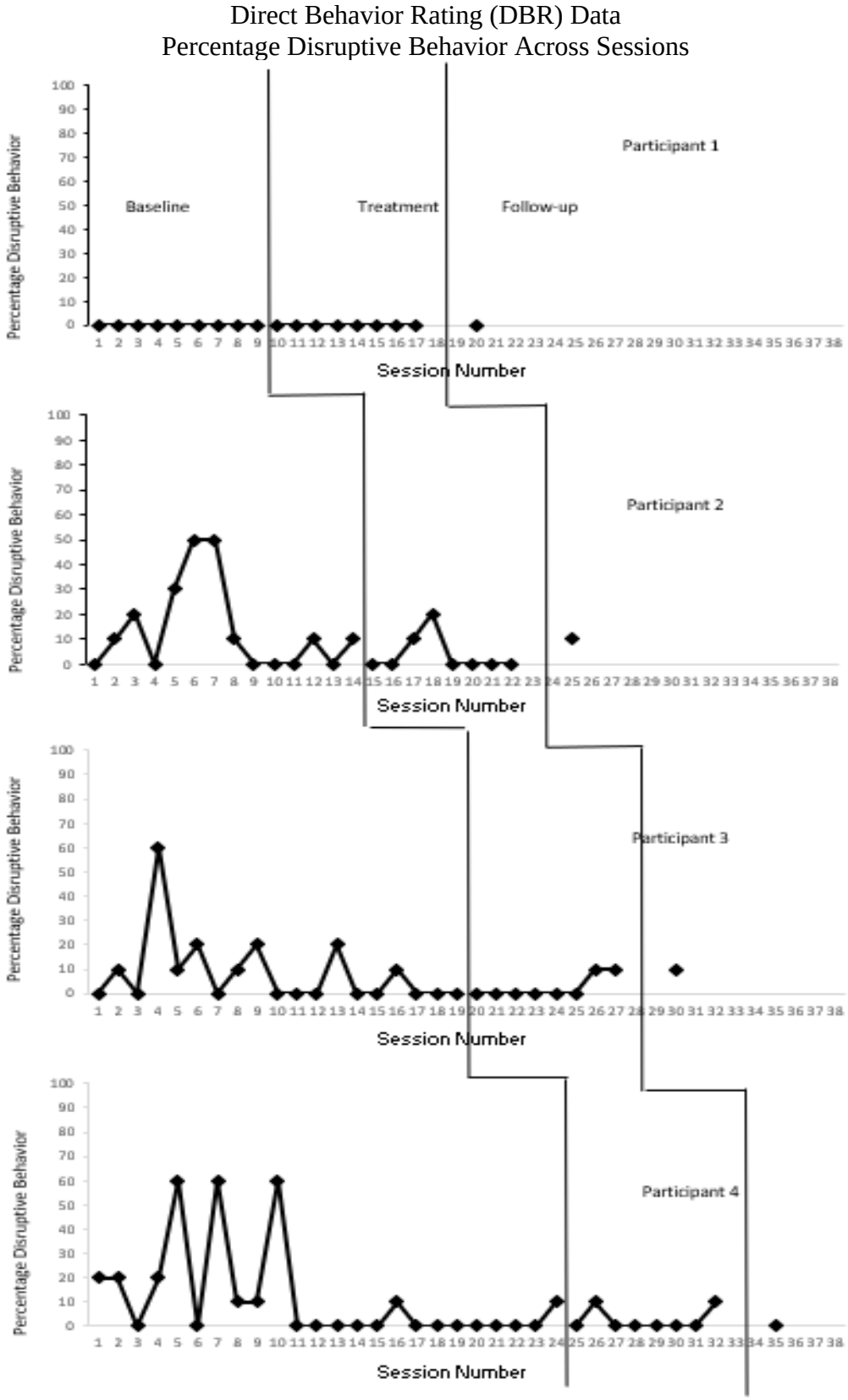


Figure 14. Direct Behavior Rating (DBR) Data: Percentage Disruptive Behavior Across Sessions

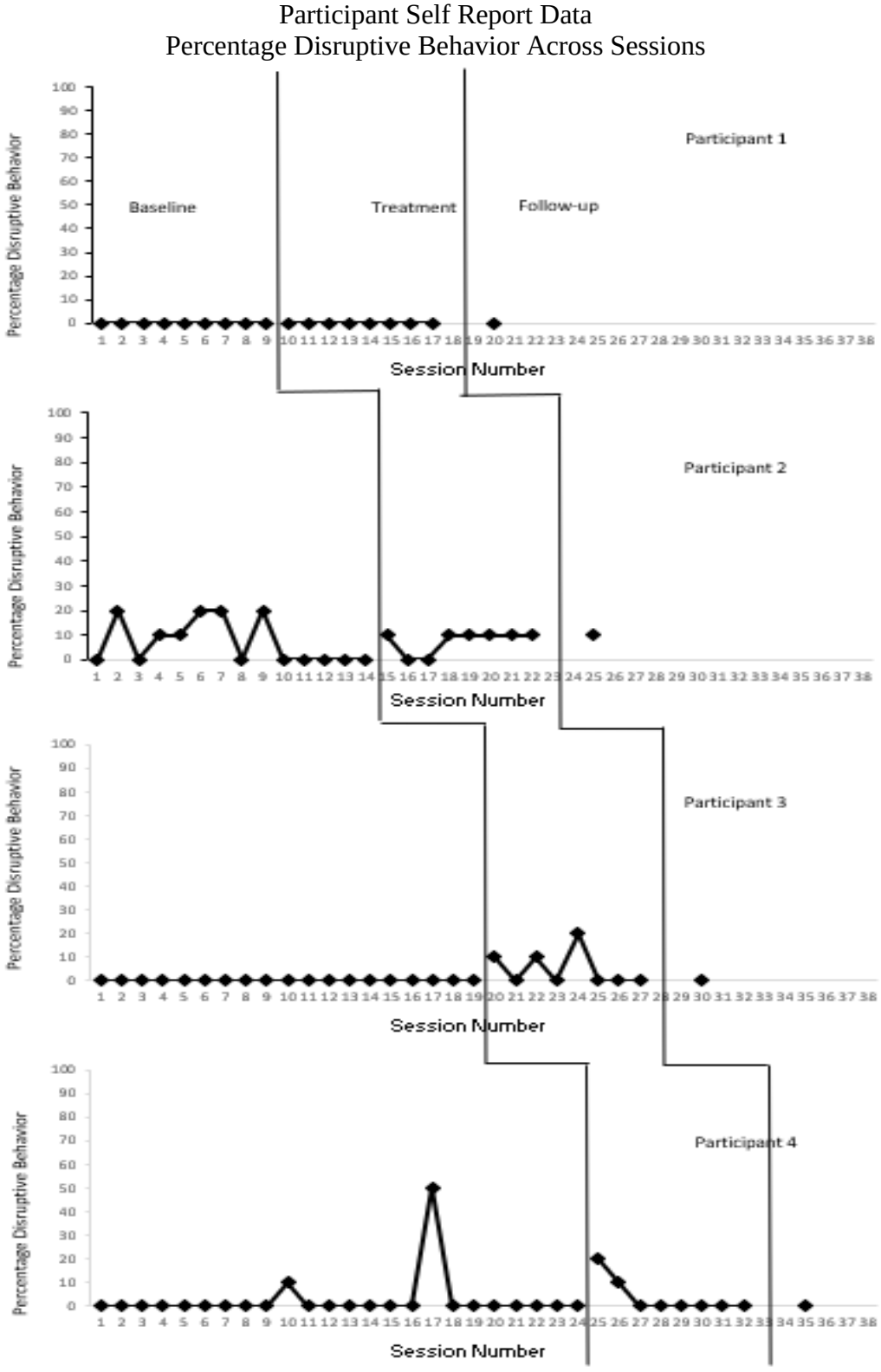


Figure 15. Participant Self Report Data: Percentage Disruptive Behavior Across Sessions

Graphs of Select Questions from the Academic Stress Inventory: *Participant 1*
(Baseline = 4, Intervention = 9, Follow up = 1)

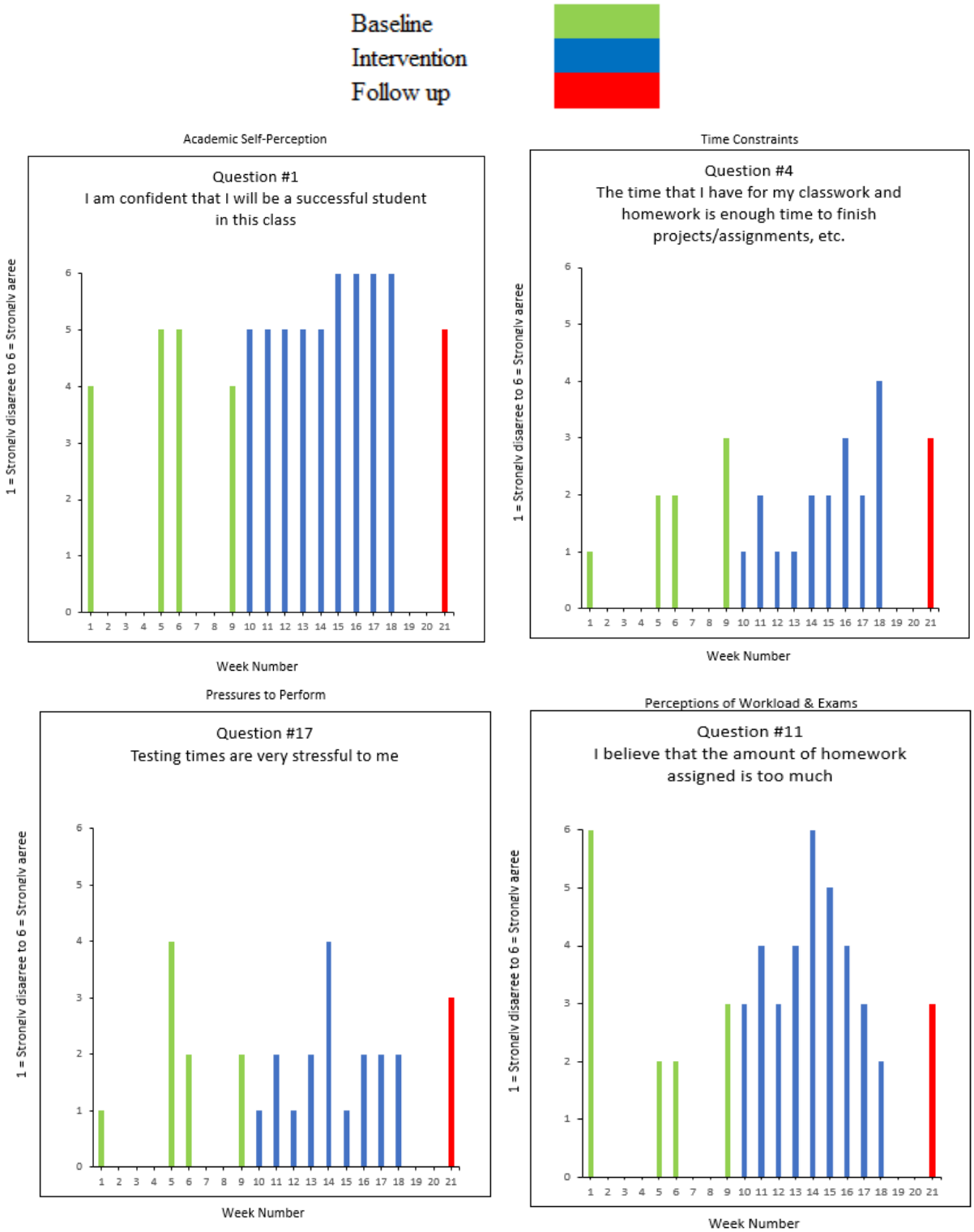


Figure 16. Graphs of Select Questions from the Academic Stress Inventory: *Participant 1*

Graphs of Select Questions from the Academic Stress Inventory: *Participant 2*
(Baseline = 4, Intervention = 8, Follow up = 1)

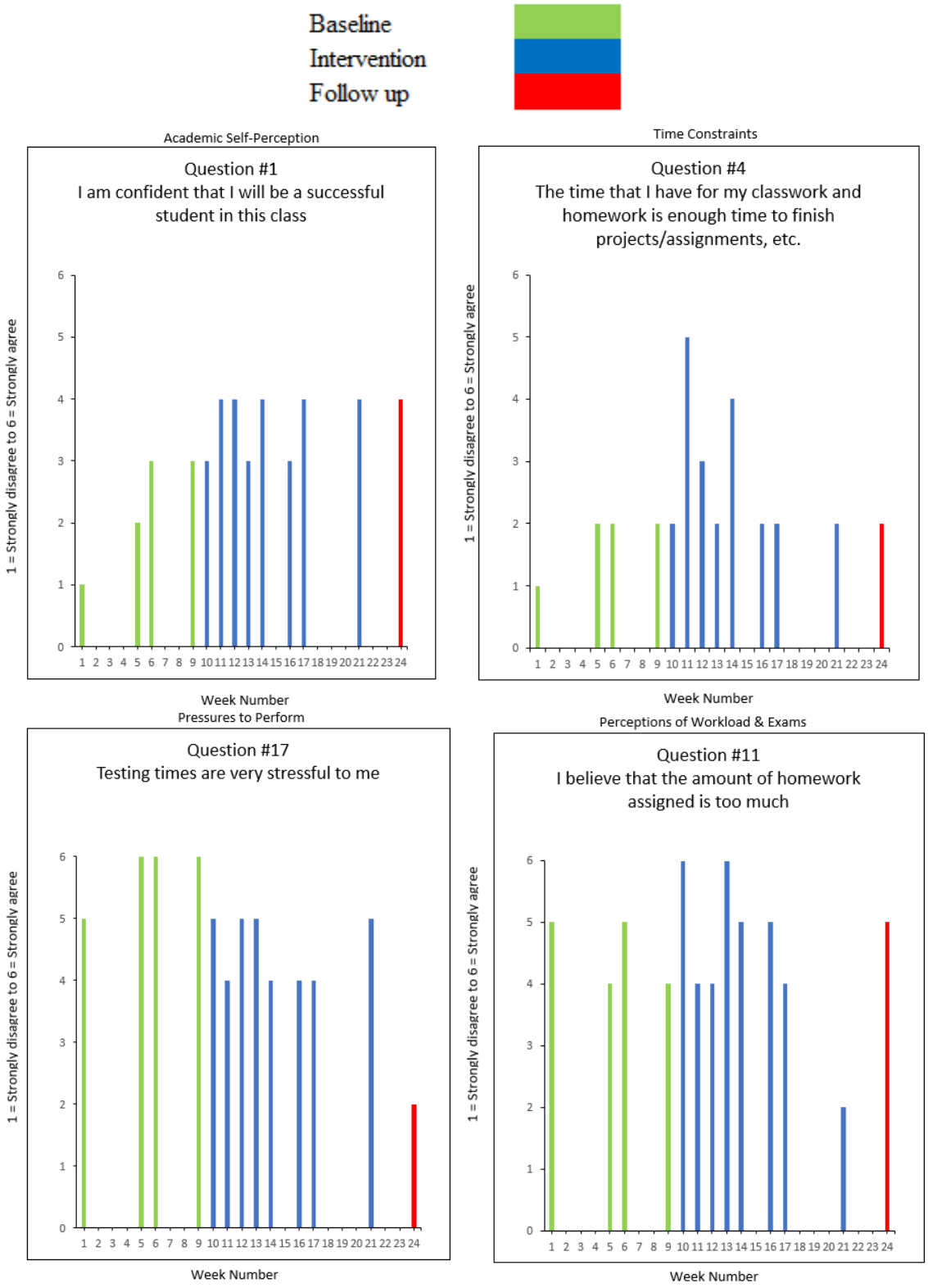


Figure 17. Graphs of Select Questions from the Academic Stress Inventory: *Participant 2*

Graphs of Select Questions from the Academic Stress Inventory: *Participant 3*
(Baseline = 4, Intervention = 9, Follow up = 1)

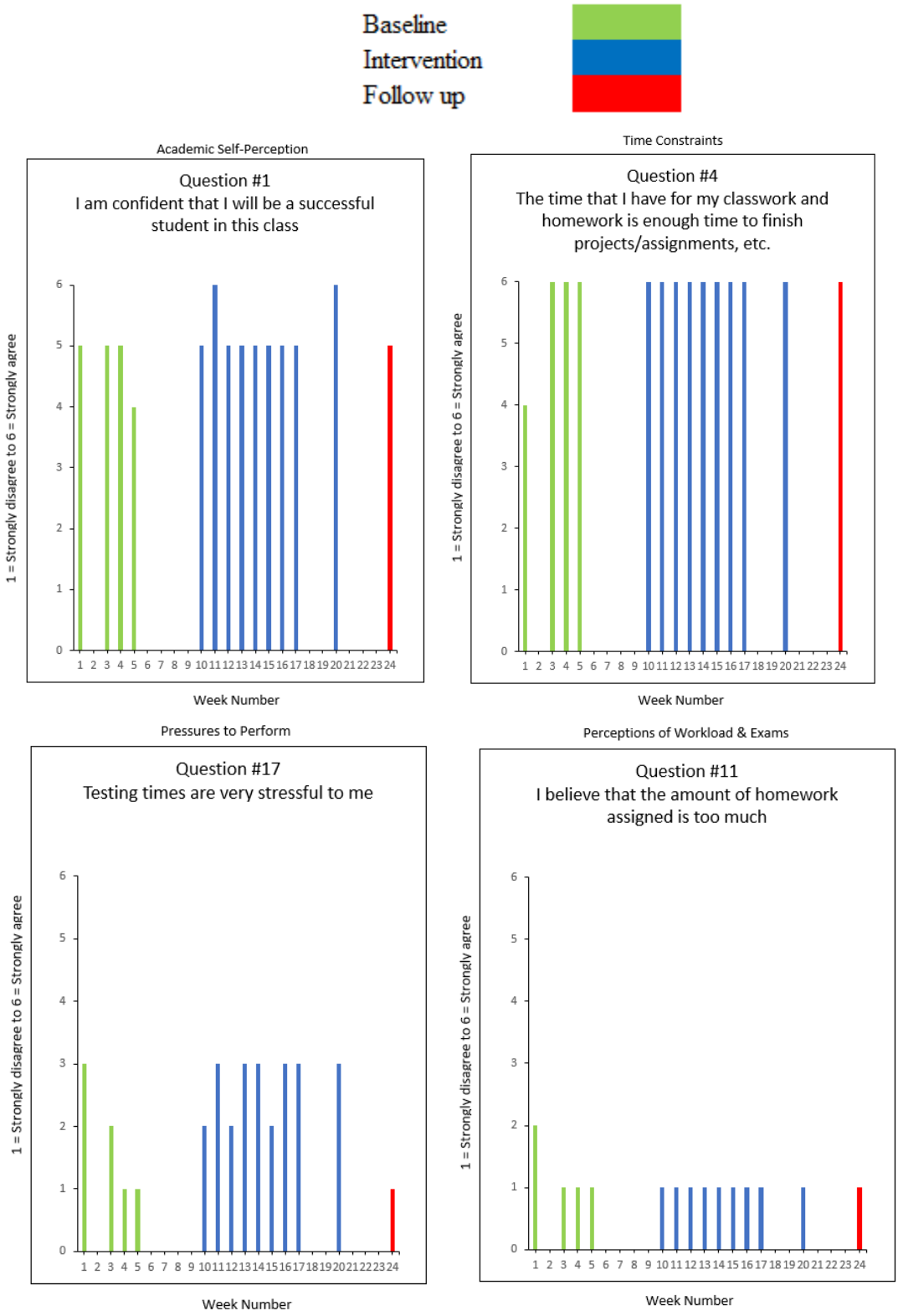


Figure 18. Graphs of Select Questions from the Academic Stress Inventory*: Participant 3*

Graphs of Select Questions from the Academic Stress Inventory: *Participant 4*
(Baseline = 6, Intervention = 8, Follow up = 1)

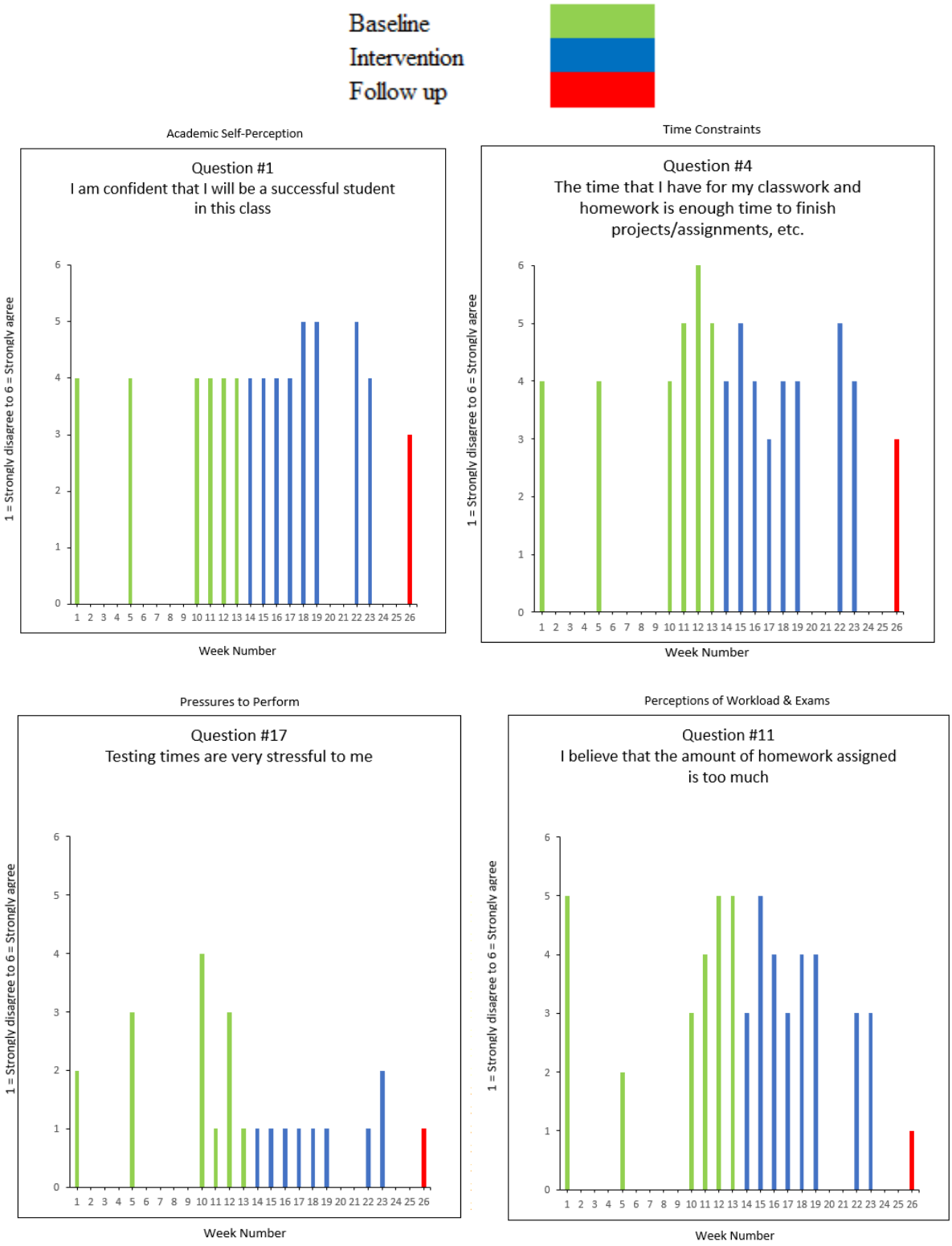


Figure 19. Graphs of Select Questions from the Academic Stress Inventory: *Participant 4*

Appendices

Appendix A: Baseline Procedures Checklist

Please check each item as it is completed for each baseline procedure:

____ 1. Pre-intervention measurements given out to participants at-least 10-days before the initial session
____ 2. ALL measurements collected before initial session starts from participants and at least one teacher
____ 3. All consent and permission from participant if 18 years of age or older, and guardian(s), if participant is under 18 years of age, to be a part of the study and collected before the initial training session
____ 4. Initial training session upheld for participants and at least one teacher to support baseline and intervention data collection
____ 5. Self-monitoring training session includes at least one, 20-minute session to students and the identified teacher (see Appendices D & F)
____ 6. Data collected on each participant for at-least five points in time before the initial session starts and immediately following the training sessions. Participants will collect data on his or herself, using the self-monitoring assessment in Appendix E. The identified teacher will also use the participant behavior monitoring assessment in Appendix ____ relating to the participant they are working directly with.

If ALL the above are complete then intervention may begin.

Appendix B: Procedural Fidelity Checklist for Baseline

The following scale should be used to rate the degree to which baseline goals were attained:

0 = Goal was not met

1 = Goal was fully achieved

Goals:	**Rating:**	**Date:**
1. Pre-intervention measurements given out to participants at-least 10-days before the initial session	0 1	
2. ALL measurements collected before initial session starts from participants and at least one teacher	0 1	
3. All consent and permission from participant if 18 years of age or older, and guardian(s), if participant is under 18 years of age, to be a part of the study and collected before the initial training session	0 1	
4. Initial training session upheld for participants and at least one teacher to support baseline and intervention data collection	0 1	
5. Data collected on each participant for at-least five points in time before the initial session starts	0 1	
6. Confirmation that each participant will be able to participate in ALL of the sessions throughout the program	0 1	
A total score of 6 (100%) reflects adequate baseline fidelity.	Total Score: _____	

This document completed by (initials): ___ ___ ___

Appendix C: Procedural Fidelity Checklist for Counselor During Session

The following scale should be used to rate the degree to which session goals were attained:

0 = Goal was not introduced or met by the counselor
1 = Goal was partially achieved
2 = Goal was fully achieved

Goals:	**Rating:**	**Date:**
1. Great participant(s) at the beginning of each session	1 2 N/A	
2. Review material from previous session and take-home work (unless 1st session, then introduce the nature of the program)	1 2 N/A	
3. Demonstrate/model the skill introduced during the session	1 2 N/A	
4. Allow time for participant(s) to practice the skill throughout the session	1 2 N/A	
5. Address expectations (as needed) throughout sessions	1 2 N/A	
6. Follow lesson plan	1 2 N/A	
7. End with closure (takeaways, journal entry, questions/answers)	0 1 2 N/A	
A total score of <u>12</u> (85%) and higher reflects adequate treatment fidelity.	Total Score: _____	

This document completed by (initials): ___ ___ ___

Appendix D: Self-Monitoring Training Session Checklist
Participant

Please check when each task is completed in order to complete training before baseline can start.

____ 1. Counselor will go over how to teach participants to support their own learning by monitoring their academic, class, and homework related goals on a weekly basis by looking at the *Self-Monitoring Check* (Appendix E). Address and go over how to mark items in Appendix E on the next page.

____ How many times and when s/he asked to talk with a peer or trusted adult about support with academics, behaviors, stress, and/or mental health
____ If the participant was in class on time and for the duration of the class identified
____ If s/he looked at his/her grades weekly
____ Identifying a GPA and class grade goal
____ How many times s/he will participate in class and what the specific goal is
____ When or how many times s/he will take part in class conversation
____ The approximate amount of time the student spent worrying or in a stressed state
____ The approximate time it took the student to start homework and classwork
____ Writing a short journal entry relating to his or her stress

____ 2. Counselor will train participants how to report and monitor when they use breathing techniques, meditate, and engage in mindful practice throughout each week of the program by intentionally completing the take-home practice

____ Counselor will address to participants that they will learn time-management techniques to support weekly academic, mental health and personal tasks

____ 3. Counselor will train participants for at least 20 minutes on how to monitor the identified behaviors and asked to practice self-monitoring his/her actions for baseline and the intervention stages

____ 4. Counselor will inform participants that they will monitor their behaviors once per day for 5, 10, 15, or 20 times (depending on the participant) for baseline and then again once per week for 8 weeks throughout the program

____ 5. Counselor will inform participants that they will meet with their counselor each week Self-Monitoring Check to talk about her/his academics, behaviors, and stress once per day for 5, 10, 15, or 20 times (depending on the participant) during the baseline sessions, for at least 15-minutes

_____ 6. Counselor will assign student to schedule a time when s/he will be able to meet directly with the adult each week during the 8-week intervention.

Appendix E: Self-Monitoring Check
Participant

Circle ***yes or no*** to indicate ***what days*** you completed each task below:

Task	Day 1	Day 2	Day 3	Day 4	Day 5
I was in class on time and for the duration of the class identified, which is _____.	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**
I looked at my grades for this class and if I had any missing assignments today.	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**
I am meeting my academic goals set for myself, which are (Semester GPA & Class Grade Goals): - 4.0 or higher GPA and A or higher class grade - 3.0 – 4.0 GPA and B or higher class grade - 2.0 – 3.0 GPA and C or higher class grade - 1.0 – 2.0 GPA and D or higher class grade	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**
I am meeting my class participation goals set for myself, which are: - Raising my hand to ask a question in class - Taking part in class conversation - Asking for help from my teacher - Other: _____ _____	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**

Task	**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 5**
I am meeting my homework goals for this class, which are: - Getting my homework done on time - Starting and getting my homework complete in a timely manner - Not procrastinating on starting or getting my homework complete - Other: _____ _____	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**	**YES** or **NO**
My time spent stressed out or worrying about homework AND classwork today was approximately _____ minutes: - Zero or choose one: 1-10 | 11-20 | 21-30 31-40 | 41-50 | 51+ - Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____
The time it took me to start homework AND classwork today (procrastination period) was _____ minutes: - Zero or choose one: 1-10 | 11-20 | 21-30 31-40 | 41-50 | 51+ - Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____	0 1-10 11-20 21-30 31-40 41-50 51+ Other: _____ _____

Counselor consent that we met to discuss this self-monitoring inventory this week:

Date _____ Signature _____

Appendix F: Behavior-Monitoring Training Session Checklist

Teacher

Please check when each task is completed in order to complete training before baseline can start.

____ 1. Counselor will go over how to teach the identified teacher to support the participating student by monitoring when the student actively engages during class with identified academic engagement skills, respectful and disruptive behaviors on a weekly basis through a behavior monitoring form. Counselor will distribute and educate the adult on the *Self-Monitoring Check* the participant will be using (Appendix E). Counselor will go over what the student will be monitoring weekly

____ 2. The identified teacher will be trained for approximately 25-40 minutes on how to monitor the identified behaviors and asked to follow-up with her/his identified student to support her/his self-monitoring through the online delivered training offered through the University of Connecticut's Direct Behavior Rating Training Site:

- https://dbrtraining.education.uconn.edu/

____ 3. Counselor will inform adults that they will meet with/monitor student behaviors once per day for 5, 10, 15, or 20 days (depending on the intervention group) during the baseline sessions

Appendix G: Pre/Post-Intervention Survey

Please take some time to fill out the following questions. There are no right or wrong answers, just your own perspective on how you identify and how you perceive your overall academic stress levels at this moment.

* Required

What is your name? *

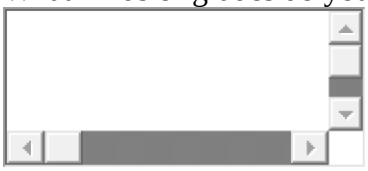
What is your gender? *

What is your race or ethnicity? *

In which year were you born? *

Please indicate the primary language you speak at home *

What kinds of grades do you usually get? *



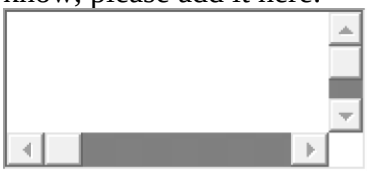
What is the highest level of education completed by your mother? If you are not sure, please take your best guess. *

- Associates Degree
- Bachelor's Degree
- Graduate or Doctoral Degree
- High School Degree or GED
- Technical or Trade Degree

What is the highest level of education completed by your father? If you are not sure, please take your best guess. *

- Associates Degree
- Bachelor's Degree
- Graduate or Doctoral Degree
- High School Degree or GED
- Technical or Trade Degree

If there is anything else you would like to add about yourself that you would like the counselor to know, please add it here:



Academic Perception Section

In the following section you will give an answer on a scale of 1-5 on your perception to that section's questions. Please read the questions carefully as the sections change in overall ideas.

Classroom Engagement Section

You will answer each question relating to a specific class you identified with your counselor on the following scale:

1 - Not at all excited
2 - Slightly excited
3 - Somewhat excited
4 - Quite Excited
5 - Extremely Excited

1. How excited are you about going to this class? *
2. How often do you get so focused on class activities that you lose track of time? *
3. In this class, how eager are you to participate? *
4. When you are not in class, how often do you talk about ideas from class? *
5. Overall, how interested are you in this class? *

Classroom Learning Strategies Section

You will answer each question relating to a specific class you identified with your counselor on the following scale:

1 - Not at all likely
2 - Slightly Likely
3 - Somewhat Likely
4 - Quite Likely
5 - Extremely Likely

1. When you get stuck while learning something new in this class, how likely are you to try a different strategy? *
2. How confident are you that you can choose an effective strategy to get your work for this class done well? *
3. Before you start on a challenging project in this class, how often do you think about the best way to approach the project? *

4. Overall, how well do your learning strategies help you learn in this class more effectively? *
5. In this class, how often do you use strategies to learn more effectively? *

Classroom Mindset Section

Whether a person does well or poorly in this class may depend on a lot of different things. You may feel that some of these things are easier for you to change than others.

You will answer each question relating to a specific class you identified with your counselor on the following scale:

1 - Not at all possible to change
2 - Slightly possible to change
3 - Somewhat possible to change
4 - Quite possible to change
5 - Extremely possible to change

In this class, how possible is it for you to change...

1. Being talented *
2. Liking the subject *
3. Your level of intelligence *
4. Putting forth a lot of effort *
5. Behaving well in class *
6. How easily you give up *

Thank you for taking this survey. If you have anything else you would like to add relating to what you answered or about yourself, please add it here:

_____
_____
_____
_____
_____

Appendix H: Perceived Academic Stress Scale

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is <u>generally true for you</u>.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

1. I am confident that I will be a successful student… _____
2. I am confident that I will be successful in my future career… _____
3. I can make academic decisions easily… _____
4. The time allotted to classes and academic work is enough… _____
5. I have enough time to relax after school… _____
6. My teachers are critical of my academic performance… _____
7. I fear failing courses this year… _____
8. I think that my worry about examinations is weakness of character… _____
9. Teachers have unrealistic expectations of me… _____
10. The amount (size) of the curriculum (workload) is excessive… _____
11. I believe that the amount of work assignments is too much… _____
12. I am unable to catch up if getting behind on work… _____
13. The unrealistic expectations of my parents stresses me out… _____
14. Competition with my peers for grades is quite intense… _____
15. The examination questions are usually difficult… _____
16. The examination times are too short to complete all of the answers… _____
17. The examination times are incredibly stressful to me… _____
18. Even if I pass my exams, I am worried about getting into college… _____

Adapted from:

Bedewy, D., & Gabriel, A. (2015). Examining perceptions of academic stress and its sources among university students: The perception of academic stress scale. *Health Psychology Open, 2*(2), 1-9. doi: 10.1177/2055102915596714

Appendix I: Post-Intervention Social Validity Measure

Participant

Adapted from: Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Section One: The online-delivered counseling intervention …

1. … was a positive experience for me _____
2. … has helped me become aware of my emotions _____
3. … has helped me become more aware of my thoughts and feelings _____
4. … has helped me be more present in my life _____
5. … has helped my cope with stress and negative thinking _____
6. … has helped me act with increased awareness _____
7. … has helped me become more aware of my bodily sensations _____
8. … has helped me be less stressed when preparing for and taking tests _____
9. … has helped me sleep at night _____
10. … has enhanced my pleasure and enjoyment of life _____
11. … has helped me focus on my schoolwork _____
12. … has enhanced my participation in athletics, music, and performing arts _____
13. … has made me less afraid of other people's judgments _____

Please continue to the next page…

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Section Two:

1. The counseling intervention was presented and explained to me clearly _____
2. What we learned in the course was easy to use and apply in situations in my life_____
3. I enjoyed the stress reduction practices we learned and will continue to use them in the future _____
4. In a typical week I practice stress reduction strategies before a test, athletic competition, or performance event _____
5. The activities we did relating to breathing should continue to be used in the counseling intervention _____
6. In a typical week I practice stress reduction strategies before going to sleep at night _____
7. The activities we engaged in served as a good resource _____
8. The practice we learned was easy to understand _____
9. The hands-on practice we were involved in helped me be less stressed in class _____
10. In a typical week I practice stress reduction strategies when walking around campus
    none, 1–2 times, 3–5 times, 6 or more times _____
11. In a typical week I practice stress reduction strategies when eating meals
    none, 1–2 times, 3–5 times, 6 or more times _____

Please rate the following stress reduction practices you were taught as:
Not good, fair, good, or *very good*

_____ ***Relaxation exercise #1: Three Deep Breaths Exercise***
_____ ***Relaxation exercise #2: Three Deep Breaths & Happy Place/Space Visualization***
_____ ***Relaxation exercise #3: Three Deep Breaths exercise with positive affirmations***

_____ ***Awareness exercise #1: inSPIRE Check-in***
_____ ***Awareness exercise #2: 5+1 = Right Now Awareness***
_____ ***Awareness exercise #3: inSPIRE Check-in & 5+1 = Right Now Awareness***

_____ ***Imagery exercise #1: Up & Down Breathing***
_____ ***Imagery exercise #2: Up & Down Breathing with gratitude***

Please continue to the next page…

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Section Three:

1. Overall, I had a positive reaction to the online-delivered counseling intervention

_____

2. The online-delivered counseling intervention was a valuable experience for me

_____

3. All students at our school can learn stress reduction skills and use them in their daily life

_____

4. I think my friends would benefit from learning stress reduction skills

_____

5. The online-delivered counseling intervention should be a requirement for all students at our school

_____

6. The online-delivered counseling intervention has been as valuable as academic classes at our school

_____

7. I will continue to practice stress reduction skills in the future

_____

8. I would like to learn more about stress reduction skills and strategies

_____

9. If there is anything else you would like to add regarding your experience with the online-delivered counseling intervention, please leave your comment(s), concern(s), and/or question(s) here. Thank you for your honest feedback!

_____
_____
_____
_____

Appendix J: Post-Intervention Social Validity Measure

Teacher, Counselor, and/or Parent/Guardian

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for the student identified.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Section One: The online-delivered counseling intervention …

1. … was a positive experience for the student _____
2. … has helped the student become aware of his/her emotions _____
3. … has helped the student become more aware of his/her thoughts and feelings _____
4. … has helped the student be more present in his/her life _____
5. … has helped the student cope with stress and negative thinking _____
6. … has helped the student act with increased awareness _____
7. … has helped the student become more aware of his/her body _____
8. … has helped the student be less stressed when preparing for and taking tests _____
9. … has helped the student sleep at night *(reported from guardian only)* _____
10. … has enhanced the student's pleasure and enjoyment of life _____
11. … has helped the student focus on his/her schoolwork _____
12. … has enhanced the student's participation in athletics, music, and/or performing arts _____
13. … has made the student be less afraid of other people's judgments _____

Please continue to the next page…

Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for the student identified.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Section Two:

1. Overall, the student had a positive reaction to the online-delivered counseling intervention

_____

2. The online-delivered counseling intervention was a valuable experience for the student

_____

3. All students at our school can learn stress reduction skills and use them in their daily life

_____

4. I think other students would benefit from learning stress reduction skills

_____

5. The online-delivered counseling intervention should be a requirement for all students at our school

_____

6. The online-delivered counseling intervention has been as valuable as academic classes at our school

_____

7. I think the student will continue to practice stress reduction skills and strategies in his/her future

_____

8. I would like to learn more about stress reduction skills and strategies to support my own students/team/family

_____

9. If there is anything else you would like to add regarding your perception of the student's experience with the online-delivered counseling intervention, please leave your comment(s), concern(s), and/or question(s) here. Thank you for your honest feedback!

_____

_____

_____

Adapted from:

Luiselli, J., Worthern, D., Carbonell, L., & Queen, A. (2017). Social validity assessment of mindfulness education and practices among high school students. *Journal of Applied School Psychology, 33*(2), 124-135. doi: 10.1080/15377903.2016.1264531

Appendix K: Maintenance Measure

Please check off if you/the student ***agree with*** each statement below. Please also feel free to add additional information if you like. You may choose as many to check off that apply to your response from participation in the program.

Please indicate whether the student or teacher is filling out this form by circling one:

I am (student response) **OR** *the student is (teacher's response)*:

____ 1. Still practicing some of the stress reducing techniques I/s/he learned from the online-delivered counseling intervention.

____ 2. Happier overall.

____ 3. Motivated to participate in class.

____ 4. Using time-management techniques.

____ 5. Talking to a trusted adult more regularly.

____ 6. Seeking out a peer for support more regularly.

____ 7. Less stressed overall.

____ 8. Grateful for who I am/they are.

____ 9. Supportive to others who need help.

____ 10. Asking for help when I/s/he need(s) it.

____ 11. Participating in class more than I/s/he was before the program.

____ 12. Getting better or maintaining grades than I/s/he was before the program.

Anything you would like to add:

_____

_____

_____

Appendix L: Direct Behavior Rating Form

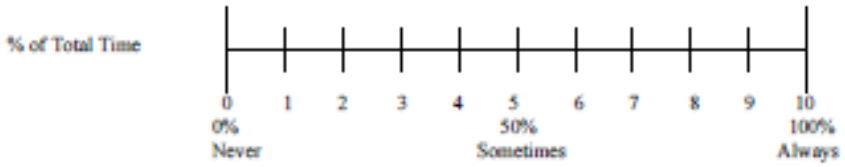
Direct Behavior Rating (DBR) Form: 3 Standard Behaviors

Date: M T W Th F	Student: Rater:	Activity Description:
Observation Time: Start:_____ End: _____ ☐ Check if no observation today	Behavior Descriptions: **Academically engaged** is actively or passively participating in the classroom activity. For example: writing, raising hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials. **Respectful** is defined as compliant and polite behavior in response to adult direction and/or interactions with peers and adults. For example: follows teacher direction, pro-social interaction with peers, positive response to adult request, verbal or physical disruption without a negative tone/connotation. **Disruptive** is student action that interrupts regular school or classroom activity. For example: out of seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom instruction.	

Directions: Place a mark along the line that best reflects the percentage of total time the student exhibited each target behavior. Note that the percentages do not need to total 100% across behaviors since some behaviors may co-occur.

Academically Engaged

Respectful



Disruptive *

* Remember that a lower score for "Disruptive" is more desirable.

Appendix M: Systematic Direct Observation Form

Systematic Direct Observation Form

Observer name:_____

Date:	Time start:	Time stop:	Setting/Activity:
ID 1:			
Name:			

Check if Study Observation or IOA Observation: ☐ Study Observation ☐ IOA Observation

Academically Engaged is participation in the classroom activity. Examples: writing, raising hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials.

Disruptive behavior is action that interrupts regular school or classroom activity. Examples: out of seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom instruction.

Respectful is following teacher direction and using polite behavior during interactions with peers and adults. Examples: follows teacher directions, being positive with peers and to adults, NOT using a negative tone such as talking back or inappropriate gesture and language.

Time (Start)	:00	:10	:20	:30	:40	:50	1:00	1:10	1:20	1:30	1:40	1:50	2:00	2:10	2:20
AE															
Disruptive															
Respectful															

Time (Start)	2:30	2:40	2:50	3:00	3:10	3:20	3:30	3:40	3:50	4:00	4:10	4:20	4:30	4:40	4:50
AE															
Disruptive															
Respectful															

Time (Start)	5:00	5:10	5:20	5:30	5:40	5:50	6:00	6:10	6:20	6:30	6:40	6:50	7:00	7:10	7:20
AE															
Disruptive															
Respectful															

Time (Start)	7:30	7:40	7:50	8:00	8:10	8:20	8:30	8:40	8:50	9:00	9:10	9:20	9:30	9:40	9:50
AE															
Disruptive															
Respectful															

Time (Start)	10:00	10:10	10:20	10:30	10:40	10:50	11:00	11:10	11:20	11:30	11:40	11:50	12:00	12:10	12:20
AE															
Disruptive															
Respectful															

Time (Start)	12:30	12:40	12:50	13:00	13:10	13:20	13:30	13:40	13:50	14:00	14:10	14:20	14:30	14:40	14:50
AE															
Disruptive															
Respectful															

Please continue to the next page if needed…

Systematic Direct Observation Form Cont.

Systematic Direct Observation Form

Observer name:_____

Date:	Time start:	Time stop:	Setting/Activity:
ID 1:			
Name:			

Check if Study Observation or IOA Observation: ☐ Study Observation ☐ IOA Observation

Time (Start)	15:00	15:10	15:20	15:30	15:40	15:50	16:00	16:10	16:20	16:30	16:40	16:50	17:00	17:10	17:20
AE															
Disruptive															
Respectful															

Time (Start)	17:30	17:40	17:50	18:00	18:10	18:20	18:30	18:40	18:50	19:00	19:10	19:20	19:30	19:40	19:50
AE															
Disruptive															
Respectful															

Time (Start)	20:00	20:10	20:20	20:30	20:40	20:50	21:00	21:10	21:20	21:30	21:40	21:50	22:00	22:10	22:20
AE															
Disruptive															
Respectful															

Time (Start)	22:30	22:40	22:50	23:00	23:10	23:20	23:30	23:40	23:50	24:00	24:10	24:20	24:30	24:40	24:50
AE															
Disruptive															
Respectful															

Appendix N: Systematic Direct Observation Form – Observation Summary Sheet

Systematic Direct Observation Form – Observation Summary Sheet

Observer name:_____

Date:	Time start:	Time stop:	Setting/Activity:
ID 1:			
Name:			

Check if Study Observation or IOA Observation: ☐ Study Observation ☐ IOA Observation

Student 1 Target Behavior	Total # of intervals behavior was present	Total # of intervals in observation session	Percentage
AE			
Disruptive			
Respectful			

Student 2 Target Behavior	Total # of intervals behavior was present	Total # of intervals in observation session	Percentage
AE			
Disruptive			
Respectful			

Student 3 Target Behavior	Total # of intervals behavior was present	Total # of intervals in observation session	Percentage
AE			
Disruptive			
Respectful			

Student 4 Target Behavior	Total # of intervals behavior was present	Total # of intervals in observation session	Percentage
AE			
Disruptive			
Respectful			

Student 5 Target Behavior	Total # of intervals behavior was present	Total # of intervals in observation session	Percentage
AE			
Disruptive			
Respectful			

Appendix O: Program Overview

Pre-Baseline	**Phase I: Baseline**	**Phase II: Intervention**
1. Email announcement of study (recruitment) 2. 3-5 student participants 3. Initial meeting with students (20 min) and researcher (see below) - Social validity measures - Goal setting - Student demographics/information (504, IEP) 4. Self-monitoring training (20 min): - Train and introduce participant(s) to weekly self-monitoring form to fill out throughout baseline, intervention, and follow-up 5. Behavior-monitoring training: teachers as a group (25-40 min) 6. Observer training: counselor (20 min)	1. Students self-monitor daily for at least 5 points in time (each participant holding at least 3 stable baseline measures before intervention can begin) - Academic stress levels - Academic engagement 2. Teacher daily ratings for at least 5 points in time (each participant holding at least 3 stable baseline measures before intervention can begin) - Participant behaviors recorded by teacher on DBR form 3. Counselor/researcher SDO ratings during DBR ratings (each participant holding at least 3 stable baseline measures before intervention can begin) 4. Student check-in mtg. after baseline data collection of self-monitoring. - Meeting 1:1 with counselor (20 min) and set up a time to meet weekly (online) during the intervention	1. 8-week pre-recorded online video series intervention (see lessons below) - Students watch each session weekly before their 1:1 meeting - Each student meets 1:1 with counselor the following week (20-25 min) 2. Counselor and student go over self-monitoring form and perceived academic stress levels 3. Teacher of student rates DBR of student at least once each week 4. Researcher and/or counselor observe student by measuring SDO at the same time teacher collects DBR (total of minimum of 5 data points for each student)

Pre-Intervention Session - 1:1 meeting with Counselor

Overview and objectives of the intervention

- Pre-intervention social validity measurements
- Perceived Academic Stress Questionnaire: Participant
- Panorama Education Pre Intervention Survey: Participant
- Establish weekly meeting time when intervention phase begins

Lesson #1 - ***Three Deep Breaths exercise:***

- ***Video #1 Three Deep Breaths exercise:*** ***https://www.youtube.com/watch?v=jEdX9rdibi0&t=154s***
- Weekly practice

Lesson #2 – ***3 Deep Breaths & inSPIRE Check-in***

- Review lesson #1: ***Relaxation exercise #1: Three Deep Breaths exercise***
  - Fill out Weekly Video Check-in Form
- ***Video #2: 3 Deep Breaths & inSPIRE Check-in:*** ***https://www.youtube.com/watch?v=wJs8qhfriiq***
- Weekly practice

Lesson #3 - ***inSPIRE Check In & 5+1=Right Now Awareness***

- Review lesson #2: ***3 Deep Breaths & inSPIRE Check-in***
  - Fill out Weekly Video Check-in Form
- ***Video #3: inSPIRE Check In & 5+1=Right Now Awareness*** **https://www.youtube.com/watch?v=q7k-fVc23Ng**
- Weekly practice

Lesson #4 - ***inSPIRE Check-in & 5+1 = Right Now Awareness***

- Review lesson #3: ***inSPIRE Check In & 5+1=Right Now Awareness***
  - Fill out Weekly Video Check-in Form
- ***Video #4: 5+1=Right Now Awareness & Up & Down Breathing*** **https://www.youtube.com/watch?v=A3he4DahF44&t=69s**
- Weekly practice

Lesson #5 - ***REVIEW WEEK: 5+1=Right Now Awareness, Up & Down Breathing, & inSPIRE Check in***

- Review lesson #4: ***5+1=Right Now Awareness & Up & Down Breathing***
  - Fill out Weekly Video Check-in Form
- ***Video #5: REVIEW WEEK: 5+1=Right Now Awareness & Up & Down Breathing, & inSPIRE Check-in*** ***https://www.youtube.com/watch?v=F8NSeAPPMvs&t=25s***
- Weekly practice

Lesson #6 - ***inSPIRE Check-In & Happy Place/Space Visualization***

- Review lesson #5: ***REVIEW WEEK: 5+1=Right Now Awareness & Up & Down Breathing, & inSPIRE Check-in***
  - Fill out Weekly Video Check-in Form
- ***Video #6: inSPIRE Check-In & Happy Place/Space Visualization:*** ***https://www.youtube.com/watch?v=MVImd4oz3F0***
- Weekly practice

Lesson #7 – ***Happy Place/Space Visualization, & 3 Deep Breaths with Positive Affirmations***

- Review lesson #6: ***inSPIRE Check-In & Happy Place/Space Visualization***
  - Fill out Weekly Video Check-in Form

- ***Video #7: Happy Place/Space Visualization, & 3 Deep Breaths with Positive Affirmations: https://www.youtube.com/watch?v=X_Xi-DzGu-A***
- Weekly practice

Lesson #8 – *3 Deep Breaths Exercise with Positive Affirmations, & Up & Down Breathing with Gratitude*

- Review lesson #7: ***Happy Place/Space Visualization, & 3 Deep Breaths with Positive Affirmations***
  - Fill out Weekly Video Check-in Form
- ***Video #8: 3 Deep Breaths Exercise with Positive Affirmations, & Up & Down Breathing with Gratitude: https://www.youtube.com/watch?v=FAlvehQUepI***
- Discussion about continued practice to support stress & follow-up meeting date (3-weeks post final 1:1 intervention meeting)

Post-Intervention Follow-up Session – What Have You Learned & Continued Practice

- Review lesson #8: ***3 Deep Breaths Exercise with Positive Affirmations, & Up & Down Breathing with Gratitude***
  - Fill out Weekly Video Check-in Form
- Post-intervention social validity measurements:
  - Post-intervention social validity measure: Participant
  - Post-intervention social validity measure: Teacher/Parent/Counselor
  - Perceived Academic Stress Questionnaire: Participant
  - Panorama Education Pre/Post Intervention Student Survey: Participant
- Ways to continue practice:
  - Letter to yourself
  - Goal setting to include stress reduction

Appendix P: Mindfulness Practice Script

A little Summary of The Technique for Mindfulness Practice (Dahl, 2018, p. 51)

- Sit comfortably, in a chair or on the floor
    - Hips a little higher than knees
    - Tall spine
    - Shoulders relaxed
    - Hands lightly on knees
    - Face, eyes, and jaw relaxed
- Inhale the spine nice and tall
- Exhale the shoulders down
- Feel connection between body and Earth
- Let the breathing relax and come to its own rhythm
- Relax the body – keep the mind alert
- Be aware of the breath at the belly
- When thoughts come, let them go
- Return to the breath at the belly
- Count 10 breaths, counting at the end of each exhale

Appendix Q: Relaxation Exercise #1: Three deep breaths

Three Deep Breaths (Dahl, 2018, p. 93-95)

"You can do this breathing technique anywhere: sitting in class, standing in line, lying down on the couch watching TV. It works best if you are standing or sitting, so you can get the spine nice and tall. It is especially useful when you are doing chores, when you would rather be hanging out with your friends or listening to music.

1. Take a deep breath, down into your lower belly.
    a. Feel your belly get big, really big.
    b. Feel your ribs, feel your heart, feel your collarbones.
    c. Then exhale all the way out: from collarbones, to heart, to ribs, until your belly comes back against the spine.
2. Take a second deep breath, just like the first-big belly, ribs, heart, and collarbones.
3. As you take this second breath, imagine lifting the back of your heart forward and up.
4. Then, exhale, completely, collarbones to belly.
5. Take a third and final deep breath.
6. Feel the body connected to the Earth.
7. Whether you are lying, sitting, or standing, imagine the contact points of your body on the surface beneath you are really connecting points into planet Earth.
8. Exhale slowly and smoothly, until the lower belly pushes in toward the spine.

- All three of these deep breaths tripper the release of oxytocin in the body; the bonding, feel-good hormone. As you breathe into your lower abdomen, it signals your body to send out oxytocin. This ends up in the brain as a messenger that says that everything is OK, that you are safe and connected. You are not in trouble or danger. The increased amount of oxygen to the brain increases your cognitive reasoning, your thinking and self-talk. It opens up the center that processes and understands cause and effect relationships and emotional experiences. It also allows you to broaden your perspective.
- On the second breath, as you visualize lifting the back of your heart forward and up, this also sends a message to your brain to minimize, or even shut down, the flight or fight response. The rest and relax response is signaled. It again tells your brain that you are safe. And a pretty cool thing it also does, is allows gratitude to kick in. Think of it this way, you are physically light-hearted; you feel up-lifted and expansive. The same thing happens in the brain!
- And the third and final deep breath has you connecting to the Earth, getting solid and stable. Getting centered. Standing on the ground beneath your own feet. You are centered wherever you stand. You are centered right now."

Appendix R: Relaxation exercise #2: Three deep breaths and Happy Place/Space Visualization

Three Deep Breaths (Dahl, 2018, p. 93-95)

"You can do this breathing technique anywhere: sitting in class, standing in line, lying down on the couch watching TV. It works best if you are standing or sitting, so you can get the spine nice and tall. It is especially useful when you are doing chores, when you would rather be hanging out with your friends or listening to music.

1. Take a deep breath, down into your lower belly.
    a) Feel your belly get big, really big.
    b) Feel your ribs, feel your heart, feel your collarbones.
    c) Then exhale all the way out: from collarbones, to heart, to ribs, until your belly comes back against the spine.
2. Take a second deep breath, just like the first-big belly, ribs, heart, and collarbones.
3. As you take this second breath, imagine lifting the back of your heart forward and up.
4. Then, exhale, completely, collarbones to belly.
5. Take a third and final deep breath.
6. Feel the body connected to the Earth.
7. Whether you are lying, sitting, or standing, imagine the contact points of your body on the surface beneath you are really connecting points into planet Earth.
8. Exhale slowly and smoothly, until the lower belly pushes in toward the spine.

9. All three of these deep breaths tripper the release of oxytocin in the body; the bonding, feel-good hormone. As you breathe into your lower abdomen, it signals your body to send out oxytocin. This ends up in the brain as a messenger that says that everything is OK, that you are safe and connected. You are not in trouble or danger. The increased amount of oxygen to the brain increases your cognitive reasoning, your thinking and self-talk. It opens up the center that processes and understands cause and effect relationships and emotional experiences. It also allows you to broaden your perspective.
10. On the second breath, as you visualize lifting the back of your heart forward and up, this also sends a message to your brain to minimize, or even shut down, the flight or fight response. The rest and relax response is signaled. It again tells your brain that you are safe. And a pretty cool thing it also does, is allows gratitude to kick in. Think of it this way, you are physically light-hearted; you feel up-lifted and expansive. The same thing happens in the brain!
    - And the third and final deep breath has you connecting to the Earth, getting solid and stable. Getting centered. Standing on the ground beneath your own feet. You are centered wherever you stand. You are centered right now."

Happy Place/Space Visualization

1. This happy place/happy space relaxation script is to help you relax your mind and guide you to imagine your own peaceful, safe place. This space will be an imaginary place that you can visualize to help calm and relax your mind when you are feeling stressed.
2. Let us begin by trying for a few minutes right now so that you can relax and try it right now, without having anything else you need to focus on.
3. Start with finding a comfortable position, seated, or laying down.
4. For the next few moments, focus on calming your mind and focus on your breathing.
5. Allow your breathing to center and relax you.
6. Breath in for 4 seconds, out for 4 seconds
    - Breathe in.... and out…. In..... out..... In.... Out.....
7. Continue to breathe slowly and peacefully as you allow your body to start to feel calm and relaxed.
8. Release areas of stress, feeling your muscles relax and become more comfortable with each breath.
9. Continue to let your breathing relax you....
10. Breathe in....2...3...4....
    - Let us try to hold the breath for a count of 4.... 3.....4 out...2...3....4..... again....2.....3....4....hold....2....3....4 out...2...3....4.... 5
11. Continue to breathe slowly, calmly, comfortably…
12. Let the pace of your breathing become gradually slower as your body relaxes.
13. Now begin to create a picture in your mind of a place where you can relax completely.
14. Imagine this place as your own space that helps you feel safe, calm, and relaxed. A place you know already.
15. You will start with thinking about what this place looks like. What is the layout of the place you are imagining... where is this happy place? You might think of somewhere outdoors... or indoors.... it may be a small place or large one.... create an image of this place…
    - (pause)
16. Now picture some more details about your happy place. Who is in this place? Are you alone? Or perhaps you are here with someone else? Are there animals? Birds? Imagine who or what is at this place with you, whether it is you only, or if you have company.
    - (pause)
17. Imagine some more details about your surroundings. Now, focus on the sounds around you in your happy place. Is there water around? Can you hear the ocean? Is there a river or maybe some wildlife? Is it quiet and there are no sounds?...
    - (pause)
18. Now imagine any tastes or smells your place may have to offer. Can you smell flowers, herbs, incents, essential oils, or maybe food of any kind cooking?
19. Keep breathing as you are visualizing this happy space. Your own happy and safe, calming place…
20. Next, imagine the things you may be able to touch... sensations you feel, including the temperature, any cold or warm breeze that may be here… thinking of the surface you are sitting, standing, or laying on... imagine the details of this calming place in your mind.

21. Focus now back to the sights of your place… what colors, shapes... objects.... plants..... water... what makes up all of the beautiful things you can see that make this space relaxing...
22. Imagine yourself here in this happy and calm space... What would you be doing in this calming place? Perhaps you are just sitting, enjoying this place, relaxing. Maybe you imagine yourself walking around.... or doing any other variety of activities…
23. Picture yourself in this place. Imagine a feeling of calm... of peace... a place where you have no worries, cares, or concerns... a place where you can simply rejuvenate, relax, and enjoy just being.
    - (pause)
24. Enjoy your happy place for a few more moments. Memorize the sights, sounds, and sensations around you. Know that you can return to this place in your mind whenever you need a break. You can take an imaginary, mental vacation to allow yourself to relax and regroup before returning to what you are doing.
25. In these last few moments of relaxation, create a picture in your mind that you will return to the next time you need a quick distressing, relaxation break. Picture yourself in your happy space.
26. This moment you are imagining now, you can picture again the next time you need to relax.
27. When you are ready to return to the present moment, simply store away the imaginary place in your mind, which will be waiting for you the next time you need it.
28. Turn your attention back to the here and now. Open your eyes slowly while taking a few more deep breaths to center yourself.
29. Notice your surroundings as your body and mind return to their usual level of alertness and wakefulness.
30. Keep with you the feeling of calm and peace from your happy place as you return to your day.

Appendix S: Relaxation Exercise #3: Three deep breaths with positive affirmations

Three Deep Breaths (Dahl, 2018, p. 93-95)

"You can do this breathing technique anywhere: sitting in class, standing in line, lying down on the couch watching TV. It works best if you are standing or sitting, so you can get the spine nice and tall. It is especially useful when you are doing chores, when you would rather be hanging out with your friends or listening to music.

11. Take a deep breath, down into your lower belly.
    a) Feel your belly get big, really big.
    b) Feel your ribs, feel your heart, feel your collarbones.
    c) Then exhale all the way out: from collarbones, to heart, to ribs, until your belly comes back against the spine.
12. Take a second deep breath, just like the first-big belly, ribs, heart, and collarbones.
13. As you take this second breath, imagine lifting the back of your heart forward and up.
14. Then, exhale, completely, collarbones to belly.
15. Take a third and final deep breath.
16. Feel the body connected to the Earth.
17. Whether you are lying, sitting, or standing, imagine the contact points of your body on the surface beneath you are really connecting points into planet Earth.
18. Exhale slowly and smoothly, until the lower belly pushes in toward the spine.

19. All three of these deep breaths tripper the release of oxytocin in the body; the bonding, feel-good hormone. As you breathe into your lower abdomen, it signals your body to send out oxytocin. This ends up in the brain as a messenger that says that everything is OK, that you are safe and connected. You are not in trouble or danger. The increased amount of oxygen to the brain increases your cognitive reasoning, your thinking and self-talk. It opens up the center that processes and understands cause and effect relationships and emotional experiences. It also allows you to broaden your perspective.
20. On the second breath, as you visualize lifting the back of your heart forward and up, this also sends a message to your brain to minimize, or even shut down, the flight or fight response. The rest and relax response is signaled. It again tells your brain that you are safe. And a pretty cool thing it also does, is allows gratitude to kick in. Think of it this way, you are physically light-hearted; you feel up-lifted and expansive. The same thing happens in the brain!
    - And the third and final deep breath has you connecting to the Earth, getting solid and stable. Getting centered. Standing on the ground beneath your own feet. You are centered wherever you stand. You are centered right now."

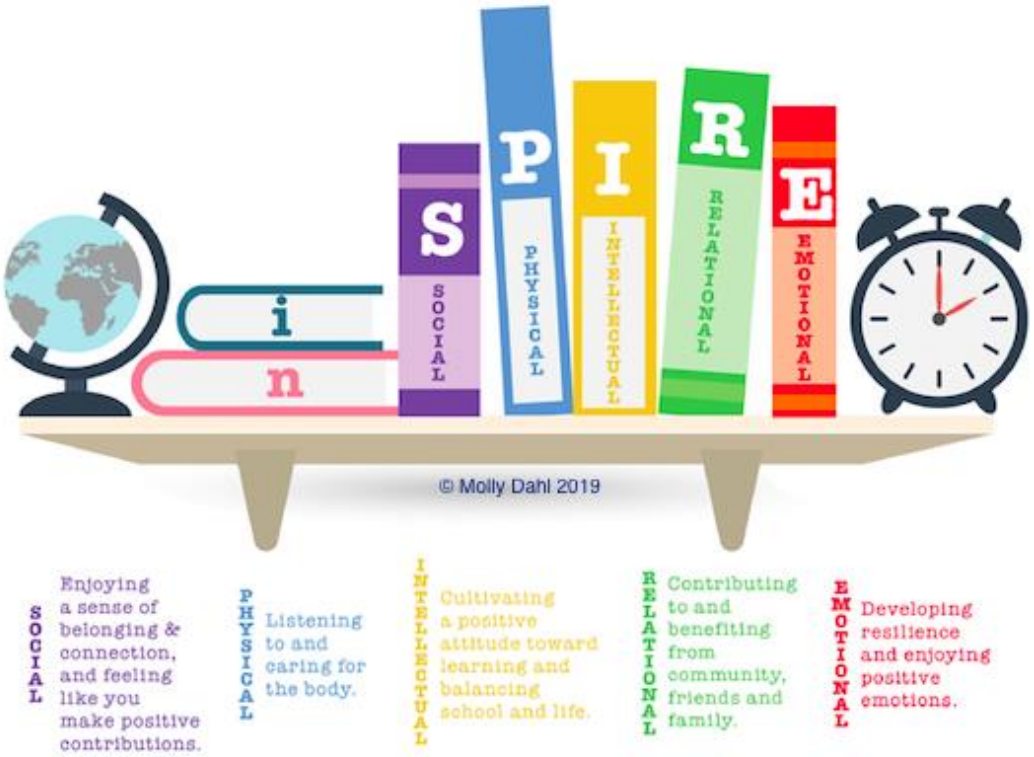
Continue to the next page…

Positive Affirmations

What are three things you can say to yourself that are positive and supportive to your own well-being and mental health

1. What is one thing you enjoy about yourself?
    - Ex: I am good at chemistry; I am a beautiful person.
2. What is one thing you are proud of yourself for doing?
    - Ex: I am proud that I passed my first quiz in geometry; I am proud that I competed in my first cross country race.
3. What is one thing you can say to yourself that is positive?
    - Ex: I am a great person; I am kind; I am caring; I am strong; I am capable.

Appendix T: Awareness exercise #1: inSPIRE Check-in



“It's important for you to know what's going on inside yourself. Only you are capable of knowing how you really feel and how you are doing. In order to get a clear picture of your "status" and where you are, as a whole person, you will need to take a deep peek at your inner world. This lesson gives you a helpful tool to do a personal "status update".

Your optimal well-being and flourishing do not come from being fragmented, from feeling scattered, splintered, or broken apart. Well-being comes by and because of integration - a sense of being complete, whole, and organized. The inSPIRE check-in is a tool for you to take a look at where you are on all levels of your being. As you learn it, practice it, and apply it, it will become a quick and oh-so-handy way for you to get a bead on your overall state of well-being.

Memorize what the inSPIRE acronym stands for. The "in" is you taking a look INside. Each letter stands for a different layer of the self: S - Sense of Meaning, P - Physical, I - Intellectual, R - Relational, and E - Emotional.

In moments when you are clouded by feelings of overwhelm or doom and gloom, or are feeling anxious or completely frazzled, you can do a mental run-through of each letter, asking yourself how you are in that layer of yourself. As you practice it, it will become second nature to you. It will be quick and natural and help you sort things out so you can get on with being happy and enjoying the fun and goodness of life.

inSPIRE Check-in

Use it often! It is so useful to know how the different parts of you are working together or not. And it will give you insight and self-awareness so you can then make responsible decisions on how you want to show up in your life.

On a side note, as you are looking at the things you could do to make small improvements, we use 3% because it is manageable, doable. We do NOT want to add more stress and pressure. So, the 3% in Physical might just mean taking a big drink of water. That is completely doable and will make a difference in your well-being. If you are feeling low in the intellectual area, a 3% change might be influenced by talking to your History teacher about your missing assignments. Along those lines...simple, manageable, real, and doable. Do not add more stress!

Look INside and rate yourself 1-5 in each area (1 being low and 5 high).
Then reflect on your rating. What is one thing you could do in each area to improve by 3%?
(Use the space below the rating scale to record your thoughts.)

Appendix U: Awareness exercise #2: 5+1= Right Now Awareness

5+1=Right Now Awareness

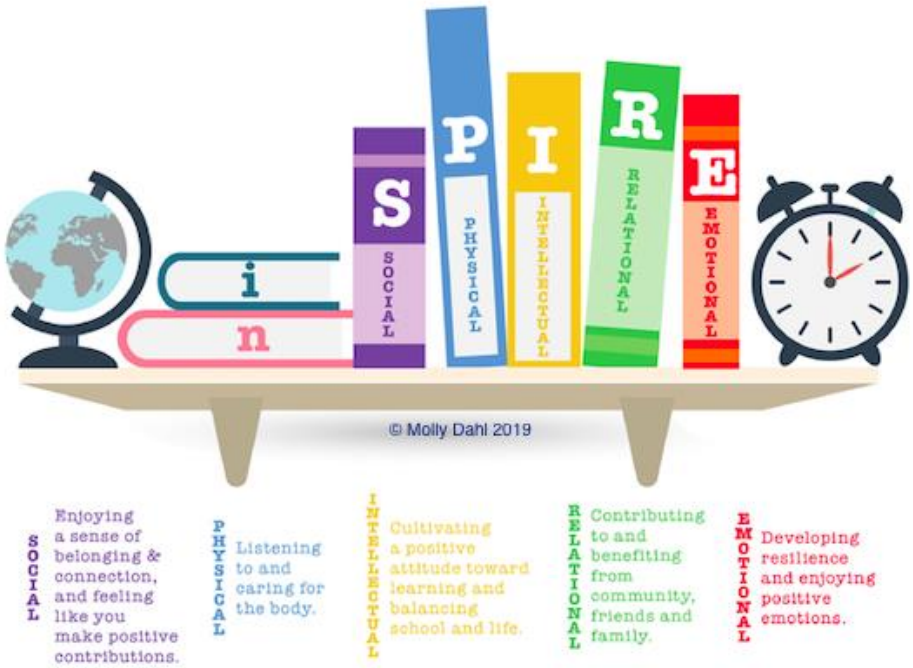
1. Focus on your five senses and your inner state of being, right now, in this moment:
2. What is one thing you can see? Look at it. See its characteristics, its shape and color.
3. What is one thing you can hear? Focus on the sound. Can you identify its source?
4. What is one thing you can feel or touch? What is the texture? Maybe you feel the air on your skin. Is it hot or cold?
5. What is one thing you can smell? Does that smell bring up old memories?
6. What is one thing you can taste, if anything?
7. And how do you feel?

- By doing this check-in, you bring yourself into your immediate surroundings. You check the air temperature, right now. You identify something you hear and see and smell, right now.
- This is a fun, quick, and easy check-in. You can write it down if you have time, but mostly it will be a mental practice. Focus on each of your senses for only two or three seconds, then move to the next. You may find that you are energized and ready to contribute to the discussion in your class or to continue with your homework. It can be fun to do with a friend if you are just hanging around. It is kind of neat to see what someone else holds in their awareness of the present moment.

Just for fun, do a 5+1 check in now. Write down your observations:

1. See:
2. Hear:
3. Smell:
4. Fell/touch:
5. Taste:
6. Inner state of being (how do you feel?):”

Appendix V: Awareness exercise #3: inSPIRE Check-in & 5+1 = Right Now Awareness



“It's important for you to know what's going on inside yourself. Only you are capable of knowing how you really feel and how you are doing. In order to get a clear picture of your "status" and where you are, as a whole person, you will need to take a deep peek at your inner world. This lesson gives you a helpful tool to do a personal "status update".

Your optimal well-being and flourishing do not come from being fragmented, from feeling scattered, splintered, or broken apart. Well-being comes by and because of integration - a sense of being complete, whole, and organized. The inSPIRE check-in is a tool for you to take a look at where you are on all levels of your being. As you learn it, practice it, and apply it, it will become a quick and oh-so-handy way for you to get a bead on your overall state of well-being.

Memorize what the inSPIRE acronym stands for. The "in" is you taking a look INside. Each letter stands for a different layer of the self: S - Sense of Meaning, P - Physical, I - Intellectual, R - Relational, and E - Emotional.

In moments when you are clouded by feelings of overwhelm or doom and gloom, or are feeling anxious or completely frazzled, you can do a mental run-through of each letter, asking yourself how you are in that layer of yourself. As you practice it, it will become second nature to you. It will be quick and natural and help you sort things out so you can get on with being happy and enjoying the fun and goodness of life.

inSPIRE Check-in

Use it often! It is so useful to know how the different parts of you are working together or not. And it will give you insight and self-awareness so you can then make responsible decisions on how you want to show up in your life.

On a side note, as you are looking at the things you could do to make small improvements, we use 3% because it is manageable, doable. We do NOT want to add more stress and pressure. So, the 3% in Physical might just mean taking a big drink of water. That is completely doable and will make a difference in your well-being. If you are feeling low in the intellectual area, a 3% change might be influenced by talking to your History teacher about your missing assignments. Along those lines...simple, manageable, real, and doable. Do not add more stress!

Look INside and rate yourself 1-5 in each area (1 being low and 5 high).
Then reflect on your rating. What is one thing you could do in each area to improve by 3%? (Use the space below the rating scale to record your thoughts.)

5+1 = Right Now Awareness (Dahl, 2018, p. 260 - 262)

"When you are bored or your mind is wandering and you cannot concentrate on your task at hand, this practice of 5+1 will bring you right to attention… In order to quiet the mind when you are scattered or to stay awake when things seem a little boring, the 5+1 will be a good friend to rely on. We have five senses. We have an inner state of being. (Think of when someone asks, "How are you?" usually they are referring to your inner, emotional state. Are you happy? Overwhelmed? Bored? etc.) So, you focus on your five senses and your inner state of being, right now, in this moment:

1. What is one thing you can see? Look at it. See its characteristics, its shape and color.
2. What is one thing you can hear? Focus on the sound. Can you identify its source?
3. What is one thing you can feel or touch? What is the texture? Maybe you feel the air on your skin. Is it hot or cold?
4. What is one thing you can smell? Does that smell bring up old memories?
5. What is one thing you can taste, if anything?
6. And how do you feel?
    - By doing this check-in, you bring yourself into your immediate surroundings. You check the air temperature, right now. You identify something you hear and see and smell, right now.
    - This is a fun, quick, and easy check-in. You can write it down if you have time, but mostly it will be a mental practice. Focus on each of your senses for only two or three seconds, then move to the next. You may find that you are energized and ready to contribute to the discussion in your class or to continue with your homework. It can be fun to do with a friend if you are just hanging around. It is kind of neat to see what someone else holds in their awareness of the present moment.

Just for fun, do a 5+1 check in now. Write down your observations:

1. See:
2. Hear:
3. Smell:
4. Fell/touch:
5. Taste:
6. Inner state of being (how do you feel?):"

Appendix W: Imagery exercise #1: Up & Down Breathing

Up and Down Breathing (Dahl, 2018, p. 151)

"Like most of the breathing practices shared here, you can do this one anywhere.

1. Stand or sit tall, with a nice long spine. Relax your body.
2. In your mind's eye, see your tailbone.
    a) As you inhale, start the breath at the tailbone and breathe up the length of the spine, over the top of the head to the middle of the forehead.
    b) Now exhale, reversing the breath from the forehead center, over the top of the head, down the spine to the tailbone.
1. Imagine a big candy cane. That is the pattern your breath will follow. Inhale up and the spine to the forehead center.
2. Exhale from the center of the forehead down the spine.
3. Inhale up. Exhale down.
4. Inhale up. Exhale down.
5. Repeat for at least five breaths, longer if you have the time.
6. Remember this is visualization. Your breath does not really start at your tailbone and end at your forehead. The visualization is what helps to keep your mind focused and centered.
7. Try it now. Sit up tall. Close your eyes. Breathe."

Appendix X: Imagery exercise #2: Up & Down Breathing with gratitude

Up and Down Breathing (Dahl, 2018, p. 151)

"Like most of the breathing practices shared here, you can do this one anywhere.

1. Stand or sit tall, with a nice long spine. Relax your body.
2. In your mind's eye, see your tailbone.
    a. As you inhale, start the breath at the tailbone and breathe up the length of the spine, over the top of the head to the middle of the forehead.
    b. Now exhale, reversing the breath from the forehead center, over the top of the head, down the spine to the tailbone.
3. Imagine a big candy cane. That is the pattern your breath will follow. Inhale up and the spine to the forehead center.
4. Exhale from the center of the forehead down the spine.
5. Inhale up. Exhale down.
6. Inhale up. Exhale down.
7. Repeat for at least five breaths, longer if you have the time.
8. Remember this is visualization. Your breath does not really start at your tailbone and end at your forehead. The visualization is what helps to keep your mind focused and centered.
9. Try it now. Sit up tall. Close your eyes. Breathe."

Gratitude: what are three things you are grateful for right now in your life?

Appendix Y: Permissions

University of Nevada, Reno

Jessica Koltz <jkoltz@nevada.unr.edu>

Perceptions of Academic Stress Scale

3 messages

Jessica Koltz <jkoltz@nevada.unr.edu> Wed, Jul 15, 2020 at 11:17 AM
To: gabriel@ucalgary.ca

Good morning Adel,

I wanted to ask permission to use your Perceptions of Academic Stress Scale within my dissertation research this coming year.

I found your scale in this article: Dedewy, D., & Gabriel, A. (2015). Examining perceptions of academic stress and its sources among university students: The perception of academic stress scale. *Health Psychology Open*, July-December, 1-9.

I am measuring perceptions of academic stress with high school students.

Thank you, I look forward to your response!

--
Jessie Koltz, M.Ed., NCC, CPC Intern
UNR CEP Ph.D. Candidate
jkoltz@nevada.unr.edu
Office (775) 391-8121

"Education is the most powerful weapon which you can use to change the world." Nelson Mandela

If you would like to schedule a meeting with me, please check out my availability at this link here :-)

Adel R Gabriel <gabriel@ucalgary.ca> Fri, Jul 17, 2020 at 1:33 PM
To: Jessica Koltz <jkoltz@nevada.unr.edu>

Hi Jessica
You have my permission to use the PAS scale

Adel Gabriel

Get Outlook for iOS