Article

“Class wide interventions for students with ADHD”

Student Counselor: Mr. Sabri Almansi

Prince Mohammad University

Reiber and McLaughlin (2007) write that attention deficit/ hyperactivity disorder (ADHD) is a persistent disorder characterized by significant problems with attention, impulsiveness and over activity. This is the most common reason for referral of children to mental health clinics and a problem affecting an estimated 3% to 5% of the elementary-school-age population. On average, these estimates place at least one child with ADHD in every classroom in North America. For this reason, I see the use of effective interventions to reduce the classroom student's with ADHD as very necessary for teachers, administrators, parents, and other students in the same classroom who do not have ADHD.

Harlacher, Roberts, and Merrell (2006) categorized ADHD into two major types: behavioral and academic. Behavioral interventions include: contingency management, therapy balls, self-monitoring, peer monitoring, and instructional choice. These interventions target the behavioral manifestations of the disorder such as off-task behavior and difficulty staying in one seat. However, academic interventions include: class-wide peer tutoring, instructional modification, and computer-assisted instruction. These interventions target the academic deficits that are often associated with ADHD such as lower academic performance, lower rates of task completion, and lower levels of accuracy.

Harlacher et al. (2006) defined contingency management (CM) as the application of consequences contingent on specified behaviors. This approach involves providing positive reinforcement for certain appropriate behaviors in an effort to increase their frequency. For example, students who are on task earn time to play a game. CM can

include several different components such as having students earn tokens or chips for certain behaviors that can be exchanged for greater reinforcers (i.e. token economy); providing praise for specified actions (i.e., contingent attention); and/or the subsequent removal of those tokens or chips contingent on inappropriate behavior (i.e., response-cost. Nelson and Israel (2006) explain contingency management as a contract in which the child and the teacher sign a written agreement specifying how the child will behave and what contingencies will accrue, which can be helpful. Cook (2005) also writes that there are essentially three major components to an effective behavioral contract: identified target behaviors, a tracking system, and a rewards menu. When developing a contract, it is important for the counselor to collaborate with the teachers, parents, and child. The idea is that if the stake-holders have input into the program, they are more likely to be invested and compliant. I think that CM depends on the behavioral theory. Reinforcing the positive behavior and discouraging the negative behavior are considered to be the most fundamental elements of the behavior theory.

Harchler et al. (2006) say that the use of therapy balls (i.e., gym balls) as an alternative to a typical classroom seat is an intriguing intervention explored by Schilling, Washington, Billingsley, and Deitz (2003). A therapy ball is an inflatable ball that the child sits upon. The therapy ball has molded feet that extend when the ball is not in use to prevent it from rolling away. Participants in a fourth-grade classroom found that sitting on the balls during language arts increased legible word production and increased in-seat behavior. In addition, all participants reported the use of

the balls favorably and many preferred them to a desk chair. I think the use of therapy balls is necessary when readjusting behavior of school-age-children who are diagnosed with ADHD because using therapy balls perhaps allows students to feel comfortable and more relaxed. A study by Schilling, Washington, Billingsley, and Deitz (2007) supports what Harchler et.al. (2006) have been said regarding using of therapy balls. The study by Schilling et al. (2007) consisted of 2 males and 1 female with ADHD and was used to investigate the effects of therapy balls as seating on in-seat behavior and legible word productivity of students with ADHD. Additionally, social validity was assessed to evaluate teacher and student opinions regarding the intervention. The study was conducted in a 4th grade inclusive classroom during daily language arts. During phases 1 and 3, the three participants and all other class members sat on chairs (in-seat on chair); during phrase 2 and 4, everyone sat on therapy balls (in-seat on ball). Dependent variables were in-seat behavior and legible word productivity. Data were graphed and visually analyzed for differences between phases. Results demonstrated increases in in-seat behavior and legible word productivity for the students with ADHD when seated on therapy balls. Harchler et al. (2006) illustrated that an advantage of such an intervention would be its social validity, whereas a disadvantage would be the cost of obtaining a therapy ball for every student.

Harchler et al. (2006) explain self-monitoring as an individualized intervention. Self-monitoring involves a student evaluating and recording his or her own behavior. The teacher and student agree on one to three behaviors for the student to monitor (e.g., work completion, attention, talking out) and the student is given a form to rate those behaviors on a Likert-scale indicating how well he or she performed the specified behavior. At specified times; the student then rates his or her behavior and compares it to the teacher's independent rating. Initially, students earn points for matching their ratings to the teacher's, which are then traded in for certain rewards. Over time, as a student is able to report a rating that matches the reality of his behavior, the teacher fades out her recording of the student's behavior, leaving self-monitoring to be entirely independent. Individual self-monitoring with students with ADHD has resulted in increased time on task and reduced inattention and inappropriate behavior. Zentall (2005) adds that educational methods such as self- monitoring can increase self-focused attention and thereby improve performance for students with ADHD. Because task errors in selective attention occur early in performance, repeated practice in small doses or additional experience with a task (practice effects) also can improve selective-attention performance.

Harchler et al. (2006) say that peer monitoring involves training students to monitor one another's behavior and to reinforce positive behavior. Typically, this involves (a) defining an appropriate behavior (e.g., raising one's hand) and its inappropriate counterpart (e.g., talking out); (b) training students to identify and distinguish between the two behaviors; (c) having students catch each other displaying the appropriate behavior; and then (d) providing reinforcement for that behavior (e.g., praise, positive mark). An advantage of peer monitoring is the powerful impact that peers can have on one another's behavior, but it may require a fair amount of set-up and training time for students to be more accurate. I think peer monitoring also has a powerful impact not only with children who have ADHD, but also with children who

do not have ADHD. Harchler et al. (2006) explain instructional choice as presenting the student with two or more activities from a teacher-developed menu, and the student is told to select the activity he or she would like to work on. The student can select one activity rather than another (e.g., chooses to do math rather than reading) or the order of assignment (e.g., working on math before working on reading). In general, instructional choice is associated with increased academic engagement and decreased behavioral problems. Powell and Nelson (1997) used choice-making with a 7- year old child diagnosed with ADHD that led to decreased occurrences of undesirable behavior (e.g., inappropriate noise vocalizations, out of seat, non-compliance). In a similar study, Dunlap and colleagues (1994) reported development in task engagement with two 11-year-old boys with ADHD symptoms (though they did not report a formal diagnosis of ADHD).

Harchler et al. (2006) go to say instructional choice has not been used on a class-wide level, but its simplicity would allow easy transfer to the entire class. For example, during independent work time, a teacher could allow the entire class to choose the order of activities to work on, as opposed to only allowing one student that choice. When I was working as a school counsellor in private schools, in these schools there were students who were diagnosed as hyperactive. I tried to use instructional choice with them, but unfortunately all of them chose the physical education lesson instead of literature, science, and math lessons for example. Harchler et al. (2006) also concluded that an instructional choice is easy to implement and requires minimum additional preparation for teachers. However, teachers may object to the idea of allowing students autonomy in which assignments they must complete, as they may fear students will come to expect a choice in all of their assignments.

In addition to behavioral interventions, there are several potential academic interventions. According to Reiber and McLaughlin (2007) peer tutoring is one of the most common academic interventions used. It is an instructional strategy where two students work together on an academic activity, with one student providing assistance, instruction, and feedback to the other. Reiber and McLaughlin (2007) conducted a two-year study with nineteen ADHD students ranging from grades one through five in two separate school districts. In this study, the participants were rated on academic performance and on-task behaviors. Results of this study revealed increased on-task behavior, decreased fidgeting and increased academic performances on tests. Harchler et al. (2006) explain another study used by Greenwood, Maheady, and Carta (1997) the study developed a class-wide peer- tutoring model that included a group reinforcement component called Class Wide Peer Tutoring (CWPT). This program incorporated a point system into the peer tutoring methodology as an added reinforcement. Research has demonstrated that CWPT increases student's time on task and improves academic performance. CWPT has led to significant improvement in one task behavior, activity level, and academic performance in math, reading, and spelling for students with ADHD in first through fifth grades. CWPT has also been found to reduce disruptive off-task behavior for children with ADHD, as well as to significantly show similar changes in task-related behavior for peer comparison children without ADHD. Harchler et al. (2006) explain that instructional modification is a proactive

strategy in which changes are made to the actual assignment in order to target a child's academic needs. For example, a teacher may divide a student's assignment into thirds, provide more frequent deadlines for assignments, or change the pacing of a read-along tape used with a word list. Use of instructional modifications has been shown to result in decreased disruptive behavior, increased task engagement, and increased academic performance in the areas of reading and writing. Another study used the instructional modifications strategy by Reiber and McLaughlin (2007) this strategy has produced a positive effect for all students involved. It was related that the academic performance on standardized tests significantly rose for students during the time spent in this classroom as opposed to the level of achievement attained. Using instructional modifications has been found to have an immediate improvement in academic and behavioral performance for students with ADHD. However, although the use of instructional modification has not been implemented at the classwide level, such transfer to the whole class would be straightforward and easy.

Harchler et al. (2006) explain Computer-Assisted Instruction (CAI) is the use of a computer-based software program designed to supplement teacher instruction and provide additional exposure to the academic material. The CAI program can modify the content and task in several ways. For example, it may draw attention to specific academic stimuli (e.g., highlighting math symbols); outline specific objectives; use multiple sensory modalities (e.g., audio and visual); provide immediate feedback (e.g., correct answers immediately on response); and/or divide the content into smaller parts. Smouse (2007) adds that computers can provide a one-to-one ratio of student to instructor, can

be novel and highly stimulating, and in many cases the student can control the pace, direction, and path of their own learning experience, all of which may benefit the student with ADHD. Computers offer the students with ADHD an individual, non-judgmental learning environment, repetition as needed, guiding questions, an opportunity to focus attention on task, undivided attention, and an opportunity to work at their own pace, whether it is faster or slower, each of which contributes to reducing the distractions and improving the opportunity for success that the students with ADHD might have.

Behavioral and academic classwide interventions are important not only for school personnel, but also for students and parents as well. After all the above discussion, it is clear that teachers have several class-wide intervention options for addressing the needs of their students with ADHD. Counsellors and special education teachers can assist students in their school and provide teachers with information that they need when interacting students who are diagnosed with ADHD. Parents can take the advantage from these interventions in order to help their children who have ADHD. Moreover, Harchler et al. (2006) go on to say that the use of class-wide intervention is a low-risk for teachers because they may use one of these class-wide interventions and find that it is not completely effective in addressing the specific needs of the student with ADHD, but its use may still benefit other students in the class. However, the literature concentrated on behavioral interventions more than concentrating on academic intervention. May be the behavioral aspect negatively effects not only on children with ADHD,

but also the other students in the class who do not have ADHD. The vast majority of referrals from teachers are because one or two students, who have ADHD, do not allow teachers to positively convey the information that the other students in the class may need.

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