Utilizing Cognitive Behavioral Interventions to Positively Impact Academic Achievement in Middle School Students

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Abstract

Empirical research suggests a correlation between Cognitive Behavioral Therapy (CBT) interventions and increased academic achievement of students in middle schools. An argument was presented for utilizing CBT intervention within the delivery system of comprehensive school counseling programs in middle schools; specifically in individual counseling, small group counseling, and classroom guidance lessons. Practical examples and resources were provided to assist school counselors in implementing CBT interventions to help students control cognitive thought processes and positively impact academic achievement.
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A professional school counselors’ role is to remove barriers to students’ success; enhancing students’ learning environments and supporting students’ academic achievement (American School Counseling Association, 2005). The American School Counseling Association (ASCA) (2005) recommends school counselors implement a comprehensive school counseling program that “leads to increased student(s) achievement” (p. 11) and “supports the school’s academic mission” (p. 15) by calling attention “to situations within the schools that defeat, frustrate and hinder students’ academic success” (p. 15). However, how each individual school counselor meets that mission is flexible within the comprehensive framework (ASCA). The purpose of this paper is to propose middle schools counselors’ meet that mission through the implementation of cognitive-behavioral interventions in individual, small group, and classroom guidance curriculums of the comprehensive school counseling delivery system. Literature correlating CBT interventions with increased academic achievement will be reviewed and practical CBT resources will be provided so that current middle school counselors may easily incorporate CBT interventions within their current delivery system.

The comprehensive school counseling proposed by ASCA (2005) suggests school counselors meet the needs of their students through a four-pronged delivery system. This delivery system is composed of (a) School Guidance Curriculum, (b) Individual Student Planning, (c) Responsive Services, and (d) System Support (ASCA). The CBT interventions proposed in this paper would be delivered as part of the School
Utilizing Cognitive Behavioral Guidance Curriculum through classroom guidance, as well as through individual counseling and small groups, which may occur during Individual Student Planning and/or Responsive Services. Middle school counselors can directly impact student learning through classroom guidance and small group activities (Sink, 2005). It will be argued in this paper that CBT interventions utilized within classroom guidance and small group meetings are the most logical and educationally applicable interventions school counselors can use to impact academic achievement.

Cognitive behavioral therapies can be defined as those interventions with the core assumptions that what individuals think directly impacts how they feel and what they do (Graham, 2005). If a school counselor can re-educate students to confront their dysfunctional thoughts, then consequently symptoms of emotional distress and dysfunctional behaviors will be reduced. School counselors utilizing CBT give strong significance to the conscious thought processes of their students, place emphasis on the present, give homework for the students to work on between sessions or groups, and assess the efficacy of the intervention to make changes as the relationship progresses (Graham). At the heart of the classroom, group, or individual school counseling experience is the positive relationship the school counselor builds with the student(s). Interventions utilizing CBT are dependent upon an appropriate cognitive developmental level, hence, a greater use of behavioral interventions may be appropriate with students under the age of eight or nine years old (Graham). Some of the aspects of CBT which make it appropriate for use in schools are the relatively small number of sessions needed for counseling, the psycho-educational aspects of the
counseling relationship, and the transparency of the treatment plan between school counselor and student.

Foundationally important to the discussion of what theoretically based interventions would be applicable within the comprehensive school counseling program is the empirically based research supporting the effectiveness of the intervention. Graham (2005) suggested in his analysis of cognitive behavioral therapies for children, “cognitive behavior therapies are those best supported by the evidence” (p. 57). In other words, empirical research suggests that CBT interventions have shown effectiveness as therapeutic interventions for children in the past. Cognitive behavioral therapies have been shown to be effective interventions for children struggling with anxiety disorders, obsessive-compulsive disorders, chronic fatigue, post-traumatic stress disorder, psychotic disorders, social skills deficits, drug and alcohol abuse, parental divorce or separation, and depression (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Cohen, Deblinger, Mannarino, & Steer, 2004; Dadds, Holland, Laurens, Mullins, Barrett & Spence, 1999; Flannery-Schroeder & Kendall, 2000; Franklin, Kozak, Cashman, Coles, Rheingold, & Foa, 1998; Graham, 2005; Kendall, 1994; Merry, McDowell, Wild, Bir, & Cunliffe, 2004). The topic of utilizing CBT interventions with youth has experienced an increasingly diverse research base, supporting the effectiveness of varied approaches with adolescent or children clients (Braswell & Kendall, 2001; Graham, 2005). However, this research has traditionally taken place in the clinical setting; therefore, research specifically connecting CBT interventions with an increase in academic achievement in middle school is sparse. The foundational tenets of this broad research base, helping youth produce positive change and a problem solving attitude through utilizing CBT
utilizing cognitive behavioral interventions (braswell & kendall; graham), are foundational tenets of the current school based cbt research as well.

the correlation between cbt and student learning

wang, haertel and walberg (1994) created a knowledge base of 11,000 statistical findings showing reasonable consensus on significant influences on learning. they identified 28 categories of influences that impact student learning. among these 28 categories, they found that metacognitive processes had the second most powerful effect on student learning, behind only classroom management. metacognitive processes were defined as the "student’s capacity to plan, monitor, and, if necessary, re-plan learning strategies" (p. 75). other researchers have linked cognitive processes with motivation, a major building block for student academic achievement (young, 1997; roeser, strobel & quihuis, 2002). using cognitive behavioral interventions to intervene and help students control cognitive thought processes would directly impact these metacognitive influences on student learning; therefore, positively impacting academic achievement.

cognitive behavioral therapy interventions in middle school would mainly be concerned with helping students realize three things: how their thought patterns affect their behavior, how they can take control of these thought patterns and how they can apply interventions to effect behavior change (hall & hughes, 1989). recently, school counselors have been particularly aware of how their interventions contribute to the increase of student academic achievement (brigman & campbell, 2003; brown & trusty, 2005; sink, 2005a; sink, 2005b; webb, brigman, & campbell, 2005). this is due, in part, to the increased focus on justifying school counseling itself through its
Utilizing Cognitive Behavioral impact on academic achievement in students and other evidence based practice called for by the ASCA National School Counseling Model (2005). Throughout the model, ASCA reinforces the idea that school counselors focus on promoting and enhancing student learning. This is especially appropriate in light of the fact that most adolescents who receive mental health services do so at school (Farmer, Burns, Phillips, Angold, & Costello, 2003).

**Academic Achievement**

Academic achievement in students can be connected to the motivation of the students, as well as the level of anxiety students experience at school (Barabasz & Barabasz, 1981; Ergene, 2003; Fisher, Masia-Warner, & Klein, 2004; Keogh, Bond, French, Richards, & Davis, 2004; Kiselica, Baker, Thomas, & Reedy, 1994; Mizelle & Hart, 1993; Pintrich & De Groot, 1990; Roeser, Strobel, & Quihuis, 2002; Young, 1997). Students must be motivated to use learning strategies, be engaged in learning, and apply self-regulating learning processes to academic tasks (Mizelle & Hart, 1993; Pintrich & De Groot, 1990). Pintrich and De Groot (1990) propose three aspects which impact student motivation: (a) Do the students believe they have the ability to perform the required task, (b) Does the task align with their self-defined goals and beliefs; and (c) Do students have an emotional response to the task? These three processes help define for the students if they are able to do the task and if they believe they are responsible for the task. The students’ beliefs that they have the ability to perform the task seems directly related to how they approach a task, persist in the task and master the task (Roeser, Strobel, & Quihuis). Further, these beliefs are then constructed as academic values, goals, and competence beliefs that directly create the motivation or
lack of motivation within the student. The Student Success Skills (SSS) intervention, that will be discussed later, was the only empirically supported school-based cognitive behavioral intervention study to directly impact academic achievement. The SSS intervention directly targets middle school students’ improvement of these self-efficacy beliefs and achievement beliefs. Therefore, based on the success of the SSS intervention, it seems an appropriate direction would be for school counselors to use classroom guidance sessions, utilizing cognitive behavioral strategies to directly target self-efficacy beliefs, and their relation to academic values, goals and competency beliefs. The third aspect impacting motivation involved is students’ emotional response to a task. Anxieties are an example of a barrier to academic success, since the emotional response to anxiety has been shown to negatively impact academic achievement in middle school students. Anxieties have a direct impact on students’ motivation to complete a task, as it affects the way they feel about the task and if they feel they can accomplish the task.

**Barriers to Academic Success**

Anxiety in adolescents has been shown to impact academic achievement, test performance, peer popularity, depression, attention deficits, and loneliness as well as other behavioral and relational issues (Barabasz & Barabasz, 1981; Ergene, 2003; Fisher, Masia-Warner, & Klein, 2004; Keogh, Bond, French, Richards, & Davis, 2004; Kiselica, Baker, Thomas, & Reedy, 1994). In clinical settings, stress and anxiety reduction programs have shown promise in managing the negative effects of these emotional responses (Credit & Garcia, 1999; Kiselica, Baker, Thomas & Reedy). These interventions included role playing, problem solving, stress logs, teacher led relaxation
exercises, parent newsletters, and a stress management program (Braswell & Kendall, 2001). CBT has been shown to be effective in clinical environments to reduce anxiety in young people (Barrett, 1998; Barrett, Dadds, & Rapee, 1996; Dadds et al., 1999; Flannery-Schroeder & Kendall, 2000; Kendall, 1994). If school counselors can utilize the interventions mentioned above to reduce anxiety in students, while equipping students with the skills to manage the negative effects of anxiety, it would seem logical that students’ academic achievement and test performance would increase.

A research gap exists pertaining to application of specific CBT interventions in schools. However, not only do the CBT interventions reported above show the effectiveness of CBT in reducing anxiety, but other CBT research illustrates the effectiveness of CBT for improving students’ self-concept and positively affecting academic achievement (Brigman & Campbell, 2003; Miranda, Webb, Brigman, & Peloso, 2007; Sapp, 1994; Sapp & Farrell, 1995; Webb, Brigman & Campbell, 2005). In addition, this research found CBT interventions had a significant effect on improving the self-concept and academic achievement of at-risk African American and Latino students, including middle school students (Miranda, Webb, Brigman, & Peloso, 2007; Sapp, 1994; Sapp & Farrell, 1995). Specifically, Sapp (1994) and Sapp and Farrell (1995) used cognitive behavioral interventions in both individual counseling sessions and within classroom guidance lessons to reduce anxiety and stress surrounding academics, specifically test taking, while improving academic self-concept by teaching study and test taking skills. The intervention resulted in improved grade point averages, reduced the number of school days missed or tardy, and improved the academic self-esteem of the participants.
The Student Success Skills Program

The Student Success Skills (SSS) cognitive behavioral intervention targets metacognitive skills, social skills, and self-management skills (Brigman & Campbell, 2003; Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb & Brigman, 2006; Webb, Brigman & Campbell, 2005). The SSS intervention utilizes small groups and classroom guidance to specifically target and teach metacognitive processes and skills to enhance academic achievement in math and increase positive student behaviors in the classroom. The SSS program is a CBT based intervention that has been effective in closing the achievement gap in mid to low range achieving students (Brigman & Campbell, 2003; Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb & Brigman, 2006; Webb, Brigman & Campbell, 2005). In past studies, students showed significant academic progress as a result of the CBT intervention. One of the main strengths of the SSS program is the collaborative design; school counselors and teachers can collaborate in presenting classroom guidance lessons, while school counselors implement structured small groups. Another main strength is the implication that because the SSS program is based on CBT; focusing on meta-cognitive and self-management education, it impacts academic achievement across ethnic lines (Miranda, Webb, Brigman, & Peluso, 2007).

The details and protocol for delivery of the SSS program have been detailed in past studies and books (Brigman & Campbell, 2003; Brigman & Goodman, 2001; Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb & Brigman, 2006; Webb, Brigman & Campbell, 2005) and, therefore, will not be presented here. However, in short, the SSS intervention is given in small groups that meet once a week
for 45 minutes, over an eight-week period. Four "booster" sessions (45 minutes each) are provided to students the following semester. The booster sessions are designed to reinforce skills and motive students (Webb, Brigman & Campbell, 2005). During each session of the intervention, students respond to a seven-item checklist geared to the three success skills that anchor the group program: academic, social, and self-management skills. The SSS intervention uses strategies aimed at helping students develop academic, social, and self-management skills to increase success (Webb, Brigman & Campbell, 2005). “A particular strength of this model is the relevance of the content to the students' own lives and needs” (Webb, Brigman & Campbell, 2005, p. 408). Classroom guidance lessons focused on three main topics: (a) helping students increase cognitive skills, such as memory, goal setting and self-monitoring progress, (b) increasing social skills, focusing on conflict resolution skills and team work, and (c) self-management skills, such as career awareness (Brigman & Campbell, 2003). Positive results were found as a result of the SSS intervention, with students receiving the treatment doing better in math than students not receiving the treatment. In one study, seventy-two percent of the students improved in their ability to apply academic, social, and self-management skills (Webb, Brigman, & Campbell, 2005). Another study showed significant gains in mathematical and reading scores for those in the treatment group (Brigman & Campbell, 2003). In replications of the SSS program, students significantly improved in their behavior, while achieving statistically significant gains in math scores (Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb, Brigman, & Campbell, 2005).
Due to the success of the SSS program, it is clear CBT interventions have been implemented successfully in individual counseling sessions, group counseling sessions, and classroom guidance to help control negative emotions and directly impact metacognitive processes, thereby increasing academic achievement in students (Brigman & Campbell, 2003; Miranda, Webb, Brigman, & Peloso, 2007; Sapp, 1994; Sapp & Farrell, 1995; Webb, Brigman & Campbell, 2005).

School Counseling Applications

Sink (2005) suggests school counselors should focus on improving students' performance in academic-educational skill areas and emphasizes interventions affecting student cognition and metacognitions. He warns that students are at risk of losing motivation, focus, and self-regulation during the transition from adolescence into adulthood (Sink). Sink goes on to offer that students need to learn how to organize their learning strategies, to practice and use memory strategies, to learn information gathering skills, and to be able to plan and organize their school and home life. These psycho-educational lessons are best presented through large and small group activities, according to Sink. These interventions and suggestions can be categorized as CBT interventions. CBT interventions are psycho-educational, teach students strategies for controlling and changing personal-social behaviors, positively affect cognitive and meta-cognitive functioning, enhance organizational and learning skills, and teach students strategies to overcome anxiety and other barriers to success.

It seems logical that if we, as school counselors, should apply any ability we may have to utilize a theoretical and intervention framework which directly impacts (a) student motivation, (b) students' beliefs about their ability to perform tasks, (c) students'
ability to control and redirect emotional responses to tasks, and specifically the crystallization of these three beliefs, and (d) the students’ academic values, goals and competence beliefs (Pintrich & De Groot, 1990; Roeser, Strobel, & Quihuis, 2002). Students’ emotional responses to tasks are often expressed through negative outlets; such as anxiety and stress. Utilizing cognitive behavioral interventions in middle schools may not only positively affect academic achievement, but also reduce stress and anxiety, which negatively impact peer popularity, increase depression, and exacerbate attention deficits and loneliness (Barabasz & Barabasz, 1981; Ergene, 2003; Fisher, Masia-Warner, & Klein, 2004; Keogh, Bond, French, Richards, & Davis, 2004; Kiselica, Baker, Thomas, & Reedy, 1994).

Numerous resources exist (Burns, 1999; Cormier & Nurius, 2003; Dobson, 2001) to help the practicing school counselor learn the theoretical foundation and applications of cognitive behavioral therapy. Since individual counseling sessions in school are by necessity brief, school counselors can easily streamline cognitive behavioral theoretical beliefs into practical, brief applications, such as units pertaining to problem solving training, self regulation approaches, recognizing and labeling emotions, relaxation training, and anger management, to name a few (Braswell & Kendall, 2001: Cormier & Nurius, 2003). Utilizing theoretical foundations of cognitive behavioral therapy within a solution focused counseling framework can also be helpful in designing brief, targeted, practical intervention designs which specifically target metacognitive processes. It is important to keep in mind the developmental level of the student, as well as the communication and delivery method of the school counselor and the manner in which the student best receives information. The delivery method needs to be age-
appropriate, and the social context and reasons for student referral need to be in the forefront of the school counselor's mind as they determine intervention possibilities in collaboration with the student (Braswell & Kendall).

**Individual Counseling**

According to Braswell and Kendall (2001), the school counselor interested in utilizing CBT in individual counseling sessions should envision themselves as a “coach” to help the young person “develop a world view that is characterized by a constructive problem-solving attitude” (p. 247). CBT interventions are especially useful for their ability to be individually applied to specific student issues. For example, self-monitoring interventions (see Cormier & Nurius, 2003, pgs. 580-638) can be utilized to assist the student who is struggling with attention-deficit hyperactivity disorder, anger management issues, struggling with homework, struggling with substance abuse, having problems controlling their behavior in the classroom, caving to social pressures, hoping to lose weight, or dealing with anxieties, shyness or phobias. Self monitoring interventions such as stimulus control, self-reward, self-as-a-model, and self efficacy interventions can all increase or decrease desired behaviors through practice and homework. Previous research has shown that these interventions do positively affect academic self concept while reducing test anxieties among students (Miranda, Webb, Brigman, & Peloso, 2007; Sapp, 1994; Sapp & Farrell, 1995).

Burns (1999) proposes numerous CBT strategies to assist the depressed person, and the person that experiences mood swings, or perceives him/herself as inadequate or a failure. Interventions target automatic thoughts and the irrational consequential thoughts that follow. Interventions attempt to replace the irrational thoughts with rational,
healthy thoughts. Replacing the irrational thoughts helps the person fight through depression and formulate a healthy mental attitude. Burns utilizes numerous helpful scales, and worksheets the school counselor can easily translate into their own practice with students struggling from peer pressure, the need to feel accepted, depression, and perfectionism.

Other CBT interventions that would be appropriate and brief for a school counseling environment might include stress and anxiety management techniques (see Cormier & Nurius, (2003), pgs. 467-504 and Braswell & Kendall, (2001), pgs. 260-261) to help students prepare for testing or other stressful events. Again, Sapp (1994) and Sapp and Farrell (1995) have shown such interventions to be effective strategies to help students reduce academic related stress. An example of stress and anxiety management techniques might be working with students to interrupt negative thought processes, replace those thought processes with rational, healthy thoughts while at the same time breathing through the nose and out the mouth while tensing and relaxing various muscle groups. Cormier and Nurius (2003) suggest that stress and anxiety interventions can target the antecedents of stress, provide a buffer to the stressful stimulus, or provide interventions to physiologically help deal with the stress. These interventions could involve problem solving, exercise, teaching breathing techniques, muscle relaxation and other physical skill building such as meditation or muscle relaxation, or could also involve stress inoculation techniques, stress coping techniques, or cognitive reframing and cognitive restructuring exercises.
**Small Groups**

Each of the CBT interventions detailed above could be utilized in small groups or classroom guidance as well. Self-monitoring training seemed to be especially promising for use within a classroom to help students control their behavior and positively impact their academic environment (Cormier & Nurius, 2003). Role playing is another common CBT training tool which can easily be transferred to small group or classroom environments. Groups of students can practice the desired behavior and then model that successful behavior for each other. Modeling and role playing allows students to learn what self control looks like and enables the student to apply the learned skills in real life situations. School counselors could utilize modeling and role playing when using CBT interventions in individual counseling as well. The SSS program literature (Brigman & Campbell, 2003; Brigman, Webb, & Campbell, 2007; Campbell & Brigman, 2005; Webb & Brigman, 2006; Webb, Brigman & Campbell, 2005) provides specific structured small group lessons that can be implemented as part of a comprehensive school counseling delivery system.

**Classroom Guidance**

The SSS intervention is the main example in the current literature that utilizes classroom guidance lessons as interventions to help students develop self-management skills to increase their academic success (Webb, Brigman & Campbell, 2005). Specific examples of CBT classroom guidance lessons are provided in the SSS literature presented above. CBT interventions could be applied to help students deal with numerous issues, such as social anxiety, peer pressure, depression, problem solving, test anxiety, and other academic issues. This is evident in the SSS intervention, which
showed students improved in their ability to apply academic, social, and self-management skills after receiving small group CBT interventions (Webb, Brigman, & Campbell).

Conclusion

The American School Counseling Association (ASCA) (2005) recommends school counselors implement a comprehensive school counseling program focused on removing barriers to student success and focused on increasing student's academic achievement. The comprehensive program is presented to students through the delivery system of the school guidance curriculum, individual planning and responsive services (ASCA). School counselors choose assorted programs and interventions to fulfill the purpose of the comprehensive school counseling program. School counselors should utilize research supported, empirically based theoretical intervention strategies, such as cognitive behavioral theory. Previous research clearly illustrates the effectiveness of CBT interventions with children and adolescents. The literature review was limited by the number of studies using Cognitive Behavioral Therapy interventions solely with middle school students in a school setting, however, numerous studies showed the effectiveness of utilizing CBT interventions with students.

School counselors would benefit from further investigation into cognitive behavioral therapies in middle school settings, especially in light of the success of the SSS program and the focus on evidence based practice in ASCA’s National School Counseling Model. Studies that did focus solely on middle school students and CBT interventions in the school setting found that CBT interventions delivered through small groups and classroom guidance were very effective. Programs such as the SSS
Utilizing Cognitive Behavioral Intervention, stress inoculation training, and at-risk student interventions were effective in helping to reduce or control social anxiety, test anxiety, and stress while improving self-management skills. The overall benefit and effectiveness of cognitive behavioral interventions in school settings was clearly illustrated. Often the intervention positively affected academic achievement by controlling cognitive inhibitors to academic achievement, such as anxiety and stress. Since specific resources and interventions were identified to help school counselors learn and apply CBT interventions in their schools. Further studies replicating these existing studies in other middle schools and new studies examining the effectiveness of different cognitive behavioral interventions on academic achievement are needed.
References


