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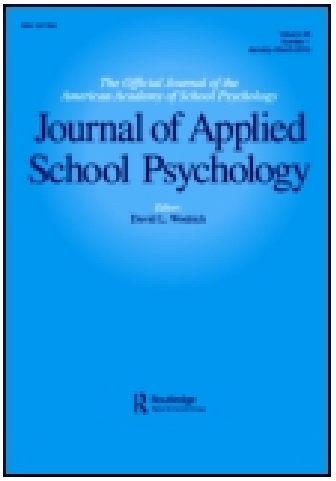

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Differentiating Tier 2 Social Behavioral Interventions According to Function of Behavior

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Differentiating Tier 2 Social Behavioral Interventions According to Function of Behavior

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Schools implementing tiered supports for social behavior need to be systematic and thoughtful about moving to the next tier. However, schools often apply resources they have in a blanket fashion for children who demonstrate behavior problems. This practice is problematic, and there is a need for increased efforts to plan and be more careful about choosing specific interventions for children who do not respond to universal supports. This article aims to discuss the importance of determining the function for behavior problems prior to intervention selection. The authors discuss problems with the current practices in schools. Data from a study on the use of the Check In Check Out intervention are presented to further illustrate the importance of determining function for behavior and implementing interventions with integrity. Without this important step, children who are at risk may not be appropriately supported and valuable resources are expended without successful outcomes. Implications for practitioners are provided.

KEYWORDS at-risk students, Tier 2, functional behavior assessment

As many as 20% of children have behavior problems, which makes schools a natural place for targeted early intervention efforts (Sugai, 2011; Walker,

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2004; World Health Organization, 2004). Accordingly, schools across the United States are adopting schoolwide prevention models to prevent or ameliorate social behavior problems (Stormont, Reinke, Herman, & Lembke, 2012). Tiered prevention models include three tiers of support, each with increasingly higher levels of intensity for students and expertise required of the professionals implementing specific interventions (Fuchs & Deshler, 2007; Sugai, 2011). Specifically related to prevention of social behavioral problems, Positive Behavior Interventions and Support (PBIS) is a commonly used tiered model in the United Sates; more than 14,000 schools currently use PBIS (http://www.pbis.org). In the context of PBIS, the foundational supports, referred to as *universal* or *Tier 1* supports, are delivered to all students (e.g., posting school rules, teaching rules and expectations, reinforcing students meeting expectations). If schools implement PBIS effectively, 80–85% of students will respond to these universal supports (Stormont, Lewis, Beckner, & Johnson, 2008). Once the universal supports are firmly in place, students who need additional Tier 2 (10–15%) and Tier 3 (5%) supports can more readily be identified (Sugai, 2011). The overall goal of the three-tiered prevention approach is to identify and intervene with students who are at risk for behavior problems toward improving their academic and behavioral outcomes. However, implementing the full continuum of supports (e.g., moving from Tier 1 to Tier 2) in social behavioral models has been a challenge for schools (McIntosh, Bohanon, & Goodman, 2011).

Schools face several challenges in providing services to students at risk for social behavioral difficulties. First, many schools do not have interventions in place or have only one intervention that does not meet the needs of all students in need of Tier 2 supports. Another related issue that school teams face is determining when students have not responded well to Tier 2 supports and need more intensive Tier 3 interventions (Scott, Alter, Rosenberg, & Borgmeier, 2010). It is imperative that schools build capacity to more effectively address these challenges. Unless student behaviors are severe and warrant immediate intensive supports, students should not receive more intensive support, referred to as Tier 3 until less intrusive Tier 2 supports have been implemented with high fidelity. Yet, many students do not receive Tier 2 interventions that are specifically designed to meet their needs; as a result, many students do not respond to the supports. Tier 2 interventions, although they do not need to be highly intensive tailored supports, should incorporate some individualized component. In particular, to maximize outcomes, it is vital that schools avoid applying a one-size-fits-all intervention for children who demonstrate a need for more support (Stormont et al., 2012). There is variability in the characteristics and needs of students who fail to respond to Tier 1 supports. Therefore, Tier 2 supports need to recognize this variability with feasible, effective, and socially acceptable practices.

To this end, the purpose of this article is to provide a framework for selecting and monitoring Tier 2 social behavioral interventions for

students on the basis of the function of their behavior and then building systems to ensure interventions are implemented with integrity. In the following review of the literature, the current practices used in Tier 2 within prevention models are presented, a case example illustrating problems with current practices, and a discussion of the importance of function based interventions are provided. Current available practices that could be used for students in need of Tier 2 social behavioral supports are then discussed.

Current Practices in Schools

Within schools implementing a three-tiered prevention model such as PBIS, targeted or Tier 2 interventions are in place to support students who do not respond to universal interventions and who are at risk for developing more significant behavior problems. Tier 2 interventions, in general (a) are ongoing programs that serve groups of students at the same time; (b) are readily available to referred students; and (c) require little assessment or additional resources (McIntosh, Campbell, Carter, & Dickey, 2009). Thus, Tier 2 interventions are considered cost-effective and efficient interventions for providing supports to students who are at risk. Typical Tier 2 interventions for social behavioral problems include daily report cards, social skills training groups, anger management programs, and homework clubs (Hawken & Horner, 2003). Although many schools use group-based Tier 2 interventions, schools typically do not have data-based decision rules to determine which intervention a given student will receive, and desired outcomes are not effectively defined or measured (Campbell & Anderson, 2008). This can be problematic for several reasons. For example, a student who refused to participate with peers in academic activities may benefit from a social skills training group, but only if the student lacks the skills taught in the group. For example, if the student has an academic deficit and is therefore misbehaving to avoid academic tasks, social skills training may not be the appropriate support, leading to nonresponse to the intervention. Thus, one important consideration when determining which Tier 2 social behavioral intervention is suitable for each student is the function, or purpose, of the student's behavior. Several studies have found that interventions that do not attend to the function of a behavior are unlikely to be successful in reducing problem behavior (Carter & Horner, 2009; Filter & Horner, 2009; Newcomer & Lewis, 2004). Therefore, a key consideration for schools when implementing a three-tiered model of behavior support is to effectively align the function of a problem behavior with an appropriate Tier 2 intervention. Taking the time for a brief assessment before intervening will likely be more efficient and lead to fewer students moving to additional more intensive Tier 3 interventions as a result of nonresponse to Tier 2 supports (Nahgahgwon, Umbreit, Liaupsin, & Turton, 2010; Newcomer & Lewis, 2004).

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Attending to Function

Every behavior that occurs repeatedly serves a purpose. Studies using functional behavioral assessments (FBA) have found that students can engage in off-task or disruptive behaviors to obtain adult attention, whereas other students can display those same behaviors to escape an activity (Nahgahgwon et al., 2010; Newcomer & Lewis, 2004). Because the reasons individuals engage in behaviors vary depending on the person and context, non–function-based interventions often inadequately address the behavior. When school behavior support teams identify the purpose or function of a student's behavior, supports can be aligned with the function to maximize the likelihood of positive outcomes for students (Stormont et al., 2012).

Several studies have examined the effects of function-based interventions in comparison with non–function-based interventions. Newcomer and Lewis (2004) implemented a non–function-based intervention that focused on the topography of behaviors and a function-based intervention that focused on how the problem behavior was reinforced with three students. This study found greater reductions for all students with interventions on the basis of the function for engaging in the problem behavior. Using similar research designs, Ingram, Lewis-Palmer, and Sugai (2005) and Filter and Horner (2009) found similar results indicating that function-based interventions more effectively reduced problem behaviors than did non–function-based interventions.

Before we can ultimately determine which Tier 2 interventions will be most effective for a particular student, a good hypothesis of the function of the behavior needs to be considered. In particular, students who exhibit behaviors to gain attention respond very differently to interventions in comparison with those who engage in behavior to escape something aversive. In general, there are three main categories of problem behavior: to gain attention (peer or adult), to escape something or someone, or to obtain a tangible (e.g., a toy). Therefore, Tier 2 social behavioral interventions work best when they attend to the underlying function or purpose for the behavior. For example, if a student displays aggressive behavior to gain attention from his or her peers, then an effective Tier 2 intervention will support this student in gaining attention from his or her peers in a more adaptive manner. As another example, if a student engages in behavior to escape an undesired task, this student needs different types of support to replace this behavior with one more adaptive. In the next section, we present an illustration of a case in which this did not happen.

Case Example

Check In Check Out (CICO) is a Tier 2 social behavioral intervention often used in PBIS schools that provides daily support and monitoring for students at risk of developing serious behavior problems. For many schools, CICO

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is the primary Tier 2 social behavioral intervention that educators use when providing supports to students. It is based on a daily check-in/check-out system that provides students with immediate feedback on his or her behavior using teacher ratings on a daily progress report (DPR) and increased positive adult attention. Research indicates that this intervention is effective in supporting students with behavior problems maintained by attention (Mitchell, Stormont, & Gage, 2011). CICO, however, can be adapted according to the function (Campbell & Anderson, 2008; March & Horner, 2002).

The following describes a case example, which illustrates the problem of using a singular approach to Tier 2 supports. In this example, the behavior support team in an elementary school implemented CICO with a student they identified as needing Tier 2 social behavioral supports. Data were gathered to determine the effect of CICO on the behavior of this student. The behavior support team did not gather assessment data to determine the function or purpose of the student problem behaviors. The student was White, male, and in the fifth grade. The behaviors of concern, as described by the student's teacher, included being withdrawn, not completing work, being off task, and often wandering off and failing to be where he was supposed to be.

A doctoral student in school psychology gathered data to determine the effectiveness of CICO with this student by collecting the following data: FBA, direct observation data in the classroom, compiling the points earned on the student DPR, number of office discipline referrals, and teacher ratings of the student's behaviors before and after the intervention. The school behavior support team implemented CICO across several months. The FBA conducted by the doctoral student concluded that the student's behavior was to avoid or escape teacher demands and unpreferred activities. The DPR was individualized for the student on the basis of the problem behaviors identified by the classroom teacher, which were verified by the FBA. However, as noted earlier, the CICO intervention is most effective for students with attention maintained behaviors and needs careful adaptations to be used for students whose behaviors are escape maintained. The DPR contained behavioral goals according to the school's PBIS schoolwide expectations (*safe*, *respectful*, and *responsible*). The DPR had a carbon copy: one copy to keep for records and one copy for the child to take home each day. The CICO coordinator was a learning specialist recruited by the school administrator. This coordinator met with the student at the beginning of the day to review the behavioral goals and at the end of the day to provide adult attention and reinforcement if the goals were met that day.

The student's behavioral goals for the *safe* expectation were (a) be where he needs to be when he needs to be there; and (b) keep all hands, feet, and other objects to himself. Under the area of *respectful*, the goal was to verbally and physically respond to adults appropriately and respectfully. His goals for being *responsible* were to (a) turn in assignments and (b) try his best.

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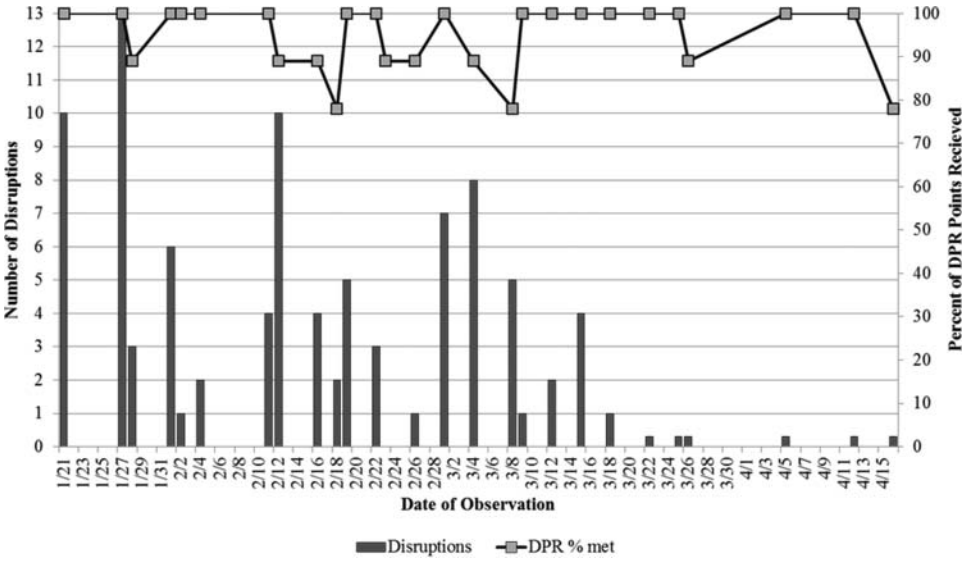

FIGURE 1 Number of disruptive behaviors and percentage of points earned for daily progress report.

The CICO intervention was implemented from January after winter break until the end of April. Classroom observations were conducted for 10 min each day during a time identified as most difficult for the student by his teacher. During these observations, a frequency count of disruptions were recorded. These data were compared with teacher-provided ratings on the DPR in Figure 1. The student had relatively few disruptions in the classroom. This is likely because his behaviors were triggered by teacher demands and engaging in an unpreferred task and these triggers may not have occurred often. The highest number of disruptive behaviors recorded was 13 on January 27; however, the student received the full number of points possible on that day.

Teachers of students who display escape maintained behaviors may avoid providing demands or redirecting these students, sometimes unknowingly, so that problem behaviors are less likely. For example, if a student who dislikes writing exhibits aggressive behavior toward his teacher each time the teacher asks him to complete a writing assignment, and as a result the teacher stops asking the student to complete his work, the student has learned that aggressive behavior results in being able to avoid writing. Further, the teacher is reinforced because the student is no longer aggressive. This cycle of negative reinforcement between teacher and student is reinforcing to both individuals and can be hard to break (Reinke & Herman, 2002). Although data on the number of teacher demands provided were not gathered in this example, it is likely that disruptive behavior was low because the student simply avoided unpreferred tasks and the teacher provided few

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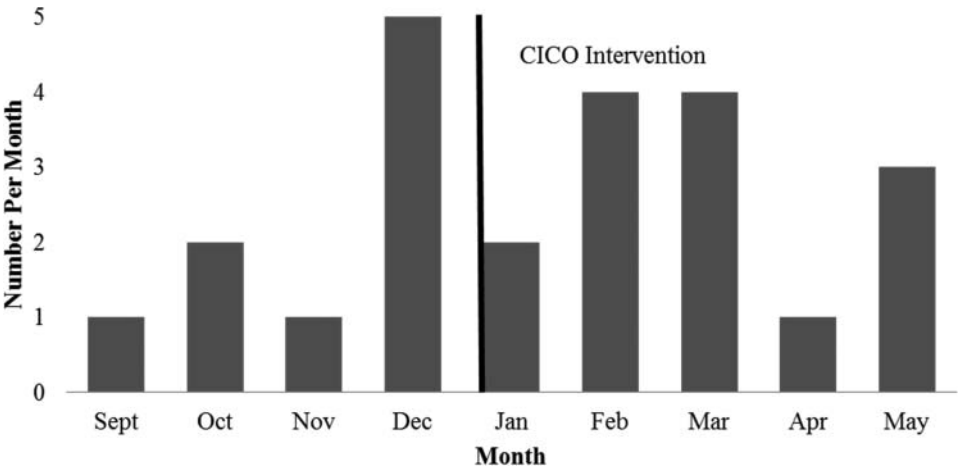

FIGURE 2 Number of office discipline referrals student received each month. CICO = Check In Check Out.

demands. Therefore, the student likely had little reason to exhibit the problem behaviors. Furthermore, teachers may find it challenging to provide negative feedback to students on the DPR card if this form of feedback is a trigger for disruptive behavior from a student. In this case, the DPR ratings and level of disruptive behavior in the classroom were not significantly correlated ($r = 0.04$). We would expect a strong negative correlation with high levels of disruptive behavior corresponding to lower ratings on the DPR. In general, the DPR ratings were consistently positive (high) regardless of the level of disruptive behaviors displayed by the student.

In addition to observation data and DPR points, office discipline referral data did not indicate much change in the number of referrals across the school year for this student. Figure 2 displays the number of office discipline referrals the student received each month of the school year. In December, he received five office discipline referrals. In January, at the start of the CICO, he received only two; however, during the subsequent 2 months, he received four. In general, there was not a change in the number of office discipline referrals he received across the school year. The average office discipline referrals per month actually increased from 2.25 to 2.80. Last, teacher ratings of the student's behavior using the Behavior Assessment System for Children, Second Edition (Reynolds & Kamphaus, 2004) indicated lack of improvement (see Table 1).

There are likely several reasons that the CICO intervention was not fully successful in supporting behavior change for this particular student. First, although the DPR behavioral goals were established by the problem behaviors identified by the teacher, and confirmed by the FBA, the reinforcements for meeting these goals were not aligned with the student's function for engaging in the problem behaviors. For example, the reinforcements did not

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TABLE 1 Teacher Behavior Ratings Before and After Check In Check Out

Teacher ratings	Before	After	Difference	Percentage change
Total externalizing	66	71	−5	−7.58
Aggression	70	74	−4	−5.71
Conduct problems	69	69	0	0.00
Attention problems	57	64	−7	−12.28
Learning problems	56	62	−6	−10.71
Social skills	40	34	−6	−15.00
Study skills	36	34	−2	−5.56

Note. Negative percentage change indicates a change in the unexpected direction.

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allow the student to escape an unpreferred activity, but instead relied heavily on provision of adult attention. When designating Tier 2 social behavioral supports to students, behavior support teams should consider if the CICO intervention can be successfully adapted and implemented with students who exhibit escape maintained behaviors, especially if those behaviors are infrequent and triggered by teacher demands or negative feedback. Possible adaptations that behavior support teams could consider include building in function based rewards for earning DPR goals such as earning the opportunity for a preferred activity (e.g., 10 min of computer time) or the option to work on modified assignments or to avoid a portion of an unpreferred task (e.g., permission to skip a homework assignment). Other possible adaptations include building in breaks for students during challenging tasks and providing DPR points for using breaks appropriately.

One caveat to the case example presented is that the data gathered had some limitations. For example, the school behavior support team did not collect fidelity data on their implementation. There could have been a lack of fidelity to the intervention. For example, the CICO coordinator may not have consistently met with the student to review the goals and provide feedback daily. In addition, the classroom teacher may not have provided accurate or timely feedback to the student about his behavior. When implementing Tier 2 supports, and any intervention, it is important to gather data on the student outcomes, and the fidelity to implementation of the intervention. The purpose of this case example was to highlight how lack of attention to the function of problem behaviors can affect the effectiveness of the intervention. The findings were consistent with research conducted on the CICO with students exhibiting escape maintained behaviors. However, it is important to note that without knowing that an intervention is conducted with high fidelity it is difficult, if not impossible, to make effective decisions about the impact of an intervention on the targeted problem behaviors.

Identifying the Function

Although behavior support teams may think that an FBA involving a comprehensive file review, teacher and student interviews, and structured

observations is beyond the scope of Tier 2 social behavioral interventions, function-based hypotheses that are based on brief assessments may save time and energy, avoiding ineffective efforts of support. The main component that must be considered as teams determine the function of a behavior is to obtain the following information by answering the questions with specific, observable, and measureable details:

1. What is the problem behavior (when, where, how often, with whom, and how severe)?
2. What happens before the behavior?
3. What happens immediately after the behavior?
4. Does the student use this behavior to gain attention, to escape or avoid something, or to obtain a tangible?

Once a hypothesis is developed on the basis of this information, the team can brainstorm what type of supports would be most effective for that student. Several forms have been developed to help guide the process toward effectively determining the function of the behavior and appropriate supports. One method is for the behavior support teams to use the Function Hypothesis Development and Planning Form (Stormont et al., 2012). This form outlines a step by step guide for teams to determine (a) the behaviors of concern, (b) the trigger or antecedent to the behavior, and (c) the consequences or what occurs after the behavior. This information will lead the team to a hypothesis of the function of the behavior. A team member can conduct a brief interview with the classroom teacher and other relevant school personnel to complete this section of the form.

Next, the team works through a checklist of potential supports to be aligned with the function of the behavior. The team also determines a behavior that would be helpful for the student to increase. Last, a plan is devised for what specific Tier 2 social behavioral supports will be offered. Some potential practices to support students are (a) academic interventions when an academic skill deficit is resulting in escape or avoidance behaviors, (b) social skills groups/training for students seeking peer attention inappropriately or avoiding peer attention due to social skill deficits, (c) social cognitive and problem solving training, (d) providing choices for students who act out because they find teacher demands aversive, and (e) support with organization and study skills. The Function Hypothesis and Planning Form is brief and efficient to complete, but follow through is necessary by team members to identify responsibilities for implementing, gathering data, monitoring fidelity, and evaluating outcomes.

Other helpful forms that can be used by behavior support teams to determine the appropriate function include the Functional Assessment Checklist for Teachers and Staff (March et al., 2000) and the Teacher Team Questionnaire (Murdock et al., 2005). Several studies have used the Functional

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Assessment Checklist for Teachers and Staff to aid in the development of behavior support plans (Campbell & Anderson, 2008; March & Horner, 2002; McIntosh et al., 2009; Payne, Scott, & Conroy, 2007). The Functional Assessment Checklist for Teachers and Staff is a semi-structured interview that takes approximately 20 min to complete and has demonstrated technical adequacy (McIntosh et al., 2008). The Teacher Team Questionnaire takes approximately 30 min and prompts the teacher to explain the problem behavior, setting events, antecedents and consequences. Then, the interviewer uses this information to develop hypothesis statements during the second part of the meeting. An evaluation of the Teacher Team Questionnaire found 64% agreement of the function between the teacher/student interviews and observations. It is important to note that the accuracy of these approaches can be increased with trained administrators and multiple pieces of data (Hawken, O'Neill, & MacLeod, 2011).

Once the function of a behavior is identified, the team can determine programs or practices that would support the student in replacing the problem behavior with adaptive behaviors. The following provides a brief overview of programs or practices that can be used as Tier 2 social behavioral interventions to support students on the basis of the function of the problem behavior.

Interventions for Behaviors Maintained by Attention

Several interventions have been found to effectively support students exhibiting attention maintained problem behaviors.

CICO

As mentioned earlier, CICO is a widely used Tier 2 social behavioral intervention that is most effective with students exhibiting attention maintained behaviors. Several researchers have investigated outcomes of function associated with CICO (Campbell & Anderson, 2008; Hawken et al., 2011; March & Horner, 2002; McIntosh, Campbell, Carter, & Dickey, 2009). For example, CICO was related to significant reductions in office discipline referrals (Hawken et al., 2011; McIntosh et al., 2009) and improvements in ratings of problem behavior and prosocial behavior for students exhibiting peer and adult attention-seeking behaviors (McIntosh et al., 2009). McIntosh and colleagues (2009) found nonsignificant effects for escape-maintained behaviors. Hawken and colleagues (2011) found inconsistent findings, demonstrating that one student in the escape condition reduced office discipline referrals, whereas another student in the escape condition increased.

Students Earning Whole-Class Rewards

Having students with attention maintained problem behavior work to earn a reward for the whole class can provide positive attention for meeting social

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behavioral goals. In particular, students that engage in behavior for peer attention can successfully gain peer attention by earning a reward for everyone in the class for demonstrating prosocial classroom behaviors (replacement behaviors for prior maladaptive behavior). For example, a token economy system could be used where students earn tokens (e.g., points, stickers, chips) contingent on the expected behavior that can then be redeemed for a reinforcer (e.g., popcorn party for all classroom students, playing a class game). The reward and prosocial behaviors can also be helpful for students with challenging attention maintained behaviors to overcome difficulties with peer rejection common among students displaying disruptive behaviors (Snyder, Patterson, & Reid, 2002).

Escape Maintained Interventions

There are several interventions that have been identified as effective for addressing escape-maintained behavior at Tier 2.

Curricular and Instructional Revision

Providing additional academic supports may reduce escape-maintained behaviors. Studies have found that modifying lessons, activities, and instructional procedures can reduce off-task behavior, disruptive behavior, and self-injury (Kern, Childs, Dunlap, & Clarke, 1994; Moore, Anderson, & Kumar, 2005; Umbreit, Lane, & Dejud, 2004). These types of intervention has also been found to improve work completion and on-task behavior (Dunlap, Kern-Dunlap, & Clarke, 1991; Kern et al., 1994). In the general education classroom, teachers can modify assignments to match instruction to the skill level of the student (Moore et al., 2005; Umbreit et al., 2004), adjust content and format of lessons, (Kern et al., 1994), reduce the duration of the task (Kern et al., 1994; Moore et al., 2005), provide a peer tutor (Newcomer & Lewis, 2004), or mix easy and difficult problems together (Cates & Erkfritz, 2007; McCurdy, Skinner, Grantham, Watson, & Hindman, 2001; Skinner, Hurst, Teeple, & Meadows, 2002). Given that academic skill deficits may be a contributing factor for students displaying escape maintained behaviors, it is vital that academic skills be evaluated and any academic skills deficit identified so that effective academic instructional supports as provided. Often behavior and academic problems are thought of as separate entities, but many times they are highly related.

Desirable Tasks

Choice making and preference are simple interventions that have shown positive effects in reducing problem behavior and increasing task engagement (Morgan, 2006). Choice making allows students to indicate choice in the activities, sequence of activities, or rewards. For example, teachers can provide students with multiple options for assignments with the same

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difficulty (Powell & Nelson, 1997) or allow students to choose the order in which they complete tasks (Kern, Mantegna, Vorndran, Bailin, & Hilt, 2001). Cosden, Gannon, and Haring (1995) found greater effects for a combination of the choice of the task and the reward compared to the choice of the task or reward alone. Preference, on the other hand, promotes engagement in activities that are more reinforcing or liked by the child (Morgan, 2006). Research has found no differences in the effects of teacher or student selected tasks (Cole, Davenport, Bambara, & Ager, 1997). In the classroom, teachers can seek to learn student's favorite learning activities and incorporate these preferences into lessons and assessments (Vaughn & Horner, 1997).

Although preference and choice making are similar, the two have been distinguished in research. Research has found that preference has a greater effect on behavior and engagement than choice making. However, there is a positive effect of choice making when the choice is between low-preference items (Cole et al., 1997; Killu, Clare, & Im, 1999; Umbreit & Blair, 1996). In addition, the function of the behavior moderates the effects of choice making for students (Romaniuk et al., 2002). Specifically, choice making is associated with decreases in problem behavior for children exhibiting escape-maintained problem behaviors, but no differences were found for children displaying attention-seeking problem behaviors. Meanwhile, preference reduced problem behaviors across all functions (Romaniuk et al., 2002). These effects may be evidenced because students may be immediately reinforced by the preferred activity, which affects the effort required to obtain a desired outcome (Morgan, 2006). Likewise, choice making may be effective because it reduces exposure to aversive activities.

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Student-Selected Breaks

Student-selected breaks allow students to access escape reinforcement by requesting a break. Because the student chooses when a break is desired, this intervention also employs choice making. Stormont and colleagues (2012) discussed using this approach in combination with differential reinforcement to teach social behavior. Specifically, Stormont and colleagues (2012) indicated that allowing students to take a break is effective for students seeking to avoid an aversive activity or social interactions. This intervention teaches students how to calmly leave and reenter a situation. During the break, students practice soothing techniques or complete a problem solving form to support the calming down process. Another intervention suggested allows students to choose a pass with response cost (Stormont et al., 2012). This intervention, the pass system, enables a student to pass on completing an activity a certain number of times per day. The student is expected, however, to complete a portion of the task, albeit minimal at first. The student can earn points for engaging in the desired behaviors, as well as lose points for refusing to complete tasks. This intervention allows students to escape

within limits and provide continued incentives for engaging in the desired behavior when the student uses all of the passes (Stormont et al., 2012).

Interventions that can be Tailored to Function

Differential Reinforcement

Differential reinforcement, an intervention that reinforces any behavior except for the behaviors targeted to change, has several variations, such as differential reinforcement of alternative behavior, differential reinforcement of incompatible behavior, differential reinforcement of zero rates of behavior, and differential reinforcement of low rates. These strategies can be effectively tailored to the function of student behavior.

Differential reinforcement of alternative behavior and differential reinforcement of incompatible behavior teach students to use a replacement behavior and provide reinforcement when the alternative behavior is displayed. Differential reinforcement of incompatible behavior, however, teaches the student to use a replacement behavior that cannot occur at the same time as the targeted behavior. This extinguishes the problem behavior and reinforces the desired behavior (Chowdhury & Benson, 2011). For example, students who talk out for attention may be praised for waiting and talking with permission. Likewise, students who yell to get a toy may receive the toy when they use an appropriate voice level to ask for it. Along the same lines, differential reinforcement of alternative behavior uses any replacement behavior even if it is not incompatible with the problem behavior. To illustrate, students who talk out for attention may receive praise for raising their hands without talking or students who engage in escape maintained behaviors may be reinforce for asking for a break. These strategies are effective because reinforcement is contingent on the individual using the learned skills.

Differential reinforcement of zero rates of behavior and differential reinforcement of low rates also use comparable approaches. Differential reinforcement of low rates provides reinforcement when the target behavior is equal or below the allowed number of occurrences, such a student receives attention for talking out three or fewer times during math. Differential reinforcement of low rates has been shown to decrease student request for teacher attention by reinforcing lower rates of request for teacher assistance than baseline levels (Austin & Beevan, 2011). On the other hand, reinforcement for differential reinforcement of zero rates of behavior is contingent on the complete absence of the target behavior for a specified period of time. For example, a student may be allowed to engage in free time for 5 min if the student is not disruptive during independent work. Differential reinforcement of zero rates of behavior can be useful for increasing tolerance of aversive stimuli (Geiger, Carr, & LeBlanc, 2010).

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Differential reinforcement can extinguish problem behaviors and increase desirable behaviors, because the consequences are reinforcing for the individuals. Thus, tailoring differential reinforcement to the function of the problem behaviors can be an effective practice when designing behavior supports for student in need of Tier 2 social behavioral interventions.

Contingent Reinforcement

Contingent reinforcement occurs when earning a reward depends on engaging in a specific behavior. This strategy can be used for students and tailored to the specific function of their behavior. For example, students exhibiting escape-maintained behaviors can earn a reward that allows him or her to escape the aversive stimulus (e.g., earning free time, pass on homework, and reducing number of problems on an assignment), whereas a student exhibiting attention-maintained behaviors can earn a reward that provides him or her with attention (e.g., eating lunch with principal, playing a game with a selected peer). Students seeking access to a preferred item or activity can receive it after they perform a specified behavior. This approach can be used in combination with non–function-based interventions. For example, self-monitoring and contingent reinforcement reduced escape-maintained off-task behavior and nonengagement to low and stable levels (Ingram et al., 2005; Newcomer & Lewis, 2004). Behavioral contracting with goal setting can also be used with contingent reinforcement (Stormont et al., 2012). Behavioral contracts have been shown to increase student productivity and assignment completion (Kelley & Stokes, 1984), improve grades (Williams & Anandam, 1973), and increase student self-control (Drabman, Spitalnik, & O'Leary, 1973).

It is important to note that a Tier 2 social behavioral intervention may employ several of the strategies outlined earlier in a feasible manner to maximize success. In addition, gathering data to determine whether the supports are being implemented as intended and are producing the desired effects is important. Last, given the variable nature of problem behaviors displayed by students, school behavior support teams may need to assess whether a student displaying more severe problem behaviors would be better served with the development of a more intensive intervention plan. The continuum between Tier 2 and Tier 3 is not well defined; thus, if we think of Tier 2 as less intensive more feasible and Tier 3 as more intensive and highly individualized the behavior support team may move beyond Tier 2 supports when planning to intervene with a small number of students displaying significant behavior problems.

Summary and Implications for School Psychologists

This article aimed to provide a framework for determining Tier 2 interventions and supporting students' needs according to function. A common

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misapplication of the Tier 2 model is for schools to use a limited set of interventions without regard to the function of the problem behavior. The problem with such an approach is that it assumes that all children with Tier 2 social behavioral needs are alike. There is great variability in the characteristics and needs of students who fail to respond to Tier 1 supports. School psychologists can play key roles in supporting their schools' efforts to implement tiered prevention models. First, school psychologists can work with schools to ensure that Tier 1 supports are in place and used with high fidelity. To effectively identify students truly in need of additional supports, effective universal interventions must first be in place. Next, school psychologists can help behavior support teams to identify the function of behavior problems among students in need of Tier 2 supports. As noted in this article, function based supports will improve the likelihood that students will respond to Tier 2 social behavioral interventions. Further, school psychologists can help schools to gather data for progress monitoring student behavior and data on the fidelity of the intervention. This will help schools determine which students are responding to Tier 2 interventions or who need more intensive Tier 3 supports. It is important that the fidelity of implementation of interventions is determined before providing more support for students; this ensures students receive the least intrusive intervention options (McIntosh et al., 2011; Scott et al., 2010). Many times interventions or practices are abandoned by schools because they seem to not be effective, but the reason for lack of results is low levels of implementation. Ensuring Tier 2 supports are implemented with high fidelity and matched to the function of problem behavior will reduce the likelihood of schools to abandon effective practices.

When schools deem that children need Tier 2 interventions, there are a wide range of relatively simple interventions that can be implemented and tailored to the function of their behaviors. These interventions can be implemented in isolation or integrated. Supports can be effectively tailored to the function of student problem behavior in a manner that is feasible for school personnel to implement. School psychologists working with behavior support teams can help bring this idea to fruition by using their knowledge of function-based Tier 2 social behavioral intervention planning and supporting the implementation of effective, function-based practices. They can also ensure the continuum of supports is operating as intended; specifically that universal supports are firmly in place and that children who need highly individualized and multifaceted interventions move to Tier 3.

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REFERENCES

Austin, J., & Beevan, D. (2011). Using differential reinforcement of low rates to reduce children's requests for teacher attention. *Journal of Applied Behavior Analysis*, *44*, 451–461.

Campbell, A., & Anderson, C. (2008). Enhancing effects of Check-in/Check-out with function-based support. *Behavioral Disorders*, *33*, 233–245.

Carter, D. R., & Horner, R. (2009). Adding function-based behavioral support to First Step to Success: Integrating individualized and manualized practices. *Journal of Positive Behavior Interventions*, *11*, 22–34.

Cates, G. L., & Erkfritz, K. N. (2007). Effects of interspersing rates on students' performance on and preferences for mathematics assignments: Testing the discrete task completion hypothesis. *Psychology in the Schools*, *44*, 615–625. doi: 10.1002/pits.20251

Chowdhury, M., & Benson, B. A. (2011). Use of differential reinforcement to reduce behavior problems in adults with intellectual disabilities: A methodological review. *Research in Developmental Disabilities*, *32*, 383–394. doi: 10.1016/j.ridd.2010.11.015

Cole, C. L., Davenport, T. A., Bambara, L. M., & Ager, C. L. (1997). Effects of choice and task preference on the work performance of students with behavior problems. *Behavioral Disorders*, *22*, 65–74.

Cosden, M., Gannon, C., & Haring, T. G. (1995). Teacher-control versus student-control over choice of task and reinforcement for students with severe behavior problems. *Journal of Behavioral Education*, *5*, 11–27. doi: 10.1007/bf02110212

Drabman, R. S., Spitalnik, R., & O'Leary, K. D. (1973). Teaching self-control to disruptive children. *Journal of Abnormal Psychology*, *82*, 10–16. doi: 10.1037/h0034981

Dunlap, G., Kern-Dunlap, L., & Clarke, S. (1991). Functional assessment, curricular revision, and severe behavior problems. *Journal of Applied Behavior Analysis*, *24*, 387–397. doi: 10.1901/jaba.1991.24–387

Filter, K. J., & Horner, R. H. (2009). Function-based academic interventions for problem behavior. *Education and Treatment of Children*, *32*, 1–19.

Fuchs, D., & Deshler, D. D. (2007). What we need to know about responsiveness to intervention (and shouldn't be afraid to ask). *Learning Disabilities Research & Practice*, *22*, 129–136.

Geiger, K. B., Carr, J. E., & LeBlanc, L. A. (2010). Function-based treatments for escape-maintained problem behavior: a treatment-selection model for practicing behavior analysts. *Behavior Analysis in Practice*, *3*, 22–32.

Hawken, L. S., & Horner, R. H. (2003). Evaluation of a targeted intervention within a school-wide system of behavior support. *Journal of Behavioral Education*, *12*, 225–240.

Hawken, L. S., O'Neill, R. E., & MacLeod, K. S. (2011). An investigation of the impact of function of problem behavior on effectiveness of the Behavior Education Program (BEP). *Education & Treatment of Children*, *34*, 551–574.

Ingram, K., Lewis-Palmer, T., & Sugai, G. (2005). Function-based intervention planning: comparing the effectiveness of FBA Function-based and non—function-based intervention plans. *Journal of Positive Behavior Interventions*, *7*, 224–236.

Kelley, M. L., & Stokes, T. F. (1984). Student–teacher contracting with goal setting for maintenance. *Behavior Modification*, *8*, 223–244. doi: 10.1177/01454455840082005

Kern, L., Childs, K. E., Dunlap, G., & Clarke, S. (1994). Using assessment-based curricular intervention to improve the classroom behavior of a student with

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emotional and behavioral challenges. *Journal of Applied Behavior Analysis*, *27*, 7–19. doi: 10.1901/jaba.1994.27–7

Kern, L., Mantegna, M. E., Vorndran, C. M., Bailin, D., & Hilt, A. (2001). Choice of task sequence to reduce problem behaviors. *Journal of Positive Behavior Interventions*, *3*, 3–10. doi: 10.1177/109830070100300102

Killu, K., Clare, C. M., & Im, A. (1999). Choice vs. preference: The effects of choice and no choice by preferred and non preferred spelling tasks on the academic behavior of students with disabilities. *Journal of Behavioral Education*, *9*, 239–253. doi: 10.1023/a:1022143716509

March, R. E., & Horner, R. H. (2002). Feasibility and contributions of functional behavioral assessment in schools. *Journal of Emotional and Behavioral Disorders*, *10*, 158–170. doi: 10.1177/10634266020100030401

March, R. E., Horner, R. H., Lewis-Palmer, T., Brown, D., Crone, D., Todd, A. W., … Carr, E. (2000). *Functional Assessment Checklist: Teachers and Staff (FACTS)*. Eugene, OR: Educational and Community Supports.

McCurdy, M., Skinner, C. H., Grantham, K., Watson, T. S., & Hindman, P. M. (2001). Increasing on-task behavior in an elementary student during mathematics seatwork by interspersing additional brief problems. *School Psychology Review*, *30*, 23–32.

McIntosh, K., Bohanon, H., & Goodman, S. (2010). Toward true integration of response to intervention systems in academic and behavior support: Tier 2 Support. *Communiqué*, *39*(3), 4–6.

McIntosh, K., Borgmeier, C., Anderson, C., Horner, R., Rodriguez, J., & Tobin, T. (2008). Technical adequacy of the functional assessment checklist: Teachers and staff (FACTS) FBA interview measure. *Journal of Positive Behavior Interventions*, *10*, 33–45.

McIntosh, K., Campbell, A. L., Carter, D. R., & Dickey, C. R. (2009). Differential effects of a tier two behavior intervention based on function of problem behavior. *Journal of Positive Behavior Interventions*, *11*, 82–93. doi: 10.1177/1098300708319127

Mitchell, B. S., Stormont, M., & Gage, N. (2011). Tier two interventions implemented within the context of a tiered prevention framework. *Behavior Disorders*, *36*, 241–261.

Moore, D. W., Anderson, A., & Kumar, K. (2005). Instructional adaptation in the management of escape-maintained behavior in a classroom. *Journal of Positive Behavior Interventions*, *7*, 216–223.

Morgan, P. L. (2006). Increasing task engagement using preference or choice-making: Some behavioral and methodological factors affecting their efficacy as classroom interventions. *Remedial and Special Education*, *27*, 176–187. doi: 10.1177/07419325060270030601

Murdock, S. G., O'Neill, R. E., & Cunningham, E. (2005). A comparison of results and acceptability of functional behavioral assessment procedures with a group of middle school students with emotional/behavioral disorders (E/BD). *Journal of Behavioral Education*, *14*, 5–18. doi: 10.1007/s10864–005-0958-z

Nahgahgwon, K. N., Umbreit, J., Liaupsin, C. J., & Turton, A. M. (2010). Function-based planning for young children at risk for emotional and

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behavioral disorders. *Education & Treatment of Children*, *33*, 537–559. doi: 10.1353/etc.2010.0005

Newcomer, L. L., & Lewis, T. J. (2004). Functional behavioral assessment: An investigation of assessment reliability and effectiveness of function-based interventions. *Journal of Emotional and Behavioral Disorders*, *12*, 168–181.

Payne, L. D., Scott, T. M., & Conroy, M. (2007). A school-based examination of the efficacy of function-based intervention. *Behavioral Disorders*, *32*, 158–174.

Powell, S., & Nelson, B. (1997). Effects of choosing academic assignments on a student with attention deficit hyperactivity disorder. *Journal of Applied Behavior Analysis*, 30, 181–183. doi: 10.1901/jaba.1997.30–181

Reinke, W. M., & Herman, K. C. (2002). Creating school environments that deter antisocial behaviors in youth. *Psychology in the Schools*, *39*, 549–559.

Reynolds, C. R., & Kamphaus, R. W. (2004). *Behavior assessment system for children* (2nd ed.). Circle Pines, MN: American Guidance Services.

Romaniuk, C., Miltenberger, R., Conyers, C., Jenner, N., Jurgens, M., & Ringenberg, C. (2002). The influence of activity choice on problem behaviors maintained by escape versus attention. *Journal of Applied Behavior Analysis*, *35*, 349–362. doi: 10.1901/jaba.2002.35–349

Scott, T. M., Alter, P. J., Rosenberg, M., & Borgmeier, C. (2010). Decision-making in secondary and tertiary interventions of school-wide systems of positive behavior support. *Education and Treatment of Children*, *33*, 513–535.

Skinner, C. H., Hurst, K. L., Teeple, D. F., & Meadows, S. O. (2002). Increasing on-task behavior during mathematics independent seat-work in students with emotional disturbance by interspersing additional brief problems. *Psychology in the Schools*, *39*, 647–659. doi: 10.1002/pits.10058

Stormont, M., Lewis, T. J., Beckner, R., & Johnson, N. W. (2008). *Implementing positive behavior support systems in early childhood and elementary settings*. Thousand Oaks, CA: Corwin Press.

Stormont, M., Reinke, W., Herman, K. W., & Lembke, E. C. (2012). *Tier 2 interventions: Academic and behavior supports for students at risk for failure*. New York, NY: Guilford Press.

Sugai, G. (2011). School-wide positive behavior support and response to intervention. Retrieved from http://www.rtinetwork.org/learn/behavior/schoolwide behavior. Washington, DC: RtI Action Network.

Umbreit, J., & Blair, K. (1996). The effects of preference, choice, and attention on problem behavior at school. *Education & Training in Mental Retardation & Developmental Disabilities*, *31*, 151–161.

Umbreit, J., Lane, K. L., & Dejud, C. (2004). Improving classroom behavior by modifying task difficulty: Effects of increasing the difficulty of too-easy tasks. *Journal of Positive Behavior Interventions*, *6*, 13–20. doi: 10.1177/10983007040060010301

Vaughn, B. J., & Horner, R. H. (1997). Identifying instructional tasks that occasion problem behaviors and assessing the effects of student versus teacher choice among these tasks. *Journal of Applied Behavior Analysis*, *30*, 299–312. doi: 10.1901/jaba.1997.30–299

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Walker, H. M. (2004). Commentary: Use of evidence-based intervention in schools: Where we've been, where we are, and where we need to go. *School Psychology Review*, *33*, 398–407.

Williams, R. L., & Anandam, K. (1973). The effect of behavior contracting on grades. *The Journal of Educational Research*, *66*, 230–236.

World Health Organization. (2004). *Prevention of mental disorders: effective interventions and policy options. Summary Report*. Geneva, Switzerland: Author.

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