The Effectiveness of Cognitive-Behavioral Therapy to Reduce Special Needs Students' anger Related Problems: Theoretical Comparative Study.

Key words: anger and aggression – cognitive behavioral therapy/approach – effectiveness – intervention

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Abstract

This research aims to reduce and/or diminish anger related problems in children and adolescents. It also sheds light on the similarities and differences between students' responses to CBT, and compares the efficacy of CBT to other traditional approaches. Further, the sub-types of CBT are explored, especially, in the way of how each one of them functions. It was found that CBT is moderately effective to treat anger and anger related problems of children with special needs. Moderate effects also were found in individual variables such as feeling angry, aggressive behavior, and anger management skills. Comparing the efficacy of CBT to other approaches cannot arrive at valid judgment because comparative studies are very scarce. Implementation of CBT is examined in this research, and some suggestions for future research were discussed.

Introduction

Anger is one of the main reasons behind physical injuries to people including the angry person him or herself, and anger is often responsible for property damages. Anger is often the hidden motive of externalized behavior. Even if externalized behaviors are absent, anger is more likely to lead to health problems such as chronic stress or physiological disorders. Thus, educators and psychologists need to intervene with a population that exhibits anger and externalized behaviors (Ho, Carter, and Stephenson, 2010).

Ho, Carter, and Stephenson (2010) cited the APA Dictionary of Psychology 2006 that defined anger as:

> an emotion characterized by tension and hostility arising from such sources as frustration, real, or imagined injury by another, or perceived injustice, it can manifest itself in behaviors designed to remove the object of the anger ... or ... merely to express the emotion. (VandenBos, 2006, p.53) (Ho, Carter, and Stephenson, 2010, p. 245)

Previous Studies

Novaco (1975) presented a unique anger model with several elements: "subjective emotional states, environmental circumstances, physiological stimulation, cognitions of antagonism, and corresponding behavioral reactions" (Sukhodolsky, Kassinove, and Gorman, 2003, p.248). One can conceptualize

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these elements as cascade. For example, the subjective emotional states evoke individuals physiologically. Hence, it leads to the stage in which individuals cognitively labeled as "Being angry" (p.248). This process occurs automatically and associated with the cognition of antagonism toward the source of provocation. The control mechanisms that regulate by internal and external states are responsible for the action impulses (Sukhodolsky et al., 2003, p.248).

Spielberger (1988) developed the understanding of anger's concept. His model divided anger in to two aspects: anger experience and anger expression. The first aspect refers to the subjective experience of the individual, its duration, and the intensity of the experience. Anger expression denotes to how individuals act on anger (e.g. outwardly, suppress it, and coping with it). Furthermore, Spielberger considered Anger, Hostility and Aggression (AHA) to be an AHA syndrome. Anger is the individual's emotional state, hostility is antagonistic beliefs, and aggression is individual's behavior (Sukhodolsky et al. 2003).

According to Novokda, there are three elements of anger: cognition, behavior, and effect. Aggressive behaviors are inevitable consequences of cognitive distortion or deficit. For example, misinterpreting social situations is an outcome of biased attributions, and displaying low self-control when aroused is because of cognitive deficit. On the other hand, the effect of anger appears through tensions and agitations (Ho et al. 2010).

There has been a major research focus in respect to anger, aggression, and other externalized behaviors, especially for students with special needs. Studies, like those done by Hill & Bruininks (1984), Sigafoos, Elkins, Kerr, & Attwood (1994), Smith, Branford, Collacott, Cooper, & McGrother (1996), have shown that the rate of students with special needs who exhibit anger and aggression problems is high. The developmental and cognitive deficits that these populations possess reduce both their ability to control their emotions and impair their social skills. Therefore, the need for intervention with anger problems for such individuals is essential (Ho et al. 2010). Aggression appears to be unchanging in children. Consequently, it needs to be treated from the very early developmental stages, so it does not become immune to treatment in students' adolescent years (Ho et al. 2010).

CBT is one of the most well used interventions with students who display anger related problems. CBT has been increasingly used to help aggressive students adapt to new behavior and/or diminish antisocial behaviors (Bennett & Gibbons, 2000).

Goal of Study

This research aims to reduce and/or diminish anger related problems in children and adolescents. It also sheds light on the similarities and differences between students' responses to CBT, and compares the efficacy of CBT to other traditional approaches. Further, the sub-types of CBT are explored the way of how each one of them functions. Implementation of CBT is examined in this research, and some suggestions for future research were discussed.

Theoretical Part

There are several approaches that have been applied to replace student's aggressive behaviors with positive behaviors. Most of these interventions that are used with students with special needs are based on applied behavior analysis (APA). These interventions use external controls that might make students completely dependable on these external techniques. Also, such interventions will apply some restrictions on their dependence. For example, using applied behavior analysis technique such as extrinsically reinforcing the wanted behavior and punishing the undesirable behaviors, it may decreases students' autonomy, will, and their intrinsic motives. However, CBT suggests that there is a connection between a given situation and a child's belief system and the child's interaction with the event (Mennuti & Christner, 2012).

The first difference between traditional behavior approaches and CBT is that the connection between behavior and its consequences is multidirectional rather than linear as in applied behavior analytic principles (e.g. A-B-C); instead in CBT "there is not a cause and effect relationship but a dynamic interaction between situational, cognitive, and behavioral components" (Mennuti & Christner, 2012, p. 6). The second difference is that CBT training not only includes both cognitive distortions and deficiencies and behavioral strategies to improve a child's skills and behavioral deficits, but also emphasizes and cultivate individual's self-discipline and coping skills that maintain generalizations over time.

Therefore, addressing the cognitive effect on CBT's approach may promote and enhance some of the limitations of traditional behavior approaches (Ho et al. 2010). Using CBT may also be more effective on educational environments since its techniques are a combination of both philosophies (cognitive approach & behavioral approach).

CBT is an independent school of therapy that differs from both behavioral and cognitive therapies. It has been "defined as a class of child-focused treatment that target covert and overt behaviors to accomplish improvement in symptoms and functioning" (Sukhodolsky et al. 2003, p. 249). According to Robinson, Smith, and Miller (2002), CBT provides aggressive students with necessary social skills that help them to respond appropriately. Furthermore, CBT helps them to interpret social situations correctly, and offers strategies for teaching decent replacement skills that can be generated to other settings and over time. CBT strategies aim to alleviate negative consequences of disorders such as fears, aggression, anxiety, phobias, and conduct disorder. The CBT model engages both internal cognitive events and external problem-behaviors through teaching strategies to improve positive interactions and lessen undesirable behaviors. CBT's procedures can be used to modify students' thoughts, beliefs, and foster self-regulation. CBT targets cognitive distortions that aggressive students use and tries to alter them positively, and also, aims to teach the requisite skills that help them to adjust with social stimuli (Robinson et al., 2002).

Del Vecchio& O'Leary (2004), whose study focused on meta analytic reviews of anger control issues and aggressive behavior, recommended CBT as an effective way to decrease anger issues. CBT was found most effectual for students who have problems with anger manifestation (Del Vecchio& O'Leary, 2004). Moreover, CBT is an essential psychological therapy for mood disorder. Sofronoff, Attwood, Hinton, & Levin (2007) adapted a version of CBT to facilitate children with Asperger syndrome who have trouble understanding and managing their anger. CBT is recognized by studies and research as an efficient treatment to modify an individual's method of thinking to respond to emotions like anger, sadness, and anxiety. CBT has been developed and enhanced over several decades of research with results indicating it as an effective therapy for conduct problems (Sofronoff et al., 2007).

As reported by Mennuti & Christner (2012), CBT is a combination of cognitive and behavioral components. For behavior, it focuses on environmental influences such as "teacher or parents' interaction and past trauma" (p. 7). Environmental influences render an aggressive child an opportunity to understand his or her problems. Teachers can modify or adjust the environment by implementing "positive behavioral support, and token economies" (p. 7). On the other hand, skill deficit stems from student's poor self-regulation or his or her underdeveloped social skills (Mennuti & Christner, 2012).

The cognitive component focuses on cognitive distortions and cognitive deficiencies. According to Mennuti and Christner (2012), "cognitive distortions refer to any kind of thinking errors that are responsible for misperceiving or/and misinterpreting situations and events. Students who have cognitive distortions often suffer from internalizing difficulties such as anxiety and depression" (p. 7). On the other hand, "cognitive deficiencies lead individuals to be impulsive and have attention problems due to individuals' deficit on cognitive-processing abilities such as minimal forethought, or problem-solving skills" (Mennuti & Christner, 2012, p. 7).

The features of cognitive deficiency regarding expression of emotions, complexity, cognitive distortion, and maturity are the focal points of CBT in terms of wrong hypothesis and dysfunctional thinking for children and adolescents with Asperger syndrome. Therefore, adults and children with Asperger syndrome who experience postponed theory of mind skills and trouble in understanding, stating, and controlling emotions could use the clear applicability of CBT to be more aware about their responses to emotions and other feelings (Sofronoff et al., 2007). Moreover, fifty outcome studies on anger were reviewed by Beck and Fernandez (1998), including a total of 1640 subjects, many of whom were incarcerated as violent convicts. The researchers found a mean weighted effect size of 0.70 for those who received CBT versus untreated controls. Subjects who applied average CBT accomplished better than 76% of untreated subjects on anger reduction (Butler, Chapman, Forman & Beck., 2006).

Robinson et al. (1999) stated that behavioral problems such as aggressive behavior, hyperactivity, and impulsivity have been reduced efficiently by school-based cognitive behavior interventions (CBTs), self-talk focused on social cognition through a span of research for more than 25 years in school settings (Daunic et al., 2012). Another aspect of CBTs is "Tools for Getting Along" (TFGA), which was created to avert or improve behavioral and emotional problems. TFGA is usually implemented at a general level to educate students to employ social problem solving in emotional impulsive cases (Daunic et al., 2012).

CBT consists of six parts, namely "assessment of the nature and degree of the mood disorder, affective education, cognitive restructuring, stress management, self-reflection, and a schedule of activities to practice new cognitive skills" (Sofronoff et al., 2007, p 1204). Attwood (2004a) illustrated that to design appropriate programs for uncommon cognitive form of students with Asperger syndrome, there are possible modifications for every part of CBT. He also demonstrates in his paper how the anger intervention program explains the employment of these modifications (Sofronoff et al., 2007).

According to Sukhodolsky et al. (2003), they demonstrated CBT as a child-focused intervention that targets external and internal conducts to achieve the development of change in display and functioning. Thus, some interventions are not considered in this meta-analysis, such as intervention provided to adults and altering environmental contingencies. Specifically, the explanations of conducting this meta-analysis of CBT for anger in children consisted of two main points. Initially, stress inoculation and arousal reduction were the two models that the treatment was based on because both of them have been used as principle ways of therapy since the 1970s. Later, other therapies based on cognitive behavioral strategies and social cognitive techniques were considered. Beck & Fernandez (1998) indicated that CBT is normally an efficient means for treatment of anger; on the other hand, there were no investigations of the differential impacts of CBT subtypes (Sukhodolsky et al., 2003). With regard to anger management, CBT plays a principle role in developing self-esteem and anger control after the intervention, even though the mood situation may not show modifications.

Novaco(1976) indicated that the cognitive behavioral approach is effective in controlling and preventing anger such as victimization by their own anger and building up of stimuli in order resolve social issues. Further, self-esteem could be improved by learning to be aware about managing anger through reducing arousal levels of anger (Bradbury& Clarke, 2007). Consequently, reducing and managing anger were positive outcomes of CBT for anger management (Bradbury& Clarke, 2007). Furthermore, Del Vecchio& O'Leary (2004) in their review of anger management recommended that multicomponent therapy could be very efficacious for aggressive behavior. Also, DiGuiseppe&Tafrate (2003) mentioned that "the inclusion of a treatment manual as well as adherence and competence measures was associated with a

greater reduction of aggressive behaviors"(p.877). Further, one meta-analysis found that individual treatment generates consistent impacts to reduce aggression even though the majority of anger management studies used a group design (DiGuiseppe&Tafrate, 2003).

Overall, there are "Five meta-analytic reviews of anger treatments in terms of self-inoculation training, relaxation training, cognitive restructuring, and other therapies were presented as proof of the medium to large effects size for aggression and anger ((Beck & Fernandez, 1998; Bowman-Edmondson & Cohen-Conger, 1996; Del Vecchio& O'Leary, 2004; DiGuiseppe&Tafrate, 2003Tafrate, 1995)" supporting the use of cognitive behavioral therapies". Moreover, the effectiveness of cognitive or behavioral intervention could not be shown depending on the specific module that uses to treat a problem. While the different components of treatments that combining both of cognitive and behavioral modules have the majority impacts (McCloskey, Deffenbacher, Gollan, &Coccaro, 2008).

While there is plenty of research to support CBT as an effective intervention, opponents of this perspective argue that it would not be effective to implement CBT in school settings as well as for children and adolescents with special needs (Ho et al. 2010). For example, Gensle (2005) investigated if CBT is effective especially when implemented in a school setting, and what component of CBT is most effective. Gensle (2005) found that many of the meta-analysis studies suggested that CBT is undoubtedly effective by concluding moderate to high effect size number, but he claimed that these studies reached this conclusion because they have not analyzed the findings as Lipsey and Wilson (1993) suggested (Gensle, 2005).

Consequently, Gensle completed a thorough meta-analysis study to synthesize the quantitative results of interventions that dealt with anger related problems and used verifiable data objectively and meta-analysis techniques. Further, he only focused on interventions that were implemented in schools. Gensle calculated the effect size as Lipsey and Wilson suggested, and found ES of the interventions to be .31, which indicate slightly less positive outcomes (Gensle, 2005).

On the other hand, Gensle's study proved that participants with special needs had a high effect size, and it is notable that studies conducted on a population with special needs tend to be more effective than those implemented on all students. Rose, Dodd, & Rose (2008) point out that an individualized plan is more effective in managing anger problems. Moreover, the individual operation concentrated on two principle aspects regarding services conveyance and permitting intervention to meet the individual's needs. Furthermore, research recommends the CBTs for aggressive behavior to decrease expressed anger in students who have an intellectual disability in community settings (Rose et al., 2008). Consequently, the possible explanation that the population with special needs report high effect size is because students with special needs

receive more extensive and strong treatments since they are more in need of such interventions (Gensle, 2005).

The reasons for different results of these effect sizes between what Gensle and other studies found are not clear. For example, the result of the ES that Beck and Fernandez (1998) found is .70, and the effect size that was reported by Sukhodolsky et al. (2003) is .67 in meta-analysis of CBT for anger. Therefore, result differences can be attributed to intervention with different populations, strength of interventions, measuring different outcomes, different treatment's setting, or different analytical techniques (Gensle, 2005).

Additionally, Özabacı (2011) carry out a study to assess the total effect size of CBT, and also specify the efficacy of CBT across every outcome's domain with different measures. Özabacı's research references dates up to 1997, and includes studies that only selected participants for violence diagnostic purposes and participants' age range between 6-to-18 year old. Moreover, Özabacı randomly assigns treatment as behavioral, cognitive, or cognitive-behavioral therapy (Özabacı, 2001). Özabacı calculated the mean effect size and found CBT less effective in reducing or diminishing violence in children and adolescents. However, Özabacı's study suggests that, in general, participants who complete a full CBT program report clinically significant reduction in violent behaviors (Özabacı, 2001). One possible explanation of the small effect of CBT that Özabacı found is that the study did not identify clearly and definitely what violent behavior is, and how it differs from aggressive behavior. Based on that, the way that Özabacı draw conclusion from other studies is not clear.

Ho et al. (2010) conducted research to investigate the use of CBT intervention with students with special needs, especially for those who exhibit developmental disabilities, emotional and behavioral disorder, and Attention deficit/hyperactivity disorder (ADHD). They scrutinize "the characteristics of participants, components of interventions, study quality, dependent variables, and the efficacy of intervention" (Ho et al. 2010, p. 247).

On this meta-analysis study, researchers included references that only use participants whose age is 5 to 18 years. They excluded any study whose participants are not identified with special needs. Interventions conducted in psychiatric settings and general school-wide programs were discarded as well. They only include interventions conducted at home, school, or clinics. The authors included CBT studies that only concentrated on anger management. Ho et al. included only experimental studies with quantitative outcome measures (Ho et al. 2010).

Results revealed moderate effective of CBT when implemented in schools, which indicate the need to make schools more practicable for CBT. There was a large diversity in respect of training strategies, and yet most studies used combinations of training strategies (e.g. "hassle logs/anger log, rehearsal/practice in role-play, modelling, and performance feedback" (p. 253)) and cognitive-behavioral skills (e.g. "anger arousal recognition, problem-solving

skills, and direct cognition treatment" (p. 253). This meta-analysis presents several studies focused exclusively on cognitive issues to reduce or/and diminish anger problems. Also, it presented other studies that intensively concentrated only on behavioral responses to treat anger. Nevertheless, studies that use behavioral-oriented interventions outnumber cognitive-oriented interventions (Ho et al. 2010).

Ho et al. (2010) present 13 research group designs and found the efficacy of eight interventions were, according to Cohen (1992), moderately effective based on the overall weighted mean ES of 0.61. Furthermore, according to this study authors' report, three of the studies were very effective and two studies were moderately effective as well. The data analysis revealed a moderate treatment effect (Ho et al. 2010).

Meta-analytic strategies have been used for long time to evaluate the efficacy of CBTs regarding the treatment of externalizing behaviors. Moreover, Sukhodolsky et al., (2004) pointedto a mean effect size of CBTs, generally 0.67, as applied in different settings with meta analysis that consisted 40 studies concentrating only on anger in children and adolescents ranging in age from 6–18 (Barnes, Smith & Miller, 2014). Interestingly, there was a comparison among the internal branches of CBTin terms of skills improvement, affective education, problem solving, and multimodal approaches. As a result, problem solving was shown to be effective to decrease personal anger experiences. However, multimodal interventions and skills improvement were found to successfully reduce aggressive behavior and improve social skills. In addition, there is a clear positive relation between CBT elements and the effect size, especially feedback, modeling, and homework strategies (Barnes, Smith & Miller, 2014).

Problem solving

In terms of problem solving, we have to identify the problem in order to search for solutions as the opening step. Finding solutions for preventing antisocial acts like anger or aggression will be a good indicator to recognize the models and help specialists to find appropriate keys to solve these problems (Sukhodolsky&Scahill, 2012). Moreover, a problem-solving approach is necessary to help children realize different points of view. In addition, the problem itself can be understood differently by different people in terms of the objective of their actions with each other (Sukhodolsky&Scahill, 2012). Yell et al. (2013) indicated the importance of problem solving for emotional and social modifications.

Daunic et al. (2006) stated that the use of problem solving is one of the major goals that lead to understanding the problem and dealing with it in regard to anger and frustration. In addition, they mention the recurrent correlations between aggressive and dissipative behavior. Moreover, Polsgrove and Smith (2004) presented an organized list of steps that can be usefulin teaching students how to solve problems:

(1)"Recognizing that a problem exists"

(2)'The problem in terms of goals"

(3)"Generating alternative solutions":
(4)"Evaluating solutions"
(5)"Implementing the plan"
(6)"Monitoring the solutions" (Yell et al., 2013, p 194).

. To summarize, all of these steps can help to guide individual decision-making and the primary goal is prepare students to use them in challenging cases in their liveswhetherat school or elsewhere (Yell et al., 2013, p 194).

Daunic et al. (2006)selected fourth and fifth grade students to improve the positive solutions to solve social problems. One purpose for selecting these grades was because at this age, especially, students are cognitively mature and have advanced problem-solving concepts. A cognitive–behavioral social problem-solving curriculum was implemented to educate students about solving problems. The goal was to examine whether CBT as implemented by classroom educators could prompt and maintain positive results for students who are at risk of aggressive and disruptive behavior. Therefore, teaching social problem-solving skills to students with conduct problems along with their peers can generate an intervention that could be implemented in a classroom setting (Daunic et al., 2006).

Self-Instruction

Self-instructional training aims to assist students to direct their non-verbal behavior by educating them about verbal prompts (Yell et al., 2013). Usually, after using the self-instructional approach, it is appear that the deficits of ability to response in a reflective, non-impulsive, prepared way are reduced. To solve behavioral and academic issues using self-instruction in effectual way to initiate, direct, redirect social behaviors could be an appropriate approach. As well, self-instructional training has been employed for aggression because children with aggressive behavior seem to react to problematic circumstances with anger; instead of usingalternatives such as consideration or using the method of “stop and think” to respond to challenging situations (Yell et al., 2013. P 144 and 145).

Camp, Blom, Hebert, &Doorninck (1977) stateed that the use of self-instructional training with children who have aggressive behavior, was examined by previous studies. Accordingly, the main goal of their research was to educate aggressive children to respond appropriately to provocative situations by teaching them how to engage in coping self-instructions (Yell et al., 2013). Meichenbaum& Goodman (1971) found that another way to reduce behavioral problems is to teach children to talk to themselves using different statements or questioning themselves when faced with difficulties that normally lead to impulsive behavior. There are four statements that children should consider when talking to themselves: (a) identification of the problem; (b) attention concentration and response direction; (c) self-reinforcement; and (d) self-evaluation, coping skills, and faults correction.Theirintervention was shown to be effective with children who had impulsivity regarding the improvement of self-instructional training style (Yell et al., 2013 p 146).

Children have been assisted to monitor their arousal situation by self-monitoring and self-instruction elements, clarifying the arousal as integrating a suitable emotional situation, identifying states that usually offer extreme feeling of anger and utilizing inhibitory self-directives to reduce the speed of their automatic reaction (Kendall, 1993). Coie & Krehbiel (1984) showed that self-instruction could be used to diminish children with impulsivity physical off-task classroom behavior (Lochman & Curry, 1986). CBTis effective in general to decrease aggressive behavior, although there is a limitation in these studies such as imperfect data collection in some measures, the lace of evaluation for sustained impacts, and insufficient teacher rating for their students' aggressive behavior. In addition, the research emphasizes the effectiveness of self-instructional training on impersonal function while less attention is directed toward diverse types of children's classroom off-task behavior (Lochman& Curry1986).

Self-monitoring

The self-monitoring process is defined **as** a personality observation that refers to an ability to regulate behavior to provide accommodation of social behavior(Menzies, Lane, and Lee, 2005). According to previous research (Webber, Scheuermann, McCall, & Coleman, 1994), some social skills, positive classroom behaviors, and keeping students engaged on tasks could be gained efficiently by using self-monitoring. In addition, self-monitoring has been used positively to reduce unsuitable classroom behaviors as well as to encourage the likelihood of generalization of such behaviors. On the other hand, the accuracy of recoding behavior by children themselves is a controversial point as to whether it affects the implementation or not. However, there is no significant correlation between children's behavior or academic behaviors and the precision of self-collected information (Yell et al., 2013 p 137).

Additionally, children must be trained by the teacher to record or collect data about their behavior. Teachers must consideration two principle factors when teaching students self-monitoring. First, the particular behavior that will be counted must be known by the students themselves. Second, the teacher must teach students about the occurrence or non-occurrence of the behavior. With this process, both teacher and students obtain feedback about the occurrence of the behavior by the collected data (Yell et al., 2013 p 137).

Cognitive-relaxation

Learning to engage in multiple cognitive interventions including the use of relaxation coping skills has been shown to be a successful way to decrease anger. Novaco (1975) in the component analysis of stress inoculation conducted that training participants in cognitive-restructuring and attention-focusing strategies and employment of relaxation coping skills to decline emotional and physiological frustrations. Furthermore, there are many investigations asserting that stress inoculation is can be an effective treatment regarding the reduction of anger problem (Deffenbacher, Story, Stark, Hogg& Brandon, 1987). Deffenbacher et al. (1987) recommended utilizing cognitive relaxation

intervention widely to target and treat skills deficits, including social skills, as primary prevention; cognitive relaxation conditions could be effective for all provocation situations.

Deffenbacher et al. (1987) provide two approaches to anger management, namely social skills and cognitive-relaxation, as compared with a no treatment control. Thus, the treatment groups showed appreciably lower preferences to suppress or display general aggression, less situations of anger, and less general anger. In addition, their findings indicated a vital productive coping in provocation, better than the control group. Cognitive relaxation subjects resulted in considerably lower personal-situational anger with the treatment group than for the control group. Del Vecchio& O'Leary (2004) reviewed many studies about anger management to show the effect size for each of them. First of all, the effect size of cognitive, relaxation-based, and skills training was between moderate to powerful ,specifically, 0.82 to 1.16 (Tafrate, 1995, cited in Del Vecchio& O'Leary, 2004). Second, another review by Edmondson and Conger (1996) presents that treatment of anger and related issues ranging from using cognitive, cognitive-relaxation, social skills, and relaxation treatments was also effective, specifically, 0.64 to 0.80 (Del Vecchio& O'Leary, 2004).

Method

Eighteen peer-reviewed journal articles were identified through searching the databases such as Erick, EBSCO, Elsevier, Medline, Sage, Academic Search Complete, Science Direct and PsycINFO. Some of the references on this study are meta-analysis-interventions that use quantitative data. Two books were used in this review as found them appropriate to used in this subject. The key words that used to search were cognitive behavior therapy or and approaches, intervention, anger and aggression, and effectiveness of CBT. Publish date for the research is from 1975 to 2015 as needed. Interventions conducted in psychiatric facilities were excluded. Consequently, most studies investigate school, home, or clinic populations. The study examined participants aged 5-18-year-old to identify developmental issues with CBT as well as determine how gender influences the efficacy of CBT.

Result

In this study, there were only two studies that found the outcomes of implementing CBT are less effective in reducing or diminishing violence in children and adolescents. For example, Gensle (2005) calculated the ES of the interventions that he applied and found it to be .31. However, the majority of the studies confirmed moderate and sometimes high effect of CBT in different case of implementations. For example, Sukhodolsky et al. (2003) reported effect size of .67, and the ES that Beck and Fernandez (1998) found is .70. Ho et al. (2010) implemented CBT in schools and found moderate effect. Most importantly, Gensle (2005) found high effect size for participants with special needs. Butler et al. (2006) pointed out that the effects magnitude of CBT for various behavioral problems including the anger is in the moderate range. Furthermore, according to Sofronoff (2007) parent of children participated in CBT reported

that their children have a significant improvement regarding the reduction of anger stage and the growth of self-confidence to manage their anger. Some studies mentioned the CBT is effective in some aspects but not in others. For instance, CBT was effective to treat the overall aggression level, physical aggression, anger, and indirect aggression scores. However, it has no significant effect toward the verbal aggression (Karataş and Gökçakan, 2009).

Overall, research is replete with the idea that CBT is moderately effective to treat anger, hostility, and aggression behaviors of children with special needs. Moderate effects also were found in individual variables such as feeling angry, aggressive behavior, and anger management skills (Ho et al. 2010).

Discussion

Studies that compare between the efficacy of CBT to other approaches are scarce, so this present study cannot arrive at valid judgment. Nevertheless, one should consider the limitations of overall research and individual studies due to several caveats. For example, the data of generalization across time and setting was not sufficient, and Ho et al. (2010) found very limited appropriate studies. Moreover, comparative data of CBT and other approaches in respect to the efficacy are very insufficient (Ho et al. 2010). Moreover, there is a need to explore "how participants' characteristics interacting with independent variables such as training time and adult-to-child ratio; Intervention elements such as teaching of anger arousal identification and direct cognition treatment"(p. 60) are also imperative to be examined in respect to participants' reactions (Ho et al. 2010, p. 60).

Ollendick and King (1999) strongly argue that teachers' perceptions of the way anger and aggression are measured play a significant role on the efficacy of CBT. If teachers believe cognitive behavior therapy can be implemented in schools effectively and it can improve students' behavior, then the classroom environment is more likely to encourage students to engage in prosocial behaviors. (Sutherland & Oswald, 2005). Consistently with that Daunic, Smith, Brank, and Penfield (2006) conducted a study and found that positive teacher-reports data are low which indicates a modest treatment efficacy of CBT (Daunic, et al, 2006).

Future studies can explore and scrutinize the relations between teachers' characteristics (e.g. "classroom discipline style, attitude toward students with problem behaviors"(p. 137)) and treatment outcomes, and how that could increase or decrease the effectiveness of implementing CBT in classrooms (Daunic, et al, 2006, p. 137).

Since research strongly supports the application of cognitive behavioral procedures as being moderately effective even for individuals with moderate intellectual disabilities, further research on investigating the efficacy of CBT becomes a real necessity. Furthermore, future research on younger populations and students with lower IQs are needed (Ho et al. 2010)

Even though the CBT found to be effective in most situations, there are some reasons commonly impede the implementation of CBT. First, the lake of

reliance information about children's behavioral changes particularly from the parents. For instance, several studies mentioned that the data that were received from parents are subjective or incomplete. Second, the small sample size is also another limitation of some studies that conducted in the CBT. Third, most of the studies that conducted in this area could not be generalized without additional researches. On the other hand, future research could be focused in the impacts of social problem solving improvement skills. Further, several studies recommended the development evaluation to recognize if self-esteem rise by anger control for the future researches. Finally, choosing the participants randomly was one of the researchers suggestions for future research in order to avoid a bias selection.

In conclusion, there have been many studies investigating the effectiveness of cognitive behavioral therapy. Obviously, the general consequences of previous research emphasize that CBT is efficacious to treat anger and related problems. The effectiveness of CBT depends on the intervention used and the circumstances of implementation. There are common interventions or approaches of CBT, which are usually employed for anger treatment such as problem solving, self-monitoring, and cognitive relaxation. Ultimately, most CBT effect sizes are between medium to large, which shows good results of asserting the efficacy of CBT to treat anger and related concern.

فعالية العلاجي المعرفي السلوكي في تخفيض شعور الغضب وسلوكياته لدى طلاب ذوي الاحتياجات الخاصة: دراسة نظرية مقارنة

الكلمات المفتاحية: الغضب والعدوانية – تدخل العلاج المعرفي السلوكي – الفعالية – خطة علاجية

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تاريخ استلام البحث ٢٠٢٢/١٢/٣ تاريخ قبول نشر البحث ٢٠٢٢/١٢/٢٩

الملخص

ينظر هذا البحث ويحقق في العلاقة بين التدخل العلاجي المعرفي السلوكي وفاعليته في تخفيض أو محو مشاكل الغضب عند الأطفال والمراهقين من ذوي الاحتياجات الخاصة. كما يسلط الضوء على نقاط التشابه والاختلاف بين فاعلية العلاج المعرفي السلوكي على ردة فعل الطلاب مقارنةً بالتدخلات العلاجية الأخرى. أيضاً، ناقش البحث أنواع العلاج المعرفي السلوكي، خصوصاً، تحديد عمل كل نوع إجرائياً ووظيفياً. ووجدت الدراسة أن

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العلاج المعرفي السلوكي فعال إلى حد ما في معالجة الغضب ومشاكله السلوكية ذات العلاقة بهذا الشعور للأطفال من ذوي الاحتياجات الخاصة. كما وجدت الدراسة فاعلية متوسطة في المتغيرات الفردية مثل: الشعور بالغضب، السلوك العدواني، ومهارات إدارة الغضب. وكشفت الدراسة عن صعوبة الوصول لحكم دقيق وصادق بتفوق فاعلية العلاج السلوكي المعرفي على التدخلات العلاجية الأخرى بسبب ندرة الأدبيات السابقة في هذا الباب. تم اختبار تطبيقات العلاج المعرفي السلوكي في هذا البحث وعرض التوصيات البحثية للدراسات المستقبلية

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