

Interventions Using Individual and Social Approaches (Non-Medication) in Improving the Self-Regulation of Children with Special Needs and Self-Regulatory Problems

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Abstract: *The number of children with developmental disorders experiences an increase. This indicates that more children need special attention, so the role of the community, especially professionals in handling this issue, is becoming more critical. This study uses a literature review to identify the positive impact of treatments using individual and social approaches (non-medication) by examining 16 international journals related to therapy for children with self-regulation issues. The results of the literature review showed that therapies focusing on increasing awareness decreased disruptive and hyperactive behavior, and those focusing on increasing the function of working memory influenced self-regulation in children. In general, each therapy described below has its own effectiveness and can be combined according to the subject's condition and the purpose of the therapy.*

Keywords: *classical approach, individualized approach, children with special needs, self-regulation*

Introduction

Every parent expects their children born healthy, both physically and psychologically (Graha, 2007). However, in reality, not all children can be born with normal conditions. Children born with the abnormal condition are called Children with Special Needs. These children show deviations from the average children with the same age in their physical, mental, and intellectual aspects (Wachidah, 2012).

According to the latest data, the number of children with special needs in Indonesia reaches 1,544,184 children, in which 330,764 children (21.42 %) are between 5-18 years old. From this total number, only 85,737 children with special needs go to school. It means that there are 245,027 children with special needs who have not yet received proper education in schools, either special or inclusive schools (Ratri, 2016). It also indicates that the number of children who need special attention goes up, so that the role of the community, especially professionals involved in both preventive and curative measures, is paramount.

Disorders in children vary and are complicated, so they need to be assisted properly. Some things to assist the children include providing life skills to develop their abilities in a specific area, or encouraging them to be more independent with the help and support from the family, community, and the government (Amalia, 2012). The sign of a child diagnosed with a particular disorder can be seen from how he interacts with people around him. Verbal communication styles in children with special needs are found to be a significant factor in their social rejection. In the learning process, children with disabilities receive more rejection sentences than their classmates who do not have disabilities (Bander, 2014).

Based on several characteristics of children with

disabilities, the most common characteristic is barriers to social interaction. Due to their limited health conditions, children may face hindrance in their social interaction and communication with the community. For example, children with autism spectrum disorder have difficulty in communicating, especially in making intense 2-way conversations (Fahrutdinova & Vasileva, 2016; Berkell, 1992). Children with ADHD also find it challenging to interact normally because they have difficulty controlling impulsivity, so they often display unexpected behaviors. These children often have difficulty to focus on what other people say (Baiqhi, 2006). A similar case can be found in children with severe intellectual disabilities, who find difficulties in their interactions because of their intellectual limitations. Children with special needs have retardation in their intelligence as well as physical, emotional, and social aspects so that they need special treatment to develop optimally due to their low ability to comprehend things (Ratri, 2016).

Interaction with other people is part of daily human activity. Social interaction is a social exchange among two or more individuals that can form a social structure, which can occur between groups of two (dyads), three (triads), or larger social group (Garfinkel). In some studies, social interaction can be supported by various things, including emotional self-regulation. In a study conducted by Marques & Lopez (2011), emotional regulation was measured by emotional intelligence tests associated with several indicators, including the quality of the individual's social interaction with peers. Using a sample of 76 students, it was revealed that emotional regulation ability was associated with interpersonal sensitivity, social tendencies, as well as positive and negative peer impressions. It indicates that social interaction is

greatly determined by the individual emotional self-regulation.

Self-regulation is an important ability that must be developed (Slattery, 2013). For children with ADHD, good self-regulation helps them improve task behavior. It can also improve children's social adjustment and determine their learning abilities (Elizabeth et al., 2016; Ren, 2018). Dysregulation in children is the primary behavioral problem since the child is at school; thus self and emotional regulation are an essential and fundamental part of children with special needs in their behavioral functions (Berkovits et al., 2017).

The treatment to teach children self-regulation can be done in various ways, either individually or socially, although the treatment using medication like Methylphenidate treatment is also effective in reducing emotional symptoms in ADHD (Gamli & Press, 2018). Children who participated in the MPH (Methylphenidate) trial got a good score in school; they were able to plan their learning before examinations (Conklin et al., 2010). The guidelines from the National Institute and the American Pediatric Association in the US suggest that a combination of stimulant drugs (e.g., Methylphenidate) and psychosocial therapy is the optimal intervention package for the management of ADHD symptoms in children. However, there are some ethical objections to the prescription of stimulant drugs for children, especially given the fact that ADHD is not usually diagnosed until the child reaches middle childhood (APA 2000). Thus, behavioral-psychosocial care is considered the primary care appropriate for preschoolers with disorders (Alizadeh et al., 2007).

This literature study describes treatments focusing on children's self-regulation and their positive impacts on the children. It is reviewed from an individual and social approach that emphasizes the involvement of the child's social environment or supporting system. The current study offers an in-depth explanation of the positive impact of each treatment based on selected journals. This is expected to help professionals to establish treatments that support children's condition, especially those with behavioral problems related to emotional self-regulation.

Discussion

The review of the literature shows that therapies involving children's social environment (i.e., playgroups) and those focusing on individuals (i.e., by including personal sessions) supported children's self-regulation. It can be seen that each therapy for children with self-regulation problems has its own effectiveness and focus. The following explanation describes some therapies that focus on classical and individual models, which helped improve the behavior of children with self-regulation problems.

Individual Approach

There are many types of therapy with individual approaches; one of them is mindfulness therapy.

Zylowska et al. (2007) suggested that mindfulness training is an appropriate intervention applied to individuals with ADHD disorders. This therapy can reduce behavioral disorders and has an impact on neurocognitive improvement, which positively affects the subject's self-regulation. During the therapy, most participants were able to complete the training and report high satisfaction. Through this therapy, there was a change from pre-post to behavioral symptoms exhibited by individuals with ADHD caused by their inhibited thoughts and attention. This study was intended for individuals aged 15 years and over who were previously diagnosed with ADHD.

Evaluations used before and after the assessment show that there is a significant reduction in behavior caused by ADHD symptoms. In general, mindfulness meditation is carried out in the following ways: a) focusing on attention, b) being aware of the distractions that occur and releasing the distractions from the mind, c) refocusing on the anchor of attention. The sequence is repeated during meditation practice. With stable attention and deep awareness, participants are asked to "pay attention to attention" and do deep attention at present. The training, in this case, is modified to solve the unique challenges of ADHD symptoms. This program is carried out for 8 weeks for 2.5 hours. The activity begins with the opening of a short meditation, followed by a discussion about the homework assignment, exercises, group discussions, a review for the next week's training, and closing meditation.

In individuals with ADHD, this meditation practice begins with; a) clinical symptom psychoeducation, neurobiology, and explanation of the etiology of ADHD, b) sitting meditation carried out for 45 minutes; this is recommended to be done at home, followed by walking meditation, c) mindful awareness in daily life is highly recommended, d) didactic aids are needed to explain the concept of mindful awareness, e) loving meditation (wishing exercises for others and yourself) is carried out for each session to overcome the problem of low self-esteem that usually occurs in individuals with ADHD.

Another study by Coholic (2011) that focused on Mindfulness with cognitive-behavioral therapy supports previous research. Researchers suggest that this treatment can provide benefits by teaching individuals how to regulate emotions, increase social skills, and improve awareness and endurance. This therapy has an important effect on teens and adults doing mindful practices to focus on what they feel and think. This therapy is carried out as many as 12 sessions, with each session running for 2 hours. The activity always starts with warming up, and at a certain point, nutritional snacks are provided. The therapy is simple and does not require special equipment, but only focuses on the senses. Uniquely in this therapy, the attribute "mind jar" is used. This describes how one's mind is when it is full, busy, unfocused, and what can happen when someone can be mindful and aware. The trick is to drop colored beads into an empty jar that

represents the thought and feeling of the child.

The discussion focuses on 2 things: 1) considering how well children minds might work when their thought and feeling spin and move quickly compared to when they are calm and focused when the objects are resting at the bottom of the jar, 2) arranging a strategy about how to increase awareness. However, Zylowska et al. (2007) argued that there were no reports of long-term satisfaction from participants. In a similar vein, Coholic (2011) outlined that it was unknown or uncertainty how long the perceived change lasted after the session was over.

A similar therapy called Mindful Yoga, specifically aims for children showed significant benefits for children with behavioral and attention problems. Before being applied to children, there was a program that moderated the effectiveness of interventions, namely, to see the level of EC and EF. The researchers looked at the subject's performance when carrying out activities that required patience, such as wrapping pencils and wrapping toys. The results of direct observation showed a significant effect of the intervention on children's self-regulation. There was some evidence that children who were most at risk of having self-regulation dysfunction took benefit most from Yoga interventions, and finally, their self-regulation dysfunction decreased by movements from the training. However, there were difficulties in maintaining the long-term effect of this program unless the teacher or mother of the child with special needs involved wanted to learn Yoga as well (Bergen-cico, 2015). Some similar therapies to mindfulness that have been described above can be applied to adults, adolescents, and children who have problems with self-regulation and emotions (i.e., ADHD children). Mindfulness therapy was found to be effective in building awareness.

Also, there were therapies using the Behavior approach, namely Self Management. This is also often used in handling children with special needs. Research conducted by Reid et al. (2005) related to the Intervention of Self Regulation through Self Management Study revealed that this intervention could improve the behavior of doing tasks in children and reduce inappropriate or unwanted behavior. Children with ADHD could be more productive in doing tasks after several therapy sessions. The results of this study showed that this intervention resulted in significant improvements in student work behavior. Measurements in this study were carried out using Cohen scale (1988), which showed a difference between pre-post productivity tests for children with ADHD.

The addition of activity in the self-management therapy process for ADHD adolescents could be applied well because incorporating physical exercise promised therapeutic benefits for individuals with ADHD. In this case, self-management was combined with a reinforcement. Provisions in this therapy were; a) using tokens, b) receiving points, c) exchanging

poker chips used to monitor oneself, d) accepting real reinforcement options, e) receiving bonus points to exchange, f) receiving praise and signs of behavior to be sent to the participant's parents, g) selecting an amplifier, h) giving an award in the form of praise or stickers for appropriate behavior. Bussing et al. (2016) conducted a study by arranging therapy with 6 children's activities. Various activities were carried out, including self-regulation, diet, implementing and following family rules, worshipping, and useful improvements.

Based on the description above, treatment using the Behavior approach has been widely used. In addition to self-management based treatment, there is a treatment focusing on the cognitive neurofeedback approach, which also supports the cognitive function of children with ADHD. All subjects in this study were children diagnosed with ADHD. According to the prescribed symptoms, these children did not have other neurological and physical disorders and had a full IQ above 80. This form of therapy used computer games where one could get points.

Subjects were asked to pay attention to feedback and strategies to get as many points as possible. There were no instructions except that subjects were asked to speed up the way their thinking works. 1 trial lasted 8 seconds and consisted of 3 phases. Those phases were Abasline phase (seconds 0-2), active phase (2-7.5), and the strengthening phase (the strengthening phase 7.5-8). If the child was able to carry out an activation experiment successfully, a smile image appeared; otherwise, a cross would appear on the screen. At the end of the initial phase, the participants were marked with a rectangle above that was highlighted to activate their brain, and a highlighted rectangle below to deactivate their brain. There was a significant increase after doing this therapy. For 6 months, the condition of the subject remained stable, and the achievement in the activation task also increased, although not significantly (Leins et al., 2007).

Besides, there were therapies utilizing working memory involvement that automatically improved the clinical condition of children who have ADHD associated with uncontrolled movements. Presumably, this occurred because there was a relationship between cognitive and motor behavior. The performance of tasks related to prefrontal functions also had a significant effect on motor activity of children with ADHD. Therapy involving working memory was carried out by Klingberg et al. (2002). In the therapy, the children were presented some activities during each training session. The activities were: 1) giving viso-spatial WM assignments where there was a circle presented one by one in four boxes, 2) doing a digit span backward; there was a keyboard with numbers and participants must read aloud while marking digits but in reverse order, 3) the range-letter assignments were read one by one. The subject must remember the identity and order of the existing documents, 4) time choice reaction task, with two gray circles presented on

the screen. The participants were asked to press the corresponding space key when one of the circles turned green and hold the response when one of the circles turned red.

Social Approach (Involving other individuals)

In addition to therapy with an individual approach, therapy using a social approach involving both children and the social environment was also conducted. This therapy also managed to support the condition of children who have behavioral problems. Parent Training And Children Training (PT + CT) involved children's support system (i.e., parents). It is believed that the involvement of children alone in the therapy is not enough, so it is equally important to train parents. Positive strategies are applied in dealing with children diagnosed with ODD or children with behavioral problems, including those with self-regulation problems, since handling children with ODD using harsh and inconsistent discipline only adds to the stress of the mother (Larsson & Clifford, 2009).

The training was given not only to children but also to parents. The parenting programs taught parents about strategies in providing children positive discipline, effective childcare strategies, stress coping strategies, and ways to strengthen children's social skills. A video was also provided for discussion sessions in parent groups. This therapy focused on the collaborative process of parents and therapists based on social development theory. For children, 18 sessions were held for 2 hours each week. Children were given video sketches for discussion, role-play, and homework exercises to improve their social skills, conflict resolution skills, and play or make collaboration with their peers. In this case, CT and PT ran in parallel.

Therapy that involves a support system is not only concerned with home settings, but also schools. In other cases, children with self-regulation problems usually have difficulty completing work or activities effectively and efficiently. Self-management therapy based on task behavior conducted by Slattery (2013) was found to be effective in increasing the time of task completion and in regulating the behavior of children who exhibited problematic behavior both at home and at school. Initially, the therapy measured or was based on the child's ability to do the task. At the end of this therapy, it was shown that this therapy had the effect of increasing the time of completing the task. The child who was initially able to do the task within a period of 3 minutes experienced an increase in completion of the task to 8 minutes. This therapy was carried out to evaluate the effect of self-management interventions on the behavior of children's tasks while exhibiting problematic routines in home settings.

During the exercise, the therapist used direct parent involvement. The parents were given parental education before the treatment. Every day, there were targeted routines. If the children carried out the tasks successfully, they would be allowed to choose items or activities that they enjoyed. If the self-management

form was not 100% similar to the parent form, parents gave feedback that the subject sheet did not match what was agreed on that day, but the subject could have the opportunity to try again the following day. Jones et al. (2007) also did a similar therapy using IY BT (Incredible Years Basic Parent Training), which provided benefits for pre-school children who displayed early signs of ADHD, such as lack of attention, or hyperactive and impulsive behavior. In general, the results of this therapy indicated that the impact of the intervention provided a positive effect, where parents were involved. PT (Parent Training) provided parents with child behavior management techniques that were based on the principles of social learning theory. Apart from its origin as a treatment method for children with antisocial behavior, recent research has found that some PT programs work well for children with ADHD comorbidities.

The skills taught in this program included (1) how to build positive relationships with children through child-centered games and activities; (2) giving praise, gifts, and incentives for appropriate child behavior; (3) guidance on using effective boundaries and clear gifts; and (4) strategies for managing non-compliance. Parents acquired these skills through lead-facilitator group discussion, brainstorming, video recording modeling, role-play, and intervention techniques. The exercises were performed either in groups or through homework. Parents attended a group session for 2.5 hours per week for 12 weeks and received weekly telephone calls from the group leader to encourage and monitor their progress.

In addition, there were classroom interventions to reduce off-task and disruptive behavior in children with ADHD symptoms. This intervention was divided into 2, namely, direct and indirect interventions. The direct intervention was also divided into 2: within-subjects design studies (WSD) and Single-subject design studies (SSD), both of which were based on consequences. This therapy produced a measure of the effect of decreasing disturbing behavior by an average of 52% and 36%, respectively, during the intervention phase compared to the initial phase.

This therapy used the role of classmates as a consequence award. Apart from those involving direct processes, there were also indirect effects of classmates. However, both were still considered effective in reducing unwanted behavior in children, depending on the child's condition. When compared with other classrooms, the effect of changes in children's self-regulation was more significant than that is generally obtained in educational classrooms. The qualitatively study on this therapy shows the positive effects of classmates, either because of indirect effects (e.g., no interruption in class) or because of the direct effect (e.g., an increase in positive behavior of classmates) (Gaastra et al., 2016).

The next intervention is the IY intervention program developed by Professor Carolyn Webster-Stratton in a childcare clinic involving parents and

children. This program aims for mothers and children with ADHD disorders. In this training, children and parents were given a video, where parents have 12-14 weeks of meetings for 2 hours with a therapist. Videos for parents showed the interaction of parents and children in everyday life, with the aim of strengthening family life and increasing parental competence and confidence in parenting, improving problem-solving skills and anger management, and increasing parents' involvement in accompanying the children.

In this therapy, parents and children met in therapy sessions for 2 hours every week for 18-20 weeks. The children were also shown videos depicting everyday life with parents and in the classroom and using dolls that showed interpersonal skills (e.g., how to make new friends). The results of the therapy showed that changes in maternal behavior in parenting could change children's behavior problems provided that the mother must be consistent and disciplined (Fossum et al., 2009)

Research conducted by Morrell & Murray (2003) also revealed that interaction between mother and child supported the improvement of the child's condition. This research was carried out for 2 months to 8 years. Emotional dysregulation at the age of 9 months due to maternal and infant interaction would predict behavioral disorders at 5 and 8 years, such as hyperactivity. In addition to the gender of the child, parenting mostly affected the emotional dysregulation of children.

Cognitive and affective child self-regulation shown by behavior in the classroom and at home, both with friends and with parents, could also be improved using the School-based Tae Kwon Do training. Self-regulatory components contained in martial arts training could support the development of self-regulation at school. In this training, it was necessary to group the children. Those identified with juvenile delinquency were divided into 3 groups, namely traditional tae kwon do, modern martial arts, and waiting list control. This can reduce juvenile delinquency, increase aggressiveness, improve social abilities (Lakes & Hoyt, 2004). Indeed, martial arts programs promote youth development as behavioral problems that persist in ADHD children are often caused by rejection from parents or forced care.

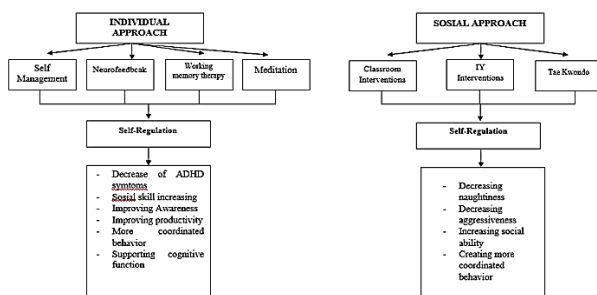


Figure 1. Positive impact of both approaches toward self-regulation improvement

Conclusion and Suggestion

Therapy for children with behavioral problems, especially self-regulation problems, can be done using a variety of approaches. Many child-focused therapies have been carried out, such as mindfulness therapy, behavior self-management therapy, and neurofeedback therapy, to name a few. These three forms of therapy have been found effective. Some of them focus on increasing awareness, decreasing disruptive and hyperactive behavior, and increasing the function of working memory. In addition to using an individual approach, some therapies use a social approach by involving parents, which also provides many benefits.

In the therapy, parents are given training on how to respond to children with behavioral problems. Furthermore, parent therapy in the social approach often involves classmates, too, so that the school environment also supports the therapeutic effect. As a result, these two therapies can shape the behavior of the children who used to find difficulties regulating themselves and their emotions. After attending several sessions, the children show significant changes in their behavior. In general, each therapy described above has its own benefit, thus can be combined according to the subject's condition and the purpose of the therapy.

Finally, it is suggested that further researchers examine more varieties of therapy by using a large number of approved therapies, including their strengths and weaknesses when used to treat children with special needs.

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