Parent–Child Interaction Therapy for Children with Selective Mutism (PCIT-SM)

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Abstract

Selective mutism is a psychological disorder in which children do not speak to others in certain social settings (e.g., school, daycare) even though they are able to speak in other settings, such as at home with family. Treatment options are often limited for children with this disorder due to the young age of onset, low prevalence rate, and type of problematic behavior displayed by the child (e.g., non-disruptive, lack of speech to clinicians). Parent-child interaction therapy (PCIT) has been adapted to fill this gap and to provide appropriate treatment for children with selective mutism. The current chapter includes a description of the clinical presentation of selective mutism as well as the etiology and maintenance of this disorder. Following a discussion of the need for a lateral extension of the original protocol for this population, the chapter describes the adapted PCIT model, including the altered assessment procedures and treatment phases. Information is also provided about medication use for selective mutism. Finally, future areas for research and clinical development regarding the adapted treatment model are discussed.

Sarah's mother was baffled when she received news from the daycare worker that her daughter had not spoken to anyone in the center since her arrival. It was difficult to imagine how her goofy and chatty girl at home became stone-faced and reserved in daycare. Even though Sarah had always been a bit slow-to-warm-up when introduced to new people, she was open and expressive with her parents and siblings at home. Having experienced her own anxiety, Sarah's mother could understand her daughter's hesitation in new social situations. Still, she hoped that this behavior would change as Sarah grew more accustomed to the new setting and that her daughter would eventually "outgrow" her shyness. Unfortunately, Sarah's silence persisted despite attempts and accommodations made by staff at the center, continuing even as she began Kindergarten. Feeling frustrated and powerless to help her daughter speak at school, Sarah's mother was referred by the teacher to a local psychology clinic. Following a comprehensive evaluation, Sarah was diagnosed with selective mutism (SM)

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and recommended for treatment services to address her lack of speech.

The Need for a Parent–Child Intervention to Treat SM

SM is a psychological disorder in which children do not speak to others in certain social settings (e.g., school or daycare) even though they are able to speak in other settings, such as at home with family. It was originally known as "voluntary aphasia" or "elective mutism" based on the false assumption that defiance or choice motivated the child's refusal to speak in the required social situations (Kussmaul, 1887; Muris & Ollendick, 2015; Tramer, 1934). However, more recent conceptualizations have recognized the lack of motive or agency among children with SM, rebranding the disorder as "selective" and reclassifying it under the anxiety disorders in the recently released fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychological Association [APA], 2013). Although estimated prevalence rates of less than 1% suggest the rarity of SM (e.g., Bergman, Piacentini, & McCracken, 2002; Viana, Beidel, & Rabian, 2009), this disorder has the potential to cause great impairment in academic achievement, social relations, and mental health functioning (Busse & Downey, 2011; Muris & Ollendick, 2015; Steinhausen, Wachter, Laimböck, & Metzke, 2006). Moreover, without appropriate knowledge of the disorder, parents and teachers often feel helpless in the face of a child's refusal to speak and may unintentionally reinforce these behaviors, which can exacerbate and maintain the lack of speech. As such, treatment for SM is vital to restore the child's communicative abilities and to break the maintaining cycle of avoidance.

In response to this need, parent–child interaction therapy (PCIT) was adapted to treat children with SM (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014; Kurtz, 2015). This adapted version of PCIT for selectively mute children (PCIT-SM) utilizes behavioral techniques in exposure situations to decrease avoidance and to promote the child's speech, beginning in the clinic and expanding to other social settings. Although PCIT-SM has yet to be empirically tested using randomized and controlled methods, it has shown initial success for increasing children's verbal responses, such as spontaneous speech (Mele & Kurtz, 2013). This chapter will begin by describing the clinical presentation of SM as well as the etiology and maintenance of the disorder. Following a justification for the lateral extension of PCIT into this population, we will describe PCIT-SM, including the adapted assessment procedures and treatment phases. Finally, future areas for research and clinical development will be discussed.

Clinical Presentation of Selective Mutism

Diagnostic Criteria

The *DSM-5* diagnostic criteria for SM include a "consistent failure to speak in specific social situations… despite speaking in other situations," with the lack of speech not attributable to knowledge or comfort with spoken language (APA, 2013). Although children with SM often speak to their close family members (e.g., parents, siblings) in the home, they do not initiate or reciprocate speech with others (e.g., teachers, classmates, extended family members, strangers) in public settings, such as school or a restaurant. Given that it is normative and developmentally appropriate for children to experience shyness and behavioral inhibition, such as limited speech, when facing new situations, a diagnosis of SM cannot be made during the first month of a new school year (APA, 2013). Children are likely to display increased anxiety and worry when beginning a new school year, but this behavior typically dissipates over time. Additionally, the *DSM-5* specifies that the child's behavior must interfere with "educational or occupational achievement or with social communication" and cannot be better explained by another disorder (e.g., communication disorder, psychotic disorder, autism spectrum disorder; APA, 2013).

Typically, parents report that children with SM interact verbally (e.g., talking, reading, singing) at home but are unable to speak to their teachers and classmates in school, relying on nonverbal communication of needs. Still, the severity of SM symptoms varies on a case by case basis and may include differing levels of nonverbal communication (e.g., facial expressions, gestures, nodding). Across the continuum, some children may appear "frozen" with limited body movement and facial expressions, while others may utilize nonverbal gestures to communicate needs and even make noises, such as clicking or whistling (Perednik, 2011). For example, one mother reported that her daughter made noises and appeared jittery and energetic in settings where she failed to speak as if the pressure to speak was building and "trying to burst out of her."

Development and Course of SM

The age of onset for SM is most commonly between 2 and 5 years; however, symptoms are often not apparent until children enter the school setting. As such, referral for services and subsequent diagnosis of SM tends to occur later, creating a gap between onset and treatment (APA, 2013; Viana et al., 2009). Although not consistently found, some research suggests that SM is more prevalent in females than males (Leonard & Dow, 1995; Standart & Le Couteur, 2003). Relatively little is known about the persistence and developmental outcomes of SM without treatment. One long-term study suggests that the symptoms of SM either "disappear quite suddenly" in adolescence or slowly improve over time (Steinhausen et al., 2006). Reported complete remission rates for the diagnosis range from 39% to 100%, with more recent, controlled findings of 58% remission in SM symptoms by age 22 (Remschmidt, Poller, Herpertz-Dahlmann, Hennighausen, & Gutenbrunner, 2001; Steinhausen et al., 2006). However, individuals with prior history of SM may suffer from higher rates of psychiatric disorders, even into adulthood, as well as social and academic deficiencies (Remschmidt et al., 2001; Steinhausen et al., 2006).

Comorbidity

Children with SM may exhibit additional internalizing and externalizing problems. High rates of comorbidity have been shown between SM and other anxiety disorders, including social anxiety disorder, separation anxiety disorder, and specific phobia (e.g., APA, 2013; Muris & Ollendick, 2015; Viana et al., 2009). For example, a mother of a 6-year-old girl with SM stated that her daughter exhibited anxiety in other situations, such as eating in public, walking into school, and being near insects. In addition, some children with SM have been found to display controlling, oppositional, and aggressive behaviors although this is less common and consistent (APA, 2013; Viana et al., 2009). However, these internalizing and externalizing symptoms may be difficult to distinguish among children with SM. For instance, a child with SM who refuses to sit on the mat for circle time because of an insect (i.e., specific phobia) is likely unable to articulate his or her concerns to others. As such, the teacher may be unable to figure out the true reason for the child's behavior (i.e., a fear of bugs), inaccurately perceiving the behavior as defiance or opposition. It has also been suggested that children with SM do not exhibit defiance across all settings but, rather, mainly in situations that require speech (Viana et al., 2009).

Etiology and Maintenance of SM

Etiology

As with many psychological disorders, there are multiple factors that are believed to contribute to the development of SM, including genetic, temperamental, environmental, and neurodevelopmental factors (APA, 2013; Muris & Ollendick, 2015; Viana et al., 2009). These features predispose children to be at higher risk for developing SM. First, a family history of SM or other anxiety disorders appears to contribute a genetic predisposition as well as possible environmental effects through behavioral modeling of anx-

ious behavior. Certain parenting behaviors, such as more negativity and control, overinvolvement, and less warmth and autonomy-granting, have been associated with anxiety in children (McLeod, Wood, & Weisz, 2007; Van der Bruggen, Stams, & Bögels, 2008). Moreover, parents of children with SM have been shown to be more protective and controlling than parents of normative children (Edison et al., 2011).

Second, children who later develop SM tend to display certain temperamental features at an early age. They are more likely to be clingy, shy, or behaviorally inhibited with persistent fearfulness and avoidance when confronted with new situations, objects, and people (e.g., Ford, Sladeczek, Carlson, & Kratochwill, 1998; Steinhausen & Juzi, 1996). In addition, the presence of speech problems, such as delayed language development or a communication disorder, as well as neurodevelopmental disorders (e.g., developmental delay, motor difficulties, auditory processing deficits) have been associated with SM (APA, 2013; Muris & Ollendick, 2015). Finally, the prevalence of SM has been found to be higher among immigrant children, which may be due to problems related to acculturation, learning another language, peer rejection, or discrimination (Muris & Ollendick, 2015; Perednik, 2011; Viana et al., 2009).

Maintenance

While it is important to note features that may predispose children for the development of SM, the maintenance of the disorder is especially relevant for treatment. Young children with SM tend to avoid situations that increase their anxiety and distress, specifically those that require speech (Muris & Ollendick, 2015). Their avoidance is often aided by parents and other family members who "rescue" them from these anxiety-provoking situations by either speaking for them or by enabling their reluctance to speak. Ultimately, this avoidance and interference creates a negatively reinforcing cycle in which the child's anxiety is alleviated in the moment, increasing the likelihood that they will not speak in future situations (Kurtz, 2015). One possible scenario of this cycle is exhibited in Fig. 1. Moreover, parents often experience anxiety themselves when their child is placed in an anxiety-provoking situation. This parental anxiety then decreases only when they "rescue" their child. As such, both the child's avoidant behaviors and the parent's rescuing behaviors are negatively reinforced by reducing their anxiety in these encounters (Kurtz, 2015). Even within a classroom, peers of a child with SM may begin to "speak for them" or may explain to others that the child does not talk,

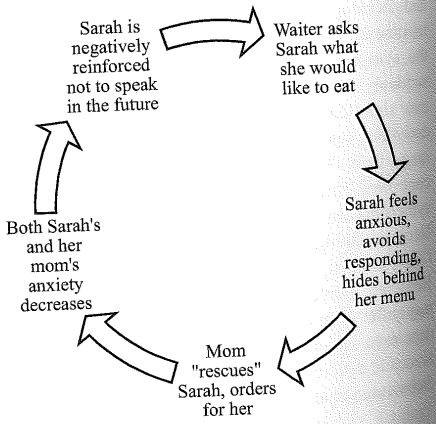

Fig. 1 Example of cycle of Selective Mutism maintenance, based on Kurtz Psychology Consulting PC (2015)

allowing the child to escape speaking demands. In treatment, this cycle of avoidance must be disrupted and substituted with reinforcement for approach behavior to promote speech. Depending on a child's severity of SM, any action that is similar or closer to verbalizing (e.g., whispering, one-word responses) may be considered an "approach" behavior to be rewarded with praise or a small prize.

Why PCIT to Treat SM?

Given the level of social and academic impairment as well as the maintaining cycle associated with SM, treatment is vital to restore speech and help children manage their anxiety. However, treatment options are currently limited for children with SM due to the young age of onset, low prevalence rate, and type of problematic behavior displayed by the child (e.g., nondisruptive, lack of speech to clinicians; Zakszeski & DuPaul, 2017). The absence of targeted treatments for SM highlights the need to extend other intervention models to fill this gap. Traditionally, downward and lateral extensions of efficacious treatments have been performed to apply them to new populations. Downward extensions use interventions originally designed for older individuals (e.g., adults, adolescents) with younger populations by altering the delivery of information to be more developmentally appropriate for the child target audience (Carpenter et al., 2014). For example, more hands-on activities may be integrated to teach concepts, treatment vocabulary may be altered to be more easily understood, and parental involvement may be increased based on the specific needs of younger children. Although downward extension of treatments for anxiety, such as cognitive-behavioral therapy (CBT), have been suggested, they may not be appropriate for children with SM due to the young age of onset. CBT relies on some cognitive tasks (e.g., perspective taking, cognitive restructuring) that children below the age of seven may not be able to perform (Carpenter et al., 2014; Kingery et al., 2006). Moreover, children with SM often will not talk to their clinician at the beginning of treatment, making it even more difficult to conduct CBT activities (Kurtz, 2015).

By contrast, lateral extensions involve the application of interventions designed for similarly aged populations to treat a different disorder than originally intended. The adaptations suggested for PCIT to treat children with SM represent a lateral extension of an efficacious treatment originally targeted for young children with externalizing problems (Carpenter et al., 2014). As a treatment model, PCIT utilizes behavioral principles that are taught to parents and are practiced within the parent–child interaction, which makes it suitable for interrupting the negatively reinforcing cycle that often maintains SM (Kurtz, 2015). However, the standard application of PCIT to children with SM is less appropriate given that the protocol focuses on different behaviors (i.e., promoting compliance), which are not as applicable for this population. As a result, the structure and content of the PCIT protocol have been adapted to address the specific target behavior for children with SM (i.e., speech), while maintaining fidelity to the treatment model as suggested by Eyberg (2005). Table 1 outlines the major similarities and differences between the standard PCIT protocol and the adaptation made for PCIT-SM.

PCIT-SM

Assessment Procedures

One of the major components of the standard PCIT protocol reflected in the adaptation for SM is the reliance on assessment to guide treatment (Kurtz, 2015). Parents of children with SM seeking treatment undergo initial assessment procedures that incorporate semi-structured interviews as well as parent report measures. Other relevant information may include speech and language tests, developmental history, and teacher input. This pretreatment evaluation allows clinicians to confirm a diagnosis of SM and to check for comorbid problems, thus obtaining a full picture of the child's current level of functioning (Kurtz Psychology Consulting PC, 2015). Still, compared

Table 1 PCIT and PCIT-SM similarities and differences comparison

Components	PCIT	PCIT-SM
Agents of change in therapy	Parents	Parents
Use of mastery criteria to move forward in treatment	Yes	Yes
Use of contingency management	Yes	Yes
Coding of parent–child interactions to inform coaching	Yes	Yes
Assessments used through treatment	Eyberg Child Behavior Inventory Dyadic Parent–Child Interaction Coding System	Selective Mutism Questionnaire Selective Mutism Interaction Coding System-Revised
CDI Mastery Criteria	10 Labeled Praises, Reflections, Behavior Descriptions <3 Questions, Commands, Criticisms	10 Labeled Praises, Behavior Descriptions <3 Questions, Commands, Criticisms 80% effective follow-through of CDI Verbalization sequence
CDI "Do's"	Labeled Praises, Reflections, Imitation, Behavior Descriptions, Enjoyment	Labeled Praises, Reflections, Imitation, Behavior Descriptions, Enjoyment, Question End-Arounds, Playing to Child's Strengths
CDI "Don'ts"	Questions, Commands, Criticisms	Questions, Commands, Criticisms, Mind Reading
Second treatment component	Parent-Directed Interaction (PDI)	Verbal-Directed Interaction (VDI)
Inclusion of other individuals	Minimal (e.g., siblings)	Yes (e.g., therapist, graduate/ undergraduate students, teacher, peers, other confederates)
Use of exposure in session	No	Yes
Use of token economy	No	Yes
Practice frequency/intensity	Spaced practice (weekly)	Massed practice (intensive treatments)
Default treatment modality	Individual parent–child	Group
Use of parental questions	Discouraged in CDI and PDI	Discouraged in CDI Required in VDI
Use of therapist modeling of skills for parent in session	Minimal	Extensive

Note: Based on Kurtz Psychology Consulting PC (2015) and Kurtz (2015)

to other psychological disorders, standardized measures of SM are limited.

The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV:C/P; Albano & Silverman, 1996) is a semi-structured interview that assesses a range of child internalizing problems using the *DSM-IV* criteria. The ADIS-IV includes a brief screener module for SM, which takes 5–10 min to administer to parents (Albano & Silverman, 1996). In addition, the Selective Mutism Questionnaire (SMQ; Bergman, Keller, Piacentini, & Bergman, 2008) is a 17-item parent-report measure of child speech across three domains (home, school, public) that has preliminary normative data for children with SM and those without the disorder. Finally, a related 8-item teacher-report measure of child speech in school is available called the School Speech Questionnaire (SSQ; Bergman et al., 2002). Parent and teacher ratings on these measures should be integrated with the child's developmental history (e.g., age of onset, family history) when confirming a diagnosis at pretreatment. Additionally, the SMQ could be used to track the child's progress throughout PCIT-SM, similar to the use of the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999) in PCIT (Kurtz, 2015). Information about the psychometric evidence for these measures is provided in Table 2.

A behavioral observation task and coding system have also been designed for children with SM

Table 2 Psychometric properties for available measures of SM

Measure	Features	Administration	Reliability	Convergent validity	Treatment sensitivity	Publishers information
The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV:C/P)	Semi-structured interview Symptoms either present or absent	Child and parent reported symptoms	κ coefficient of diagnosis: 0.63–0.80 ICC of symptom severity: 0.78–0.95	Association between ADIS-IV: C/P diagnoses and MASC anxiety factors	No information available	Oxford University Press
Selective Mutism Questionnaire (SMQ)	17-item 4-point scale assessing frequency and distress	Parent-reported symptoms	Internal consistency: 0.65–0.91 3-factor structure	Association with ADIS-IV SM CSR Association with SASC-R total and MASC social anxiety scales	Associated with therapist reports of changes in child speech	Oxford University Press
School Speech Questionnaire (SSQ)	8-item 4-point scale	Teacher report	Internal Consistency: 0.94–0.96	No information available	No information available	Oxford University Press
Selective Mutism Behavioral Observation Task (SM-BOT)	Standardized, unobtrusive behavioral observation	Three 5-minute segments; increasing degree of parental control	No information available	No information available	Associated with increased child verbalizations after brief treatment	Kurtz Psychology Consulting PC

Note: Psychometric information collected from Bergman et al. (2002); Bergman et al. (2008); Carpenter et al. (2014); Letamendi et al. (2008); Mele and Kurtz (2013); Silverman, Saavedra, and Pina (2001); Wood, Piacentini, Bergman, McCracken, and Barrios (2002).
ICC interclass correlation, *MASC* Multidimensional Anxiety Scale for Children, *ADIS-IV SM CSR* The Anxiety Disorders Schedule for DSM-IV: Child and Parent Versions, Selective Mutism module, clinician severity rating, SASC-R Social Anxiety Scale for Children-Revised

based on the Dyadic Parent–Child Interaction Coding System (DPICS; Eyberg, Chase, Fernandez, & Nelson, 2014), which was developed for PCIT. The SM Behavioral Observation Task (SM-BOT; Kurtz, 2008) is a baseline parent–child task that includes five segments (see Table 2). During the first phase, the parent and child play alone in a clinic room while being observed by the clinician through a one-way mirror, similar to the Child-Led Play (CLP) portion of the DPICS. Next, a stranger enters the clinic room and engages with the parent and child using the PCIT-SM "Do" skills, asking one forced choice question to the child at the end of the segment. These two situations are repeated in an A-B-A-B design, with the final segment being a "faux testing" situation that simulates oral and reading tests in school (Carpenter et al., 2014; Kurtz, 2008, 2015; Kurtz Psychology Consulting PC, 2015). The SM-BOT allows the clinician to observe the child's natural speech pattern with the parent, to observe the parent's role in maintaining SM, and to assess the child's willingness to speak to an unfamiliar person, serving as baseline data for the family (Carpenter et al., 2014). Preliminary data on the SM-BOT suggest that children with SM talk significantly more in the presence of just their parent (i.e., the first segment), but their likelihood of responding to a stranger increases over time (e.g., from the first to the second forced choice question; Kurtz, 2015).

In PCIT-SM, parent and child behaviors are coded at this pretreatment observation and throughout treatment as parents work towards

reaching the mastery criteria. Adapted from the DPICS, the Selective Mutism Interaction Coding System-Revised (SMICS-R; Kurtz, Comer, & Masty, 2007) is used to classify adult and child verbalizations into categories. Although some of the codes overlap with the DPICS scheme (e.g., reflection, labeled praise, behavior description), the SMICS-R differentiates questions based on type and focuses more on the child's verbal response to the adult during an interaction (Kurtz, 2015). As such, the SMICS-R focuses more on the child's verbal responses to prompts rather than their compliance to commands, which is the emphasis of the DPICS scheme and the original PCIT protocol. For example, if a parent were to ask the child "Do you want to play with Legos or dolls?" this would be coded as a forced choice question (Q-FC). The child's response to this question could range from a verbal response (CV), a verbal attempt (VA), noncompliance to the prompt (NCV), or pointing (PT). Initial research suggests that anxious children are more likely to respond to some prompts (e.g., direct command to speak, forced choice and open-ended questions) than others (e.g., indirect commands, neutral talk; Kurtz, Comer, Gallagher, Hudson, & Kendall, 2013; Masty, Kurtz, Tryon, & Gallagher, 2009). Table 3 presents an overview of the major codes in the SMICS-R.

Child-Directed Interaction (CDI)

Mastery Criteria

Consistent with the original PCIT protocol, the first phase of PCIT-SM is CDI, during which parents are working towards mastery of the PRIDE skills. Given that children with SM often do not talk at the beginning of treatment, parents are only required to have ten labeled praises and ten behavior descriptions along with fewer than three questions, commands, and criticisms. An additional mastery requirement for parents in PCIT-SM is 80% effective follow through of a "CDI sequence," which is defined as parents using either a labeled praise or a reflection after every time the child speaks (Kurtz, 2015). For this sequence, using a labeled praise or a reflection is considered appropriate as these skills are believed to be equally reinforcing for the child in PCIT-SM, diverging from the original PCIT protocol (Kurtz, 2015). These mastery requirements ensure that parents "overlearn" the PRIDE skills to assist generalization to other settings and that children begin to receive positive reinforcement for speaking.

Table 3 Major codes of the Selective Mutism Interaction Coding System-Revised (SMICS-R)

Person	Code	Description	Example
Parent	YNQ	Yes/no question	"Do you want the blue block?"
	FC	Forced choice question	"Do you want the blue block or the red block?"
	QEM	Question about emotions, motivations, or thinking of the child	"How does that make you feel?"
	QUK	Question with unknowable answer	"How does that make John feel?"
	RFQ	Reflective question	CHILD: "My favorite color is green" PARENT: "Your favorite color is green?"
	PNG	Pointing question	"Where should I put that puzzle piece?"
	BD	Behavior description	"You're drawing the ocean blue"
	RF	Reflection	CHILD: "My favorite color is green" PARENT: "Your favorite color is green"
	ACK	Acknowledgement of child's verbal or nonverbal communication	CHILD: "My favorite color is green" PARENT: "Okay"
	UP	Unlabeled praise	"Great job"
	LPV	Labeled praise for verbal behavior	"Great job using your words"
	LPNV	Labeled praise for non-verbal behavior	"Great job coloring your picture"
	DC	Direct command	"Please hand me the blue block."
	DCV	Direct command to verbalize	"Please tell me where the blue block is."
	IC	Indirect command	"Hand me the blue block, okay?"
	ICV	Indirect command to verbalize	"Tell me where the blue block is, okay?"
	NT	Negative talk	"Don't climb on the table."
	NTV	Negative talk—verbal	"Don't talk right now."

(continued)

Table 3 (continued)

Person	Code	Description	Example
Child	CV	Child verbal answer	PARENT: "Do you want the blue block or the red block?" CHILD: "The red block."
	YN	Verbal yes/no	PARENT: "Do you want the blue block?" CHILD: "Yes."
	VA	Verbal attempt	PARENT: "Do you want the blue block?" CHILD: "Spff." PARENT: "What?" CHILD: "Sure."
	NS	Nonspeech verbalization	PARENT: "Do you want the blue block?" CHILD: "Ruff-ruff."
	SS	Spontaneous speech	"Where does this puzzle piece go?"
	SVA	Spontaneous verbal attempt	CHILD: "Buba." PARENT: "What?" CHILD: "Blue block."
	SNS	Spontaneous nonspeech verbalization	"Bow-wow!"
	HD	Head gesture	PARENT: "Do you want the blue block?" CHILD: (nods)
	CO	Compliance	PARENT: "Please take the blue block." CHILD: (takes the blue block)
	NC	Noncompliance	PARENT: "Please take the blue block." CHILD: (take the red block)
	NCV	Noncompliance to a prompt for verbalization	PARENT: "Do you want the blue block?" CHILD: (does not respond after five seconds)

Note: Based on Kurtz et al. (2007) and Kurtz Psychology Consulting PC (2018)

PRIDE Skills

The CDI phase uses similar "Do" and "Don't" skills compared to the standard PCIT protocol, but the skills focus on the child's speech (e.g., labeled praise for talking) rather than the child's compliant or appropriate behavior (e.g., labeled praise for using gentle hands; Kurtz, 2015). This change is reflected in the SMICS-R as different codes are assigned to labeled praises of verbal and nonverbal behavior (LPV and LPNV, respectively; Kurtz et al., 2007). PCIT-SM has additional "Do" skills during CDI: (1) the use of "question end-arounds" to find ways to avoid asking questions and (2) focus on playing to a child's strengths by including activities that he or she enjoys. For example, to avoid asking a question, the parent may say "point to your favorite color," which allows the child to respond without speaking. In standard PCIT, this phrase would be coded as a command and would be discouraged during CDI; however, PCIT-SM focuses less on compliance and more on reinforcing approach behaviors. Avoiding "mind reading" or anticipating what the child wants is a new "Don't" skill that has been added for PCIT-SM, as this behavior tends to reduce the demand for the child to verbally communicate (Kurtz, 2015; Kurtz Psychology Consulting PC, 2015). These PRIDE skills are utilized in PCIT-SM to increase warmth in the parent–child interaction and, most importantly, to provide positive attention for every verbalization or approach behavior a child makes in session.

Verbal-Directed Interaction (VDI)

In PCIT-SM, CDI continues until children appear ready to be prompted to speak or to use their "brave voice" at which point treatment enters the second phase, known as Verbal-Directed Interaction (VDI; Kurtz Psychology Consulting PC, 2015). For example, therapists and other staff may ask the child "probe" questions across sessions to see if he or she will respond. Once a child verbally responds to these prompts, he or she may begin the second phase of PCIT-SM. This phase is analogous to the parent-directed interaction (PDI) phase in the standard PCIT protocol; however, VDI focuses more on generalization of speech to new environments and people using exposure tasks. In VDI, questions or commands are provided to prompt children to verbalize, increasing the opportunity for them to receive positive reinforcement for talking (Kurtz Psychology Consulting PC, 2015). Similar to PDI, VDI includes specific "Do" and "Don't" skills as well as an effective sequence to prompt the child's speech.

VDI Dos and Don'ts

In addition to the three CDI skills (i.e., labeled praise, reflection, behavior description), parents and other adults are encouraged to use either forced choice or open-ended questions with the child, to provide direct prompts to talk, and to wait 5 s for the child's response (Kurtz Psychology Consulting PC, 2015). In PCIT-SM and SMICS-R, questions are divided into three types based on the child's response options: yes/no, forced choice, and open-ended. For example, a parent who asks a child "Do you want any candy?" is using a "yes/no" question as these are the two main response options. For children with SM, yes/no questions typically provide an opportunity for them to avoid speaking by using nonverbal gestures (e.g., head nod, shaking head) to respond. By contrast, forced choice questions provide the child with two or more response options (e.g., parent: "Do you want M&Ms or Twizzlers?"), and open-ended questions require the child to provide a unique response (e.g., parent: "What candy do you want?"). During VDI, parents are encouraged to use either forced choice or open-ended questions, a new "Do" skill, and to avoid using yes/no questions with the child, a new "Don't" skill. Additionally, parents are instructed to prompt children to speak using a direct command (e.g., "Tell me what candy you want.") as opposed to an indirect command (e.g., "Will you tell me what candy you want?"). Following either commands or questions, parents are expected to wait 5 s as part of the VDI sequence. VDI "Don't" skills include mind reading, yes/no questions, indirect commands, negative talk, and enabling the child's avoidance (Kurtz, 2015; Kurtz Psychology Consulting PC, 2015). These behaviors often allow children to avoid speaking by using nonverbal gestures or may remove an opportunity for them to talk.

VDI Sequence

Similar to the PDI time out sequence, there is a specified VDI sequence for prompting children to speak in PCIT-SM (Kurtz, 2015). A valid VDI sequence begins with either a forced choice or open-ended question to the child. After asking a question, the adult must wait 5 s for a response. If the child responds verbally to the prompt, the adult should use a labeled praise for talking or a reflection of the child's speech, ending the sequence. If the child either responds nonverbally (e.g., pointing, shaking head) or does not respond at all, the adult acknowledges any nonverbal behavior (e.g., "I see you are nodding."), repeats or reformats the question, and waits 5 s for the child to respond. Again, a verbal response should be followed by a labeled praise or reflection. If the child does not respond or responds nonverbally after 5 s for this second prompt, the adult should either let the child know that the dyad will practice talking more later and shift back into CDI or move to the most recent activity or environment in which the child responded to a verbal prompt and continue practicing there. This sequence allows the child and adult to develop distress tolerance and provides the child with an opportunity to practice what he or she can do with small steps forward (Kurtz Psychology Consulting PC, 2015). Figure 2 provides a visual representation of the VDI prompting sequence.

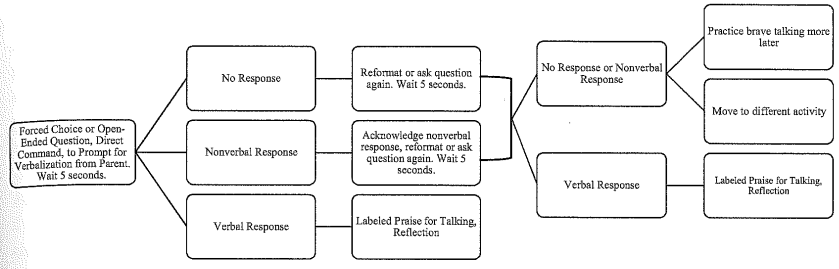

Fig. 2 Effective VDI sequence, based on Kurtz Psychology Consulting PC (2015)

Exposure in VDI

The main focus of VDI is to generalize the child's speech across different settings and different individuals, which often requires exposure activities outside of the clinic therapy room. In this way, the therapist aims to support successive approximations of brave talking and to fade different individuals in and out of the setting. To be successful in this task, it is recommended that therapists limit changes made in session to one variable (setting, individual, or activity) at a time (Kurtz Psychology Consulting PC, 2015). For example, if a therapist and a child with SM have practiced playing "Go Fish" in the therapy room, options for future sessions include: moving to another location (e.g., the waiting room) while maintaining the same people and activity, adding another person while keeping the location and activity constant, or playing a different game with the therapist in the therapy room. If too many aspects are changed at once, this may drastically increase the child's anxiety and result in their inability to maintain therapy gains. Moreover, the therapist and child can practice an exposure situation in the therapy room before progressing to the novel environment to increase the child's chance of success. Thus, just as parents begin PDI by giving easy-to-complete, play commands to increase the likelihood of child compliance in the original PCIT protocol, PCIT-SM attempts to set children up for success by utilizing situations in which they have already experienced success to progress forward in treatment (Kurtz Psychology Consulting PC, 2015). Although the definition of progress is dependent on each child's symptom severity, therapists and parents should observe small yet noticeable changes with each exposure session.

Other recommendations to help improve the execution of VDI exposure activities include having available supplies such as a dry erase board or paper, dry erase markers or pencils, a "brave points" tracker, 3–5 familiar games, prizes, and a small bag for mobility (Kurtz Psychology Consulting PC, 2015). Some therapists may include pre-rehearsed questions on cards to help unfamiliar adults prompt children using the same language that is used in the therapy room. This scripted language is "a starting point, not an ending" and should be viewed as an aid for children in new situations to promote success (Kurtz Psychology Consulting PC, 2015). In this kit, it is important to include games with which the child is familiar and enjoys. Possible talking games include "Go Fish," "Battleship," "Guess Who," "Spot It," and "Hangman." Therapists may allow the child to choose several prizes at the beginning of the session, so they can have physical reminders of their incentives during exposure (Kurtz Psychology Consulting PC, 2015).

Unique Features of PCIT–SM

Several core components of the standard PCIT protocol are maintained in PCIT-SM, but some changes were made to meet the unique needs of

children with SM (see Table 1). First, though PCIT does not utilize token economy or physical rewards (Eyberg & Funderburk, 2011), PCIT-SM does incorporate such behavioral methods. For example, the use of "brave points" for talking has been introduced as a token economy for which children receive prizes and privileges at the end of session (Kurtz Psychology Consulting PC, 2015). Children may also have school behavior charts that stipulate how many tokens are needed before a child receives a reward for talking. These tangible rewards are typically used more heavily at the beginning of treatment and may be faded or reduced as the child becomes more comfortable speaking. As such, these rewards provide added motivation for children to overcome the high level of anxiety that they experience in situations that require talking, creating initial momentum that propels treatment forward (Kurtz, 2015). Second, games are used in PCIT-SM as a rewarding activity meant to encourage speech. The use of games is traditionally discouraged in PCIT as it may create a negative interaction (e.g., when a child loses, if a child cheats); however, games serve a dual purpose in PCIT-SM to prompt and reward speech.

A third major difference between standard PCIT and PCIT-SM is the inclusion of other individuals (e.g., therapist, graduate students, undergraduate students) in the treatment sessions. In PCIT, primary caregivers (e.g., parents, grandparents) are viewed as the main agents of change for their child's behavior, and therapists often have limited interaction with the child directly (Eyberg & Funderburk, 2011). By contrast, the parent is eventually faded out of PCIT-SM and replaced by the therapist. Given that children with SM have difficulty talking to unfamiliar individuals, exposure to others is vital to provide opportunities for the child to speak and receive reinforcement. Thus, the unfamiliar therapist is faded into treatment until the child appears comfortable talking at which point another person may be introduced, passing on the "talking baton" (Kurtz Psychology Consulting PC, 2015). This fading of the therapist may follow a general pattern in which the therapist enters the room and gradually moves closer and interacts more with the child. As this occurs, they should attend to the amount of child verbalizations, how quickly the child responds, and the child's volume, ensuring that they do not change dramatically throughout the fading process. Using this system, the "talking baton" will continue to be passed to others through exposure, slowly increasing the number of people with whom the child is able to talk (Kurtz Psychology Consulting PC, 2015). As a result, PCIT-SM utilizes more clinical assistants or bystanders, such as graduate and undergraduate students. Still, parents are considered very important to the treatment process and receive coaching as well as live demonstration of skills. Notably, parents receive coaching throughout treatment to help promote skill acquisition and observe others (e.g., clinical assistants) being coached while interacting with the child.

Medication for Children with SM

Although behavioral interventions are the most highly recommended form of treatment for SM (Viana et al., 2009; Zakszeski & DuPaul, 2017), the value of incorporating psychotropic medication, such as selective serotonin reuptake inhibitors (SSRIs) or monoamine oxidase inhibitors (MAOIs), to reduce symptoms has been recognized for certain SM cases (Carlson, Mitchell, & Segool, 2008; Manassis, Oerbeck, & Overgaard, 2016). However, empirical support for the efficacy of medication is currently limited as few studies include sufficient sample sizes, appropriate comparison groups, and other methodological characteristics (e.g., double-blind conditions, controls for confounding variables; Manassis et al., 2016). As a result, clinicians are recommended to conduct a detailed cost-benefit analysis to determine if a referral for medication is necessary on a client-by-client basis (Manassis et al., 2016). Psychosocial treatment programs should be viewed as the first option for children with SM given their associated positive outcomes (Zakszeski & DuPaul, 2017). Medication may be considered for children who demonstrate resistance to behavioral interventions, such as PCIT-SM, or who do not experience symptom relief (Carlson et al., 2008; Manassis et al., 2016). Children likely to receive medication are those who exhibit more severe impairment and comorbid disorders, who have poor response to prior psychological treatment, and who are not meeting expected treatment benchmarks (Kurtz Psychology Consulting PC, 2015).

Table 4 Anecdotal PCIT-SM treatment trajectory

Number of sessions	Progression
1–2	Child should not appear frightened or agitated when starting sessions
2–3	Child should be talking to parent(s) and therapist both in the room
4–6	Child should be talking to therapist without parent(s) in the room
6–8	Child should be talking to another adult without parent(s) in the room Sessions may be conducted in child's school
8–12	Child should be talking to multiple teachers and/or peers without parent(s) in the room
12+	Child should no longer be nervous or agitated in talking across settings with different people

Note: Based on Kurtz Psychology Consulting PC (2015)

Children with SM should demonstrate progress within the first few sessions of PCIT-SM even if it is slow, such as maintaining speech in front of the clinician or answering a clinician's question (Kurtz Psychology Consulting PC, 2015). After 4–6 sessions, children are typically able to talk to the therapist without their parents in the room, and children should begin talking to multiple individuals in school by 8–12 sessions (See Table 4 for full outline; Kurtz Psychology Consulting PC, 2015). Although this expected symptom trajectory for children participating in PCIT-SM has not been empirically tested, it can be used as a general guide for clinicians to evaluate their treatment progress and to determine when medication may be needed to aid symptom relief. Each child's recovery will be unique based on factors, such as parent skill practice, developmental history, child age, and consistency of application; however, behavior change should be observed across therapy sessions even if it appears to be minor. As in standard PCIT, clinicians should discuss a child's lack of progress with parents and assess their consistent implementation of the PCIT-SM skills and sequences before recommending medication.

Future Directions

Even though symptoms of SM have been recognized since the beginning of the twentieth century, the research literature, assessment measures, and treatment options currently available are limited (Muris & Ollendick, 2015; Zakszeski & DuPaul, 2017). Thus, PCIT-SM represents a promising lateral extension of an efficacious, well-established treatment, adapted for children with SM. Still, there are some areas in which the adaptation could be further investigated. First, though PCIT-SM has been implemented clinically, it has not been evaluated using control or comparison groups within a large sample of children. Other adaptions of PCIT have undergone rigorous empirical validation to guide changes made in the protocol, to support the need for alterations, and to demonstrate their effectiveness compared to other treatment models (e.g., Comer et al., 2012; Fernandez, Gold, Hirsch, & Miller, 2015; McCabe & Yeh, 2009; Niec, Barnett, Prewett, & Chatham, 2016). Overall, more evidence for the efficacy and effectiveness of PCIT-SM in reducing symptomology is required before the treatment should be widely disseminated.

Second, the assessment measures associated with PCIT-SM have also not been fully evaluated and require more research attention. Studies of the DPICS suggest that children with anxiety exhibit different behaviors during the observation compared to normative or oppositional children (Cotter, 2016). Given that the SMICS-R and SM-BOT were adapted from the DPICS, it will be important for future research to provide normative data, interrater reliability, convergent validity, and other psychometric support to guide the use and interpretation of these assessments. Finally, more explicit implementation guidelines and formal standardization should be given for the elements of PCIT-SM that differ from the standard PCIT protocol. For example, clinicians

who provide standard PCIT may not have much experience implementing a token economy or conducting exposure tasks that target anxiety. An explanation of appropriate play-room/exposure setup, training for clinical assistants, and coaching considerations unique to PCIT-SM should be developed to guide these clinical techniques. Moreover, clinicians would likely need support on how to address a child's regression when speaking in high anxiety contexts or how to involve teachers and school staff in treatment.

Conclusion

SM is an anxiety-related psychological disorder that is maintained through avoidance and that can result in both short- and long-term impairments in social, academic, and psychological functioning. PCIT-SM is an adapted treatment program that utilizes behavioral principles and exposure activities to target a child's failure to speak. Clinical use of PCIT-SM has demonstrated promising symptom relief, yet more research is needed to support its widespread dissemination. For Sarah's mother, treatment provided a new-found sense of hope and effective tools to help her daughter become more confident when using her "brave voice" in previously anxiety-provoking settings. Throughout the course of treatment, Sarah slowly progressed from nonverbal responses, to whispering, to finally talking with peers, teachers, and strangers. Being able to order her own food at a busy restaurant was the ultimate PCIT-SM graduation session for Sarah and her mother.

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Adapting PCIT to Treat Anxiety in Young Children: The PCIT CALM Program

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Abstract

Despite tremendous progress and success in the development of well-established treatments for anxiety presenting in middle childhood and adolescence, advances in the development of supported practices for treating early childhood anxiety has lagged. Fortunately, in more recent years, the field has begun to witness a number of very important advances in the development of interventions designed specifically to treat early childhood anxiety and behavioral inhibition. One of the most promising advances in this area has been the adaptation of parent–child interaction therapy to address early childhood anxiety problems. As in traditional PCIT for early externalizing problems, PCIT adaptations for early-onset anxiety target child symptoms indirectly by reshaping the primary context of child development. This chapter reviews the research support for the PCIT CALM program and describes the program in detail. The chapter concludes with a case example of the program.

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Anxiety disorders are collectively the most prevalent category of mental health problems affecting children and adolescents (Comer & Olfson, 2010; Kessler et al., 2012). These disorders are characterized by marked and persistent fear or worry, and are typically accompanied by considerable behavioral avoidance and life interference. For example, child anxiety disorders are associated with serious family dysfunction, peer problems, reduced academic performance, sleep disturbance, irritability, and the development of other mental health problems such as depression, substance use, and suicidality (e.g., Cornacchio, Crum, Coxe, Pincus, & Comer, 2016; Cummings, Caporino, & Kendall, 2013; Green et al., 2016; Swan & Kendall, 2016; Thompson-Hollands, Kerns, Pincus, & Comer, 2014; Weiner, Elkins, Pincus, & Comer, 2015; Wu, Goodwin, Comer, Hoven, & Cohen, 2010). When left untreated child anxiety problems often persist into adulthood, during which time they are associated with a number of other mental and physical comorbidities, life impairments, and overall reduced quality of life (e.g., Comer et al., 2011; Lever-van Milligen, Lamers, Smit, & Penninx, 2017).

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