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Lisa Kovac  
*University of Central Florida*

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AN EXPLORATORY ANALYSIS OF A FIVE MINUTE SPEECH SAMPLE OF MOTHERS  
OF CHILDREN WITH SELECTIVE MUTISM

by

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B.S. University of Central Florida, 1994  
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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the School of Child, Family and Community Sciences  
in the College of Education and Human Performance  
at the University of Central Florida  
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Major Professor: Anne McDonald Culp

## ABSTRACT

Selective mutism (SM), an anxiety disorder wherein children have difficulty speaking or communicating when they are uncomfortable, is relevant for the early childhood population as symptoms often manifest upon school entry (Steinhausen & Juzi, 1996) and early treatment leads to better treatment prognosis (Oerbeck, Stein, Wentzel-Larsen, Langsrud & Kristensen, 2014). Bergman, Gonzalez, Piacentini and Keller, (2013) utilized an integrative behavioral treatment for children (ages 4-8) with SM and reported a 75% treatment responder status after 24 weeks of therapy. Their mothers are the focus of this study.

This exploratory study examined the content of Five Minute Speech Samples at baseline and end of treatment condition for 9 mothers whose children had participated in the randomized controlled trial. Via a content analysis of language samples, this study examined emergent themes and a priori codes of Expressed Emotion (a construct associated with a variety of disorders) and parental overcontrol (a construct associated with the development and maintenance of anxiety disorders).

Results revealed five categories of content expressed by mothers: (a) child characteristics (b) child's activities, (c) relationships with others, (d) difficulties other than SM, and (e) thoughts related to SM. Analysis revealed mothers who had children with SM had higher levels of expressed emotion and emotional overinvolvement than samples of mothers of children without SM. The implication of this finding is unknown and is a direction for future research. Overcontrol was overtly present in one mother and subtle in other mothers. Levels of expressed emotion largely remained unchanged over the course of treatment. Overall, information garnered from giving mothers the five minutes speech sample provides insight for therapists to design

intervention. Giving the mothers a chance to discuss their views and experiences with their children is valuable in determining the behavioral and emotional support they need as they parent their child with SM.

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## CHAPTER ONE: INTRODUCTION

*April is a 5-year old girl who loves to play with her 7 year old sister—at home their favorite games are playing “house,” playing dress-up and putting on elaborate “plays” complete with silly, made-up songs for their parents. April recently began attending a prekindergarten program. Approximately one month into the school year, April’s teacher approached April’s parents with concerns about April’s verbalization skills. April was not talking to any other children or her teacher throughout the day. She was also having a hard time making eye contact with others, and she would occasionally “freeze” her body when she was asked a question by her teacher. April’s parents were very surprised. Was this the same child that was putting on plays and singing silly, made-up songs at home with her sister?*

A child’s inability to speak or communicate in certain situations despite being able to speak well in settings where they are comfortable can often be a puzzling scenario for parents and teachers to encounter, especially since this difficulty is not well known. A recent survey of 2,204 adults found that less than 1 in 5 had heard of selective mutism (Pollack, 2017). This inability to speak/communicate when uncomfortable is known as selective mutism (SM) and is often diagnosed in early childhood when a child first enters school. Untreated SM can lead to secondary deficits and a longer, more entrenched course of the disorder (Wright, Miller, Cook & Littmann, 1985). A current evidence-based treatment method for SM reveal treatment response rates of near to 75% (Bergman, Gonzalez, Piacentini, & Keller, 2013), and often parents/caregivers are included in the treatment for the disorder. Considering what parents say about the disorder and the status of the day-to-day parent-child relationship is imperative to

improving children's treatment and family outcomes. As such, the following is an introduction to this study.

### Background of the Study

Symptoms of SM, an anxiety disorder wherein people have difficulty speaking or communicating when uncomfortable, often manifest upon school entry, often in children as young as three and four years old (Cunningham, McHolm, Boyle & Patel, 2004; Wright et al., 1985). Current prevalence rates estimate that as many as 1% of children have SM (American Psychiatric Association, 2013). Despite early onset of symptoms, a long lag time usually exists between symptom onset and start of treatment (Wright et al., 1985), potentially due to lack of awareness of the disorder or belief that children will grow out of it. Early treatment of SM has been linked to improved treatment outcomes in comparison to older children (Oerbeck, Stein, Wentzel-Larsen, Langsrud & Kristensen, 2014). Additionally, children who are not treated for SM are shown to be at risk for secondary deficits (Wright et al., 1985).

The current evidence-based treatment for SM is therapy that utilizes behavioral and/or cognitive behavioral treatment components (Bergman, Piacentini & McCracken, 2002; Kehle, Bray, Byer-Alcorace, Theodore, & Kovac, 2011; Muris & Ollenick, 2015; Viana, Beidel & Rabian, 2009). The only two random-controlled treatment trials for SM that have been conducted have utilized a treatment which incorporated behavioral treatment (Bergman et al., 2013; Oerbeck et al., 2014). In the Bergman et al. (2013) study, 75% of children were determined as responders to treatment. Although this response rate is better in comparison to other anxiety disorders utilizing a cognitive-behavioral protocol (CBT; James, James, Cowdrey, Soler, & Choke, 2013), it still leaves 25% as treatment non-responders. As such, it is important to

consider whether the addition of other treatment components, including the role that parent-child interactions may play throughout the course of their child's disorder, may help to improve the treatment response rates as well as contribute to better coping within families.

The literature regarding SM and parenting is very shallow in comparison to the depth and complexity of literature that exists in relation to anxiety disorders and parenting. In the absence of a robust literature specific to parenting and children with SM, it is appropriate to review the literature pertaining to parenting and childhood anxiety disorders in general. A review of this literature indicates that some parent/familial practices are associated with the etiology of childhood anxiety, such as parental modeling of anxious behaviors and parental reinforcement of anxious behaviors displayed by their children (Ollendick & Grills, 2016). A meta-analysis conducted by McLeod, Wood, and Weisz (2007) suggests that parental control, autonomy-granting, and overinvolvement may play an important role in childhood anxiety. However, the research is mixed regarding the amount and type of influence that parenting may exert on the development of childhood anxiety. In light of this research which indicates that some parenting factors may play a role in the development and maintenance of childhood anxiety, it is imperative that we explore this more fully within the SM population.

Research related to parents of children with SM is very limited in scope. However, similar to the global anxiety literature, it is now generally established that there is a large heritability component for children with SM in that studies have corroborated the finding that parents of children with SM often have a history of anxiety (Black & Uhde, 1995; Chavira, Shipon-Blum, Hitchcock, Cohan, & Stein, 2007; Kristensen & Torgersen, 2001). Research has indicated no family dysfunction (Cunningham et al., 2004), and two studies have been conducted

on parental overcontrol and have produced mixed results (Buzzella, Ehrenerich-May, Pincus, 2011; Edison et al, 2011). One study revealed that parents did not demonstrate overcontrol when using checklists as an assessment (Buzzella et al., 2011), whereas one study utilizing more robust observational measures of speech by parents of children with SM found increased control across all tasks in comparison to mothers of children with anxiety and no anxiety (Edison et al., 2011).

One construct of interest that has shown to be correlated with anxiety and many mental health and physical disorders is Expressed Emotion (EE). EE examines caregiver attitudes and emotions expressed by caregivers toward their patient and is thought to provide a “glimpse into the day-to-day family life, including aversive patterns of interaction between parent and child that may be highly stressful to both” (Peris & Miklowitz, 2015, p. 864). First reported in the schizophrenic literature, Brown, Carstairs and Topping (1958) determined that the level of EE (high/low) of caregivers regarding their patients with schizophrenia was linked to the type of community in which they resided upon discharge from the hospital. Those patients who were discharged to lodgings or at home with siblings fared better than those discharged to large hostels or the parental or matrimonial home. In addition, those that spent less time with their relatives also fared better than those who spent more time with their relatives (as cited in Hooley, 1985). In addition to schizophrenia, high levels of the dichotomous variable EE have been found to predict the course and treatment response of a wide range of psychiatric disorders (Sher-Censor, 2015). It is essential to note that this construct does not imply that caregivers are to blame for the patient’s disorder; rather it is reflective of the interaction of both relative characteristics and patient characteristics (Hooley & Gotlib, 2000). EE has not been studied in the SM population and elucidation of this construct within the SM population may provide

valuable information regarding the mother-child relationship that can be utilized to improve treatment outcomes for children and improve family coping.

Discussed in the chapter so far have been an overview of SM, the research pertaining to parenting and anxiety, parenting and SM, and EE. These areas are discussed further in the literature review in Chapter 2. The remainder of the current chapter includes an overview of: (a) the problem statement, (b) the purpose of the proposed study, (c) research questions, (d) methodology, (e) limitations and (f) assumptions. Each area is discussed in detail in the following chapters.

### The Problem Statement

The problem addressed in this dissertation is that very limited research exists pertaining to family factors that may contribute to the development and maintenance of SM in children. More globally, research points to several parenting factors which may interact in a reciprocal relationship with offspring and thus may contribute to anxiety disorders in children. These parenting behaviors include parental modeling of anxious behavior, conveyance of anxiety-provoking information, reinforcement of anxious behavior, and child-rearing behaviors associated with overprotection and control (Ollendick & Grills, 2016). Although these behaviors are established in the literature regarding anxiety disorders at the global level, research is extremely limited when considering the contribution of family factors to the specific anxiety disorder of SM. Although it is fairly well established that the anxiety heritability index is high among families of children with SM (Black & Uhde, 1995; Chavira et al., 2007; Kristensen & Torgersen, 2001), there have been few studies relating to the parenting behavior of children with SM. Further, the few studies that have been conducted have been divergent in their findings.

More specifically, studies relating to parental control, an established contributor to childhood anxiety within the global anxiety research (McLeod et al., 2007), are conflicting within the SM population (Buzzella et al., 2011; Edison et al., 2011). Moreover, no study on parents of children with SM has determined how parental behavior/beliefs/attitudes change over the course of treatment. This study attempts to fill this important gap by adding to the parenting literature for children with SM.

This problem is important because the treatment responder status for the evidence-based treatment of SM after 24 weeks is 75% (Bergman et al., 2013). After 24 weeks of treatment, 67% of children no longer met criteria for SM. There is a sense of urgency to treat SM, as research has shown the earlier the treatment for SM, the more efficacious treatment is (Oerbeck et al., 2014; Stone, Kratochwill, Sladerzek, & Serlin, 2002). A long course of SM can lead to greater resistance to intervention due to the pattern of negative reinforcement (or the withdrawal of request for verbal behavior) that evolves when a child does not respond (Kehle, Madaus, Baratta, & Bray, 1998). Over time, this pattern of avoidance becomes entrenched in a child's behavior. In addition, research has indicated that untreated childhood anxiety disorders increase the later risk for adult anxiety, depression, substance abuse, and suicide attempts (Drake & Ginsburg, 2012).

As behavioral/cognitive-behavioral research is currently the only evidence-based treatment of SM, it is concerning that 25% children were considered nonresponders for treatment in the integrated behavioral treatment study conducted by Bergman et al. (2013). Although this rate is better in comparison to treatment outcomes obtained with other anxiety disorders using a CBT protocol found in the literature (James et al., 2013), there is room for improvement to increase treatment outcomes. Examining language sample of mothers of children with SM has

the potential to provide information that can contribute to improved treatment outcomes for children. In addition, the information obtained could also be used to improve family relationships and coping in families who have children with SM.

### Purpose of the Study

The purpose of this study was to examine the content of a five minute speech sample to describe themes that mothers express when talking about their child with SM and to analyze how these themes change over the course of an integrated behavior treatment of young children with SM. This study used a content analysis to describe *what* mothers talk about when asked to talk about their child with SM, as well as evaluated how emergent themes along with a priori codes of expressed emotion (a construct associated with patient relapse and poorer course of the disorder in many other disorders and conditions), and overcontrol (a parenting style associated with childhood anxiety) changed over the course of an integrated behavior treatment of young children with SM. Consistent with the statement made by researchers Weston, Hawes, and Pasalich (2017) that the FMSS may provide utility in clinical assessment, administration of the FMSS to parents of children of SM can potentially be used to help improve treatment outcomes through the elucidation of mother-child relationship variables that may be contributing to the development/maintenance of SM. It can also be used to identify and evaluate targets for parental intervention/psychoeducation that may occur in tandem with treatment that targets the child with SM. Potentially this assessment can provide the power to improve mother-child relationships in that areas of strength, misunderstanding, areas of conflict and challenge, and areas which contain inappropriate attributions may be illuminated and, thus, targeted for intervention. Finally, as



limited research exists regarding parenting behaviors in the SM literature, this examination will shed light on potential areas for future research.

### Research Questions

The following research questions were addressed in this study:

1. Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?
2. How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Overview of Methodology

The following section contains an overview of the methodology for the proposed study including: (a) research design, (b) population and sample, (c) data collection procedures, and (d) data analyses. The methodology is discussed in further detail in Chapter 3.

### Research Design

This study is a secondary analysis of a random controlled pilot study of integrated behavior therapy that was conducted by researchers at the University of California at Los Angeles, Division of Child and Adolescent Psychiatry, UCLA Semel Institute for Neuroscience and Human Behavior as well as one researcher who was in independent practice. The results of this random controlled pilot study were published in *Behaviour Research and Therapy* in 2013.

This dissertation study utilized a qualitative approach to conduct an exploratory analysis on a Five Minute Speech Sample (FMSS) of mothers of children with SM. Specifically, this secondary analysis utilized a content analysis approach described by Bengtsson (2016) to

analyze *what* mothers talk about in regard to their children with SM and how this talk changed over the course of treatment. In addition to describing the content of mothers' talk, an analysis of a priori codes including expressed emotion and overcontrol pre- and post-treatment condition was conducted.

### Population and Sample

Participants for the IBTSM study were recruited from a pediatric anxiety specialty clinic, mental health practitioner referrals, and internet website postings from websites that were focused on SM. Although speech samples in the IBTSM study were collected from both mothers and fathers, to allow for consistent comparisons, the sample that was analyzed for this dissertation study was limited to speech samples collected from mothers of children with SM. In the original IBTSM, speech samples were collected from 18 mothers at baseline, 14 mothers at Week 24, and 11 mothers at Week 36. Due to poor audio and inability to transcribe some of the audio tapes, the final sample in this secondary analysis of maternal speech samples was reduced to 9 mothers who participated at baseline and Week 24. Thus, 18 recordings were analyzed.

### Data Collection Procedures

The Institutional Review Board reviewed this study and made the determination that it met criteria for Not Human Research. All data obtained for this secondary analysis was de-identified prior to receipt by this doctoral student and was untraceable to any participant.

FMSS's were collected by the original researchers from caregivers who participated in the IBTSM study. To collect this data from parents, researchers followed the same protocol for each participant. Parents were administered the FMSS prompt (described below) at baseline, week 24, and week 36 by researchers affiliated with the study. After this prompt was

administered, parents were audiotaped for 5 minutes. At the end of 5 minutes, the audiotape was stopped. These audio tapes were transcribed by this researcher and a research assistant. After transcription, the sample size was whittled down to include mothers who have good quality recordings for baseline and end of condition language samples. The resulting sample included 9 mothers with good quality audio recordings for both baseline and end of condition.

### Instrumentation

The instrument for analysis in this study was the Five Minute Speech Sample (FMSS) collected from parents of children with SM. In the FMSS, researcher assistants affiliated with the study administered the following prompt to caregivers:

I'd like to hear your thoughts about [participant name] in your own words and without my interrupting you with any questions or comments. When I ask you to begin, I'd like you to speak for 5 minutes, telling me what kind of a person [participant name] is and how the two of you get along together. After you have begun to speak, I prefer not to answer any questions. Are there any questions you would like to ask me before we begin?

Please see Chapter 3 for a review of psychometrics of the instrument and coding system. This data was analyzed qualitatively for content of the maternal language sample pre-treatment and change in the content of maternal language sample post treatment condition (end of condition; EOC). In addition to analyzing content to identify themes that mothers talk about, a priori codes of expressed emotion and overcontrol were analyzed.

### Data Analysis

A case analysis was conducted with data from the FMSS. A content analysis methodology was used to analyze emergent themes and a priori codes of overcontrol from the

content of the speech samples from 9 mothers. Expressed Emotion analysis was conducted according to procedures set forth by Ana Magana-Amato (2016).

### Qualitative Content Analysis

Content Analysis was utilized to answer the following research questions:

Question 1: Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

Question 2: How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

To conduct the content analysis, the researcher used the following stages described by Bengtsson (2016): (a) decontextualization, (b) recontextualization, (c) categorization, and (d) compilation. The stages are described more fully in Chapter 3. A constant comparative method was used as the researcher moved through the data analysis stages to ensure information was complete and accurate.

### Limitations

As with any research, several limitations are inherent in the proposed study. As this is a secondary analysis of data that was collected during the original randomized controlled study, the analysis was limited to the data that was collected. Possible threats to trustworthiness for the qualitative analysis include the sample size in that it is possible that data saturation is not met. In addition, a possible threat to credibility includes that mothers may have self-protected or protected their child when providing information on the FMSS if it was not positive or they may have provided a viewpoint they think is pleasing to the interviewer.

## CHAPTER TWO: LITERATURE REVIEW

### Introduction

In this chapter, I provide a central review the literature on the etiology and associations between parenting and anxiety disorders at the global level within the framework of the diathesis-stress model, and then comprehensively review and critique the scholarship on parents within the selective mutism (SM) population within this same model. In addition, the literature surrounding the conceptual framework of expressed emotion (EE) will be reviewed. Although many studies have been conducted regarding the associations between anxiety disorders and parenting, limited studies have been conducted with parents of children with SM, a type of anxiety disorder identified in the *DSM-5* (American Psychiatric Association, 2013). Similarly, although studies in EE have examined other populations relating to mental health disorders and health conditions, these studies have not specifically examined EE in the SM population. As such, this literature review provides an overview of the etiology and parenting behaviors associated with childhood anxiety disorders and then provides additional insight into what the literature reports about parents of children with SM. Further, the analytic focus on what the literature reports about EE related to other disorders provides another insight.

This literature review integrates literature from a global perspective of childhood anxiety disorders, the SM population, and EE, and identifies a central issue to the field: Despite well-established, albeit complicated, research on the associations of parenting in the development and maintenance of anxiety disorders, there is very limited research on parents of children with SM, especially in regard to parent-child relationships. In addition, no analytic attention has been paid

to what parents say about their child with SM which can be used to inform parent intervention efforts.

#### Diathesis-Stress Model with Bronfenbrenner's Ecological Model

The diathesis-stress model is the conceptual foundation of most current thinking about psychopathology (Hooley & Gotlib, 2000) and describes development of anxiety as the interaction of vulnerabilities, including genes and the environment. More specifically, Kushner (2015) describes the diathesis-stress model as assuming that “psychopathology results from interactions among individual characteristics, developmental history and current context” (p.813). Various forms of psychopathology develop as stress interacts with vulnerability toward a disorder, and it encourages us to understand the dyadic nature of psychopathology as “systems of mutual influence in which each provides the stress that acts on the intrinsic vulnerabilities of the other, even after the disorder has developed” (Hooley & Gotlib, 2000, p.136). Potential vulnerabilities described by Hooley and Gotlib (2000) include less flexibility and tolerance, an internal locus of control, and a tendency to be self-critical.

As Kushner (2015) describes the diathesis-stress model as assuming that “psychopathology results from interactions among individual characteristics, developmental history and current context” (p.813), it should be noted that Bronfenbrenner's ecological framework is used to define the ‘current context’ aspect of this definition. Bronfenbrenner's ecological model suggests that in order to understand the individual development of a child, one must consider the influence of different roles/levels a child experiences in his or her life that result in negotiating multiple relationships. This ecological framework organizes people and their environment to understand their interconnectedness (Algood, Harris & Hong, 2013) and is based

on the idea of empowering families through understanding their strengths and needs (Swick & Williams, 2006). Through Bronfenbrenner's ecological model (1979) we understand that SM affects the microsystem, mesosystem, exosystem, and macrosystem; however, for the purposes of this study, Bronfenbrenner's microsystem (child) and mesosystem (family) is the definition for the "current context" and will be examined closely. Bronfenbrenner (1979) describes the microsystem as a pattern of activities, roles and interpersonal relationships experienced by the developing person in a given setting with particular physical and material characteristics. He describes the mesosystem as comprising the interrelations among two or more settings in which the developing person actively participates. One major idea Bronfenbrenner (1979) states in his developmental perspective that is pertinent to this study is that an ecological transition/development involves a change in a person's role (or expectations for behavior associated with particular positions in society), setting, or both. According to Bronfenbrenner (1979), an ecological transition is both a product and a producer of change. With a primary goal of improving speaking behavior with children who have SM, this study considers whether a family based component to assessment can provide additional information which could be used to improve treatment outcomes and improve family relationships. It is understood through this ecological model that these changes do not exist in isolation and have an effect on one another.

### [Review of the Etiology and Association Between Parenting, Family Environment, and Childhood Anxiety](#)

In light of the scant literature pertaining to parenting and SM, reviewing the literature regarding the factors associated with the etiology of childhood anxiety in general and parenting practices that may contribute to the development and maintenance of childhood anxiety globally

can shed some light on potential parenting factors that may contribute to the etiology, development and maintenance of SM. In addition to examining the differentiation of anxiety disorders, examining anxiety disorders from a global perspective has received support from some researchers, particularly in regard to examining the genetic components of anxiety (Gregory & Eley, 2007). In Gregory and Eley's (2007) review of research studies regarding studying anxiety from a global perspective, authors used the following reasoning to study anxiety from a global perspective: "anxiety disorders show concurrent and longitudinal comorbidity and there are similarities between anxiety disorders in terms of genetic liability, mental health histories, and factor structure" (Gregory, 2007, p. 203).

#### Prevalence and Etiology of Anxiety Disorders

Up to 9% of preschoolers are affected by anxiety disorders (Carpenter, Puliafico, Kurtz, Pincus, & Comer, 2014). Anxiety disorders in the youth population average 10% (Drake & Ginsburg, 2012). In their primer of child anxiety, Ollendick and Grills (2016) describe the etiology of anxiety in children as equifinality ("i.e. multiple pathways to any one outcome") (p. 634) and describe contemporary etiological models of anxiety as having influences that "cut across social-ecological systems and typically (and broadly) include biological, developmental, psychological, social and environmental components" (p.634). Drake and Ginsburg (2012) report in their review of literature pertaining to family factors associated with anxiety disorders that researchers have estimated that genes account for approximately 30% of the variance in child anxiety disorders, shared environments (factors similar for family members such as socioeconomic status) explain approximately 20% of the variance, and non-shared environments



(factors unique to each individual like peer group influence) and error explain the remaining 50% of the variance.

### Heritability

“Anxiety runs in families” is a common thread that runs throughout childhood anxiety research (Drake & Ginsburg, 2012; Ginsburg & Scholssberg, 2002; Ollendick & Grills, 2016; Wei & Kendall, 2014). Ginsburg and Schlossberg, (2002) report that up to 80% of children with anxiety disorders have parents with anxiety disorders. In their examination of rates of anxiety disorders in the parents of children with anxiety disorders, Turner, Beidel and Costello (1987) found a similar high rate of heritability. Based on the examination of parents of a sample of 59 children ages 7 to 12 years via diagnostic interview, it was determined that children of parents with anxiety disorders were seven times more likely to be diagnosed with an anxiety disorder in comparison to children of parents with no psychiatric disorder. Finally, in their meta-analysis McLeod, Wood, and Weisz (2007) analyzed two studies from a large twin registry (n=4564 and 7600) and determined a heritability estimate of approximately 50% for children with anxiety disorders.

### Parenting/Family Factors Association with Anxiety Disorders

Regarding parental/familial practices associated with the etiology of childhood anxiety, Ollendick and Grills (2016) report that research has demonstrated the influence of parental modeling of anxious behaviors, parental conveyance of anxiety-provoking information to their children, parental reinforcement of anxious behaviors displayed by their children, and child-rearing behaviors characterized by overprotection and control in the etiology of childhood

anxiety. Research is mixed regarding the amount and type of influence that parenting may exert on the development of childhood anxiety.

Interestingly, McLeod, Wood and Weisz (2007) conducted a meta-analysis of 47 studies which examined the linkage between parenting and childhood anxiety and found an overall weighted mean effect size of .21 (small effect), and their compilation suggested that parenting was only associated with approximately 4% of variance in childhood anxiety. However, in this study, it was determined that parenting dimensions were differentially associated with childhood anxiety and that control was significantly associated with moderating the effect between the parent-child anxiety relationship. Control accounted for 8% of the variance ( $ES=.25$ ). Parenting behaviors relating to control are thought to “increase child anxiety by restricting children’s opportunities to experience new and challenging situations and minimizing the development of mastery and confidence in the ability to cope with challenges,” (Drake & Ginsburg, 2012, p. 147). With regard to the direction of effects, McLeod, Wood, and Weisz (2007) concluded that excessive parental control may play an important role in childhood anxiety as a cause of anxiety, a response to a child’s anxiety, or an expression of parental anxiety. Subdimensions of parenting including autonomy-granting (mean  $ES=.42$ , 18% of variance) and overinvolvement (mean  $ES=.23$ ) explained the greatest proportion in variance in childhood anxiety (McLeod et al., 2007).

This finding is similar to Chorpita, Brown, and Barlow’s (1998) seminal study of 93 children and their families that used a cross-sectional design to examine perceived control as a mediator of family environment. Results of this study suggested that a diminished sense of control over events may lead to a vulnerability for anxiety and limited opportunity for personal

control may be associated with anxiety. As such, Chorpita and colleagues (1998) stated that the family environment may make a considerable contribution to a cognitive diathesis characterized by a sense of reduced self-control.

Ollendick and Grills (2016) reviewed the literature pertaining to perceived control, family environment, and the etiology of child anxiety post publication of Chorpita, Brown, and Barlow's (1998) seminal study and concluded that the relations between parental control and child anxiety are complex. Although the research is suggestive of a reciprocal transactional relationship between parent-child, longitudinal studies are needed to determine the direction of effects as current research has not established this. Ollendick and Grills (2016) suggested a future direction for research in that *behavioral control*, *psychological control*, *perceived control* about anxiety-related situations, and more *general perceived control* should be measured. These authors described behavioral control a focus on "practices that establish a set of rules for the family that help regulate and control the child's behavior" and involves "parental monitoring of the child's actions and limit setting" (p. 635). Barber and Harom (2002) describe psychological control as "parental behaviors that are intrusive and manipulative of children's thoughts, feelings, and attachments to parents" and is illustrated by parental guilt-induction, contingent love or love withdrawal, instilling anxiety, and invalidation of the child's thoughts and emotions (as cited in Ollendick & Grills, 2016, p. 635).

#### Role of Parents in Treatment for Anxiety Disorders with Young Children

Carpenter, Puliafico, Kurtz, Pincus, and Comer (2014) call for the incorporation of parents into treatment for young children with internalizing problems. Some of the reasons these researchers suggest that parents should be involved in the treatment of young children with

anxiety disorders are the following: (a) preschool-aged children are reliant on their parents for basic life skills and emotional support, (b) young children are susceptible to parent bias toward negative stimuli, (c) parents of young children with anxiety and depression are often inadvertently involved in the maintenance of the children's symptoms by inadvertently reinforcing unwanted behavior, (d) parents sometimes demonstrate certain parenting styles and behaviors associated with childhood anxiety, (e) parents may be affected by their own psychopathology which may inhibit their ability to implement treatment with fidelity, and (f) parent-child relationships may be strained due to conflict over child symptomatology (Carpenter et al., 2014).

Although the call for parents to be involved in a young child's treatment is clear for the above listed reasons, the impact and efficacy of parental involvement is less clear. In Wei and Kendall's (2014) review of 17 randomized studies of youth with anxiety disorders which surrounded parental involvement and its contribution to childhood anxiety and treatment, they determined that findings are mixed and cannot confirm an additive benefit from adding parental involvement to a child-based CBT protocol. However, they do suggest that potential benefits have been noted when family treatment is added, but specific components that contribute to increased efficacy are not yet fully understood. These researchers suggest that aligning parental intervention with known contributors to the development and maintenance of childhood anxiety (parental over-control, over-protection, intrusiveness, and rejection) rather than the typical parental interventions which involve contingency management and teaching CBT protocols has the potential to create an emotional climate necessary for a favorable parent-child relationship and contribute to the associated benefits for anxious youth.

### SM Overview, Etiology and Associations with Parenting

SM, a social communication anxiety disorder, is described by the *The Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.; *DSM-5*; American Psychiatric Association, 2013) as the consistent failure to speak in social situations (e.g., school) despite being able to speak in other situations. SM interferes with education/occupational achievement or social communication, lasts at least one month (not limited to the first month of school), and cannot be the result of lack of knowledge/comfort with the required spoken language. Further, it cannot be better explained by another disorder (e.g., childhood-onset fluency disorder) and cannot occur exclusively during the course of autism, schizophrenia, and other psychotic disorders. Prevalence rates vary according to the setting and age of the child, but the *DSM-5* indicates that as many as 1% of children have SM (American Psychiatric Association, 2013). In the educational environment, this lack of speech not only impairs social communication, but it can impair educational functioning as it often becomes difficult for teachers to assess academic skills such as reading (American Psychiatric Association, 2013).

### SM and Relevance to Early Childhood

SM is a disorder that is particularly relevant to early childhood development and education because of the age of onset and setting where symptoms occur. In a review of 81 case reports in 47 published papers from 1950 to 1983, Wright, Miller, Cook, and Littmann (1985) determined the average age of onset of symptoms as 4.9 years old, whereas another more recent paper found a slightly lower average age of onset of symptoms (3.3 years old) in their sample of 52 children with SM (Cunningham, et al., 2004). Since children are often able to speak in situations where they are comfortable such as their home, entrance to preschool is usually when

symptoms first appear (Steinhausen & Juzi, 1996). Viana and colleagues (Viana, Beidel, & Rabian, 2009) describe SM as a “young child” disorder.

Early recognition and treatment of SM in preschool can have a profound effect on prognosis. Wright et al. (1985) report that early intervention is very effective, may lead to a better prognosis, and may prevent secondary deficits. Delivery of treatment relatively soon after symptom onset and at an early age was determined to lead to stronger treatment effects (Stone et al., 2002). Finally, Oerbeck, Stein, Wentzel-Larsen, Langsrud, and Kristensen (2014) corroborated this finding in their randomized controlled trial (RCT) intervention when experimental outcomes showed that, although treatment was efficacious for children above age 5 years, there was a significantly greater improvement in the younger age group. This finding was subsequently substantiated in a one-year follow-up study conducted by Oerbeck, Stein, Pripp, and Kristensen (2015). This follow up study found that younger children improved more in comparison to older children. More specifically, 78% of children aged 3 to 5 years did not have SM at follow-up, whereas 33% of children aged 6 to 9 years still had SM. These treatment gains were “largely maintained” at a follow-up conducted five years later (Oerbeck, Romvig Overgaard, Stein, Pripp, & Kristensen, 2018).

#### Assessment Overview for SM

The literature reveals several child-focused methods to assess the presence and severity of SM. These assessments utilize a functional behavioral assessment approach as traditional assessment approaches are often inadequate due to child’s difficulty in speaking to the clinician. Primary assessment measures utilized include a structured diagnostic interview, parent- and teacher-based instruments, behavioral observations, and daily logs (Kearney & Vecchio, 2006).

Information from these measures are synthesized to understand the antecedents of a child's failure to speak and the consequences that follow this behavior (Kearney & Vecchio, 2006) and linked to develop a treatment protocol.

Two questionnaires that have been designed specifically to assess the symptoms of SM are the Selective Mutism Questionnaire (SMQ) and the School Speech Questionnaire (SSQ). The SMQ is a 17-item parent-report measure of the child's SM behaviors in the Home, School and Other domains (Bergman, Keller, Piacentini, & Bergman, 2008). The SSQ is a teacher-report measure which assesses speaking behaviors at school (as cited in Bergman et al., 2013).

In light of the difficulties in assessment associated with limited-to-no verbal response or initiations in children with SM, clinicians and researchers have also developed novel assessment approaches including use of parents as test presenters in the assessment process with children (Klein, Armstrong, Shipon-Blum, 2012), use of a Language Environment Analysis (LENA) to objectively measure language and interactions (Busman & Platt, 2016; Hong, Feinberg, Furr, Tenenbaum, Klein, Del Busto, & Pruden, 2017), and the development of the Teacher Telephone Interview: SM and Anxiety in the School Setting (TTI-SM; Martinez, Tannock, Manassis, Garland, Clark, & McInnes, 2015).

One assessment approach described by Kotrba (2015) incorporates a four-step process to determine the presence and severity of SM. This process includes the following four steps:

1. A diagnostic interview with parents/teacher/caregivers to assess the circumstances speaking occurs
2. Questionnaire such as the SMQ which can be analyzed quantitatively or qualitatively in conjunction with Dr. Elisa Shipon-Blum's Selective Mutism-Stages of

Communication Comfort Scale© (SM-SCCS) or other related anxiety-specific or general mental health questionnaires

3. Direct Structured Observation at home, school, and in a novel location
4. Rule Out Co-Occurring Disorders through the use of speech/language evaluation, evaluation of intellectual functioning, educational and hearing evaluation, oral-motor examination of coordination and strength in muscles of the jaw, tongue and lips, and evaluation for autism symptoms

#### Treatment Overview for SM

A main goal of treatment with children with SM is to increase verbal communication, increase social and academic functioning, decrease avoidance and decrease distress associated with speaking (Bergman, 2013). The most effective treatments are based on behavioral or cognitive-behavioral theories (Bergman et al., 2002; Kehle, et al., 2011; Muris & Ollendick, 2015; Viana et al., 2009). Thus far, many studies on the treatment of SM have utilized case descriptions or single case design to show treatment effects (Beidel & Alfano, 2011). However, two studies utilizing a random control design have been conducted with children who have SM (Bergman et al., 2013; Oerbeck et al., 2014). Both random control studies utilized a behavioral treatment methodology that significantly increased speech. In addition, Oerbeck et al.'s (2014) study incorporated defocused communication as a general treatment principle in addition to behavioral techniques, and researchers noted that future research is needed to determine the active treatment components that contributed to increased speech. Effective behavioral intervention used to treat SM includes a combination of behavioral strategies, such as



contingency management with shaping, stimulus fading, in-vivo exposure, and self-modeling (Viana et al., 2009).

### Response Rates for SM Treatment

In the Bergman et al. (2013) random control trial conducted for SM, treatment responder status was 75% at the end of 24 weeks of Integrated Behavioral Therapy. More specifically, 75% of the 21 participants (ages 4 to 8 years) were rated as treatment responders (“very much improved” or “very improved”) on the Clinical Global Impression-Improvement Scale at the end of 24 weeks of treatment. In contrast, 0% of waitlist participants were rated as responders at the end of their waitlist. Similarly, 67% of children no longer met criteria for SM based on the results of the Anxiety Disorders Interview Schedule for DSM-IV, Parent Version, at the end of the treatment, whereas 100% of the children assigned to the waitlist condition continued to meet criteria for SM at week 12 ( $\chi^2(1)=9.69, p=.002$ ). This treatment response rate is good when you take into consideration James, James, Cowdrey, Soler, and Choke’s (2013) finding upon review of 808 CBT participants and 542 controls that approximately 60% of children ages 6 to 19 years who have anxiety disorders were characterized as in remission at post treatment response after a CBT protocol (James et al., 2013).

In a one year-follow-up of study of Oerbeck et al.’s (2014) random control trial of a home- and school-based intervention using defocused communication and behavioral techniques, Oerbeck, Stein, Pripp, and Kristensen (2015) found that treatment gains were maintained. Where Bergman et al. (2013) found that 67% of participants no longer met criteria for SM after treatment, Oerbeck et al. (2015) found that 50% no longer met criteria for SM.

## Parental Role in Treatment

In light of research implicating some familial factors in the development and maintenance of childhood anxiety, researchers have called for parents to be active participants in the treatment of young children with anxiety (Carpenter et al., 2014). Considering a child's environmental setting, including the family in which he or she resides, is critical in optimizing children's amelioration of speech deficits that occur as a result of SM. Interventions are designed and implemented by trained professionals; however, professionals often train parents and teachers as part of the treatment plan to implement these strategies. Bergman et al. (2013) points out that, since children with SM often fail to speak to the therapist in early sessions, unique strategies for engagement and parental involvement are necessary early in the treatment process. In the randomized controlled pilot study of integrated behavior therapy for children with SM, Bergman and colleagues (2013) incorporated parent involvement into all components of the integrated behavioral treatment. More specifically, in sessions 1 to 3, the parent was oriented to treatment. Through the therapist's work with the child, the therapist provided the parent a model of intervention that could be implemented in additional settings. Parent involvement during this phase included the child speaking to the parent in the therapy room without the therapist present, child playing a verbal game with the parent with the therapist present, and parent and child recording the child's voice for playback with the therapist. In addition, a reward system was developed to be implemented and monitored by the child's parent to encourage child engagement and praise efforts.

In sessions 4 to 14, in addition to in-session behavioral exposure exercises conducted between the therapist and the child, behavioral practice assignments of gradually increasing

difficulty were designed and assigned to be completed in between sessions. As children were between the ages of 4 to 8 years, parents likely had responsibility for orchestrating practice assignment and out of session exposures. Parents were asked to keep a log with details regarding exposure attempts and outcomes. In sessions 15 to 20, session goals included the transfer of control from the therapist to the parent and relapse prevention was discussed. During these final sessions, efforts were made to ensure parents' ability to maintain treatment post study conclusion by having parents devise and assign treatment tasks, communicate with school personnel, set goals, and manage the reward system. It is obvious from these session descriptors that parents played an essential, pivotal role in their child's treatment for SM.

#### Parental Role in Advocacy and Support

Not only are parents instrumental in implementing exposures to generalize speech in the school and community environments, parents are the primary advocates for their child throughout the course of the disorder and beyond. In addition, parents also play a primary role in supporting and encouraging their child with SM.

#### Parent Characteristics, Family Environment, and Parent-Child Relationship of Children with SM

Given the important role that parents play in the treatment, advocacy, and support of their child with SM, it is important to consider what we know about parents of children with SM, family environments for children with SM, and the parent-child relationship. Understanding these complex relationships and multifactorial components may lead to improved interventions better designed to ameliorate deficits and concurrently improve family relationships.

## Heritability

Heritability statistics found in the SM research literature are comparable to statistics found within child anxiety literature. Both indicate a high level of heritability and raise the risk factor for children who have parents with anxiety disorders. Within the SM literature, Black and Uhde (1995) examined psychiatric characteristics of 30 children with SM and found via information collected from self-report that 70% of children with SM had a parent with a history of social phobia or avoidant disorder and that 37% of parents reported personal histories of SM. Although there was no control group for comparison in this study, Black and Uhde (1995) suggested that it is likely that social anxiety is transmitted familiarly to children with SM because of the high prevalence of social phobia and avoidant disorder among parents.

Similarly, results of a case-control study on SM and comorbidity with 50 SM families and 108 control families revealed SM and social anxiety as a family phenomenon (Kristensen & Torgersen, 2001). This study utilized the Millon Clinical Multiaxial Inventory (MCM-11) and determined that parents of children with SM were significantly different than matched controls on personality traits reflecting social anxiety. Membership in the SM index group was predicted by the avoidant scale (mothers) and the schizoid scale (fathers). One limitation of the study stated that living and coping with the child with SM could have affected parents' personality scores (Kristensen & Torgersen, 2001).

Moreover, Chavira and colleagues (2007) conducted a rigorous study with 70 parent dyads of children with SM and 31 parent dyads of children without SM (ages 3 to 11 years) to determine the history of lifetime psychiatric disorders in the parents of children with SM. Data collected via the ADIS-C/P, the SMQ, the Structured Clinical Interview for SMG-IV Disorders

(SCID-IV), the SCID for Axis II Personality Disorders (SCID-II), and the NEO Personality Inventory-Revised supported a familial relationship between SM and Social Phobia (SP). Parental Generalized Social Phobia (GSP) and Avoidant Personality Disorder (AVPD) were “three to fourfold more common among parents of SM children than control children. Furthermore, child SM severity predicted parent SP (generalized type)” (Chavira et al., 2007, p. 1469).

Although familial anxiety has been prevalent in the families of children with SM as evidenced by the majority of studies, Buzzella, Ehrenerich-May, and Pincus (2011) found no significant differences in depression, anxiety, or stress in their examination of 29 mothers of children with SM and a comparison group of 28 mothers. Researchers cite that these results are in contrast to the majority of research. They further speculate that, while this could be the true state found in this sample, it also could be the result of a potential limitation of the measurement tool. Potentially the measurement tool was not specific enough to capture the necessary information, and the outcome could have been affected by characteristics of the sample (e.g., educated/knowledgeable parents regarding SM in the sample and research oriented/eager community controls).

In their comparison of 52 community control participants and 52 children with SM, Cunningham, McHolm, Boyle and Patel (2004) did not find any evidence of depression in parents of children with SM.

### [Family Environment and Parenting Behaviors](#)

The diathesis-stress model indicates that pathology results from a combination of biological and psychological vulnerabilities as well as environmental factors. As strong

biological factors are present in anxiety disorders including SM, it is necessary to consider the impact the environment has on the development and maintenance of SM. Understanding the environmental conditions, including parent-child relationships, common to children with SM is a precursor to improving environmental conditions within the family climate and potentially may help improve outcomes for children with SM and improve coping for families.

To answer the question whether SM is linked to parenting and family dysfunction, Cunningham, McHolm, Boyle, and Patel (2004) studied a sample of 104 children (52 with SM and 52 community controls) by conducting home visits in which parent questionnaires, parent structured interviews, and children reading and arithmetic tests were administered. In addition, teachers completed an additional battery of questionnaires. Findings regarding family functioning via a MANOVA analysis revealed that SM children were less cooperative than controls; however, parents did not exhibit more coercive or permissive parenting in comparison to control groups. Family functioning, parental depression, and social networks were not significantly different across groups. The authors note that this finding is inconsistent with information in previous case reports that link SM to family dysfunction and speculate that these case studies results may not be generalizable.

Similarly, although Buzzella, Ehrenerich-May, and Pincus (2011) hypothesized increased parental involvement and control of children's activities because of the established link between parenting control and childhood anxiety disorders, they found no significant differences in depression, anxiety, stress, or family factors such as parental control and warmth in their examination of 29 mothers of children with SM and comparison group of 28 mothers. The authors of this study state that these findings are contrary to the literature of SM/childhood

anxiety and parents, and possible limitations include that the testing instrument (Depression Anxiety Stress Scale) was too general and not sensitive enough to differentiate between anxiety types. In addition, authors suggest that future research should include observational measures which are powerful in examining familial processes (Buzzella et al., 2011). This suggestion could be consistent with McLeod, Wood, and Weisz's (2007) finding in their meta-analysis that interview and questionnaire measures of parenting were found to underestimate the magnitude of the association between parenting and childhood anxiety in comparison to measures that used observation.

One study that utilized observational measures, the gold standard of assessment, to examine parent-child interactions for children with SM was conducted by Edison and colleagues (2011). The purpose this study was to determine whether parents of children with SM exhibited more control with their children in comparison to parents whose children are anxious (without SM) and to parents of children who were not anxious. Further, the researchers sought to determine the extent to which parent anxiety and child characteristics would predict control. Researchers investigated two aspects of parental control: the extent to which caregivers granted autonomy and the extent to which they made high powered remarks that demanded a verbal response from the child. To determine control behavior, 63 children (28 males, 35 females, ages 4 to 13 years) and their primary caregivers (57 mothers and 6 fathers) were observed in four contexts during a laboratory visit: (a) five minute free play session, (b) two minute discussion of the child's most recent birthday, (c) five minute preparation for the child to do a birthday speech, and (d) a three minute presentation of the child's birthday speech. Analysis via a split-plot ANOVA revealed that parents of children with SM were rated by observers to be more

controlling as evidenced by granting less autonomy ( $M=3.81$ ,  $SD=.9$ ) and making a higher proportion of high power remarks ( $M=.47$ ,  $SD=.11$ ) in comparison to both the anxiety group (Grant autonomy:  $M=4.08$ ,  $SD=.89$ ; High Power:  $M=.39$ ,  $SD=.11$ ) and the no-anxiety group (Grant autonomy:  $M=4.24$ ,  $SD=.71$ ; High Power:  $M=.35$ ,  $SD=.08$ ). Authors proposed the following possible explanations for this finding: 1.) possible overprotection and speaking for the child to reduce the child's discomfort and anxiety, 2.) parents employ more directive strategies as a means to increase child's speaking participation, and 3.) parental avoidance of their own discomfort when the child does not comply with social norms. Regression analysis revealed that higher observed child anxiety predicted less autonomy granting in free play and birthday speech situations. Moreover, parent anxiety was associated with granting autonomy during the free play situation but not the birthday situation. Overall findings revealed that parents made more high power remarks when children made fewer self-initiated comments. When children made more self-initiated comments, parents exerted less conversational control.

### Expressed Emotion

The concept of Expressed Emotion (EE) is a measure of how families respond to an episode of psychiatric disorder and focuses on the dyadic relationship between the patient and caregivers by examining attitudes and emotions expressed by caregivers toward their patient (Peris & Miklowitz, 2015). EE is thought to provide a "glimpse into the day-to-day family life, including aversive patterns of interaction between parent and child that may be highly stressful to both" (Peris & Miklowitz, 2015, p. 864) and is respected by psychologists as a form of psychosocial stress (Hooley & Gotlib, 2000). Contrary to its name, EE is not a measure of the emotional expressiveness by caregivers; it is a measure of the extent to which a caregiver talks



about a patient in a critical or hostile manner or with significant emotional overinvolvement or overconcern (Hooley & Gotlib, 2000). A rating high EE is earned when there are an above-threshold of critical comments, any evidence of hostility, or marked evidence of emotional overinvolvement (Hooley & Gotlib, 2000). Relatives of patients who exhibit high EE can be considered to be coping less well with the patient in comparison to patients with low EE relatives, both by their own admission and high levels of relapse in patients living with them (Hooley, 1985).

The impetus for EE development was driven to explain observations made by Brown and his colleagues (Brown, Carstairs & Topping, 1958), wherein released patients' success or failure was associated with the type of living group to which they were discharged. Brown and colleagues (1958) noted of their 229 discharged male patients with schizophrenia that how they fared was dependent upon the type of situation to which they were discharged. Patients who were discharged to lodging or with siblings fared better psychiatrically than those who were discharged to a large hostel or the parental or matrimonial home. Further, it was determined that those patients who, after discharge, experienced limited contact with relatives fared better than those who spent longer amounts of time with their families (as cited in Hooley, 1985).

Since this initial observation by Brown, Carstairs, and Topping (1958), the EE construct has been studied across numerous psychiatric and health disorders. The EE construct via the Five Minute Speech Sample has been studied with the following disorders: eating disorders, mental illness, bipolar illness, depression, head injury, epilepsy, Alzheimer's disease, adults with learning disabilities, adolescents with self-injurious thoughts and behaviors, adolescents with social anxiety disorder, separate/divorced families, mothers and children with anxiety disorders,

homeless families, children experiencing parental violence, children with asthma, children with attention deficit hyperactivity disorder, children with behavioral difficulties, children with depressive disorders, children with gender identity disorder, children with intellectual disabilities, disadvantaged children and children with obsessive-compulsive disorder (Magana-Amato, 2016). Although EE has not been studied within the SM population specifically, it has been found to be a prognostic indicator for a wide range of other psychiatric disorders (Peris & Miklowitz, 2015). Higher levels of parental EE have been linked to elevated rates of psychopathology in parents and are associated with poorer patient clinical outcomes, diminished treatment response, and higher rates of relapse across a broad range of psychiatric disorders, including anxiety (Peris & Miklowitz, 2015), the disorder of interest in relation to SM.

In a review of the FMSS in developmental research, Sher-Censor (2015) stated that although the FMSS—EE is brief, it has “proven highly-effective in indexing the quality of caregiver-relative relationships and predicting the relative’s adaptation” (p.128). He points to studies in the developmental literature that suggest that “parents’ expressed emotion, while speaking about the child, is associated with daily parent-child interactions, and indicates and predicts child adaptation” (p. 132). As most studies with expressed emotion differentiate between criticism and emotional overinvolvement, Sher-Censor (2015) reviewed the literature of these two constructs separately.

In Sher-Censor’s (2015) review of the construct of EE-Criticism, he reports that EE-Criticism reveals sound psychometric properties and corresponds to “poorer observed interactions of parents and their children” (p.128). Further, Sher-Censor (2015) points out that EE-Criticism is associated with elevated rates of externalizing problems and the severity of

several psychological disorders in child, including child anxiety. However, this researcher also states that the literature is inconsistent regarding EE-Criticism and child internalizing problems. He states his review of the literature revealed that the negative effects of parental EE-Criticism “may be stronger in the context of other risk factors” (p.133).

Sher-Censor (2015) also reviewed the developmental literature surrounding the emotional overinvolvement construct within EE and concluded that the validity of emotional overinvolvement in developmental research is not clear. Although he states that it can reliably be assessed, studies have revealed that there is little support of emotional overinvolvement in relation to the qualities of observed parent-child interactions and it is inconsistent with regard to child adaptation. He concludes the review of emotional overinvolvement with the statement that “the significance of FMSS-EOI in developmental studies has not yet been fully revealed” (p.135). In a study of emotional overinvolvement in early development and its relationship with child behavior problems, Khafi, Yates, and Sher-Censor (2015) studied 223 child-mother dyads and concluded that none of the emotionally overinvolved criteria were associated to changes in children’s internalizing behavior problems; however, in the study of 108 children (ages 6-11), Stubbe, Zahner, Goldstein, and Leckman (1993) found that the presence of a child anxiety disorder was associated with parental EOI.

Despite this evidence of inconsistency within the major components of Criticism and Emotional Overinvolvement within the EE construct, Sher-Censor (2015) concluded his review of developmental research with the statement the assessing EE via the FMSS “constitutes a valid and useful procedure for indicating and predicting the qualities of parent-child relationships and child wellbeing from infancy to adolescence” (p.149).

### Dyadic Nature of the EE Construct

It is essential to note that EE does not place blame upon the parent for their child's mental illness; rather, it depicts a dyadic relationship whereby parental EE may be both an outcome of the child's mental illness and a stressor that interacts with the child's genetic vulnerability (Peris & Miklowitz, 2015). EE is "almost certainly a product of the interaction of both patient and relative characteristics" (p.139) rather than a measure of something about the relative or a reaction of the relative to something about the patient (Hooley & Gotlib, 2000). This finding is consistent with three prospective studies identified by McLeod and colleagues (2007) that found evidence that childhood anxiety is consistent with both causal directions. In other words, parenting predicts child anxiety, and child anxiety predicts parenting.

### How EE Attitudes may develop

The vulnerability-stress interplay described in the diathesis-stress model comes to bear in the development of a caregiver's EE attitudes. The following example describes how caregiver EE may originate and develop in connection with a child's temperament:

From this perspective, EE attitudes may begin in early childhood with a youngster whose behavioral, self-regulatory, or cognitive limitations (e.g., behavioral inhibition, irritability, mood liability) pose significant challenges for parents. These features may reflect the child's underlying genetic vulnerability to psychiatric illness, a vulnerability that may be shared by one or more parents. The result may be that a genetically predisposed child is matched with a parent who is vulnerable to maladaptive patterns of responding with hostile and critical or anxious and overprotective behaviors (Peris & Miklowitz, 2015, p.868).

Research also suggests that some factors within the individual may lead to an increased vulnerability and confer “some kind of intrinsic liability toward criticism, hostility, or emotional over-involvement” (Gotlib and Hooley, 2000, p. 137). Although not an exhaustive list, these authors point to research which has suggested that relatives who are less flexible, less tolerant, have a more internally-based locus of control, and are more self-critical may be placed higher on the continuum of vulnerability and, thus, are more at risk for developing high EE.

#### Reported Rates of EE among Mothers of Children Without SM

Some researchers have studied EE among control populations for young children. A study of family expressed emotion, childhood onset depression, and childhood-onset schizophrenia spectrum disorders compared their clinical samples of maternal FMSS's to a normal control sample (absence of any psychiatric disorder in children) of maternal FMSS's for children ages 6-13 (Asarnow, Thompson, Hamilton & Goldstein, 1994). Among the 21 mothers in the normal control condition, 14% were rated as high EE, and 9% were rated as emotionally overinvolved. Raishevich, Kennedy, and Rapee (2010) studied maternal FMSS's of 120 behaviorally inhibited preschoolers and 37 behaviorally uninhibited preschoolers and found that 10.8% of mothers with behaviorally uninhibited children scored in the high EOI range; whereas 38.3% of mothers of children showing behavioral inhibition were rated as EOI. Sher-Censor's (2015) meta-analysis of developmental research (2015) revealed that while some developmental studies that have examined the EOI construct suggest it can be reliably assessed from the FMSS of parents, in several studies that ranged from toddlers to adolescents “parents' High EOI was too rare to be analyzed in a meaningful way” (p.134).

## Assessment of EE

EE was originally assessed via a standardized interview, the Camberwell Family Interview (CFI), and included five scales: criticism, hostility, emotional overinvolvement, warmth, and positive remarks (Hooley, 1985). This interview was found to be a strong and robust predictor of patient relapse (Van Humbeeck, Van Audenhove, De Hert, Pieters & Storms, 2002); however, this interview often took 1 ½-2 hours to administer and 3-4 hours to rate (Magana et al., 1986). As such, Magana, Goldstein, Karno, Miklowitz, Jenkins and Falloon (1986) began using the Five-Minute Speech Sample to assess EE. The FMSS takes 5 minutes to administer and approximately 20 minutes to code. Magana-Amato (2016) describes the five following scoring categories in the FMSS:

Initial Statement: scored from the first thought or idea expressed by the respondent about the relative, rated as positive, neutral, or negative

Relationship: scored from statements that describe how the respondent and relative get along together, rated as positive, neutral, or negative. Level of warmth is also assessed from this relationship score and is a numerical value, based on a 0-5 scale.

Criticism: scored from negative statements about the relative's behavior or characteristics, scored based on content and/or tone, and assessed via a frequency count.

Dissatisfaction: Statements expressed by relative that indicate mild negative feelings about the relative's behavior or characteristics, scored on content, rated as absent or present

Emotional Overinvolvement: scored from statements which indicate the respondent is excessively involved with the relative. Composed of five subcategories: self-sacrificing overprotective behavior, emotional display, statements of attitude, excessive detail, and excessive praise (p. 7).

EE is particularly derived from the Emotional Overinvolvement and the Critical Scales. A thorough description of this measure including procedures and psychometrics are found in Chapter 3.

### EE Response to Intervention

Research has indicated that EE may moderate the course of childhood psychiatric illness and as such, family criticism and emotional overinvolvement are promising treatment targets to modify relationship patterns (Peris & Milkowitz, 2015). When family-oriented treatment has sought to reduce family levels of criticism, hostility and emotional overinvolvement, patients attain better treatment outcomes in comparison to treatments that involve medication and routine clinical care (Hooley & Gotlib, 2000).

Specific to childhood anxiety, measures of criticism and emotional overinvolvement have proved to be amenable to targeted treatment. More specifically, Gar and Hudson (2009) examined maternal levels of expressed criticism and emotional overinvolvement via the Five Minute Speech Sample in 48 clinically anxious children aged 6-14 years. Results of analysis revealed a significant decrease in expressed high levels of criticism and emotional involvement in mothers after parent and child participated in a 10-week CBT program aimed at teaching children and parents skills to manage the child's anxiety. Treatment included psychoeducation, realistic thinking for threat-related thoughts, cognitive restructuring, graded exposure to feared

events, social skills/assertiveness training, and parent coaching. In addition, parents were taught principles of parent management (reward, praise, pay attention to positive child behaviors, reduce attention to anxious behaviors) and to encourage courageous, independent behavior and to reduce parental overprotection.

Similarly, Garcia-Lopez, Diaz-Castela, Muela-Martinez, and Espinosa-Fernandez (2014) studied the families of 52 socially anxious adolescents (aged 13-18 years) and assigned parents who exhibited high levels of EE to either a cognitive-behavioral school-based intervention with an added parent-training component or a cognitive-behavioral school-based intervention focused solely on the adolescent (no parent involvement). The parent involvement component included five 120-minute group sessions for parents. As part of the group sessions, parents received psychoeducation regarding social anxiety and information regarding the role of EE in their child's symptomatology. In addition, parents received communication skills training to replace rejection, EOI, criticism and hostile verbal comments, and contingency management strategies to better manage the adolescent's social anxiety. Parents were instructed to not encourage avoidance and safety behaviors, but to provide reinforcement for exposure behaviors. Results of this intervention revealed significant reductions in diagnosis remission and social and depressive symptomatology (particularly with the EE status of the parent changed from High EE status to Low EE status) when parents were involved in the condition which included the parent training component.

### Conclusion

In conclusion, the literature related to parenting and children of anxiety disorders, and parenting and children with SM reveal many similarities. Children with anxiety disorders, and



SM in particular, exhibit high rates of heritability from their parents who have anxiety disorders. This genetic vulnerability places them at higher risk for the development of anxiety disorders. Research in both the anxiety and SM literature have suggested that family practices such as overinvolvement/overcontrol may be evident in parents of children with anxiety and SM; however, research regarding parenting within the SM community is very limited and not well established. The construct of EE aims to capture caregiver dynamics characterized by emotional overinvolvement and critical comments. Interventions have emerged utilizing this construct in many disorders other than SM and aspects of the family environment that contribute to high overinvolvement and critical comments have been modified. This modification of the family environment has been shown to improve treatment outcomes. Consistent with Carpenter et al.'s (2014) call for a greater emphasis on the role of parent in the treatment of young children with internalizing problems, it is important to expand the research on parents of children with SM to help improve treatment outcomes. Given established higher rates of parental anxiety disorders within the SM community as well as the large role that parents play in their child's environment and in the treatment process, this research study will concentrate on increasing understanding of maternal-child dynamics and will contribute to parental interventions by gaining an understanding of what parents of children with SM talk about when asked to talk about their children and how this changes over the course of treatment.

## CHAPTER THREE: METHODOLOGY

The purpose of this study was to examine the content of a five-minute speech sample to describe themes that mothers expressed when talking about their child with SM and to analyze how these themes changed over the course of an integrated behavior treatment of young children with SM. More specifically, in addition to describing *what* mothers talk about when asked to talk about their child with SM, this study utilized a qualitative content analysis to evaluate how emergent themes along with a priori codes of expressed emotion and overcontrol changed over the course of an integrated behavior treatment of young children with SM. This information may be used to potentially improve treatment outcomes through the elucidation of family relationship variables that may contribute to the development and maintenance of SM. In addition, it will help guide parent education and parent-child intervention, and potentially contribute to improved family relationships.

The methodology to answer these research questions has been organized into the following sections: (a) research questions, (b) orientation to the research design, (c) recruitment and sample of IBTSM study (d) intervention and control group description, (e) instrumentation, (f) data collection procedures, and (g) data analysis procedures.

### Research Questions

The research questions addressed in this study include the following:

1. Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

2. How does the content of mother's talk change over the course of integrated behavioral treatment of their children with SM?

### Orientation to Research Design

This study is a secondary analysis of a randomized controlled pilot study of integrated behavior therapy that was conducted by researchers at the University of California at Los Angeles, Division of Child and Adolescent Psychiatry, UCLA Semel Institute for Neuroscience and Human Behavior as well as one researcher who was in independent practice. The results of the study were published in *Behaviour Research and Therapy* (Bergman et al., 2013). Described below is a description of the research design utilized in the original randomized controlled pilot study for Integrated Behavior Therapy and the research design used in this secondary analysis.

#### Research Design for Randomized Controlled Study for Integrated Behavior Therapy

In this original pilot study of behavior treatment researchers utilized the Random Allocation Software to randomly assign children to either 20 sessions of Integrated Behavior Therapy for SM (IBTSM) over 24 weeks or to a 12-week Waitlist (WL). Data were also collected at three months post-treatment for children randomly assigned to the active treatment condition. Children were offered open IBTSM treatment following conclusion of the 12 week waitlist condition. In light of ethical and clinical concerns, this study utilized an unmatched duration of treatment and waitlist in accordance with previous pediatric anxiety CBT research conducted by Kendall, (1990, 1994; as cited in Bergman et al., 2013). As the duration of the IBTSM treatment condition differed from the WL condition, this study utilized blind independent evaluators to conduct the assessments at baseline, week 12, week 24, and week 36

for all participants regardless of condition. Specific to this secondary analysis, the five-minute speech sample was completed at baseline, week 24, and week 36 (Bergman et al., 2013).

#### Research Design for the Secondary Analysis of the Five Minute Speech Sample

This dissertation study utilized a qualitative approach to analyze the FMSS. Specifically, it utilized a content analysis approach described by Bengtsson (2016) to analyze *what* mothers talk about with regard to their children with SM and how this talk changed over the course of treatment. Downe-Wambolt (1992) describes content analysis as “a research method that provides a systematic and objective means to make valid inferences from verbal, visual, or written data in order to describe and quantify specific phenomena” (as cited in Bengtsson, 2016, p. 9.)

#### Sample and Recruitment

##### Sample for the Randomized Controlled Study for Integrated Behavior Therapy

Participants for the original study were recruited from a pediatric anxiety specialty clinic, mental health practitioner referrals, and internet website postings from websites that were focused on SM. The following criteria was utilized for inclusion: (a) ages 4 to 8 years at baseline, (b) met DSM-IV criteria for a primary diagnosis of SM, and (c) participated in school or some other form of structured daily group activity continuously throughout enrollment. Exclusion criteria were the following: (a) use of psychotropic medication within two to six weeks of study entry, (b) failed trial of CBT for anxiety within the previous two years, (c) criteria met for any psychiatric illness that contraindicated study participation, and (d) inability for child or parent to participate in the completion of measures, interviews, or treatment in English. Sixty-seven parents completed a structured telephone eligibility screening. This was

narrowed down to twenty-five qualifying families who completed informed consent/assent and the baseline eligibility evaluation. As two were determined ineligible and two withdrew consent, a total of 21 children participated in the IBTSM pilot study (Bergman et al., 2013). See Table 1 for demographic information on the sample of children included in the IBTSM study.

Table 1  
Demographic Information of Children in IBTSM Study

|                               | Total<br>N/Mean (SD) | IBTSM<br>n/mean (SD) | Waitlist<br>n/mean (SD) | P    |
|-------------------------------|----------------------|----------------------|-------------------------|------|
| N                             | 21                   | 12                   | 9                       |      |
| Age at baseline<br>(years)    | 5.43 (1.16)          | 5.25 (1.14)          | 5.67 (1.22)             | .25  |
| Gender (male)                 | 11                   | 7                    | 4                       | .53  |
| <i>Ethnicity</i>              |                      |                      |                         | .31  |
| Non-Hispanic<br>White         | 9                    | 5                    | 4                       |      |
| Latino                        | 2                    | 1                    | 1                       |      |
| Asian                         | 4                    | 4                    | 0                       |      |
| Biracial                      | 4                    | 1                    | 3                       |      |
| Other                         | 2                    | 1                    | 1                       |      |
| Age of Onset of<br>SM (years) | 3.38 (.74)           | 3.17 (.49)           | 3.69 (.96)              | .13  |
| CSR of SM                     | 5.00 (.77)           | 5.00 (.74)           | 5.00 (.87)              | 1.00 |
| No. of current<br>diagnoses   | 2.38 (.59)           | 2.25 (.62)           | 2.56 (.53)              | .25  |
| <i>Symptom<br/>measures</i>   |                      |                      |                         |      |
| SMQ                           | .86 (.40)            | .79 (.36)            | .95 (.46)               | .38  |
| SSQ                           | .70 (.55)            | .81 (.59)            | .56 (.49)               | .31  |
| SNAP-Retell                   | 27.05 (73.64)        | 12.18 (26.85)        | 45.22 (106.31)          | .33  |
| SASC-Parent                   | 3.12 (.58)           | 3.29 (.49)           | 2.91 (.65)              | .14  |
| SASC-Teacher                  | 2.26 (.75)           | 2.09 (.34)           | 2.43 (.85)              | .35  |

SM = Selective Mutism; CSR = Clinician Severity Rating on the Anxiety Disorder Interview Schedule; SMQ = Selective Mutism Questionnaire; SSQ = School Speech Questionnaire; SNAP = Strong Narrative Assessment Procedure; SASC = Social Anxiety Scale for Children.

*Note.* From “Integrated behavior therapy for SM: A randomized controlled pilot study” by R. L. Bergman, A. Gonzalez, J. Piacentini, M. L. Keller, 2013, *Behaviour Research and Therapy*, 51, p. 685. Copyright 2013 by Elsevier Ltd. Reprinted with permission.

#### Sample for the Secondary Analysis of the Five Minute Speech Sample

To allow for consistent comparisons, the sample that was analyzed for this dissertation study was limited to Five Minute Speech Samples collected only from mothers of children with SM. The original sample of FMSSs were collected from both mothers and fathers. However, the analysis of FMSS’s from only mothers and not fathers was warranted in light of the small sample size in this study combined with Weston, Hawes, and Pasalich’s (2017) finding that the speech samples of fathers differed from speech samples of mothers in relation to their validation against evidence obtained via of direct observation of parent-child dynamics. More specifically, Weston, Hawes, and Pasalich (2017) conducted a systematic review of 25 studies (N=2945 child participants) which included FMSS and their associations with direct observational coding of parent-child interactions and found “considerable evidence that mothers’ FMSS rating are associated with parent-child interactions, however the evidence regarding fathers is much less clear” (p. 128).

In the sample included for this secondary analysis, 18 baseline FMSSs were collected from mothers, 14 Week 24 samples, and 11 Week 36 samples. Due to poor audio and inability to transcribe the audio tapes, the final sample in this secondary analysis of FMSSs collected from mothers was reduced to 9 paired baseline and Week 24 recordings.

### Intervention and Control Group Description

The following section provides a description of the intervention and control group utilized in the IBTSM study. The treatment protocol highlights described below can be found with further detail in the original article by Bergman and colleagues (2013) and in the corresponding detailed treatment manual which was adapted for publication (Bergman, 2013).

#### Intervention Group

Twelve children were randomly assigned to receive active IBTSM. The integrated behavior therapy individualized treatment condition consisted of 20 1-hour sessions held over a 24-week period. Treatment targeted “graduated exposures to the feared stimuli/situation (e.g. verbal communication) as the primary agent of symptom reduction” (Bergman et al., p. 683) both in session and out of session in situations that were “central to the non-speaking behavior (e.g. at school)” (Bergman et al., 2013, p.683). Treatment is described as integrated because parent and school teacher (or teacher-like professionals in the summer months) involvement was incorporated into all treatment components.

#### Treatment Protocol for IBTSM

The treatment protocol for IBTSM utilized behavioral treatment with the child and incorporated parent and teacher involvement into components of treatment. More specifically, in sessions one through three, the child and parents were introduced to treatment, rapport was built, and a behavioral reward system was established. Assessments of child’s in session speaking tolerance was assessed, and a “feelings thermometer” was introduced for the child to be able to communicate anxiety levels. During these sessions, emphasis was placed on increasing the

child’s speech with the therapist and providing a model for future work. Exposure exercises were carried out but varied according to the child’s baseline level of speech with the therapist.

In sessions four through 14, in addition to in-session behavioral exposure exercises conducted between the therapist and the child, behavioral practice assignments of gradually increasing difficulty were designed and assigned to be completed in between sessions. These out-of-session assignments were initially developed by the therapist; however, collaboration of parent, teacher, and child in the development of these activities was emphasized over time. Parents were asked to keep a log with details regarding exposure attempts and outcomes. Cognitive restructuring principles were introduced when appropriate “(e.g., replacing fearful or worried thoughts with coping self-statements)” p. (684).

In sessions 15 through 20, session goals included the transfer of control from the therapist to the parent and relapse prevention was discussed. Parents were instructed to praise their child upon speech that occurred in daily living. During these final sessions, efforts were made to ensure parents’ ability to maintain treatment gains by having parents develop and assign treatment tasks, communicate with school personnel, develop goals, and manage the reward system. See Table 2 for a detailed description of the sessions.

Table 2  
Overview of the 20 Sessions of the IBTSM Intervention

| Session | Title in Manual | Main Content  |
|---------|-----------------|---|
| 1       | Introduction    | Provide an overview of treatment and begin to increase the child’s comfort with the new situation |



| Session | Title in Manual                   | Main Content  |
|---------|-----------------------------------|---|
| 2       | Feelings chart, reward system     | Introduce and practice use of “feelings chart,” a developmentally friendly subjective unit of distress measure. Introduce family to the use of a behavioral reward system to reinforce speaking behaviors and assist them in the development of a tailored system |
| 3       | Class list and hierarchy building | Gather details about child’s verbal behavior with peers in the class. Construct a “talking ladder” or hierarchy (graded list of situations involving verbal communication that the child will be working on)  |
| 4       | Exposure practice*                | Review rationale behind exposure interventions and begin with in-session exposures that guide future in- and out-of-session exposures   |
| 5-9     | Initial (mild) exposures*         | Develop, execute and assign exposure exercises for situations where the child has difficulty speaking in-session and elsewhere (school, extended family, community, etc.)   |
| 10      | Treatment midpoint session        | Focus on review of progress to date and problem-solve obstacles to success (e.g., teacher or parent non-compliance with exposure tasks,   |

| Session | Title in Manual  | Main Content   |
|---------|--|--|
|         |  | problems with reward program, lack of generalization, child oppositionality)   |
| 11-14   | Intermediate (moderate) exposures*                             | Continue working on exposures from child's hierarchy ("talking ladder") with input from family and teachers  |
| 15      | Continued exposures* and introduction of transfer of control   | Continue exposure tasks and introduce concept of transfer of control as necessary process whereby responsibility for ongoing work is handed over to parent and child. Relevant as there will likely be continued work after formal treatment ends. Begin eliciting more ideas from parent/child for out-of-session exposures as part of the method of guiding them to direct treatment process |
| 16-17   | Advanced exposures and additional focus on transfer of control | Routinely working on more advanced exposure tasks and more focus on transferring control and responsibility for treatment to family as well as teacher if appropriate  |
| 18-19   | Review of progress/Advanced exposures and transfer of control  | Recognize areas where progress has occurred and identify situations where difficulty speaking remains.   |

| Session | Title in Manual                   | Main Content   |
|---------|-----------------------------------|--|
|         |                                   | Develop strategies to continue working in these areas particularly if functional impairment remains. Allow family and/or teacher to offer suggestions of exposures tasks to target remaining symptom areas   |
| 20      | Relapse prevention and graduation | Present child with progress chart to acknowledge and reinforce gains. Develop list of remaining challenges and together brainstorm ideas to continue working on these areas. Review relapse prevention strategies. Present graduation certificate and, if time permits, have small celebration |

\* When appropriate to the developmental level of the child, simple cognitive restructuring techniques can be added during these stages of the intervention

*Note.* From “Children who are anxious in silence: A review on selective mutism, the New Anxiety Disorder in DSM-5”, by P. Muris and T. H. Ollendick, 2015, *Clinical Child and Family Psychology Review*, 18, p. 163. Reprinted with permission.

### Control Group

Nine children were randomly assigned to the 12-week waitlist condition in the IBTSM study. All nine children completed the waitlist condition and subsequently entered into IBTSM treatment.

### Instrumentation

Measures in the original study (Bergman et al., 2013) included the following: (a) the Anxiety Disorders Interview Schedule for DSM-IV, Parent Version, (b) the Clinical Global Impression-Severity and Improvement Scales, (c) the SM Questionnaire (SMQ), (d) an Independent Evaluator Behavioral Evaluation, (e) the School Speech Questionnaire, (f) the Social Anxiety Scale for Children-Revised, the Strong Narrative Assessment Procedure-Retell, and (g) the Client Satisfaction Questionnaire. The Five Minute Speech Sample (FMSS) was also collected from parents at baseline, Week 24, and Week 36; however, these data were not transcribed, coded, or analyzed as part of the original analysis. An exploratory analysis of the FMSS's collected from mothers of children with SM was the focus of this dissertation study.

### Five Minute Speech Sample

The Five Minute Speech Sample was originally developed by Gottschalk and colleagues for the purpose of ascertaining degree of impairment via a quantitative analysis of a speech sample (Gottschalk & Gleser, 1969; Gottschalk, Gleser, Daniels, & Block, 1958). Originally studied within patients with schizophrenia, Gottschalk, Gleser, Daniels, and Block (1958) concluded that the quantitative analysis of certain speech patterns demonstrated in a free speech exercise of patients with schizophrenia provided a valid method to estimate intra-individual variations in the degree of schizophrenic disturbance. Correlations between speech content and two independent psychiatrists rating of impairment ranged from .44, .58, and .80 and were statistically significant according to a one-tail hypothesis during a cross-validation of revised schemata of scoring.

Magana, Goldstein, Karno, Miklowitz, Jenkins, and Falloon (1986) procedurally modified the FMSS used by Gottschalk and colleagues to assess caregiver attitudes and feelings regarding a mentally ill family member rather than to provide an analysis of speech patterns in patients. Magana and colleagues modified the instructions of the FMSS used by Gottschalk and colleagues to be more focused on “the respondent’s attitudes toward the mentally ill relative rather than on a personal or dramatic life event experienced by the respondent” (p. 205). (Procedures for the FMSS are described below). Additionally, these researchers also adapted the scoring system of the FMSS. Through these adaptations of the FMSS, Magana and colleagues (1986) sought to provide a valid measure of EE, a construct characterized by critical and extreme emotional overinvolvement of a relative toward their patient. EE is related to poorer patient clinical outcomes, diminished treatment response, and higher rates of relapse across a broad range of psychiatric disorders, including anxiety (Peris & Miklowitz, 2015). Magana and colleagues (1986) theorized that the FMSS would be much less cumbersome than the Camberwell Family Interview (CFI) which was the commonly used standardized interview used to assess EE and has been shown to be a strong and robust predictor of patient relapse (Van Humbeeck et al., 2002). The CFI often took 1 1/2 to 2 hours to administer and 3 to 4 hours to rate, whereas the FMSS takes 5 minutes to administer and 20 minutes to code (Magana et al., 1986). The scoring scales adopted for the FMSS include the following: initial statement, relationship, criticism, dissatisfaction, and emotional overinvolvement. Both content and tone are used as the vehicle for scoring, and EE is derived specifically from measures of emotional overinvolvement and criticism (Magana-Amato, 2016).

### Scoring of the FMSS

Scoring information from the FMSS was obtained from the Manual for Coding Expressed Emotion from the Five Minute Speech Sample by Ana Magana-Amato (2016). The FMSS is scored by considering the following 5 categories: initial statement, relationship, criticism, dissatisfaction and emotional overinvolvement (EOI). The initial statement is scored based on the first thought expressed by the respondent. This statement is scored as positive, neutral, or negative and is scored independent of the rest of the speech sample. The relationship is scored based on the overall quality from information provided by the respondent regarding how well the respondent and relative get along. The relationship is rated as positive, neutral or negative, and it is scored based on the entire language sample. The level of warmth of the respondent is assessed from the relationship rating and is assigned a numerical value of between 0-5.

Criticism, scored based on content and/or tone, is a negative statement based on the relatives' behaviors or characteristics. A frequency count is used to score the number of criticisms present in the language sample. Dissatisfaction is scored as present or absent and these statements indicate mild negative feelings about the relative's behavior or characteristics.

Emotional overinvolvement scoring is based on the following 5 categories: self-sacrificing overprotective behavior (language that represents extreme or unusual sacrifice, extreme enmeshment, and/or extreme or unusual overprotection), emotional display (crying during the language sample), statements of attitude (expression of feelings of love or willingness to do anything for the relative), excessive detail and/or irrelevant information about the past, and excessive praise.

High expressed emotion based on criticality (CRIT) is assigned for language samples which contain (a) a negative initial statement; or (b) a negative relationship rating; or (c) one or more criticisms. High expressed emotion based on emotional overinvolvement (EOI) is assigned for language samples which indicate (a) self-sacrificing/over protective behavior; or (b) emotional display; or (c) any two of the following: borderline self-sacrificing/over protective, one or more statements of attitude, excessive details about the past, or excessive praise (5 or more positive remarks).

Borderline critical (bCRIT) ratings are assessed if a language sample contains one or more statements of dissatisfaction. Borderline emotional overinvolvement (bEOI) scores are earned if language samples contain any one of the following: borderline self-sacrificing/overprotective behavior, one or more statements of attitude, excessive detail about the past or excessive praise (5 or more positive remarks). In this study, borderline ratings were placed in the Low category. Speech samples that do not indicate criticality or emotional overinvolvement are placed in the Low category of EE.

In this dissertation study, one modification was made to the scoring system. In light of Peris and Miklowitz's (2015) concern about the relevance of scoring excessive detail in young populations, this dimension was not scored in this sample as children were between the ages of 4-8.

### Psychometrics of the FMSS

In their review of literature regarding assessment instruments for EE, Van Humbeeck et al. (2002) reported that the FMSS has good internal consistency (greater to or equal to .8) and a reasonable test-retest reliability ( $r = .64$ ). Analysis of concurrent validity with the CFI reveals

that the FMSS underestimates the high EE by 20 to 30%. Given that the FMSS has demonstrated underestimation in comparison to the CFI, researchers Magana et al. (1986) suggest rating those speech samples that are found to be borderline EE as high EE. When this method is used, predictive validity of relapse is good ( $\chi = 6.59, df = 1, p < .02$ ; Van Humbeeck et al., 2002). It is interesting to note that in contrast to Van Humbeeck et al.'s (2002) reporting of test-retest reliability of the FMSS as .64, Leeb et al. (1991) described the FMSS as considerably stable with a mean interval of 5.6 weeks between administration one and administration two of the FMSS ( $\chi = 8.9, df = 1, p < .003$ ) in their study of cross-national reliability, concurrent validity, and stability to assess EE.

The method of assessment that is the gold standard to assessing parent-child interactions is direct observation. As such, Weston, Hawes, and Pasalich (2017) sought to determine how the FMSS is similar to this established method of assessment by examining 25 studies that incorporated both the FMSS and a parenting or parent-child interaction variable. The goal of these researchers was to “evaluate the assumption that the FMSS reflects moment-to-moment exchanges between parents and children” (p. 118). Importantly, in their analysis, they found that 20 of 25 studies were significantly associated with parent-child interactions. Specific to the FMSS coding system devised by Magana et al. (1986), the authors determined that of 12 studies that utilized this coding system or modified versions of it, 10 (83%) demonstrated an association between the FMSS and observed parent-child interactions, with correlations across studies ranging from small to large ( $r = .19-.65$ ; Weston et al., 2017). These findings contribute to the validity of the FMSS to assess the moment-to-moment exchanges, and these researchers concluded that the FMSS “holds strong potential as a brief but richly informative tool for



indexing parent-child dynamics-particularly affective dimensions of the parent-child relationship-in both research and clinical contexts” (Weston et al., 2017, p. 118). More specifically, they concluded that the FMSS may provide utility in clinical assessment because the FMSS has been shown to (a) provide differing ratings between parents of children with and without clinical levels of psychopathology, (b) significant differences between parents’ thoughts and feelings about their children from pre- to post-treatment, and (c) there is associated evidence from observational research of parent-child dynamics.

### Study Procedures

According to the university Institutional Review Board, this study has met the criteria for research that is not human subjects research. All data obtained for this secondary analysis was de-identified and is untraceable to any participant.

Data from the FMSS that were collected in the IBTSM study were analyzed. To collect this data from parents, researchers in the IBTSM study followed the same protocol for each participant. Parents were administered the following prompt at baseline, week 24, and week 36 by researchers affiliated with the study:

I’d like to hear your thoughts about [participant name] in your own words and without my interrupting you with any questions or comments. When I ask you to begin, I’d like you to speak for 5 minutes, telling me what kind of a person [participant name] is and how the two of you get along together. After you have begun to speak, I prefer not to answer any questions. Are there any questions you would like to ask me before we begin?

After this prompt was administered, parents were audiotaped for five minutes. At the end of five minutes, the audiotape was stopped.

Audiotapes were transcribed by the doctoral student and a research assistant who was trained by the doctoral student. The research student was trained to mutual consensus on audio

transcription. The research assistant and doctoral student achieved an inter-observer agreement rating of 95% (using percentage of agreement) for 20% of the transcribed tapes. Although 66 recordings were collected by IBTSM researchers, as a result of exclusion of fathers and poor audio quality, the number of recordings was whittled down to 18 paired recordings (9 pretreatment and 9 at End of Condition) that were eligible for inclusion in this analysis.

For analysis of a priori codes of expressed emotion, the doctoral student applied the coding procedure developed by Magana (1986). The doctoral student completed training with Ana Magana-Amato on how to code the FMSS in October 2017. Post training, both the doctoral student and Ana Magana-Amato each coded the same ten language samples to assess reliability. The doctoral student achieved 85% reliability with Ms. Magana-Amato with regard to the EE subgroup and 90% reliability with regard to overall EE ratings.

Consistent with Levitt, Bamberg, Creswell, Frost, Josselson and Suarez-Orozoco (2018)'s recommendation to demonstrate that findings are warranted and support methodological integrity, a process of combined scoring by two trained FMSS coders was utilized to determine reliability of the EE ratings in the language samples included in this exploratory analysis. Reliability was assessed for 39% of the speech samples and is calculated as within the moderate range according to categories suggested by Landis and Koch (1977; EE Overall kappa=.59; EE Subgroup kappa=.58).

### Data Analysis

A content analysis methodology was used to analyze emergent themes from the content of the speech sample. The scoring methodology devised by Ana Magana-Amato was used to determine EE ratings. In addition, parental overcontrol was also considered as an a priori code as

the literature base has in many cases implicated this factor as occurring at a higher rate among children with anxiety.

### Qualitative Content Analysis

Content Analysis was utilized to answer the following research questions:

Question 1: Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

Question 2: How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Epoche

Prior to reviewing any of the data collected, the doctoral student considered her role as the researcher and the potential bias this role may have had on interpreting the FMSS. Moustakas (1994) described this bracketing of experience as Epoche wherein “everyday understandings, judgments, and knowings are set aside, and phenomena are revisited, freshly, naively, in a wide open sense” (p. 33). Thus, this doctoral student considered her positionality and bracketed her experience to aid in accurate analysis of the data.

### Data Analysis

To conduct the content analysis, the doctoral student used inductive reasoning to determine emergent codes and deductive reasoning to evaluate a priori codes. A latent analysis was used wherein the doctoral student not only describes *what* was said by participants but also sought to find the underlying meaning of what the text is talking about (Bengtsson, 2016).

The following four stages of data analysis described by Bengtsson (2016) were used to conduct the content analysis: a.) decontextualization, b.) recontextualization, c.) categorization, and d.) compilation. A brief description of each step is defined in the following Table 3:

Table 3  
Description of Bengtsson (2016) Data Analysis

|                            |  |
|----------------------------|--|
| <b>Decontextualization</b> | Researcher familiarizes self with the data; reads to obtain a sense of the whole; break down into meaning units; create, describe and list codes   |
| <b>Recontextualisation</b> | Checks whether all content has been covered in relation to the aim of the study, re-read original text with meaning units, consider what to do with text not included in meaning units   |
| <b>Categorisation</b>      | Condense meaning units; identify themes and categories; all categories (a priori and emergent) must be rooted in the data, consider where meaning units are placed according to category/theme   |
| <b>Compilation</b>         | Draw realistic conclusions; choose appropriate meaning units in the text as quotations; present summary of themes, categories/subheadings; present one example of the analysis process; quantify and count variables including frequency of identified themes; consider in relation to literature; colleague reads text to determine if they are reasonable or not |

To ensure information was complete and accurate, a constant comparative method was used as the doctoral student moved through the data analysis stages.

## Trustworthiness and Validity of Research Findings

Quantitative research describes trustworthiness in terms of validity and reliability, whereas qualitative research describes trustworthiness in terms of credibility, dependability, and transferability (Graneheim & Lundman, 2004). For the qualitative content analysis, this research study advocates for the adherence to these aspects of trustworthiness. Graneheim and Lundman (2004) reviewed the literature base and extracted and described these elements of trustworthiness (p. 109-110) found in Table 4 below.

Table 4  
Graneheim and Lundman's (2004) Identified Elements of Trustworthiness

| Term            | Definition  | Source                          |
|-----------------|---|---------------------------------|
| Credibility     | Focus of the research, "refers to confidence in how well data and processes of analysis address the intended focus"             | Polit and Hungler, 1999, p.109  |
| Dependability   | "The degree to which data change over time and alterations made in the researcher's decisions during the data analysis process" | Lincoln and Guba, 1985, p.110   |
| Transferability | "the extent to which the findings can be transferred to other settings or groups"   | Polit and Hungler, 1999, p. 717 |

Threats to trustworthiness for this study include potential threats to credibility in that the small sample size may not have reached a data saturation point when identifying themes that mothers talk about with their children with SM and how this data may change across treatment. This secondary analysis is limited to the data that was collected during the original randomized

controlled study. Another possible threat to credibility is that participants may have self-protected or protected their child when providing information on the FMSS that is not positive or they may have provided a viewpoint they think is pleasing to the interviewer.

## CHAPTER FOUR: FINDINGS

### Introduction

The primary purpose of this study was to answer the following research questions:

**Research Question 1:** Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

**Research Question 2:** How does what mothers talk about change over the course of integrated behavioral treatment of their child who has SM?

This chapter presents the findings from these two research questions. First, results are presented by participant in a case analysis, then results are presented collectively by group (active and waitlist treatment conditions). Within the case analysis section, these findings are organized within each participant with the following structure: (a) demographics/background information (b) EE Subgroup and Overall EE rating, (c) research question 1 addressing emergent themes and a priori codes, and (d) research question 2 addressing emergent themes and a priori codes. Within the collective analysis section, findings are presented by active treatment group and then the waitlist treatment group. Finally, an overall synopsis of the results is presented.

### Case 1 (Participant 8 on IBTSM)

#### Demographics/Background Information

**Child:** Female, C.A.: 4 years, 10 months, Primary Diagnosis: SM, Secondary Diagnosis: Separation Anxiety, Tertiary Diagnosis: Social Phobia, SMQ Baseline total: 18 (mean=1.06), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill, Clinical Global Impressions Scale—Severity at Week 24: borderline mentally ill, Clinical Global Impressions Scale-Improvement at Week 24: Very Much Improved

**Mother:** C.A.: 44 years old, Mother reported problems present with shyness when a child, Mother reported no trouble talking in certain situations when child, No reported history of Obsessive-Compulsive Disorder (OCD), Anxiety, Depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, M.1's language sample consisted of the following themes: characteristics of the child with SM, activities, child's difficulties other than SM, relationship within the family, and thoughts related to SM.

### Characteristics of the Child with SM

According to M.1, characteristics of C.1 include being extremely bright, artistic, curious, inquisitive, and wants to learn new things. M.1 shares that C.1 likes to cuddle. M.1 reports that C.1 is a good student and that teachers love her because she "follows all the directions and does exactly what she's told to do and listens very carefully and wants to do a good job." M.1 shares how it is important to C.1 that C.1 is very competent, and she wants to do a good job as a student. M.1 also described C.1 as "very stubborn, extremely stubborn."

### Activities

Prior to treatment, M.1 stated that C.1 likes reading, drawing and writing.

### Child's Difficulties Other Than SM

Throughout the language sample, M.1 describes areas where she thinks C.1 has difficulty. In addition to her SM diagnosis, M.1 described C.1's control issues. Notably, while her SM



behavior earned one comment in the baseline language sample from M.1, C.1 's difficulty with control issues and relationship difficulties associated with control earned mention six times by M.1. M.1 shares that C.1 is very stubborn and seems to have inherited that trait from her strong-willed parents. M.1 describes C.1 as manipulative and that she "exploits her sister's weaknesses to the fullest extent when she is in the mode for it." M.1 reports that C.1 has a strong need to be in control and she is rule-follower. M.1 predicts that C.1 will be her "terror teen" because she "is not easily swayed from her mind." Relatedly, M.1 reported that C.1 wants to be very competent, so she always wants to learn new things and "asks a ton of questions, a million questions all the time to the point where she can make you crazy" and her questions keep "going and going and going."

#### Relationships Within the Family

M.1 described areas of relationship challenges in the baseline language sample. M.1 states that they struggle a lot with C.1 being strong willed and that it is very important to C.1 to "control mommy." Because C.1 does not like to be forced to do anything, M.1 reports spending a lot of time trying to convince C.1 it's C.1's own free will to do things and reports this is always challenging. Another relationship difficulty M.1 reports is that C.1 is cooperative for everyone else, including at school, but is not cooperative with her parents and especially gives M.1 a hard time.

#### Thoughts Related to SM

Regarding C.1's SM, at baseline M.1 made one comment that indicated that she knows that C.1 has a "genuine fear in her" and that she is afraid to talk to people. This comment was

embedded in language surrounding her daughter's need for control and states that "once we get over that [fear of talking to people] we can get into some of the control issues."

#### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.1's language samples indicated a negative relationship rating (1 on the Warmth scale). During the language sample, M.1 presents a lot of evidence for a difficult relationship that includes "doing battle" over her daughter's need to be in control. She is rated as a 1 rather than a 0 because she does provide some evidence of warmth in that M.1 states that C.1 is "kind of my cuddle baby."

M.1's language sample contains two criticisms regarding C.1. M.1 is rated as critical because of her repeated references to C.1's question-asking ("asks a ton of questions, a million questions all the time to the point where she can make you crazy," "you can't give her the short [answer], there is no short answer to Anya and she keeps going and going and going so she's very curious and very inquisitive all the time" and states that "she can make you crazy". Another criticism is that M.1 also reports that when C.1 is not in a good mood she can make you miserable.

M.1 does not indicate any emotional overinvolvement in this speech sample. Her EE Subgroup is Critical based on criticism and a negative relationship rating, and her EE Overall is rated as High.

This language sample presented some evidence that should be evaluated further to see if maternal overcontrol is present. M.1's language sample revealed many difficulties surrounding control in the mother/daughter relationship. While it is not directly stated, the mother does indicate that she [the mother] is strong willed and stubborn, and that she and her daughter often

“do battle” over control issues. Despite saying that she herself is strong willed and stubborn, M.1 attributes many of the battles over control issues to C.1’s motivation/need to be in control.

### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

At the end of condition at 24 weeks and after 12 weeks of treatment (EOC), M.1 described C.1 in much the same way although improvements were noted.

### Characteristics of the Child with SM

Similarities noted in M.1’s language sample in regard to C.1’s characteristics between baseline and EOC language samples include M.1’s description that C.1 is a bright, curious, asks many questions, is a good student and feeling competent is very important for C.1. In the baseline sample, M.1 described C.1 as a little artistic, in the EOC language sample, M.1 described how C.1 is creative. Differences noted between baseline and EOC include that M.1 did not mention in EOC that C.1 likes to cuddle. M.1’s EOC language sample described a C.1 with a few more adjectives, although all were consistent with previous descriptions. More specifically, in the EOC sample, M.1 stated that C.1 was very determined, independent, academically advanced, a rule follower, and a perfectionist. In the EOC language sample, M.1 also noted that other kids “seem to like her, but she doesn’t necessarily, she doesn’t try to do things just to please people.” M.1 described C.1 as “stubborn, extremely stubborn” in the baseline sample, and in the EOC sample, she described C.1 as a “very determined child.”

### Activities

At baseline, M.1 mentioned that C.1 likes to read, draw and write. M.1 did not mention any of C.1's activities in the EOC language sample.

### Difficulties Other Than SM

Similarities between the baseline and EOC language sample include M.1's description of C.1's control issues. In the baseline sample, M.1 states that C.1 "very much wants to be in control" and in the EOC language sample, M.1 states "she wants to be in control and do her own thing".

### Relationships Within the Family

Between baseline and EOC, M.1's description of relationships within the family remained consistent. At baseline, M.1 stated that they often "do battle" over C.1's control issues and in the EOC language sample, M.1 stated that "we have our power struggles, a lot of power struggles, and we have to work through that all the time, a lot of it control issues." In addition, language samples were consistent regarding C.1's desire for attention from M.1. At baseline, M.1 stated C.1 in "kindof my cuddle baby...she wants a lot of attention from mom, that's very important to her" and at EOC, M.1 stated "she's definitely a mommy's girl in that she wants to be around her mom and she want's mommy's attention". However, at EOC, M.1 did report an improvement in this area when she stated that her daughter continues "to want mommy's attention," but that she has "gotten a lot less clingy which is good."

### Thoughts Related to SM

Meaningful differences were noted between M.1's description of her daughter's SM between baseline and EOC. At baseline, the only comment regarding C.1's SM was when M.1

stated that her daughter has a “genuine fear in her” to talk to other people. At EOC, M.1 described an improvement in C.1’s symptoms of SM. More specifically, M.1 stated C.1 is “less clingy” and that “she has grown up a lot this summer.” M.1 reported that she did “*much* better with social skills this summer, ” and “did well socially with other family members that she normally would not have even talked to or hung out with. She would actually seek them out, so she’s definitely grown up a lot this summer and changed a lot.”

#### A priori Codes: Expressed Emotion and Overcontrol

After treatment, M.1’s EE rating remained the same. In both the baseline and EOC language samples, M.1 earned a High EE rating based on criticism and negative relationship rating. M.1’s language sample did evidence 2 criticisms in the baseline sample, and 1 criticism in the EOC language sample. In addition, her level of warmth decreased marginally as M.1 still reported the many struggles with their relationship but did not provide any evidence of positivity (0 positive remarks and no evidence of a positive relationship in the EOC language sample.) See Table 5 for detail regarding EE ratings.

Table 5  
EE Rating for Baseline and End of Condition for Case 1

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | 0        | 0                |
| Relationship (+, 0, -)                  | -        | -                |
| Warmth (0, 3, 5)                        | 1        | 0                |
| Critical Comments (#)                   | 2        | 1                |
| Dissatisfaction (P/A)                   | P        | P                |
| Emotional Display (P/A)                 | A        | A                |
| Statement of Attitude (#)               | 0        | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | A        | A                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 0        | 0                |
| EE Subgroup                             | Critical | Critical         |
| EE Overall                              | High     | High             |

In regard to overcontrol, the description of control issues did not change from baseline to EOC. M.1 continues to attribute control issues to C.1, and in the EOC language sample, M.1 states that they have “power struggles, a lot of power struggles, and we have to work through that all the time, a lot of it control issues.”

### Case 2 (Participant 15 on IBTSM)

#### Demographics/Background Information

**Child:** Female, C.A.: 7 years, 8 months, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 12 (mean=.71), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill, Clinical Global Impressions Scale—Severity at Week 24: Markedly Ill, Clinical Global Impressions Scale-Improvement at Week 24: No Change

**Mother:** C.A.: 33 years old, Mother reported problems present with shyness when a child, Unknown if trouble talking in certain situations when child (missing data), No reported history of Obsessive-Compulsive Disorder (OCD), Anxiety, Depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child with has SM?

### Emergent Themes

Prior to treatment, M.2's language sample consisted of the following themes: characteristics of child with SM, activities, difficulties other than SM, relationships within the family and thoughts related to SM.

### Characteristics of the Child with SM

M.2 reveals the daughter often tries "a lot" to please her mother, and to get good grades and be the best student she can be. M.2 describes C.2 as well-rounded, and very competitive. M.2 states that C.2 is "not shy" and explains that she wants to participate in everything, but SM is "really holding her back." According to M.2, C.2 is a fast runner.

### Activities

M.2's language sample reveals that C.2 loves school and loves playing the piano. In addition, C.2 loves playing with her friends, going shopping and out to eat with her mother. According to M.2, C.2 loves to go to swimming, but that changes from week-to-week. She also loves going to Sunday school and Disneyland.

### Difficulties Other Than SM

M.2 stated that her daughter had a hard time following direction. This is the only difficulty other than SM that was indicated by M.2.

### Relationships Within the Family

In regard to relationships with family, M.2 reports that she and C.2 get along “very well” and are “very close to one another.” M.2 shares that she and C.2 really enjoy each other, and they like to shop and eat out together. According to M.2, C.2 is getting closer to her dad because he is “becoming more involved in her and taking care of her and fulfilling the responsibilities associated with having a little one around.”

### Thoughts Related to SM

Regarding C.2’s SM, M.2 reports that she can feel how C.2 is struggling because she’s not shy—she wants to participate in everything but having the selective mutism is really holding her back because she’s limited in how she can communicate with others, and I can feel the struggle because I know she wants to talk. I just know she can’t. She can’t get up the courage or whatever she needs.

M.2 states that she feels thankful for C.2’s school and her “accepting teachers,” and M.2 is also thankful for family support. M.2 shares that C.2 is excited to come to the city of where treatment is located, because she has never been there. M.2 shares they are planning to do a touristy activity after they are done with their treatment session.



### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.2 presented evidence for a positive relationship (5 on the Warmth scale) as M.2 directly states that they get along together very well and are very close. Further, numerous examples are given of activities that they like to do together.

M.2's speech sample does not contain any critical comments or dissatisfaction. There is borderline self-sacrifice/overprotection, as she states on two different occasions that she "feels" her daughter's struggle with SM. Thus, at baseline, M.2's EE Subgroup is borderline Emotional Overinvolvement and her EE Overall is Low.

This language sample contained evidence that is associated with overcontrol. The statement "if I ask her to do something, she does it; if I ask her not to do something she doesn't do it" combined with the statement that her daughter "tries so hard" to follow the system of structure that is set up is some evidence suggestive that the mother is interested in regulating and controlling her child's behavior.

### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

At the end of the condition at 24 weeks and after 12 weeks of treatment (EOC), similarities and differences were noted within the themes of characteristics of child with SM, activities, relationships within the family, and thoughts related to SM.

### Characteristics of the Child with SM

More specifically, in the area of characteristics, M.2 continued with the same description that C.2 follows rules and obeys directions. More specifically, in the baseline language sample, M.2 states “if I ask her to do something she does it, if I ask her not to do something she doesn’t do it.” In the EOC language sample, M.2 stated that C.2 “obeys directions I think fairly well for someone her age. She does her homework when I ask her too, she practices her piano when I ask her to.” In addition, in the baseline sample, M.2 reported that C.2 tries a lot of please others, and in the EOC language sample, M.2 reported that C.2 is considerate and conscientious. In this EOC language sample, M.2 did describe her as sweet, loving and considerate which were not included in the baseline language sample, but they are not inconsistent with the positive remarks shared in the initial language sample.

### Activities

In regard to activities C.2 engages in, M.2 was much more descriptive regarding C.2’s activities during baseline, and during the EOC language sample, M.2 indicated that C.2 enjoys shopping. M.2 also shared activities that they do together as family such as going to Disneyland and Wild Rivers, watching movies and playing games.

### Difficulties Other Than SM

In the baseline language sample, M.2 reported that C.2 had some difficulty with following directions, but that M.2 had set up a structure that C.2 tries “so hard” to follow. M.2 reported the new structure a successful in helping her follow directions. In the EOC language sample, M.2 reported that C.2 “obeys directions fairly well for someone her age.”

### Relationships Within the Family

Similar to the baseline, in the EOC language sample, M.2 shared that C.2 had good family relationships. M.2 did note further details regarding their relationship during the EOC tape in that they conflict because C.2 “tends to lose track and get off task sometimes.” M.2 shared that she has a lot going on and tends to be less patient when C.2 is off task. Further, M.2 reports that they conflict because C.2 doesn’t keep her room “super clean.”

### Thoughts Related to SM

In the baseline language sample, M.2 shared information regarding her child’s difficulties with SM and M.2 reported how SM is really holding her back and that she can feel how C.2 struggles. In the EOC language sample, M.2 did not share many concerns related to SM, however, she did report an example of success during a recent exposure. The mother stated C.2 “asked-I asked her to ask—the sales person what the color [lipstick] was that she wanted.” Also, in the beginning language sample, M.2 shared that C.2 was excited to come to the city where treatment was occurring and that they were planning to do some touristy things after the session was finished. During the EOC language sample, M.2 reported that C.2 “doesn’t much like coming” to treatment but she “accepts why she’s coming and she’s doing a pretty good job with her assignments.” Finally, while M.2 only indicated that C.2 loves Sunday School in the initial sample, in the EOC language sample, she added additional. More specifically, M.2 described how M.2 helps teach Sunday school once a week with C.2 and she states that “they like to have me there.”

### A priori Codes: Expressed Emotion and Overcontrol

In regard to a priori codes, comparison of baseline language sample to EOC language samples was very consistent and did not reveal any meaningful differences. M.2 was rated the same in all areas warmth (5), negativity/criticism (0), and emotional overinvolvement (borderline). In both baseline and EOC, M.2's EE subgroup was borderline EOI and her EE overall is rated as Low. See Table 6 for detail regarding language sample ratings.

Table 6  
EE Rating for Baseline and End of Condition for Case 2

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | +        | +                |
| Relationship (+, 0, -)                  | +        | +                |
| Warmth (0, 3, 5)                        | 5        | 5                |
| Critical Comments (#)                   | 0        | 0                |
| Dissatisfaction (P/A)                   | A        | A                |
| Emotional Display (P/A)                 | A        | A                |
| Statement of Attitude (#)               | 0        | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | b        | A                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 2        | 8                |
| EE Subgroup                             | bEOI     | bEOI             |
| EE Overall                              | Low      | Low              |

In regard to overcontrol, M.2's baseline and EOC language samples contained statements suggestive of some maternal behavioral overcontrol. As noted, in the baseline sample, M.2 reported a struggle with having C.2 follow directions. As a result of C.2's difficulty, M.2

reported that she implemented more structure that C.2 “tries so hard to follow”. M.2 stated “if I ask her to do something, she does it, if I ask her not to do something she doesn’t do it”. In the EOC language sample, M.2 reports that C.2 “obeys directions fairly well for someone her age. She does her homework when I ask her too, she practices piano when I ask her to.” M.2 also reports some conflict then C.2 doesn’t follow directions. Finally, M.2 shares that she and C.2 conflict about C.2 not having her room “super clean.”

### Case 3 (Participant 16 on IBTSM)

#### Demographics/Background Information

**Child:** Male, C.A.: 5 years, 9 months, 25 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 9 (mean=.53), Clinical Global Impressions Scale-Severity at baseline: Moderately Ill (4), Clinical Global Impressions Scale—Severity at Week 24: Mildly Ill (3), Clinical Global Impressions Scale-Improvement at Week 24: Improved (3)

**Mother:** C.A.: 33 years old, Mother reported problems present with shyness when a child, Mother reported trouble talking in certain situations when child, No reported history of Obsessive-Compulsive Disorder (OCD), Anxiety, Depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

#### Emergent Themes

Prior to treatment, M.3’s language sample consisted of the following themes: characteristics of child with SM, relationships within the family, child’s difficulties other than SM, and thoughts related to SM.

### Characteristics of the Child with SM

According to M.3, characteristics of C.3 include being very loving, caring, and sweet.

### Relationships Within the Family

M.3 does not directly talk about her relationship with her son in this language sample. However, she does talk about her relationship with the child's father. M.3 states that she and the child's father "often butt heads" over their parenting styles and the approaches that they have for C.3. She describes the father as "more stern and practices tough love and follow through and is pretty strict in some ways" and M.3 states that she tends to be more of the "soft gentler approach."

### Difficulties Other Than SM

M.3 states that C.3 has history of tantrums that "linger for a long time." He has progressed to throwing tantrums quietly, but M.3. said that "you know he's upset because he would either pinch or scratch or something...he would hurt you somehow". She gave a recent example where he was holding his mother's hand and he put "his nails into it, he was upset with me...and I was trying to figure out what he needed."

### Thoughts Related to SM

M.3 spent a lot of her speech sample talking about her thoughts related to C.3's SM. She reported that when he first began preschool, "he was not as social" as his parents had hoped. M.3. expressed concerns related to her part in C.3's SM diagnosis. She stated that she was concerned that she missed opportunities to work with him because of her work schedule, wonders if C.3's father being away for 2 months during the summer while he was in preschool affected him, and feels guilty for not doing more for her son. Mom wonders if his difficulties are

related to her not giving him enough attention or if it is because she didn't help him enough academically.

Directly related to SM, she reports that C.3. had a good start at a Christian preschool and they were very loving/nurturing and it was a "good stimulating environment for him." M.3 reports that he did have meaningful relationships with kids his age. According to M.3., they changed his preschool to a corporate preschool and this change "impacted him." She reports that C.3.'s brother was there at the new school and M.3. thinks C.3. is more secure with his brother around.

M.3 reports that deciding how to approach C.3's difficulties has caused conflict between herself and the child's father. As noted above, she describes parenting differences and says they often butt heads regarding parenting style.

#### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.3. presented evidence for a neutral relationship (3 on the Warmth scale) M.3's language sample does not include any statements categorized as critical; however, the sample does exhibit elements of dissatisfaction in that "he is not as social as we had hoped." This presence of dissatisfaction warrants a borderline critical rating.

M.3 reported several statements that are considered to be borderline self-sacrificing/overprotective. As such, M.3's language sample is rated as borderline EOI. Her overall EE subgroup is borderline Critical, borderline EOI, and her overall EE category is Low.

There is mild evidence that suggests further evaluation is warranted to determine if overcontrol is present. M.3. describes the father as "stern, practices tough love and follow through, and is pretty strict in some ways."

## Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

#### Characteristics of the Child with SM

At the end of condition at 24 weeks and after 12 weeks of treatment, M.3. continued to use positive characteristics to describe C.3.; however, these characteristics were different. At baseline, M.3. described C.3. as sweet, very loving and caring. At EOC, the mother described C.3. as well rounded, a good student, well-liked by his peers, thoughtful, and polite.

Interestingly, she described C.3's politeness as he will "ask for permission for all kinds of stuff."

#### Relationships Within the Family

A meaningful positive difference is evident in the area of relationships within the family from the baseline language sample to the EOC language sample. At baseline, M.3 described her relationship with the child's father in that they "butt heads" regarding parenting styles and they disagree on approaches to take with C.3. In the EOC language sample, she reported that she and her husband are a "good team" and that "we're trying the best we can...to work out this disorder." During the baseline language sample, M.3 did not reference any relationship other than the difficulty she was experiencing with C.3's father, but at EOC she stated they spend a lot of family time together, there is a deep love between the C.3 and his brother, and that they have a supportive extended family.



### Difficulties Other Than SM

In respect to difficulties other than SM, M.3. talked about C.3's tantrums in the baseline sample, but she did not reference any tantrums or other difficulties regarding C.3's behavior in the EOC language sample.

### Thoughts Related to SM

Many differences were noted between the baseline and EOC language sample in regard to M.3.'s discussion related to C.3's SM. At baseline, M.3's description contained a lot of language related to what may have caused C.3's SM and statements related to the role that she may have played in the development and maintenance of C.3's SM. In the EOC language sample, statements that indicated that she felt responsible were absent and a much more optimistic tone was present. In the EOC language sample, the mother reported that he doesn't have a lot of play time with other kids, but he spends a lot of time with cousins and extended families. She reported that they are doing the best they can to work out this disorder, and they hope he'll "get over it eventually." M.3. hopes that by encouraging interactions with others, C.3. will see the benefits of talking and sharing things with friends and his family. She reported that he is very vocal in restaurants and that he speaks well in front of strangers, but has a harder time when people are close to him. M.3 stated that with those close to him

he tends to be a little more reserved and shy and quiet...I don't know if he cares more about their feelings, about how he sounds, or if there's some sort of self-esteem or insecurity there, but I think that little by little, it's coming out.

At the end of her EOC language sample, the mother reports that C.3. blurted out in a really loud tone of voice and he “just let his cousin hear”. M.3. states that “we were really excited about it and I almost stopped the car.”

A priori Codes: Expressed Emotion and Overcontrol

At EOC of 12 weeks, this mother’s EE rating remained unchanged from borderline Critical and borderline EOI at baseline to borderline Critical and borderline EOI at EOC. This puts M.3 in the Low EE category at baseline and at EOC. See Table 7 for detail.

Table 7  
EE Rating for Baseline and End of Condition for Case 3

| Category                                | Baseline    | End of Condition |
|---|-------------|------------------|
| Initial Statement (+, 0, -)             | +           | +                |
| Relationship (+, 0, -)                  | 0           | +                |
| Warmth (0, 3, 5)                        | 3           | 5                |
| Critical Comments (#)                   | 0           | 0                |
| Dissatisfaction (P/A)                   | P           | P                |
| Emotional Display (P/A)                 | A           | A                |
| Statement of Attitude (#)               | 0           | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | b           | A                |
| Excessive Detail (P/A)                  | A           | A                |
| Positive Remarks (#)                    | 3           | 4                |
| EE Subgroup                             | bCrit, bEOI | bCrit            |
| EE Overall                              | Low         | Low              |

Although there is mild evidence suggestive of possible overcontrol in the baseline sample, there was no evidence of overcontrol in the EOC language sample.

## Case 4 (Participant 29 on IBTSM)

### Demographics/Background Information

**Child:** Female, C.A.: 6 years, 2 months, 12 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 15 (mean=.88), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill (5), Clinical Global Impressions Scale—Severity at Week 24: Mildly Ill (3), Clinical Global Impressions Scale-Improvement at Week 24: Much Improved (2)

**Mother:** C.A.: 41 years old, Mother reported problems present with shyness when a child, Mother reported trouble talking in certain situations when child, History of maternal anxiety and depression, no history of OCD

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, this mother's language sample consisted of the following themes: characteristics of her child with SM, and activities.

### Characteristics of the Child with SM

Regarding characteristics, M.4 described C.4 as very caring, has a big heart, and explains that she likes to take care of everyone. More specifically, M.4 states that if C.4's dad has a headache she wants him to feel better and will get him a drink, and if M.4 is lying down on the sofa, C.4 will offer to rub her back. M.4 reports that she is also this way with her brother and sister. M.4 reports that C.4 also like to help a lot around the house. M.4 reports that C.4 is very bright, loves learning, is often independent with her homework and that math comes easily to her.

## Activities

M.4 states that C.4 loves to draw and will “often spend hours at her little table drawing pictures for the whole family.” C.4 likes to swim, play soccer, likes going to school, loves to watch TV, loves to go shopping and loves to go out to eat with her family. M.4 explains they often go out to eat because of everyone’s busy schedules.

### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, this mother is rated a 5 in warmth. M.4’s language sample does not include any evidence of negativity/criticism, or overinvolvement. The EE Subgroup is Low and EE Overall is Low. In addition, overcontrol was not evident in this language sample.

## Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

At baseline, M.4 described characteristics of C.4 and C.4’s activities. At EOC, M.4.’s language sample contained descriptions of language that falls into three additional themes that were not present at baseline. These three additional themes present at EOC include relationship within the family, difficulties other than SM, and M.4’s thoughts related to C.4’s SM diagnosis.

## Characteristics of the Child with SM

At the end of condition and after 12 weeks of treatment, M.4 used different adjectives to describe her daughter, however, they represent a consistent picture in that all characteristics mentioned were positive. At baseline, M.4 described her daughter as caring, helpful, bight, and independent with homework. At EOC, M.4 described C.4 as very loving, usually fun to be

around, gets excited easily about things, and has good manners. She reports C.4 has a really good laugh and personality.

### Activities

Regarding activities, at EOC, M.4. only mentioned that C.4 loves drawing and is consistent with her baseline description that C.4 “can spend hours sitting at her table drawing.”

### Relationships Within the Family

Regarding relationships within the family, M.4 explains that she and C.4 spend a lot of time together running errands. M.4 reports that she often “drags her everywhere I go” because C.4 is her youngest child, and they have fun together getting their nails done. M.4 explains that they often talk while they are in the car that C.4 often talks about things that “have happened in school, or things she likes, or things that she wants to do when she grows up.” Also, regarding relationships, M.4 reports that C.4 often gets away with more things with her in comparison to C.4’s dad. M.4 reports that “she’s learned how to do that and yet...when she’s pushed the wrong button, she backs off and she’ll listen to me.”

### Difficulties Other Than SM

Regarding difficulties other than SM, M.4 did not report any difficulties other than SM in the baseline, but M.4 did report that C.4 has difficulty going to bed at night in the EOC language sample. More specifically, M.4 states that she tucks her in at night and they “do all the things that you have to do, before I know it she’s up asking me a question that she says he needs to ask me, she forgot to ask.” M.4 reports that this happens 2-3 times a night.

### Thoughts Related to SM

M.4 didn't describe any thoughts related to C.4's SM at baseline; however, at EOC, M.4 described their trips to therapy. M.4 states that she tries to make them special because they are tiring for C.4. M.4 reports that they often "make it a fieldtrip" and afterwards go out and get something good to eat and get dessert somewhere. Also, M.4 will make it a point to have music in the car that C.4 likes. When discussing how great her child's laugh was to listen to, M.4 lamented that "that's a side [of C.4] that sometimes people don't see to her and I wish they did because she...just has a really good personality." M.4 indicates that she wants her daughter to be able to laugh

without feeling like people are watching her, like it's something bad to laugh that way, or to feel like she can't express her thoughts or her opinions because somebody's gonna make fun of her. Or let's say she's embarrassed of what people are gonna think if she says the wrong thing. I want her to be able to just go through life being able to do that and not being held back because of what...someone's gonna say or think about her. And I think once she realizes that you can do that, then I think she will do it and she will be that much happier because she has that confidence and that freedom to express herself and to think what she believes in.

### A priori Codes: Expressed Emotion and Overcontrol

After treatment, M.4's overall EE rating remained in the Low category. Her reported relationship remained positive (Warmth=5) and Emotional Overinvolvement remained absent in the EOC language sample. Dissatisfaction was absent in the baseline language sample, but present in the EOC language sample; therefore, her EE subgroup changed from Low at baseline

to Borderline Critical in the EOC language sample. This did not affect her overall rating, as borderline ratings are placed into the Low category. See Table 8 for EE ratings.

Table 8  
EE Rating for Baseline and End of Condition for Case 4

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | +        | +                |
| Relationship (+, 0, -)                  | +        | +                |
| Warmth (0, 3, 5)                        | 5        | 5                |
| Critical Comments (#)                   | 0        | 0                |
| Dissatisfaction (P/A)                   | A        | P                |
| Emotional Display (P/A)                 | A        | A                |
| Statement of Attitude (#)               | 0        | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | A        | A                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 4        | 4                |
| EE Subgroup                             | Low      | bCrit            |
| EE Overall                              | Low      | Low              |

There was no evidence of overcontrol in the baseline or the EOC language sample.

#### [Case 5 \(Participant 30 on IBTSM\)](#)

#### Demographics/Background Information

**Child:** Female, C.A.: 5 years, 5 months, 26 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 26 (mean=1.53), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill (5), Clinical Global Impressions Scale—Severity at Week 24: Borderline Mentally Ill (2), Clinical Global Impressions Scale-Improvement at Week 24: Very Much Improved (1)

**Mother:** C.A.: 37 years old, Mother reported problems present with shyness when a child, Mother reported trouble talking in certain situations when child, History of maternal anxiety, No history of depression or OCD

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, M.5's language sample consisted of the following themes: characteristics of the child with SM, relationships with the family and thoughts related to SM.

### Characteristics of the Child with SM

M.5 describes C.5 as a serious, observant child. M.5 reports that C.5 was a colicky and difficult infant and that she was so happy when C.5 started sucking her thumb at three weeks old because "that was the only thing that would comfort her." M.5 reports that C.5 still sucks her thumb.

### Relationships Within the Family

M.5 shared in the language sample that she and C.5 "get along very well for the most part" and M.5 feels very protective of C.5. M.5 states that she and C.5 have a special bond and that M.5 sees a lot of herself in C.5. More specifically, M.5 states that she was shy when she was younger, although she reports that she is not now. M.5 indicates that she always tries to see the good in C.5 and all her strengths as opposed to the things they would like to change.



### Thoughts Related to SM

M.5 shares many thoughts that pertain to C.5's SM diagnosis in this language sample. M.5 describes C.5's experience with SM through the years. M.5 shares that when M.5 was an infant she was "not like other babies that could look at a stranger" and that strangers couldn't look at her and bring out a smile. M.5 reports that C.5 likes to be close to her parents and "has always been someone that always needed that comfort zone around her." M.5 mentions that just before C.5 was two years old, M.5 noticed that if adults or kids would talk to C.5, C.5 would turn her back without eye contact and "it just seemed like she was kinda keeping the whole world at a distance except for her immediate family and a few close relatives." M.5 reported that C.5 began preschool because M.5 was pregnant and she "just needed a break from this child that was just always by my side."

When C.5 started preschool, M.5 indicated that C.5 persisted with not speaking, and stated that "it was like everybody there was a piece of furniture and if a kid asked her a direct question she wouldn't even acknowledge, she wouldn't play with anyone." M.5 indicated C.5 often cried at the beginning, but she did get over it. M.5 shared that preschool was only two days a week for three hours and M.5 thought "it's gonna happen because I have to have a break." M.5 reported that after C.5's brother was born, he was a big help to C.5 because he's "kindof an icebreaker for her." M.5 states that C.5 has her brother go in first and he will "sort of talk for her even though he's not superverbal because he's only 2 and a half...he's just much more of an explorer, less cautious, kind of a 'throw it to the wind' sort of kid, so that's been a good match for the two of them."

M.5 reports that C.5 made some progress over the years. More specifically, at the end of her 2<sup>nd</sup> year in preschool, one teacher would “sit at the table and maybe hear her voice quietly, but no one else.” She also has been able to make one friend each year that she is able to talk to and play with. M.5 reports that currently, after three years in the same school, C.5 loves school, doesn’t speak to any of the teachers, but has a friend she enjoys playing with. M.5 states that the first year C.5 wouldn’t run or climb on the playground, but this year M.5 sees her running and laughing, and she “has gotten to the point where she would hit her hand on the desk or nod if a certain teacher would ask her a question.” Finally, M.5 reports that C.5 has also made improvement in the church group they attend. Whereas previously C.5 wouldn’t even look up or acknowledge that they called on her, now two and a half years later, she will come up to the front and hold a picture.

#### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.5 presents evidence for a positive relationship (Wamth=5). No criticisms were evident in this language sample, although dissatisfaction is present. This language sample revealed that Emotional Overinvolvement is present based on Self-Sacrifice/Overprotection based on 2 different statements indicating that M.5 is overprotective (“I think I’m very protective of her”) and that she is overwhelmed and needs a break. Thus, her EE Subgroup is borderline Critical and EOI and her EE Overall is High.

In regard to overcontrol, the evidence is unclear as to whether or not overcontrol is present. M.5 makes a statement “I think I’m very protective” of C.5. Further investigation in the assessment process would be needed to determine if M.5’s protective behavior translated into overcontrol.

## Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

At the end of condition at 24 weeks and after 12 weeks of treatment, several differences were noted in M.5's language sample in comparison to the baseline language sample. The differences are discussed below.

### Characteristics of the Child with SM

M.5 discussed some of C.5's characteristics in the baseline sample, this theme did not arise in the EOC language sample.

### Activities

In the EOC language sample, M.5 indicated that C.5 likes to do activities such as art, gymnastics and sings at church; whereas this theme was not present in the baseline sample.

### Relationships Within the Family

Regarding the theme of relationships, M.5's content was very similar in the baseline and the EOC language sample in regard to relationship quality between mother and child. M.5 indicated in both language samples that she and C.5 have a close bond and she (M.5) is very protective. One difference is that in the baseline language sample, M.5 indicated two times her need for a break from "this child that was just always by my side." At EOC, the M.5 did not mention any need for a break.

### Thoughts Related to SM

In regard to M.5's thoughts about C.5's SM diagnosis, M.5's language samples at baseline contained information regarding C.5's challenges as well as improvements; however, in the EOC language sample, M.5 only described C.5's improvements. This is consistent with M.5's statement in the baseline sample "we really try to look for the good in her and all of her strengths as opposed to the things we would like to change." More specifically, in the baseline language sample, M.5's description contained a detailed description of C.5's challenges, as well as information on improvements such as C.5 eventually being able to nod her head to answer a question after three years in the same school, and C.5's acknowledgement of people's questions at church. In the EOC language sample, M.5 reported all her daughter's difficulties related to SM within the context of improvement. More specifically, M.5 reported that C.5 has "blossomed tremendously" and that M.5 is "pleased to see her personality develop." M.5 states that C.5 is feeling more at ease and comfortable in situations that used to be difficult and that "she may not be able to talk to everyone a mile a minute, but she responds much more than she used to." M.5 reports that others in a variety of settings have noticed that C.5 is "coming out of her shell."

#### *A priori Codes: Expressed Emotion and Overcontrol*

After treatment, M.5's EE rating remained in the High category. M.5 earned a High EE rating based on Emotional Overinvolvement in both her baseline and EOC language sample. Her positive relations (Warmth=5) and number of criticisms (0) remained the same from baseline to EOC language sample. See Table 9 for detail regarding EE ratings.

Table 9  
EE Rating for Baseline and End of Condition for Case 5

| Category                                | Baseline   | End of Condition |
|---|------------|------------------|
| Initial Statement (+, 0, -)             | +          | +                |
| Relationship (+, 0, -)                  | +          | +                |
| Warmth (0, 3, 5)                        | 5          | 5                |
| Critical Comments (#)                   | 0          | 0                |
| Dissatisfaction (P/A)                   | P          | A                |
| Emotional Display (P/A)                 | A          | A                |
| Statement of Attitude (#)               | 0          | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | P          | P                |
| Excessive Detail (P/A)                  | A          | A                |
| Positive Remarks (#)                    | 0          | 2                |
| EE Subgroup                             | bCrit, EOI | EOI              |
| EE Overall                              | High       | High             |

In regard to overcontrol, potentially the level of overcontrol decreased from baseline to EOC. More specifically, in the baseline language sample, the M.5 stated “I think I’m very protective of her.” In the EOC language sample, M.5’s verb tense changed. In the EOC language sample, M.5 stated

I think I’ve been very protective of her. She’s my first born, and when I noticed that she had difficulties speaking and some anxieties, I just was very close to her and tried to always shelter her from any pain that I could and I also realized that sometimes being a parent to a child that has some of those struggles and needs that you have to see them go through things that are difficult.

## Case 6 (Participant 14 on IBTSM)

### Demographics/Background Information

**Child:** Female, C.A.: 5 years, 2 months, 5 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 18 (mean=1.06), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill (5), Clinical Global Impressions Scale—Severity at Week 24: Mildly Ill (3), Clinical Global Impressions Scale-Improvement at Week 24: Much Improved (2)

**Mother:** C.A.: 36 years old, Mother reported problems present with shyness when a child, Mother reported no trouble talking in certain situations when child, No history of maternal OCD, anxiety, depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, M.6's language sample consisted of the following themes: characteristics of her child with SM, activities, relationships with family, and thoughts related to SM.

### Characteristics of the Child with SM

The only characteristic that M.6 shared during the baseline language sample was that C.6's favorite color is pink.

### Activities

M.6 shared that C.6 loves to draw, paint, dance, enjoys gardening, and riding a bicycle.

### Relationships Within the Family

M.6 shared that C.6 is a very good sister to her two brothers. M.6 states that C.6 loves them dearly and that she will show them how to read, write their name. According to M.6, C.6 draws them pictures all the time while she is in preschool.

### Thoughts Related to SM

The majority of M.6's language sample content related to C.6's difficulties with selective mutism. M.6 spends approximately two minutes of the language sample crying when she describes the difficulties associated with selective mutism. M.6 states that C.6 has a difficult time while she is in school and that she doesn't speak to any friends or teachers while she is at school, the playground or at events. M.6 states that outside of school, she has difficulty if it's associated with school. M.6 states that C.6 does like going to parties but that she doesn't speak to any friends or any of the parents while she is there. M.6 states that "the good thing" is that she has made some progress. According to M.6, during the last 9 months or so, she has been speaking to people outside of school such as the person at the drycleaners and at the grocery store. C.6 is also becoming more comfortable with extended family members that she hasn't spoken with such as her grandfather and uncle. M.6 reports that C.6 is playing with them and speaking "quite a bit more." M.6 shares that C.6 has a few friends that she does enjoy playing with and she speaks to them in her home setting, but that does not transfer to the school. M.6 states "I guess she hasn't found her voice yet."

### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.6 presented evidence for a neutral relationship (Warmth=3). This language sample did not include any criticisms or dissatisfaction. This language sample is rated

as Emotionally Overinvolved based on the emotional display characterized by M.6 crying for approximately two minutes. Thus, the EE overall is rated as High.

This language sample does not include any evidence of overcontrol.

### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

At the end of condition at 24 weeks and after 24 weeks of treatment, M.6's language sample was much more positive in comparison to the baseline language sample in regard to M.6's SM. The categories described within the language sample include characteristics of the child with SM, activities, relationships with family and thoughts related to SM are as follows.

### Characteristics of the Child with SM

At baseline, M.6's only description pertinent to her daughter was that her favorite color was pink. In the EOC language sample, M.6 described C.6 as a "very lovely and sweet child" and described many of C.6's favorites which include the following: the color pink, the animal "chick," macaroni and cheese/ice cream, and Disneyland. M.6 reported that when C.6 grows up she'd like to be a princess.

### Activities

Many similarities exist between the baseline and EOC language sample regarding M.6's descriptions of C.6's activities. In both baseline and EOC, M.6 stated that C.6 loves drawing, painting and gardening. At baseline, M.6 indicated she likes to dance and ride a bicycle;



however, these activities weren't mentioned at EOC. At EOC, in addition to the above activities, M.6 reported that C.6 loves to cook and has many interests, including her ballet and magic class.

#### Relationships Within the Family

At baseline, within the context of relationships with family, M.6 only stated that C.6 was a very good sister and did not provide any other information related to family relationships. However, in the EOC language sample, M.6 provided evidence for a positive relationship between mother and daughter in that M.6 and C.6 “get along very well” and that they often play together for 20-30 minutes after C.6’s brothers go to sleep. Further, they like to plant flowers together. Finally, in the EOC language sample, M.6 states that C.6 enjoys spending time with her grandmother and does so every Monday and Friday.

#### Thoughts Related to SM

At baseline, M.6 spent approximately 2 minutes crying as she recounted C.6’s difficulties with SM. M.6 explained that C.6 didn’t speak with any friends or teachers in school, and had difficulties with anything associated with the context of school. M.6 did report that her daughter made progress in communicating with people outside of school such as the dry cleaners, grocery store person, grandfather and uncle. At EOC, no crying occurred, and M.6 shared C.6’s improvements and stated that since coming the treatment, C.6 has “opened up quite a bit more and she seems to be a happier child because of it.” M.6 stated that “she still doesn’t speak much at school but she gets along very well with her friends” and that she is very well liked by her peers “who are very good to her.” M.6 reports that C.6 is starting to speak more freely to friends at home, and she will speak to two friends in their homes. According to M.6, C.6 is also starting to speak to the substitute teacher and “asked her a couple of questions from her interview book,

and so, she’s progressing quite well.” M.6 states that C.6 is growing and maturing, and that relatives have also noted the change in C.6 and they think “it’s a very happy event in our life.”

A priori Codes: Expressed Emotion and Overcontrol

After 24 weeks of treatment, M.6’s relationship went from a neutral relationship (Warmth=3) at baseline to a positive relationship (Warmth=5) at EOC. Criticisms/Negativity were absent in both the baseline and EOC language sample. Emotional Overinvolvement related to Emotional Display was present in the baseline condition; however, Emotional Overinvolvement was not present in the EOC language sample. Thus, M.6 EE overall rating as High in the baseline sample, and Low in the EOC sample. See Table 10 for detail of EE ratings.

Table 10  
EE Rating for Baseline and End of Condition for Case 6

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | 0        | +                |
| Relationship (+, 0, -)                  | 0        | +                |
| Warmth (0, 3, 5)                        | 3        | 5                |
| Critical Comments (#)                   | 0        | 0                |
| Dissatisfaction (P/A)                   | A        | A                |
| Emotional Display (P/A)                 | P        | A                |
| Statement of Attitude (#)               | 0        | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | A        | A                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 0        | 2                |
| EE Subgroup                             | EOI      | Low              |
| EE Overall                              | High     | Low              |

In regard to Overcontrol, no evidence was present in the baseline or EOC language samples.

### Case 7 (Participant 17 on IBTSM)

#### Demographics/Background Information

**Child:** Female, C.A.: 5 years, 4 months, 29 days, Primary Diagnosis: SM, No Secondary Diagnosis, SMQ Baseline total: 16 (mean=.94), Clinical Global Impressions Scale-Severity at baseline: Moderately Ill (4), Clinical Global Impressions Scale—Severity at Week 24: Moderately Ill (4), Clinical Global Impressions Scale-Improvement at Week 24: Minimally Improved (4)

**Mother:** C.A.: 58 years old, No mother reported problems present with shyness when a child, No mother reported trouble talking in certain situations when child, No reported history of OCD, anxiety or depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

#### Emergent Themes

Prior to treatment, M.7's language sample consisted of the following themes: characteristics of the child with SM, activities, relationships within the family, difficulties other than SM, and thoughts related to SM.

### Characteristics of the Child with SM

M.7 used all positive adjectives to describe C.7. M.7 described C.7 as wonderful, warm, and affectionate. M.7 shared that C.7 has a fantastic imagination and is very creative. She provided an example in that C.7 uses a truck of dress up clothes to stimulate all sorts of play, loves to play pretend, and she performs skits for M.7. According to M.7, C.7 is active, bright,

and does well in school. She follows directions, listens, and pays attention. M.7 states that C.7 loves people, loves to play with other children and likes going to parties. M.7 shares that C.7 has a wonderful vocabulary and “gives wonderful descriptions of things.” Additionally, C.7 loves animals. M.7 describes C.7 as a “wonderful, happy, well-adjusted kid.”

### Activities

According to M.7, C.7 loves to draw, color and paint. She enjoys writing, and she makes up stories and illustrates them. C.7 loves swimming, loves to play at the playground, and enjoys having friends over to play.

### Relationship Within the Family

M.7 states that she and C.7 are very close and they are very attached to each other. M.7 states that “we’re friends, we play together, we have a good time together, we read a lot, we go on long walks, we take the dog for a walk. I’m her primary caretaker, and during the day we have breakfast together, we have dinner together, we go shopping together, so we’re pretty attached to one another.” M.7 also reports that C.7 is “very, very helpful with taking care of M.7’s granddaughter and she is “almost like a big sister to her.”

### Difficulties Other Than SM

During this baseline language sample, M.7 shared that C.7 is not always cooperative at bedtime. M.7 says that she does not like go to sleep and she wants to stay up. M.7 states that C.7 is “always afraid she is going to miss something and she’s just never quite finished with her activity, so that is that only hard time that we have.” Additionally, M.7 states that C.7 is afraid to go into her bedroom because she’s afraid there are monsters under the bed. According to M.7, C.7 sleeps in M.7’s bed all the time. M.7 states “

that's just something I kinda accept for now and I...don't really have negative feelings about it, I don't think there's any reason why to push her into her own bed until she's ready to go. I assume by the time she's 16, she'll be putting a 'Do Not Disturb' sign on the door knob and not wanting me to go in there and bother her.

### Thoughts Related to SM

M.7 shares that C.7 has a difficult time communicating verbally and that she doesn't like to talk to people other than her mom and dad. According to M.7, this interferes with C.7's ability to make friends, fit in, and function in school. M.7 shares her concern that right now C.7 has a patient and supportive teacher, M.7 is not sure how she would survive in kindergarten at a public school and worries "she would just get forgotten about or something because, well, I don't think they would take the time to find out what she really knows."

### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.7 presented evidence in the language sample for positive mother/child relationship (Warmth=5). There was no criticism or dissatisfaction evident in this sample. Emotional Overinvolvement is rated as borderline as 13 positive remarks regarding C.7 were evident. Overall, M.7's EE subgroup is borderline EOI, and the EE Overall is Low. The language sample did not present any evidence of overcontrol.

### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children who has SM?

## Emergent Themes

### Characteristics of the Child with SM

In both the baseline and the end of condition at 24 weeks and after 24 weeks of treatment language samples, M.7 continued to use all positive adjectives to describe C.7. All adjectives used were consistently themed from baseline to EOC. Adjectives that were the same from baseline to EOC are the following: wonderful, great listener, great imagination, loves parties, does well in school, is very affectionate and is active. Additional language used to describe C.7 in the EOC sample includes that she is very cooperative, enjoys life, is always willing to try new things, plays nicely (not too bossy and participates in everything) and is funny. In addition, in the EOC sample, M.7 stated that C.7 is a terrific friend, gets along well with everyone and “when somebody has a problem, she’s always the one who goes over and comforts them and tries to help make it better.”

### Activities

In regard to activities, M.7 did not mention activities in the EOC language sample; whereas she mentioned C.7’s activities in the baseline sample.

### Relationships Within the Family

Regarding relationships within the family, similarities and differences were noticed. C.7’s baseline and EOC language samples were similar in that M.7 indicated that she and C.7 have a great relationship. In the EOC language sample, M.7 stated that C.7 is “just everything a mom would want.” One difference noted is that in the baseline sample, M.7 only discussed how great her relationship was with C.7; however, in the EOC language sample, M.7 also mentioned two comments regarding others in the family. More specifically, M.7 stated that once a week, the

family tries to sit down after dinner and play games together as a family, and that C.7 has gotten really close to her dad in the past couple of months. M.7 states that C.7 and dad have really bonded and that he fills in when M.7 is tired. M.7 states that it was hard for C.7 at first, but “now she’s really comfortable when he picks her up from school, that’s not a problem, she’s ready to go.”

### Difficulties Other Than SM

In the EOC language sample, M.7 did not mention any difficulties other than SM; whereas, at baseline, M.7 shared C.7’s difficult time going to bed and her fear of monsters under her bed.

### Thoughts Related to SM

Regarding thoughts related to SM, differences existed when comparing the baseline and EOC language sample. In the baseline language sample, M.7 shared difficulties associated with C.7’s SM including that she doesn’t like to talk to people other than mom or dad and that M.7 has concerns about C.7’s survival in kindergarten. In the EOC language sample, M.7 shares many triumphs related to C.7’s SM. More specifically, M.7 related that C.7 had two birthday parties where she enjoyed being the center of attention and she organized many party goers as they played games. In addition, M.7 related the previous night’s experience at a party. C.7 was “laughing and talking to everybody at the party. I could hear her from across the room which is a real first...that was a breakthrough so she’s getting so much better at all these things.” Another “breakthrough” that mom reported was that C.7 has made new friends in her ballet class, “so now she has 3 friends that she’s made outside of school in her dance class, so that’s a big deal.” Finally, M.7 reported that C.7 is communicating with family members such as C.7’s uncle. M.7

stated “so that’s really nice, so if that continues so that she feels comfortable speaking in front of family members that’s gonna make everything a lot easier for us to socialize with those people and have fun with them.”

#### A priori Codes: Expressed Emotion and Overcontrol

In comparison to the baseline language sample, after 24 weeks of treatment, M.7’s positive relationship status, Warmth (5), Criticism (0), and Dissatisfaction (Absent) ratings remained the same. At baseline, M.7 was rated as borderline Emotionally Overinvolved because of 13 positive remarks; however, at EOC, she was rated EOI. More specifically, during the EOC language sample, M.7 made 12 positive remarks, one Statement of Attitude, and exhibited borderline self-sacrifice/overprotection (Lack of Objectivity) which increased her rating from borderline EOI to EOI. Thus, because borderline ratings have been placed in the Low Category, M.7’s overall EE rating went from Low at baseline to High at EOC. See Table 11 for further detail.



Table 11  
 EE Rating for Baseline and End of Condition for Case 7

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | +        | +                |
| Relationship (+, 0, -)                  | +        | +                |
| Warmth (0, 3, 5)                        | 5        | 5                |
| Critical Comments (#)                   | 0        | 0                |
| Dissatisfaction (P/A)                   | A        | A                |
| Emotional Display (P/A)                 | A        | A                |
| Statement of Attitude (#)               | 0        | 1                |
| Self-Sacrificing/Overprotective (P/A/b) | A        | b                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 13       | 12               |
| EE Subgroup                             | bEOI     | EOI              |
| EE Overall                              | Low      | High             |

In regard to overcontrol, no evidence was present in the baseline sample. In the EOC language sample, M.7 shared that C.7 is “just so well behaved which I think is an important thing” and that when they go out to restaurants people are always commenting on what a lovely little girl she is. It was not clear from this language sample how much of an importance that M.7 places on having C.7 be well behaved, but this comment warrants further investigation to see if overcontrol may be present.

## Case 8 (Participant 24 on IBTSM)

### Demographics/Background Information

**Child:** Female, C.A.: 5 years, 5 months, 11 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 16 (mean=.94), Clinical Global Impressions Scale-Severity at baseline: Moderately Ill (4), Clinical Global Impressions Scale—Severity at Week 24: Moderately Ill (4), Clinical Global Impressions Scale-Improvement at Week 24: Minimally Improved (4)

**Mother:** C.A.: 36 years old, Mother reported problems present with shyness when a child, Mother reported no trouble talking in certain situations when child, No history reported of maternal OCD, anxiety or depression

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, M.8's language sample consisted of the following themes: characteristics of the child with SM, activities, relationships within the family, and thoughts related to SM.

### Characteristics of the Child with SM

At baseline, M.8 reported that C.8 was born with a clef lip and pallet but that she is healthy other than surgeries and has had no physical or emotional impact. M.8 described C.8 as a happy-go-lucky kid who is always smiling. Further descriptions of C.8 by M.8 include the following: happy, "very, very, delightful," fun, playful, plays with everyone, everyone is her friend, and she likes adventure and trying new things. M.8 shares that C.8 loves to learn and wants to be a doctor to help others "with boo-boos on their face so they don't have to have boo-

boos anymore.” M.8 states that C.8 is “very girly-girl.” M.8 uses the word “caring” to describe C.8 three times in the baseline language sample. She states she is “so caring,” “very, very caring and concerned,” and “she’s very good about peoples caring and thought and feelings about others.”

### Activities

M.8 shares that C.8 loves to draw, color and play dress-up. She loves to ride her bike, swim, play games and go to friends’ houses. M.8 states that C.8 will play “any game that she or I want to play with.”

### Relationship Within the Family

M.8 reports that she and C.8 are very close. She further describes their relationship by saying that she and C.8 “hug and kisses every morning, every night, all day long. If she needs to come to my bed, if she needs to talk to me, if something’s bothering her, she comes straight to me, she cuddles up. I know when something is wrong, she tells me everything. She’s a sweet dear.” M.8 states that C.8 is a “very special child” and that she’s “never seen another kid like this.” In regard to other family members, M.8 reports that C.8 loves to play with her grandmother.

### Thoughts Related to SM

In this language sample, M.8 didn’t directly share information about C.8’s difficulties with SM. However, she did share that C.8 is “outspoken at home” and that she “talks to all of her friends—she makes playdates, she confirms them with me.” M.8 states that C.8 has difficulty talking on the phone. She will answer and say “Hello, who is it?” but then clams up after a second or two and can’t wait for her grandmother to come over. M.8 shares that C.8 loves to play

with her grandmother, but that she doesn't talk much at her grandmother's house. Regarding C.8's treatment for SM, M.8 states "no challenge is too hard for her" and "even coming here, anything I tell her she needs to do, we're gonna do it together. She's 'ok, Mommy'....very happy."

#### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, M.8 presented evidence for a positive mother/child relationship (Warmth=5). This language sample did not include any criticisms/dissatisfaction. This language sample is rated as Emotionally Overinvolved based on Lack of Objectivity and 13 positive remarks. Thus, M.8's EE overall is rated as High.

This language sample does not include any evidence of overcontrol.

#### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

#### Emergent Themes

#### Characteristics of the Child with SM

In both the baseline and the end of condition at 24 weeks and after 24 weeks of treatment language samples, M.8 continued to use all positive adjectives to describe C.7. All adjectives used were consistently themed from baseline to EOC. In both language samples, M.8 shared that C.8 was born with a cleft lip and pallet. Also, in both language samples, M.8 described C.8 as a "happy-go-lucky" kid, and described her desire to be a doctor and her caring nature. In the baseline sample, M.8 used the word 'caring' to describe C.8's three times, in the EOC language sample, M.8 stated that C.8 was caring and provided examples of her caring nature 8 times. More

specifically, some examples in the EOC sample are that C.8 is “very concerned about other children’s needs, wants, and how they look and to make sure that everybody looks perfect,” “she always tries to make sure what everybody is happy,” “she cares about everybody,” and she is “very, very, very intuitive to other people’s needs.” In the baseline language sample, M.8 describes C.8’s love for learning, and relatedly, in the EOC sample, M.8 states that C.8 does well in school and is “very, very smart.”

Similarly, in the baseline language sample, M.8 states that C.8 “plays with everyone” and “everyone is her friend,” and expands this in the EOC language sample to the following: “she has many friends,” “loves to play with everybody and everything,” is “very good with other children,” “plays beautifully with all the kids,” is helpful with other kids, and is “just one of those all-around kids that everybody is going to like.”

M.8 added the following descriptors in the EOC language sample that were not present in the baseline sample: skillful, loves animals and is “very easy to persuade and to change her mind...if you tell her this isn’t right or try to correct her. She’ll ask me about it, but she won’t try to correct me at all. Easy, very easy kid.” M.8 describes C.8 as a “very good girl.”

### Activities

Some similarities and differences were noted within the activities theme from baseline to EOC. Similarities across language samples include C.8’s love for arts and crafts related activities, playing dress-up, bike riding and playing games/sports. In the baseline sample, M.8 indicated that C.8 loves to go to friend’s houses; however, this was not mentioned in the EOC language sample. In the EOC language sample, M.8 added the following activities that were not present in the baseline sample: enjoys rollerblading, is looking forward to attending summer

camp, likes reading and doing puzzles. M.8 states that “puzzles is her new thing. She can do many, many puzzles in like seconds.”

### Relationship Within the Family

In the baseline language sample, M.8 described her relationship with C.8 as “very close” and mentioned how C.8 enjoys playing with her grandmother. In the EOC language sample, M.8 did not mention these items, but did mention that that C.8 “plays with her brothers and sisters very well. She always tries to make sure that everybody is happy.”

### Thoughts Related to SM

In the baseline language sample, M.8 didn’t directly talk about C.8’s difficulties with SM. She only reported that C.8 is outspoken at home, she talks to all her friends, has difficulty talking on the phone, and doesn’t talk much at her grandmother’s house. In the EOC language sample, C.8’s only comment regarding C.8’s difficulty with SM was when mom states

she’s really just a happy-go-lucky kid who doesn’t like to talk to her teachers, but she even tells me she’ll talk to this one and not that one. But it really doesn’t bother her personality and if she wants to talk she does, and I think it’s a big control thing now with her.

One difference noted in language between baseline and EOC is that at baseline M.8 said C.8 talks to “all her friends,” and EOC, M.8 broadened that statement to C.8 “talks with all the other kids.”

### A priori Codes: Expressed Emotion and Overcontrol

In comparison to the baseline language sample, after 24 weeks of treatment, M.8’s EE ratings remained the same. More specifically, relationship status (positive), Warmth (5), and

Criticism/Dissatisfaction (absent) remained the same. At both baseline and EOC, M.8's was rated as Emotionally Overinvolved because lack of objectivity and a high number of positive remarks (13 at baseline, 10 at EOC). M.8's overall EE rating was High both in baseline and EOC. See Table 12 for further detail.

Table 12  
EE Rating for Baseline and End of Condition for Case 8

| Category                                | Baseline | End of Condition |
|---|----------|------------------|
| Initial Statement (+, 0, -)             | 0        | +                |
| Relationship (+, 0, -)                  | +        | +                |
| Warmth (0, 3, 5)                        | 5        | 5                |
| Critical Comments (#)                   | 0        | 0                |
| Dissatisfaction (P/A)                   | A        | A                |
| Emotional Display (P/A)                 | A        | A                |
| Statement of Attitude (#)               | 0        | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | b        | b                |
| Excessive Detail (P/A)                  | A        | A                |
| Positive Remarks (#)                    | 13       | 10               |
| EE Subgroup                             | EOI      | EOI              |
| EE Overall                              | High     | High             |

In regard to overcontrol, no evidence was present in the baseline sample or EOC language samples.

## Case 9 (Participant 31 on IBTSM)

### Demographics/Background Information

**Child:** Male, C.A.: 4 years, 6 months, 4 days, Primary Diagnosis: SM, Secondary Diagnosis: Social Phobia, SMQ Baseline total: 16 (mean=.94), Clinical Global Impressions Scale-Severity at baseline: Markedly Ill (5), No Information Clinical Global Impressions Scale—Severity at Week 24 (missing data), No Information Clinical Global Impressions Scale-Improvement at Week 24 (missing data)

**Mother:** C.A.: 33 years old, Mother reported no problems with shyness when a child, Mother reported no trouble talking in certain situations when child, History of maternal anxiety and depression, no history of OCD

### Research Question 1

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

### Emergent Themes

Prior to treatment, M.9's language sample consisted of the following themes: characteristics of the child with SM, relationships within the family, and thoughts related to SM.

### Characteristics of the Child with SM

At baseline, M.9 described C.9 as cute, very loveable, easy to get along with and very smart. M.9 shared that he enjoys having relationships and being with people but that “he just sometimes is so shy that he can't overcome situations to become more sociable.” She shared how C.9 likes being read to, and he likes to hear the same story over and over again. According to M.9, C.9 is a relatively easy eater. M.9 states that he is never a disciplinary problem at school. M.9 reports that C.9 worries about not doing something right and he gets upset if he loses at something.



### Relationship Within the Family

M.9 reports that she and C.9 “get along fine.” She also states that C.9’s relationship with his family (mother, dad, brother) is “fine, nothing wrong with that.” M.9 reports that C.9 is comfortable with his family, it’s school where he has difficulty.

### Thoughts Related to SM

M.9 shares that C.9 is very talkative and verbal at home. She does not see that C.9 is different from other kids except for his anxiety at school. M.9 describes how C.9 has an inability to make friends at school because of his anxiety. More specifically, he has difficulty initiating and will not speak. M.9 shares that she is concerned about his ability to speak and make his needs known. When discussing C.9’s experiences at school, M.9 shares that “other children do like him, girls, especially little girls try to mother him [and] take on that role with him.” M.9 shares how C.9 “just can’t seem to break that barrier and be himself and let others know what he’s really like which is so different from our home and outside of school.” M.9 reports that C.9 “will do anything because of his brother” whom he idolizes, and he is more outgoing when he is with his brother than if he’s alone. M.9 states he is different from his older brother, and that “we’ll probably have to learn how to help him be who he’s supposed to be.” She states that she is more worried about him than his father is, and she thinks it might be because she is naturally more anxious than his dad. M.9 states that she sees it more of a problem for C.9, but they are both on board knowing that C.9 does have a problem and could receive some help.

### A priori Codes: Expressed Emotion and Overcontrol

Prior to treatment, this mother presents evidence for a neutral relationship (Warmth=3) characterized by her statement that M.9 and C.9’s relationship is “fine.” M.9’s speech sample

prior to treatment does not contain any criticisms; however, dissatisfaction is present. Emotional overinvolvement is absent. Her EE subgroup is borderline Critical (attributed to dissatisfaction that is present), and her EE Overall as Low. No evidence of overcontrol in this language sample is present.

### Research Question 2

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

Consistent with the baseline language sample, in the EOC language sample, all content fell within the same themes with one exception. The themes characteristics for the child who has SM, relationships and thoughts related to SM were consistent across participants; however, at EOC, M.9 did mention content that falls into the theme ‘difficulties other than SM.’

### Characteristics of the Child with SM

Consistent the M.9’s statement at baseline that C.9 is “loveable,” in the EOC language sample, M.9 stated that C.9 is “very affectionate” and “likes to be held,” and “likes to be reminded that he is loved.” At baseline, M.9 shared that C.9 enjoys having relationships and being with people, and in the EOC language sample, she states that he enjoys having friends and likes to be with them. M.9 did not indicate any other characteristics in the EOC sample. In the baseline sample, she had shared the C.9 was easy to get along with, very smart, likes the same story being read to him over and over again, is a “relatively easy eater,” is never a disciplinary problem at school, and is cute. She also stated that he is often worried about not doing something right.

### Relationships Within the Family

Prior to treatment, M.9 stated that she and C.9 get along “fine,” and that C.9’s relationship with his family (mom, dad, brother) is “fine, nothing wrong with that.” In the EOC language sample, M.9 stated that she and C.9 “still get along well.” In both the baseline and EOC language sample, M.9 shared that C.9 loves his older brother.

### Thoughts Related to SM

In the baseline language sample, M.9 shared statements regarding his difficulties with SM. In the EOC language sample, M.9 did not share C.9’s difficulties with SM, she shared all C.9’s improvement with SM. More specifically, at baseline, M.9 shared her concern that he will not speak at school. In the EOC language sample, she said that C.9 will talk to his teacher, and he participates more in class. M.9 states that now he raises his hand, and sometimes “he won’t even raise his hand now, he’ll just shout out the answer.” M.9 describes how that has been thrilling for her and the teacher to see the difference in him.

M.9 states that C.9 is a very bubbly boy at home, and now he’s “carried some of it into school.” She states that C.9 is more self-confident and is more comfortable in performances and that he likes to be watched by family. She states that he didn’t used to like being recorded while he was singing, but, although he is still hesitant, he enjoys it more. M.9 shares that C.9 is “just a lot happier kid now especially with going to school.” Even though C.9 will still say that he doesn’t want to go to school, now he “doesn’t put up a fight” like in the past. M.9 thinks that C.9 enjoys going to school now and that he looks forward to seeing his friends and trading toys with him. M.9 shared that she was recently approached by another parent of a child in C.9’s school.

This other parent described her son and C.9 as being stuck together “like glue.” M.9 reported that C.9 is enjoying art more.

As baseline and at EOC, M.9 shared her concerns regarding C.9’s SM. At baseline, she stated “we’ll probably have to learn how to help him be who he’s supposed to be.” She shared that she is “more concerned with how he responds at school.” At EOC, M.9 shared different concerns regarding C.9. M.9 shared that she hopes C.9’s progress will “carry along as he moves forth into kindergarten and a new school.” M.9 states that

I’m afraid that the new teacher won’t see things in him that the current teacher sees now. That’s my biggest fear and I hope with time, that when he gets more comfortable with them that they will see him for who he really is and not just how he is in the beginning with them.

### Difficulties Other Than SM

Although M.9 indicated at baseline that C.9 gets upset if he loses something, she did not focus on this as a concern. It is not clear if this is a significant difficulty, and no other mention of difficulties other than SM were mentioned in the baseline language sample. During the EOC language sample, M.9 shares that C.9 has temper tantrums and “he can get very carried away with his emotions sometimes and kind of be stuck in them. He needs a lot of encouragement to get out of some of those situations.”

### A priori Codes: Expressed Emotion and Overcontrol

At baseline, M.9 revealed evidence indicative of a neutral relationship (Warmth=3); however, at EOC, M.9 presented evidence for a positive relationship (Warmth=5). Although there was evidence of dissatisfaction in the baseline sample, there was no evidence of

dissatisfaction in the EOC sample. Zero criticisms were present in the baseline and EOC language samples. At baseline, M.9's EE subgroup was rated as borderline Critical based on the presence of dissatisfaction. At EOC, dissatisfaction was not present, and M.9's EE Subgroup decreased to the Low category. M.9's overall EE rating remained the same (Low) from baseline to EOC. See Table 13 for further detail.

Table 13  
EE Rating for Baseline and End of Condition for Case 9

| Category                                | Baseline  | End of Condition |
|---|-----------|------------------|
| Initial Statement (+, 0, -)             | 0         | +                |
| Relationship (+, 0, -)                  | 0         | +                |
| Warmth (0, 3, 5)                        | 3         | 5                |
| Critical Comments (#)                   | 0         | 0                |
| Dissatisfaction (P/A)                   | P         | A                |
| Emotional Display (P/A)                 | A         | A                |
| Statement of Attitude (#)               | 0         | 0                |
| Self-Sacrificing/Overprotective (P/A/b) | A         | A                |
| Excessive Detail (P/A)                  | A         | A                |
| Positive Remarks (#)                    | 4         | 1                |
| EE Subgroup                             | bCritical | Low              |
| EE Overall                              | Low       | Low              |

In regard to overcontrol, no evidence was present in the baseline sample or EOC language samples.

### Collective Analysis of Research Questions within Active and Waitlist Conditions

In the above pages, maternal language samples were analyzed in a case analysis format within participants to gain a microscopic understanding of the child with SM, and to get a glimpse into the day-to-day family life for each participant. In addition to this case analysis, it is also helpful to analyze the language samples within groups to identify patterns that may contribute to the development and maintenance of selective mutism, and to identify areas of concern that can be targeted throughout the treatment process to help improve family relationships and potentially improve treatment outcomes. In the following section, research question one was answered briefly for all mothers, then the research questions were analyzed collectively for all mothers within the active group, then for all mothers within the waitlist treatment group. These groups were analyzed separately as the treatment length varied between the waitlist (participants received 12 weeks of treatment) and active conditions (participants received 24 weeks of treatment). The research questions to be answered are as follows:

**Research Question 1:** Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

**Research Question 2:** How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

#### Research Question 1: Active and Waitlist Condition

Prior to treatment, all language content fell in the following categories: characteristics for the child who has SM, activities, difficulties other than SM, relationships within the family, and thoughts related to SM. Unless otherwise stated within a theme, a description of content wherein

two or more mothers provided content within the same category either in baseline or EOC language samples is below.

In regard to characteristics of their child with SM, mothers indicated that their child was social (3 mothers), good student (5 mothers), loving/caring, (5 mothers), bright (4 mothers), wants to do well (2 mothers), happy (2 mothers), and wonderful/delightful (2 mothers).

Regarding activities, mothers revealed their child loves to draw/do art (5 mothers), swim (4 mothers), rides a bike (2 mothers), play games (2 mothers), and likes going to school (2 mothers).

In regard to difficulties other than SM, four out of 9 mothers revealed their child had difficulties other than SM. Child difficulties reported by mothers include a fear of going into a bedroom because of monsters under the bed, always needing to be in control, difficulty following directions, and difficulty with tantrums that “linger for a long time.”

Regarding relationships within the family, eight out of 9 mothers provided information regarding relationships within the family. The following relationships were described: positive mother/child relationship (5 mothers), negative mother/child relationship (1 mother), and a neutral relationship (3 mothers). Two mothers described close sibling relationships and one mother described difficulties with her husband over treatment approaches.

Prior to treatment, eight mothers shared some thoughts related to their child’s SM. The mothers described what their child’s selectively mute behavior looks like, described some concerns they had regarding their child’s SM, discussed sibling relationships, noted some recent improvements in SM, and shared some thoughts about treatment.

In regard to expressed emotion, at baseline 4 mothers were rated as having high EE. 1 mother's language sample revealed a Critical subgroup rating, and 3 mothers' language samples revealed an EOI rating for the EE subgroup.

Regarding overcontrol, four of nine mothers reported information that should be further evaluated to determine if overcontrol is present. One mother stated "if I ask her to do something, she does it; if I ask her not to do something she doesn't do it." Another language sample describes the child's father as "stern, practices tough love and follow through, and is pretty strict in some ways." Two other mothers presented evidence that should be further evaluated to see if overcontrol is present.

Further detail regarding the content of mother's talk prior to treatment can be found in the below section.

#### Research Question 1: Active Condition

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

#### Emergent Themes

Prior to treatment, consistent with the waitlist treatment group, the language sample content of all 4 mothers in the active condition can be categorized according to the following 5 themes: characteristics for the child who has SM, activities, difficulties other than SM, relationships within the family, and thoughts related to SM. Unless otherwise stated within a theme, a description of content wherein two or more mothers provided content within the same category either in baseline or EOC language samples is below.



### Characteristics of the Child with SM

Three out of four mothers in the active condition provided some content in regard to their child's characteristics. All three mothers in the active condition who provided information about their child's characteristics indicated that their child is social and enjoys people. More specifically, M.7 states that despite the fact that C.7 has a difficult time communicating verbally, C.7 does love people, loves to play with other children, and likes going to parties. M.8 shared that C.8 plays with everyone and considers everyone to be her friend. M.9 shared that C.9 enjoys having relationships and being with people. M.9 adds that C.9 is "just so shy that he can't overcome situations to become more sociable."

All three mothers in the active condition who reported information regarding their child's characteristics indicated that their child is a good student. For example, M.7 reports that C.7 "does very well in school." M.7 shares that C.7 is bright, follows directions, listens, pays attention, and follows through on all her tasks. M.8 states that C.8 "loves to learn, she'll learn, learn, learn." And finally, M.9 states that C.9 is "never a problem, a disciplinary problem at school."

Two of the three mothers in the active condition who provided information regarding their child's characteristics stated that their child was loveable/easy to get along with, happy, bright/smart, and wonderful/delightful. Please see Table 14 for detail regarding content of the baseline language sample.

Table 14  
 Characteristics of Children in Active Group at Baseline

| Characteristics                 | Number of mothers |
|---------------------------------|-------------------|
| Social/enjoys people            | 3                 |
| Good student                    | 2                 |
| Loveable/easy to get along with | 2                 |
| Happy                           | 2                 |
| Bright/smart                    | 2                 |
| Wonderful/delightful            | 2                 |
| Warm/affectionate               | 1                 |
| Caring                          | 1                 |

Activities

Regarding the theme of activities, three of four mothers provided information regarding activities that their child with SM enjoys. Mothers indicated their child enjoys the following activities: draw/paint (3 mothers), ride a bike (2 mothers), swimming (2 mothers), and playing games (2 mothers.) Please see Table 15 for further detail regarding content of language sample regarding activities.

Table 15  
 Activities of Children in Active Group at Baseline

| Activities | Number of Mothers |
|------------|-------------------|
| Draw/paint | 3                 |
| Rides bike | 2                 |
| Swims      | 2                 |
| Play games | 2                 |

### Difficulties Other Than SM

Of the four mothers in the active condition, only one mother provided information regarding their child's difficulties other than SM. More specifically, M.7 reported that C.7 is not always cooperative at bedtime and that she does not like to go to sleep. M.7 reports that C.7 is "always afraid she's going to miss something, and she's never quite finished with her activity." M.7 adds that C.7 is afraid to go into her own bedroom. M7 explains when she states the following:

She's afraid that there are monsters under the bed, so she ends up sleeping in my bed all the time and that's just something I accept for now. And...I don't really have negative feelings about it, I don't think there's any reason why to push her into her own bed until she's ready to go.

### Relationships Within the Family

All four moms in the active treatment condition provided information regarding relationships within the family. Two mothers reported that they had a "very close" relationship with their child with SM. More specifically, M.7 reported that she and C.7 have a wonderful relationship and they are "very close, we're very attached to each other. We're friends, we play together, we have a good time together." M.8 stated that she and C.8 are "very close" and "hug and kisses, every morning, every night, all day long." M.8 states that C.8 tells M.8 everything, and M.8 always knows when something is wrong. Finally, M.9 reported a neutral mother/son relationship when she states that she and C.9 "get along fine."

Two of four mothers reported close sibling relationships. More specifically, M.6 stated that C.6 is a very good sister to her brothers and "she loves them dearly." M.9 reported that C.9

“loves to play with his older brother, idolizes his older brother, will do anything because of his brother, much more outgoing than if he’s alone.”

### Thoughts Related to SM

All four mothers in the active treatment group talked about SM in the baseline language sample. Content can be separated into the following categories: SM description, parent concerns, thoughts related to treatment, and thoughts related to improvement in their child.

### SM Description

Four mothers described their child’s selectively mute behavior. Two mothers indicated their child was very verbal in the home environment. One mother shared that her child will speak to friends in the home, but not in school. Two mothers indicated their child does not speak in school. One mother indicated her child doesn’t like to talk to people other than mom and dad. Another mom indicated that her child also has trouble talking on the phone and at her grandmother’s house.

### Parent Concerns

Two mothers shared specific concerns regarding their child’s selectively mute behavior. One mother is concerned about her child’s ability to make friends/function at school. This mother also worries about her child getting forgotten about in kindergarten. Another mother shared her concern about her child’s inability to make friends because of anxiety, and that she wants her child to speak more to develop friendships and make his needs known. This mother stated that her child can’t seem to break barriers at school to let others know what he is like. It should be noted that one mother cried for approximately 2 minutes of the language sample, so it

is very likely that concern was present, but specific concerns were not elaborated upon (other than the description of the selectively mute behavior.)

### Treatment

Regarding treatment, two mothers talked about treatment. One mother shared her confidence in her daughter when she stated, “no challenge is too hard for her.” Another mom shared her thought that, through treatment, they would “probably have to learn how to help him be who he’s supposed to be.” This mother also shared that she was more worried about her son than his father was, and this “probably just comes from the fact that I’m naturally more anxious than his dad is.” The mother reported even though she is more worried than the child’s father they are “both on board with knowing that he does have a problem, and that he could receive some help for this.”

### SM Improvement

Regarding improvement in SM, one mother shared that her child has made some progress. More specifically, she stated “the good thing is that during the last 9 months or so, she has been speaking to people outside of school, and she speaks to the person at the drycleaners, at the grocery store.” See Table 16 for content regarding mother’s talk during the baseline sample.

Table 16  
Thoughts Related to SM in Active Group at Baseline

| Thoughts about SM | Number of Mothers |
|-------------------|-------------------|
| SM Description    | 4                 |
| Parent Concerns   | 2                 |
| Treatment         | 2                 |
| SM Improvement    | 1                 |

### A priori Codes: Expressed Emotion and Overcontrol

Regarding relationships, at baseline, two mothers reported positive relationships (Warmth=5) and two mothers' language samples revealed neutral relationships (Warmth=3). No language samples in the active condition contained critical comments. The EE subgroup was emotionally overinvolved for two mothers, and in the borderline range for 2 mothers (bEOI, and bCrit). As such, two mothers earned ratings of High expressed emotion, and two mothers earned ratings of Low expressed emotion. Please see Table 17 for detail regarding expressed emotion ratings mothers in the active condition (Cases 6-9).

Table 17  
EE Ratings in Active Treatment Group at Baseline

| Category                                | Case 6 | Case 7 | Case 8 | Case 9    |
|---|--------|--------|--------|-----------|
| Initial Statement (+, 0, -)             | 0      | +      | 0      | 0         |
| Relationship (+, 0, -)                  | 0      | +      | +      | 0         |
| Warmth (0, 3, 5)                        | 3      | 5      | 5      | 3         |
| Critical Comments (#)                   | 0      | 0      | 0      | 0         |
| Dissatisfaction (P/A)                   | A      | A      | A      | P         |
| Emotional Display (P/A)                 | P      | A      | A      | A         |
| Statement of Attitude (#)               | 0      | 0      | 0      | 0         |
| Self-Sacrificing/Overprotective (P/A/b) | A      | A      | b      | A         |
| Excessive Detail (P/A)                  | A      | A      | A      | A         |
| Positive Remarks (#)                    | 0      | 13     | 13     | 4         |
| EE Subgroup                             | EOI    | bEOI   | EOI    | bCritical |
| EE Overall                              | High   | Low    | High   | Low       |

No evidence of possible overcontrol in the baseline language samples mothers who are in the active condition.

### Research Question 2: Active Treatment

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

#### Emergent Themes

In the following section, the baseline and EOC language sample content of all 4 mothers in the active condition was analyzed according to the following 5 themes: characteristics for the child who has SM, activities, difficulties other than SM, relationships within the family, and thoughts related to SM. Unless otherwise stated within a theme, a description of content wherein two or more mothers provided content within the same category either in baseline or EOC language samples is below. Although the number of mother's indicating content that falls into these categories is different from baseline to EOC, it is not thought to be a reflection regarding the treatment, but rather a difference in what mother's chose to share in the language sample. Only when content within a category indicates an improvement or a decrease in the same content can some judgement be made regarding the effect of treatment.

#### Characteristics of the Child with SM

In the active condition, three out of four mothers reported content related to their child's characteristics in the baseline sample, whereas all 4 mothers reported content related to characteristics in the EOC language sample. Content categories were consistent between baseline and EOC language samples. Please see Table 18 for mothers' descriptions of children's characteristics.

Table 18  
 Characteristics in Active Group at Baseline and End of Condition

| Baseline                        |                   | End of Condition                |                   |
|---------------------------------|-------------------|---------------------------------|-------------------|
| Characteristics                 | Number of mothers | Characteristics                 | Number of mothers |
| Social/enjoys people            | 3                 | Social/enjoys people            | 3                 |
| Good student                    | 2                 | Good student                    | 2                 |
| Loveable/easy to get along with | 2                 | Loveable/easy to get along with | 1                 |
| Wonderful/delightful            | 2                 | Lovely/Wonderful                | 2                 |
| Bright/smart                    | 2                 | Bright/smart                    | 1                 |
| Happy                           | 2                 | Happy                           | 0                 |
| Warm/affectionate               | 1                 | Affectionate                    | 2                 |
| Caring                          | 1                 | Caring                          | 2                 |

### Activities

Three mothers in the active condition provided information regarding their child's activities in both the baseline and EOC language samples. Content was similar from baseline to EOC language sample. Please see Table 19 for a description of content within this theme.

Table 19  
 Activities in Active Group at Baseline and End of Condition

| Baseline   |                   | End of Condition       |                   |
|------------|-------------------|------------------------|-------------------|
| Activities | Number of Mothers | Activities             | Number of Mothers |
| Draw/paint | 3                 | Draw/paint/arts&crafts | 2                 |
| Rides bike | 2                 | Rides bike             | 1                 |
| Swims      | 2                 | Swims                  | 1                 |
| Play games | 2                 | Play games             | 0                 |



### Difficulties Other Than SM

Information from baseline to EOC was inconsistent within this category. Only one mother (M.7) shared information at baseline regarding her child's difficulty with going to sleep and fear of monsters under her bed. In the EOC language sample, M.7 did not share any further difficulties regarding this difficulty. In the EOC language sample, one mother (M.9) shared information regarding her son's tantrums; however, she did not share these difficulties at baseline. In the EOC language sample, she stated that C.9 has tantrums and "he can get very carried away with his emotions sometimes and kind of be stuck in them. He needs a lot of encouragement to get out of some of those situations."

### Relationships Within the Family

All four mothers in the active condition provided information in the baseline and EOC language samples regarding relationships within the family. A close relationship was reported by 2 mothers in baseline and 3 mothers in the EOC language sample. Language samples were consistent in that two mothers reported close sibling relationships at baseline and in EOC language samples. No mothers shared difficulties regarding relationships within the family in the baseline or EOC language samples for mothers in the active condition.

### Thoughts Related to SM

All four mothers in the active treatment group talked about SM in the baseline and EOC language sample. See Table 20 for a description of thoughts related to SM by mothers who are in the active treatment group.

Table 20  
Thoughts related to SM in Active Group at Baseline and End of Condition

|                          | Baseline          |                          | End of Condition  |  |
|--------------------------|-------------------|--------------------------|-------------------|--|
| Thoughts about SM        | Number of Mothers | Thoughts about SM        | Number of Mothers |  |
| SM Description           | 4                 | SM Description           | 1                 |  |
| Parent Concerns          | 2                 | Parent Concerns          | 1                 |  |
| Treatment                | 2                 | Treatment                | 1                 |  |
| SM Improvement           | 1                 | SM Improvement           | 4                 |  |
| Relationship Improvement | 0                 | Relationship Improvement | 2                 |  |

### SM Description

In the baseline sample, four mothers described their child’s SM; whereas in the EOC language sample, only 1 mother described her child’s SM behavior. More specifically, at EOC, this mother described her child as a happy-go-lucky kid who “doesn’t like to talk to teachers,” and the mother thinks that not speaking is a “big control thing with her now.”

### Parent Concerns

Two mothers shared their specific concerns related to their child’s SM behavior in the baseline sample; whereas, only one mother shared her concern in the EOC language sample. This mother stated that she hopes her child’s improvements will carry forward into kindergarten. She stated

I’m afraid the that the new teacher won’t see things in him that the current teacher sees now. That’s my biggest fear and I hope with time that...when he gets more comfortable with them that they will see him for who he really is and not just how he is in the beginning with them.

## Treatment

Two mothers shared their initial thoughts regarding treatment in the baseline, and one mother referenced the role of treatment in the EOC language sample. In the EOC language sample, this mother (M.6) stated that since coming to treatment, her child “has opened up quite a bit more and she seems to be a happier child because of it.”

## SM Improvement

Regarding improvement in selectively mute behavior, at baseline one mother shared that her child had made some progress including speaking to people outside of school. In the EOC language sample, all four mothers shared their child’s improvements in SM behavior. More specifically, the following improvements were noted:

M.6 reported C.6 speaks more freely to friends in her home, and two friends in their homes. According to M.6, C.6 is starting to speak with a substitute teacher and is “progressing quite well.” In addition, relatives have also noticed a change. M.7 relayed a recent experience at C.7’s birthday party where C.7 took charge of organizing the party-goers, and she was laughing and talking to everyone at the party. M.7 stated she could hear C.7 from across the room “which is a real first...that was a breakthrough so she’s getting much better at all these things.” M.7 is also happy that her child is communicating with relatives. M.8 reported that C.8 “talks with all the other kids.” M.9 shared many improvements including that C.9 has lots of energy that has now transferred to school, he is more self-confident, will talk to this teacher, is more comfortable in performances, and will participate more in class. M.9 stated that sometimes “he won’t even raise his hand now, he’ll just shout out the answer.” M.9 states that he still doesn’t like to go to school, but he won’t put up a fight like he did in the past. M.9 explained that she thinks he enjoys

going to school, seeing friends, and trading toys. M.9 reports that she and his teacher are thrilled to see the difference.

### Relationship Improvements

Regarding relationship improvements, in the baseline language sample, no mothers indicated improvement in relationships in any language sample, and two mothers indicated relationship improvements in the EOC language sample. More specifically, M.7 stated that C.7 had been better at making new friends in her ballet class which is “sort of a breakthrough.” In addition, M.7 reported the C.7 has become really close to her dad within the past couple of months. M.7 states that was initially hard for C.7, “but now she’s really comfortable.”

A priori Codes: Expressed Emotion and Overcontrol

Table 21  
EE Ratings for Active Group at Baseline and End of Condition

| Case Number | Time | Chronological Age<br>(year.month) | Initial Statement | Relationship | Warmth | Critical | Dissatisfaction | Emotional Overinvolvement |                       |                                   |               |                  | EE Subgroup  | EE overall |
|-------------|------|-----------------------------------|-------------------|--------------|--------|----------|-----------------|---------------------------|-----------------------|-----------------------------------|---------------|------------------|--|------------|
|             |      |                                   |                   |              |        |          |                 | Emotional Display         | Statement of Attitude | Self-Sacrifice/<br>Overprotection | Excess Detail | Positive Remarks |  |            |
|             |      |                                   | +,-,0             | +,-,0        | 0,3,5  | #        | P/A             | P/A                       | #                     | P/b/A                             | P/A           | #                | Crit,EOI,<br>CRIT&EOI,<br>b/Crit, b/EOI,<br>b/Crit&b/EOI,<br>LOW | Hi/Low     |
| 6           | BL   | 5.2                               | 0                 | 0            | 3      | 0        | A               | P                         | 0                     | A                                 | A             | 0                | EOI  | High       |
| 6           | EOC  |                                   | +                 | +            | 5      | 0        | A               | A                         | 0                     | A                                 | A             | 2                | Low  | Low        |
| 7           | BL   | 5.5                               | +                 | +            | 5      | 0        | A               | A                         | 0                     | A                                 | A             | 13               | bEOI   | Low        |
| 7           | EOC  |                                   | +                 | +            | 5      | 0        | A               | A                         | 1                     | b                                 | A             | 12               | EOI  | High       |
| 8           | BL   | 5.5                               | 0                 | +            | 5      | 0        | A               | A                         | 0                     | b                                 | A             | 13               | EOI  | High       |
| 8           | EOC  |                                   | +                 | +            | 5      | 0        | A               | A                         | 0                     | b                                 | A             | 10               | EOI  | High       |
| 9           | BL   | 4.6                               | 0                 | 0            | 3      | 0        | P               | A                         | 0                     | A                                 | A             | 4                | bCrit  | Low        |
| 9           | EOC  |                                   | +                 | +            | 5      | 0        | A               | A                         | 0                     | A                                 | A             | 1                | Low  | Low        |

## **Overcontrol**

No evidence of overcontrol was present in the baseline language samples for mothers in the active treatment condition. Only one mother in the EOC language sample provided information that requires further investigation to determine if overcontrol could be present. More specifically, M.7 shared that C.7 is “just so well behaved which I think is an important thing” and that when they go out to restaurants people are always commenting on what a lovely little girl she is. It was not clear from this language sample how much of an importance that M.7 places on having C.7 be well behaved, but this comment could warrant further investigation to see if overcontrol may be present.

### Research Question 1: Waitlist Condition

Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has SM?

#### Emergent Themes

Prior to treatment, the language sample content of all 5 mothers in the waitlist condition can be categorized according to the following 5 themes: characteristics of the child with SM, activities, difficulties other than SM, relationships within the family, and thoughts related to SM. Unless otherwise stated within a theme, a description of content wherein two or more mothers provided content within the same category either in baseline or EOC language samples is below.

#### Characteristics of the Child who has SM

All mothers in the waitlist condition provided some content regarding their child’s characteristics. Three of five mothers described their child as loving and caring. More specifically, participant M.3 described C.3 as being very loving, caring, and sweet. M.4

described C.4 as very caring, has a big heart, and explains that she likes to take care of everyone. More specifically, M.4 states that if C.4's dad has a headache she wants him to feel better and will get him a drink, and if M.4 is lying down on the sofa, C.4 will offer to rub her back. M.4 reports that C.4 is also this way with her brother and sister. In addition, M.4 reports that C.4 also like to help a lot around the house. Finally, M.1 shares that C.1 likes to cuddle, be held, and played with.

Three of five mothers also described their child with SM as being good students. More specifically, M.1 describes C.1 as a good student, and that teachers love her because she "follows all the directions and does exactly what she's told to do and listens very carefully and wants to do a good job." M.2 shares how C.2 wants to get good grades and be the best student she can. M.4 describes C.4 loves learning, how math is really easy for her, and she does her homework without supervision.

Two of five mothers also shared how their children with SM want to do well outside of the school context. More specifically, M.1 shares that it is very important to C.1 that C.1 is very competent. Similarly, M.2 shared how C.2 tries "a lot" to please M.2 and that C.2 is very competent.

Two of five mothers describe their children with SM as bright. Please see Table 22 for detail regarding content of maternal baseline language sample regarding characteristics of their child with SM.

Table 22  
 Characteristics in Waitlist Group at Baseline

| Characteristics  | Number of Participants |
|------------------|------------------------|
| Good student     | 3                      |
| Loving/caring    | 3                      |
| Wants to do well | 2                      |
| Bright           | 2                      |

### Activities

Regarding the theme of activities, three of five mothers provided information regarding activities that their child enjoys. Mothers shared their child likes drawing (2 mothers), and swimming (2 mothers). M.2 reports that C.2’s enjoyment of swimming changes week-by-week. Two mothers also state that their child enjoys going to school. More specifically, M.2 reports that C.2 loves both going to regular school and also to Sunday School. Similarly, M.4 shares that C.4 “really likes going to school, loves learning.” Please see Table 23 for additional detail on the content of mother’s baseline language sample regarding the theme of activities.

Table 23  
 Activities in Waitlist Group at Baseline

| Activities            | Number of mothers |
|-----------------------|-------------------|
| Likes to draw         | 2                 |
| Likes to swim         | 2                 |
| Likes going to school | 2                 |

### Difficulties Other Than SM

In the baseline language sample, three of five mothers indicated that their child had difficulties other than SM, but none of the difficulties overlapped with one another. M.1



described C.1's control issues at length in the baseline language sample. Notably, while her SM behavior earned one comment in the baseline language sample from M.1, C.1's difficulty with control issues and relationship difficulties associated with control earned mention six times by M.1 in the baseline sample. She shared that C.1 is "not easily swayed from her mind," is very stubborn and seems to have inherited that trait from her strong-willed parents, and she "exploits her sister's weaknesses to the fullest extent when she is in the mode for it."

M.2 shared that C.2 had difficulty following directions. M.2 attributed this difficulty to a lack of structure and reported that she implemented some structure and now C.2 "tries so hard to follow directions." M.2 shared improvement with this difficulty when she stated that now "if I ask her to do something she does it, if I ask her not to do something she doesn't do it."

Finally, M.3 shared that C.3 has history of tantrums that would "linger for a long time." He has progressed to throwing tantrums quietly, but M.3. said that "you know he's upset because he would either pinch or scratch or something...he would hurt you somehow." She gave a recent example where he was holding his mother's hand and he put "his nails into it, he was upset with me...and I was trying to figure out what he needed."

### Relationships Within the Family

Four out of 5 mothers reported information regarding their relationship with their child who has SM. One mother revealed that the relationship between her and her daughter is challenging. According to this mom, they struggle a lot and "do battles" over her daughter's control issues. This mother stated that is very important to C.1 to "control mommy." Because C.1 does not like to be forced to do anything, M.1 reports spending a lot of time trying to convince C.1 it's C.1's own free will to do things and reports this is always challenging. Another

relationship difficulty M.1 reports is that C.1 is cooperative for everyone else, including at school, but is not cooperative with her parents and especially gives M.1 a hard time.

Two mothers reported positive relationships with their child with SM. One mother (M.2) reported they get along “very well” and are “very close to one another” and another mother (M.5) reported that she and C.5 “get along very well for the most part” and that she feels very protective of C.5. M.5 states that she and C.5 have a special bond and that M.5 sees a lot of herself in C.5.

One mother (M.3) did not directly talk about her relationship with her son in the baseline language sample; however, she did talk about her relationship with the child’s father. M.3 states that she and the child’s father “often butt heads” over their parenting styles and the approaches that they have for C.3. She describes the father as “more stern and practices tough love and follow through and is pretty strict in some ways” and M.3 states that she tends to be more of the “soft gentler approach.”

#### Thoughts Related to SM

Four out of five mothers talked about SM in the baseline language sample. See Table 24 for content regarding thoughts related to SM by mother during the baseline sample.

Table 24  
Thoughts Related to SM in Waitlist Group at Baseline

| Thoughts about SM      | Number of mothers |
|------------------------|-------------------|
| SM Description         | 4                 |
| Sibling Relationships  | 2                 |
| Parent Concerns        | 2                 |
| SM Improvement         | 1                 |
| Reference to Treatment | 1                 |

### SM Description

Four mothers described their child’s selectively mute behavior. More specifically, M.1 described C.1’s SM by stating that C.1 had a genuine fear of talking to people. M.2 described C.2’s desire to talk, but states that she can’t. M.2 further stated that C.2 is “not shy—she wants to participate in everything.” M.3 describes C.3’s entrance into preschool and their concern that he was not as social as they had hoped. She stated C.3 had a good experience, made a lot of progress and developed meaningful relationships at a smaller, faith-based preschool, but experienced difficulty when he moved to a new larger preschool that was more formal.

M.5 shared that many details regarding C.5’s difficulties with SM. According to M.5, just before C.5 was two years old, M.5 noticed that if adults or kids would talk to C.5, C.5 would turn her back without eye contact and “it just seemed like she was kinda keeping the whole world at a distance except for her immediate family and a few close relatives.” When C.5 started preschool, M.5 indicated that C.5 persisted with not speaking, and stated that “it was like everybody there was a piece of furniture and if a kid asked her a direct question she wouldn’t even acknowledge, she wouldn’t play with anyone.” M.5 reports that C.5 made some progress over the years is that

at the end of her 2<sup>nd</sup> year in preschool, one teacher would “sit at the table and maybe hear her voice quietly, but no one else.” She also has been able to make one friend each year that she is able to talk to and play with. M.5 reports that currently, after three years in the same school, C.5 loves school, doesn’t speak to any of the teachers, but has a friend she enjoys playing with. M.5 states that the first year C.5 wouldn’t run or climb on the playground, but this year M.5 sees her running and laughing, and she “has gotten to the point where she would hit her hand on the desk or nod if a certain teacher would ask her a question.”

### Sibling Relationships

Two mothers shared information regarding sibling relationships. M.3 shared that C.3 feels more secure with his brother around. M.5 shared that C.5’s little brother is a big help to C.5. According to M.5, C.5’s brother is more social and outgoing and “he’s kind of an ice-breaker for her. In situations, she sort of has him go in first and he will sort of talk for her even though he’s not super verbal because he’s only 2 and a half, but he’s just much more of an explorer, less cautious, kind of a throw-it-to-the-wind sort of a kid, so that’s been a good match for the two of them.”

### Parent Concerns

Two mothers shared concerns related to their child’s SM. M.2 stated her concern that SM is really holding her child back. M.5 revealed that she may feel overwhelmed with her child’s selectively mute behavior when she shared her concern that she “just needed a break from this child that was just always by my side.”

## Improvement with SM

In the baseline language samples, only one mother shared improvements in her child's selectively mute behavior. More specifically, M.5 shared ways that C.5's SM improved over time and stated that "each year she has been progressing a little bit more." More specifically, M.5 shared that C.5 cried a lot at the beginning of school, but then she adjusted. M.5 states that C.5 made some progress at the end of her 2<sup>nd</sup> year in preschool in that when her teacher would sit at her table she would 'maybe hear her voice quietly, but no one else.'" M.5 shared that even though C.5 hasn't spoken to any of the teachers for three years, she has made improvement on the playground. Initially, M.5 shared that she wouldn't run or climb on the playground, and now she runs, laughs and plays. M.5 states that C.5 has gotten to the point where "she would hit her hand on the desk or nod if a certain teacher would ask her a question." Finally, M.5 reports that C.5 has also made improvement in the church group they attend. Whereas previously C.5 wouldn't even look up or acknowledge that they called on her, now two and a half years later, she will come up to the front and hold a picture.

## Reference to Treatment

One mother referenced treatment in her speech sample. M.2 stated that she was "very excited to get involved in this research program" because she feels how C.2 is struggling. She stated that C.2 was excited to come to treatment because she's never been to the city where the treatment is location and that they planned to do some tourist activity after the treatment session.

## A priori Codes: Expressed Emotion and Overcontrol

Regarding mother/child relationships for mothers in the waitlist condition, three mothers reported positive relationships (Warmth=5), one mother reported a neutral relationship

(Warmth=3) and one mother reported evidence for a negative relationship (Warmth=1).

Regarding criticality, one mother’s language sample contained critical comments; whereas 4 mothers did not report criticisms. The EE subgroup was critical for one mother, emotionally overinvolved for one mother, in the borderline range for 2 mothers, and Low for one mother. As such, two mothers earned ratings of High expressed emotion, and three mothers earned ratings of Low expressed emotion. Please see Table 25 for detail regarding expressed emotion ratings for cases 1-5.

Table 25  
EE Ratings at Baseline for the Waitlist Condition

| Category                                | Case 1   | Case 2 | Case 3      | Case 4 | Case 5     |
|---|----------|--------|-------------|--------|------------|
| Initial Statement (+, 0, -)             | 0        | +      | +           | +      | +          |
| Relationship (+, 0, -)                  | -        | +      | 0           | +      | +          |
| Warmth (0, 3, 5)                        | 1        | 5      | 3           | 5      | 5          |
| Critical Comments (#)                   | 2        | 0      | 0           | 0      | 0          |
| Dissatisfaction (P/A)                   | P        | A      | P           | A      | P          |
| Emotional Display (P/A)                 | A        | A      | A           | A      | A          |
| Statement of Attitude (#)               | 0        | 0      | 0           | 0      | 0          |
| Self-Sacrificing/Overprotective (P/A/b) | A        | B      | b           | A      | P          |
| Excessive Detail (P/A)                  | A        | A      | A           | A      | A          |
| Positive Remarks (#)                    | 0        | 2      | 3           | 4      | 0          |
| EE Subgroup                             | Critical | bEOI   | bCrit, bEOI | Low    | bCrit, EOI |
| <b>EE Overall</b>                       | High     | Low    | Low         | Low    | High       |

## Overcontrol

Four out of five moms in the waitlist conditioned presented with information that should be further evaluated as to whether overcontrol is present. More specifically, one language sample contained statements attributing battles that occur within the family to the daughter's control issues, yet the mother stated that she herself is also strong-willed and stubborn. Another mother's language sample described how her daughter tries "a lot" to please her and had some difficulty following directions related to a lack of structure. The mother reports setting up a structure to help and states that now "if I ask her to do something, she does it; if I ask her not to do something she doesn't do it." Another language sample warrants further examination as to whether overcontrol is present in the family in that the mother describes the child's father as "stern, practices tough love and follow through, and is pretty strict in some ways." Finally, the last example that requires further evaluation to determine if overcontrol is present contains the statement "I think I've very protective" of her, but she does not further specify.

## Research Question 2: Waitlist Condition

How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

### Emergent Themes

Similar to baseline, the language sample content of all 5 mothers in the waitlist condition in the EOC language samples can be categorized according to the following 5 themes: characteristics of the child with SM, activities, difficulties other than SM, relationships within the family, and thoughts related to SM. Unless otherwise stated within a theme, a description of

content wherein two or more mothers provided content within the same category either in baseline or EOC language samples is below. Although the number of mother's indicating content that falls into these categories is different from baseline to EOC, it is not thought to be a reflection regarding the treatment, but rather a difference in what mother's chose to share in the language sample. Only when content within a category indicates an improvement or a decrease in the same content can some judgement be made regarding the effect of treatment.

Characteristics of the Child with SM

Five mothers reported content related to their child's characteristics in the baseline sample, whereas 4 out of 5 mothers reported content related to characteristics in the EOC language sample. Content categories were largely consistent across baseline and EOC. See Table 26 for mothers' descriptions of children's characteristics.

Table 26  
 Characteristics in Waitlist Group at Baseline and End of Condition

| Characteristics                  | Baseline          | End of Condition                 |                   |
|----------------------------------|-------------------|----------------------------------|-------------------|
|                                  | Number of Mothers | Characteristics                  | Number of Mothers |
| Good student                     | 3                 | Good student                     | 2                 |
| Loving/caring                    | 3                 | Loving                           | 2                 |
| Wants to do well                 | 2                 | Wants to do well                 | 2                 |
| Bright                           | 2                 | Bright                           | 1                 |
| Other kids like Child who has SM | 0                 | Other kids like child who has SM | 2                 |
| Thoughtful                       | 0                 | Thoughtful                       | 2                 |
| Well-behaved                     | 0                 | Well behaved                     | 2                 |



## Activities

Three mothers in the baseline condition, and 4 mothers in the EOC condition provided content regarding their child’s activities. The baseline and EOC language samples were similar in that two of the five mothers indicated that their child enjoys drawing or doing art. Other than these similarities, there was no overlap in categories between baseline and EOC language samples. See Table 27 for mothers’ descriptions of activities for children in the waitlist group.

Table 27  
Activities in Waitlist Group at Baseline and End of Condition

| Baseline              |                   | End of Condition      |                   |
|-----------------------|-------------------|-----------------------|-------------------|
| Activities            | Number of Mothers | Activities            | Number of Mothers |
| Likes to draw         | 2                 | Likes to Draw/Art     | 2                 |
| Likes to swim         | 2                 | Likes to swim         | 0                 |
| Likes going to school | 2                 | Likes going to school | 0                 |

## Difficulties Other Than SM

Within the theme of ‘difficulties other than SM’, one mother reported the same difficulties in that she described her daughter’s difficulty with control issues in both the baseline and EOC language samples. The two mothers who reported difficulties other than SM such as difficulties in following directions and with tantrums, did not mention these difficulties in the EOC language sample. One mother did not report difficulties other than SM in the baseline sample, but reported content that falls into this theme in the EOC language sample. More specifically, this mother reported that her child had difficulty going to bed at night. M.4 shares

that she tucks her child in at night and they “do all the things that you have to do, before I know it she’s up asking me a question that she says he needs to ask me, she forgot to ask.” M.4 reports that this happens 2-3 times a night.

### Relationships Within the Family

Four mothers provided relationship information in the baseline sample, whereas all 5 mothers reported information regarding their relationship with their child who has SM in the EOC language sample. In the baseline sample, two of the four mothers who reported information on relationships reported positive family relationships, whereas four out of five mothers reported positive family relationships in the EOC language sample. The information reported by all mothers either indicated that relationships within the family either remained consistent, or some improvement was noted.

### Thoughts Related to SM

Four mothers provided information related to their child’s SM in the baseline sample, and 5 mothers provided information regarding their child’s SM in the EOC language sample. See Table 28 for mothers’ thoughts related to SM in the waitlist group at baseline and end of condition.

Table 28  
Thoughts Related to SM in the Waitlist Group at Baseline and End of Condition

| Baseline              |                   | End of Condition     |                   |
|-----------------------|-------------------|----------------------|-------------------|
| Thoughts about SM     | Number of mothers | Thoughts about SM    | Number of Mothers |
| SM Description        | 4                 | SM Description       | 2                 |
| Sibling Relationships | 2                 | Sibling relationship | 0                 |
| Parent Concerns       | 2                 | Parent Concerns      | 2                 |
| SM Improvement        | 1                 | SM Improvement       | 3                 |
| Treatment             | 1                 | Treatment            | 3                 |

### Description of SM

In the baseline language sample, 4 mothers included a description about their child’s SM, and in the EOC language sample, two mothers described her child’s SM behavior. In the EOC, one mother shared how her child doesn’t play with a lot of other kids, but he does interact a lot with extended family. Another mom described her child as very vocal in restaurants and stated the following:

he speaks like no one else is there because to him I don’t think anybody’s really paying attention to him...it doesn’t matter to him that his voice is being heard because they’re for the most part strangers, but I think it matters more when the people are closer to him, like his relatives, his cousins, his family and also his teacher and the kids at school. So those who are a little closer to him, he tends to be a little more reserved and shy and quiet around them.

### Sibling Relationships

Whereas two mothers talked of how sibling relationships helped their child with SM, this was not mentioned in the EOC language sample.

### Parent Concerns

Concerns related to SM were discussed by mothers in both the baseline and EOC language sample. In the baseline language sample, one mother shared her concern about how she really needed a break as a result of her child's SM, and another mother indicated her concern that SM was holding her child back because her child is "limited in how she can communicate with others." In the EOC language sample, one mother shared her thoughts that they are "doing the best they can to try to work out this disorder or whatever it is that we're going through right now and hopefully it's a little bit of a phase perhaps that he'll get over eventually." This mother also shares that she is hoping that by encouraging more interactions, her son will see the "real benefits of actually talking and sharing things with friends and his family." A different mom shared her concern that other people don't see her child's laugh and personality. This mother shares that her daughter has a "really good laugh" that makes you laugh when you see her laughing. This mother laments

that's a side that sometime people don't see to her and I wish they did because ...she just has a really good personality. And she has this giggly laugh and I just want her to be able to do that without feeling like people are watching her like it's something bad to laugh that way, or to feel like she can't express her thoughts or her opinions because somebody's gonna make fun of her. Or let's say she's embarrassed of what people are gonna think if she says the wrong thing, I want her to be able to just go through life being

able to do that and not being held back because of what you know someone's gonna say or think about her. And I think once she realized that you can do that, then I think she will do it, and she will be that much happier because she has that confidence and that freedom to express herself and to think what she believes in.

### SM Improvement

In the baseline language sample, one mother referenced her child's improvement; whereas three mothers referenced some improvement in the EOC language sample. In the EOC language sample, M.1 indicated her child has "changed a lot," and reported some improved relationships and interactions with extended family. M.3 shared that "little by little" C.3's SM is improving and reported a recent moment where he "just blurted out...really loud tone of voice and just let his cousin hear which was really cool and we were really excited about it. I almost stopped the car." M.5 reported that her daughter has "blossomed tremendously" and that C.5 is feeling more at ease and comfortable in situations that used to be difficult. M.5 stated that C.5 doesn't talk to everyone a mile-a-minute, but she does respond more.

### Treatment

One mother (M.2) referenced treatment in the baseline language sample when she stated that she is "excited to get involved in this research program" because she feels how her child is struggling. In the EOC language sample, 3 mothers relayed content relating to treatment. More specifically, M.2 stated that her child doesn't enjoy coming to treatment, but she is doing well with her assignments. Another mother (M.4) reported that they make therapy days fun and often play music she likes in the car on the way to and from therapy, and/or go out to eat or get dessert after treatment.

### A priori Codes: Expressed Emotion and Overcontrol

There was no change in overall EE ratings from baseline to EOC for all 5 mothers in the waitlist treatment group (2 High EE and 3 Low EE). All mother-child relationships remained the same with the exception of one mother who indicated a neutral relationship (3 Warmth) at baseline, and a positive relationship (5 Warmth) at EOC.

Table 29  
EE Ratings in the Waitlist Treatment Condition

| Case Number | Time | Initial Statement | Relationship | Warmth | Critical | Dissatisfaction | Emotional Overinvolvement |                       |                               |               |                  |  | EE Subgroup | EE overall |
|-------------|------|-------------------|--------------|--------|----------|-----------------|---------------------------|-----------------------|-------------------------------|---------------|------------------|--|-------------|------------|
|             |      |                   |              |        |          |                 | Emotional Display         | Statement of Attitude | Self-Sacrifice/Overprotection | Excess Detail | Positive Remarks | Crit,EOI, CRIT&EOI, b/Crit, b/EOI, b/Crit&b/EOI, LOW |             |            |
|             |      | +,-,0,+           | +,-,0,+      | 0,3,5  | #        | P/A             | P/A                       | #                     | P/b/A                         | P/A           | #                |  | Hi/Low      |            |
| 1           | BL   | 0                 | -            | 1      | 2        | P               | A                         | 0                     | A                             | A             | 0                | Critical   | High        |            |
| 1           | EOC  | 0                 | -            | 0      | 1        | P               | A                         | 0                     | A                             | A             | 0                | Critical   | High        |            |
| 2           | BL   | +                 | +            | 5      | 0        | A               | A                         | 0                     | b                             | A             | 2                | bEOI   | Low         |            |
| 2           | EOC  | +                 | +            | 5      | 0        | A               | A                         | 0                     | A                             | A             | 8                | bEOI   | Low         |            |
| 3           | BL   | +                 | 0            | 3      | 0        | P               | A                         | 0                     | b                             | A             | 3                | bCrit, bEOI  | Low         |            |
| 3           | EOC  | +                 | +            | 5      | 0        | P               | A                         | 0                     | A                             | A             | 4                | bCrit  | Low         |            |
| 4           | BL   | +                 | +            | 5      | 0        | A               | A                         | 0                     | A                             | A             | 4                | Low  | Low         |            |
| 4           | EOC  | +                 | +            | 5      | 0        | P               | A                         | 0                     | A                             | A             | 4                | bCrit  | Low         |            |
| 5           | BL   | +                 | +            | 5      | 0        | P               | A                         | 0                     | P                             | A             | 0                | bCrit, EOI   | High        |            |
| 5           | EOC  | +                 | +            | 5      | 0        | A               | A                         | 0                     | P                             | A             | 2                | EOI  | High        |            |

## Overcontrol

Potential overcontrol was present in the language sample of 4 mothers in the waitlist condition either during baseline or EOC. In two mothers (M.1, M.2), potential overcontrol information was present and consistent at baseline and EOC. In one mother (M.3), and there was mild evidence in the baseline sample, and no evidence in the EOC sample. Finally, there may have been a decrease in potential overcontrol in M.5's speech sample. More specifically, in the baseline language sample, the M.5 stated "I think I'm very protective of her." In the EOC language sample, M.5's verb tense changed. In the EOC language sample, M.5 stated

I think I've been very protective of her. She's my first born, and when I noticed that she had difficulties speaking and some anxieties, I just was very close to her and tried to always shelter her from any pain that I could and I also realized that sometimes being a parent to a child that has some of those struggles and needs that you have to see them go through things that are difficult.

While this change in verb tense in this statement does present evidence of a change in overprotection, further investigation would need to determine if overcontrol in addition to overprotection was present and changed as a result of treatment.

## Synopsis of the Results

The below section provides a synopsis of the results, both individually and collectively, for research questions 1 and 2.

### Research Question 1 Findings

Research Question 1: Prior to treatment, what do mothers talk about when describing their child and their relationship with their child who has selective mutism?



## Emergent Themes

Prior to treatment, the content of mothers' transcripts falls into the following five categories: characteristics of the child with SM, activities of the child, difficulties other than SM, relationships within the family and thoughts related to SM.

### Characteristics of Child with SM

Prior to treatment, two or more mothers of 9 in the sample indicated the following characteristics of their child with SM: good student (5 mothers), loving/caring (5 mothers), bright/smart (4 mothers), very social/enjoys people (3 mothers), strives to do well/perfectionistic (3 mothers), wonderful/delightful (2 mothers) and happy (2 mothers). Only one mother in the sample shared a negative characteristic/trait when she described her child as "very stubborn, extremely stubborn."

### Activities

Five mothers out of nine shared that their child enjoys drawing and/or painting. Four mothers indicated that their child likes to swim. Two mothers shared that their child enjoys riding their bike, enjoys going to school, and enjoys playing games.

### Difficulties Other Than SM

Four out of nine mothers shared difficulties other than SM; however, these difficulties did not overlap among the mothers. Difficulties other than SM that mothers described include the following: afraid to go into her room because thinks there are monsters under the bed, significant control issues that affect relationships, difficulty following directions, history of tantrums that "linger for a long time."

### Relationships Within the Family

Eight mothers provided information regarding relationships within the family. Five mothers reported the mother/child relationship as positive, and three mothers described neutral mother/child relationships. One mother revealed evidence of a negative relationship between mother and child and within the family, and she attributed this negative relationship largely to battles that often result from her daughter's issues with control and her child's strong-willed nature. Two mothers reported that their child experienced close sibling relationships. In regard to relationships within the family context, one mother reported that family relationships are "fine, nothing wrong with that" and another mother reported that her child is growing closer to her dad because he is "becoming more involved in her and taking care of her." One mother reported about her relationship with the child's dad and stated that they "often butt heads" over parenting styles and the approach that they have for their child.

### Thoughts Related to SM

Eight of nine mothers shared their thoughts regarding their child's SM in the following categories: description of the selectively mute behavior (8 mothers), parent concerns (4 mothers), SM improvement, (2 mothers), sibling relationships/rescue (2 mothers), and thoughts regarding treatment (3 mothers). Highlights are the following:

#### SM Description

One mother described her child's SM as a "genuine fear of talking to people." Another mother described her child's desire to talk but stated that her child can't do it and that her child is "not shy—she wants to participate in everything." One mother shared that her son had thrived in a smaller preschool, but experienced difficulty after he transitioned to a larger preschool. A

different mother shared that just before her child was two years old, her child would turn her back without eye contact if adults or children would talk to her child, and “it just seemed like she was kinda keeping the whole world at a distance except for her immediate family and a few close relatives.” Two mothers indicated that their child was very verbal in the home environment. One mother shared that her child will speak to friends in the home, but not in school. One mother indicated her child does like to talk to people other than mom and dad.

### Parent Concerns

Two mothers shared their concerns about their young child’s inability to make friends as a result of their child’s anxiety. One mother reported she was worried about her child getting forgotten about in school. Another mom shared her concern about her child’s ability to make his needs known. One mother shared her concern that SM is really holding her child back. Another mom referenced two times in her language sample about needing a break from her child “that was just always by my side.” Finally, one mother revealed her concern over the role that she had played in her child’s SM. She stated that she felt guilty that she didn’t spend as much time with her son due to work constraints in comparison to his older brother, and wondered how this affected his SM.

### SM Improvement

At baseline, two mothers indicated that their child had made some progress. More specifically, one mom shared that each year she is “progressing a little bit more” and after three years in the same school, her child is able to “hit her hand on the desk or nod if a certain teacher would ask her a question.” Another mother stated that her child has made some progress over the

last 9 months, and is now speaking to people outside of school, and she speaks to the person at the drycleaners and at the grocery store.

#### A priori Codes: Expressed Emotion and Overcontrol

At baseline, 5 mothers' language samples revealed positive relationships. Three mothers' relationships were rated as neutral, and one relationship was rated as negative. One mother's language sample was rated as Critical, and 3 language samples were rated as emotionally overinvolved. Thus, four mothers were rated High in Expressed Emotion.

Regarding overcontrol, four of nine mothers reported information that should be further evaluated to determine if overcontrol is present. One mother stated "if I ask her to do something, she does it; if I ask her not to do something she doesn't do it." Another language sample describes the child's father as "stern, practices tough love and follow through, and is pretty strict in some ways." These two language samples had the highest severity ratings on the Selective Mutism Questionnaire in this sample of 9 mothers. Two other mothers presented evidence that should be further evaluated to see if overcontrol is present.

#### Research Question 2 Findings

Research Question 2: How does what mothers talk about change over the course of integrated behavioral treatment of their children with SM?

#### Emergent Themes

In both the active and the waitlist group, at both baseline and EOC, all content in the language samples can be placed in the following same categories: characteristics of the child with SM, activities of the child with SM, difficulties other than SM, relationships within the family, and thoughts related to SM. Although the number of mother's indicating content that

falls into these categories is different from baseline to EOC, it is not thought to be a reflection regarding the treatment, but rather a difference in what mothers chose to share in the language sample. Only when content within a category indicates an improvement or a decrease in the same content can some judgement be made regarding the effect of treatment.

### Characteristics of the Child with SM

The ‘characteristics’ category was consistent between baseline and EOC and no differences were noted between the active and treatment conditions. Consistent categories across baseline and EOC include the following: good student (5BL, 4 EOC), loving/caring (5 BL, 5 EOC), wants to do well (3BL, 2 EOC), bright (4 BL, 2 EOC), social/enjoys people (3BL, 3EOC), wonderful (2BL, 2 EOC). Only one mother shared a negative trait/characteristic. In the baseline condition, this mother shared that her child was “very stubborn, extremely stubborn” and in the EOC language sample, the mother described her daughter as a “*very* determined child.”

### Activities

There were no meaningful differences between baseline and active conditions from baseline to EOC. Mothers indicated that their child participates in a variety of activities including, but not limited to, the following: draw/paint/art (5BL, 4 EOC), likes to swim (4 BL, 1 EOC), likes going to school (2BL, 0EOC), riding a bike (2BL, 1 EOC), playing games (2BL, 0 EOC).

### Difficulties Other Than SM

One mother provided consistent information regarding the difficulties surrounding her daughter’s need for control at both baseline and EOC. All other content in this category was

inconsistent in regard to information from baseline to EOC. More specifically, three mothers reported difficulties in baseline (following directions, tantrums, afraid of going in her room because of monsters) but did not mention these difficulties in the EOC language sample. Two mothers did not report difficulties other than SM in the baseline sample, but did report difficulty (difficulty with bedtime, tantrums) in the EOC language sample.

### Relationships Within the Family

In both the active and waitlist conditions, content of mother/child relationships either remained consistent or improved for 8 of 9 mothers. Five mothers revealed content indicating positive mother/child relationships at both baseline and EOC (3 Waitlist and 2 Active). The content of the language samples revealed a change from a neutral relationship to a positive relationship for 3 mothers (1 waitlist, 2 active). One mother both at baseline and EOC indicated a negative relationship involving “doing battle” over control issues in both the baseline and EOC language samples.

### A priori Codes: Expressed Emotion/Overcontrol

Overall EE ratings were remarkably consistent from baseline to EOC. There was no change in overall EE ratings among mothers with children with SM in 7 out of 9 mothers from baseline to EOC. No consistent pattern of change was noted in regard to overcontrol from baseline to EOC.

## CHAPTER FIVE: DISCUSSION

### Introduction

The purpose of this study was to examine the content of the five minute speech sample (FMSS) to describe themes that mothers expressed when talking about their child with selective mutism (SM) and to analyze how these themes changed over the course of an integrated behavior treatment of young children with SM. This study utilized a content analysis to describe *what* mothers talk about when asked to talk about their child and their relationship with their child who has SM. In addition, this study evaluated language samples for expressed emotion and content pertaining to overcontrol which are two constructs hypothesized to be related to the development and maintenance of SM. This study also considered how these emergent themes and a priori codes (expressed emotion and overcontrol) changed over the over the course of an integrated behavior treatment of young children with SM. It was hoped through the examination of speech samples, information contributing to the development and maintenance of SM could be identified and thus utilized to target additional intervention areas to be used in conjunction with child-focused treatment for SM. In addition, it was hoped that the information obtained from the FMSS could be utilized to improve family relationships. This chapter is organized by providing a discussion of those findings, implications for practice, limitations of the present study, and future directions for research.

### Discussion

The findings of this exploratory analysis were considered within the context of the diathesis-stress model which describes the development of anxiety as the interaction of vulnerability, including genes and the environment. More specifically, Kushner (2015) describes

the diathesis-stress model as assuming that “psychopathology results from interactions among individual characteristics, developmental history and current context” (p.813). Bronfenbrenner’s ecological framework is used to define the ‘current context’ aspect of this definition. This model suggests that in order to understand the individual development of a child, one must consider the influence of different roles/levels a child experiences in his or her life that result in negotiating multiple relationships. This ecological framework organizes people and their environment to understand their interconnectedness (Algood et al., 2013) and is based on the idea of empowering families through understanding their strengths and needs (Swick & Williams, 2006). For the purposes of this study, Bronfenbrenner’s microsystem (child) and mesosystem (family) is the definition for the ‘current context’ and was examined closely.

The findings in this exploratory analysis are consistent with anxiety and SM research (Black & Udhe, 1995; Chavira et al., 2007; Ginsburg & Schlossberg, 2002; Kristensen & Torgersen, 2001) in that a diathesis, or genetic vulnerability, is present in this sample. In this sample, 7 out of 9 mothers indicated they experienced problems with shyness as a child and three of the 8 mothers indicated difficulty talking in certain situations as a child. Interestingly, while evidence of functional impairment was noted by mothers, only 3 mothers indicated a history of anxiety disorders. Thus, it is reasonable to conclude that although a past history of anxiety disorders was less indicated in this sample in comparison to research, a genetic vulnerability was conferred a large percentage of mothers indicated problems with shyness as a child. This discrepancy may be explained by mothers in this sample may be more likely to indicate difficulties with a problem that they perceive to be less severe than a disorder, or that SM was less likely to be diagnosed when these mothers were children. This genetic vulnerability inherent



in the SM population lends support to considering family interactions and support as targets in the treatment process. In addition, considering this treatment approach which incorporates a family component is consistent with addressing treatment from the diathesis-stress perspective in that changing the current context (family environment)—not just a specific behavior of not speaking—may help change/improve child behaviors and relationships within the family.

Findings of this exploratory analysis revealed that some information is revealed in language samples that is associated with the development and maintenance of a child's SM, and information is also revealed where families could use additional support. Regarding the development and maintenance of a child's SM, considering expressed emotion, parental overcontrol and/or specific content of language samples identified some areas of incompatibility between family dynamics and treatment goals. In the following section, expressed emotion, and content pertaining to overcontrol, reinforcing "good behavior," overprotection, and family accommodation is discussed. Following this discussion, specific content that was revealed in language samples that can be used to specifically improve family relationships/functioning will be discussed along with the role of parental involvement in SM treatment. Finally, comparisons in the post treatment condition that emerged from the exploratory analysis that relate to the SM literature will be shared.

### Expressed Emotion

As this study is an exploratory study with a limited sample size and is possibly the first study in this field to investigate EE within the field of SM, limited conclusions can be drawn regarding the impact of EE on the development and maintenance of SM. In the below section,

findings related to EE prior to treatment and then findings related to how EE changed over the course of treatment are presented.

### Expressed Emotion Prior to Treatment

The analysis of findings in this study revealed higher rates of EE at baseline among mothers of children with SM in comparison to the rates of EE among mothers of children without SM. Overall, even with borderline ratings placed in the low category which provides a conservative estimate, this study revealed 44% of mothers as having language samples categorized by high expressed emotion; whereas Asarnow and colleagues (1994) found that only 14% of 21 mothers of children ages 6-13 in a control condition were rated as high EE.

In particular, the dimension of emotional overinvolvement (EOI), a major dimension that comprises EE, revealed the same pattern of increased rates in comparison to a control population. More specifically, prior to treatment, three of 9 (33%) mothers demonstrated high EOI which is higher than what is reported in the literature for mothers of children without SM (e.g., 9%, Asarnow et al., 1994; e.g., 10.8%, Raishevich et al., 2010; Sher-Censor, 2015).

It should be noted that in this study, to provide differentiation in the sample, all borderline EE ratings were placed in the low category and excessive detail was not scored as many consider this dimension inappropriate for young populations (Peris & Miklowitz, 2015). This provided a very conservative estimate of EE and dimensions comprising EE. However, placing borderline EE subcategory ratings in the high category is sometimes recommended for families with young children or certain ethnic groups who are less likely to exhibit strong emotions (Magana-Amato, 2016). This categorization of placing borderline ratings in the high category is reported in the literature by Gar and Hudson (2009) who studied clinically anxious

children ages 6-14, and by Raishevich and colleagues (2010) in their study of inhibited/uninhibited preschoolers. In this dissertation study, if borderline emotional overinvolvement was placed in the high category, 6 out of 9 (67%) of mothers would be placed in the high category of expressed emotion. This percentage is considerably higher than the 10.8% rate of emotionally overinvolved speech samples that Raishevich and colleagues (2010) documented amongst mothers of behaviorally uninhibited preschoolers and the 9% of mothers of children without psychiatric disorders found by Asarnow et al. (1994) and underscores the prevalence of this dimension within the families of children with SM. Further, if borderline critical ratings were placed in the high category, 4 out of 9 mothers (44%) would be viewed as having language samples with a critical rating which is also considerably higher than the 18.9% found among mothers of behaviorally uninhibited children (Raishevich et al., 2010) and also considerably higher than the 5% of 21 control mothers who were found to be critical by Asarnow and colleagues (1994).

Although this study found higher rates of expressed emotion and emotional overinvolvement among mothers of children with SM in comparison to samples of mothers of children without SM, the application of this finding is not clear in this small sample. In a simple, nonstatistical comparison of symptom severity at baseline via the SMQ and the CGI-S, it does not appear that there is a relationship between EE overall or EE Subgroup (including EOI), and child symptom severity, maternal history of anxiety disorders or treatment outcome. In addition, in light of Khafi et al.'s (2015) suggestion that it may be appropriate to consider the presence of Self-Sacrifice/Overprotection and Statement of Attitudes separately in young children as they relate to treatment outcome, this doctoral student also considered these components of EE, but no

clear meaningful associations were evident. It is very possible that the small sample size of this study significantly impacted the ability to find these associations.

### Expressed Emotion Over the Course of Treatment

Overall EE ratings were remarkably consistent across baseline and EOC language samples. Seven out of 9 mothers (78%) achieved the same overall EE ratings at baseline and at EOC. While a change in a parent's expressed emotion as a result of treatment was not evident in this sample, it is not entirely surprising based on previous findings reported in the literature. Peris and Miklowitz (2015) report that "psychoeducation alone is unlikely to produce changes in affective charged family dynamics" and that "child and adolescent psychopathology literature documents little success with changing the high EE family dynamic" (p.871). These authors state that efforts to develop interventions to improve family functioning in High EE families are "sorely needed" (p.871). One study that was effective in reducing parental EE among clinically anxious children ages 6-14 consisted of 10 weekly group sessions wherein the psychologist worked with both children and parents. Topics included in this treatment included

psychoeducation, realistic thinking for threat-related thoughts, cognitive restructuring, graded exposure to feared events, and social skills/assertiveness training...parents were trained as coaches to provide support and encouragement throughout the program and were taught the principles of parent management. For example, the program taught parents to reward, praise and pay attention to positive child behaviors and to reduce attention paid to anxious behavior. Also, parents learned to encourage courageous, independent behavior and to reduce overprotection" (Gar and Hudson, 2009, p.349-350).

The IBTSM treatment did include some parent topics such as psychoeducation about the phenomenology of SM, skills-based practice, accountability regarding the cycle of avoidance, and graded exposure to feared events; however, the main focus of the treatment was to increase the child's verbal communication, increase social/academic functioning, decrease avoidance, and decrease distress associated with speaking (Bergman, 2013). While this intervention was very effective in meeting these treatment goals and improving the children's selectively mute behavior, it does not appear as effective in changing family dynamics enough to change their expressed emotion rating within this sample.

#### Parental Control

In this sample, the FMSS did provide some evidence of overcontrol that can be used with parents in conjunction with behavioral treatment of the child. However, analysis also revealed that while the FMSS does this information, it is not a robust measure that definitively captures whether overcontrol is present. One language sample did indicate clear evidence of behavioral control consistent with Ollendick and Grills (2016) definition of "practices that establish a set of rules of the family that help regulate and control the child's behavior" and involves "parents monitoring of the child's actions and limit setting" (p.635). More specifically, when talking about her child following directions, this mother stated, "if I ask her to do something, she does it; if I ask her not to do something, she doesn't do it." This pattern was also consistent with this mother's EOC language sample in which the mom indicated that she and her daughter conflict because her daughter "doesn't keep her room super clean." Interestingly, this child's language sample had the second highest severity rating on the SMQ. This finding is consistent with McLeod et al.'s (2007) statement that excessive parental control may play an important role in

childhood anxiety as a cause of anxiety, a response to a child's anxiety, or an expression of parental anxiety. In addition, this finding is consistent with Edison and colleagues (2011) finding that parents of children were more likely to grant less autonomy in comparison to children with anxiety and children with no anxiety.

The language sample that corresponded to the highest severity SMQ rating contained some possible evidence that overcontrol is present, but further investigation is necessary to make a definitive determination. More specifically this mother described her child's father as "stern, practices tough love, and follow through." Two other language samples also revealed evidence of possible overcontrol but require further investigation to determine if overcontrol is present.

Some in the literature use the word parental control as synonymous with emotional overinvolvement (Gar and Hudson, 2009); however, in areas of literature specific to childhood anxiety, it is parental control that accounts for some variance in childhood anxiety disorders. It is the opinion of this doctoral student that they are separate constructs. For example, the statements associated with overcontrol made by one mother ("when I ask her to do something, she does it, when I ask her not to do something, she doesn't do it") are not coded in the EE rating systems. This parent did have the second highest severity rating via the SMQ in the sample. It is possible that differentiating between overcontrol and overinvolvement and incorporating that into the EE construct may provide additional meaning, especially when considering children who have anxiety.

#### "Good" Behaviors

With the exception of one child who is described by her mother as very strong-willed and stubborn, a consistent category found in baseline and EOC maternal language samples was

evidence of and pride in their child's "good" behaviors. Children were often described as "good," "well-mannered," good students, "obedient," and "polite." One mother described her child's "very polite" behavior as the child will "ask permission for all kinds of stuff." Another mother said her child was "so well behaved, which I think is an important thing." Other mothers in this language sample described their children as "pleasers," and presented evidence of the child's overemphasis on caring for others. One mother described her daughter as trying to "make sure that everyone is happy" and that she is "very easy to persuade and to change her mind." In addition, she described her daughter as a "very good girl" and an "easy, very easy kid." Well-behaved, compliant, pleasing, and polite children are often highly valued (and praised) among teachers and parents of young children; however, too strict of an adherence to this value does not promote the skills necessary for dealing with hard situations which require standing up for themselves or others when they are wronged, or advocating for what they need/want/desire. The mothers in this sample did not seem to recognize these traditionally prized behaviors as potentially out of line with normal development and were proud of their children. These positive thoughts shared by mothers regarding their child's "good" behavior is perhaps an example of Carpenter et al.'s (2014) statement that parents often inadvertently reinforce unwanted behaviors thereby maintaining their child's anxiety. These children are working to develop their speaking/communicating behaviors, but having their voice be heard must not stop with audible vocalizations.

### Overprotection

Overprotection is listed above in the EE section; however, it is also discussed here as it was expressly stated by a mother and would be a target for amelioration if treating professionals

only collected the FMSS but did not measure expressed emotion. More specifically, prior to treatment, this mother stated that she was “very protective” of her daughter. Later, in the EOC language sample, this mother talked in the past tense about her protective behavior and stated that “I just was very close to her and tried to shelter her from any pain that I could and I also realized that sometimes being a parent to child that has some of those struggles and needs that you have to see them go through things that are difficult.” These statements suggest that overprotection, which has been associated with the development and maintenance of SM, was present in this mother at baseline, but that treatment for her child’s SM may have helped reduce this overprotective behavior in this mother. This makes sense as psychoeducation in IBTSM is provided regarding the nature of avoidance and how children “often escape discomfort by not speaking in situations that are difficult for them” (Bergman, 2013, p.22). In addition, parents were active members of their child’s treatment team and often had the responsibility of helping/promoting/encouraging their child’s exposure and response in situations where the child’s speech was not occurring and also helping the child take small steps toward speech.

#### Family Accommodation/Rescue

In reference to family accommodation/rescue, some mothers indicated that their child had close sibling relationships and that the child with SM often relied on the sibling during interactions outside of home. These examples of family accommodation are counterproductive to SM treatment goals which include increased verbalizations and decreased avoidance (Bergman, 2013).



## Family Relationships/Functioning and Parent Involvement

The information provided above may directly be related to the maintenance and development of SM and if ameliorated could potentially improve treatment outcomes. However, there was also specific content that emerged from these speech samples that may have more of a direct/immediate impact on family relationships/functioning if targeted during treatment. In this sample, maternal guilt, conflicting parenting styles, a mother's need for a break, and difficulties other than SM were all themes that emerged from maternal language samples. While many of these needs and concerns are common in families without children with SM, these areas may be exacerbated among families with children with SM due to the family stress of the disorder. Each language sample, in a brief manner, provided information that is unique to each family setting and provided useful information that can be used by the therapist to help improve family relationships.

When considering whether it is appropriate for SM treatment to delve into family dynamics in addition to focusing strictly on the non-speaking behavior in treatment for children with SM, it's important to consider the information reported in the literature regarding the role that parental involvement in a child's treatment has played. As reported earlier, information about the impact of parental involvement in treatment is not clear (Wei and Kendall, 2014). These authors suggest that potential benefits have been noted when family treatment is added, but specific components that contribute to increased efficacy are not fully understood. As treatment to increase verbalizations for SM is very intensive (often with both time involved, and costs associated with therapy) for therapists, parents, and the child, it will be very important to consider which are the most salient aspects of parent intervention.

As part of the assessment protocol for SM in her treatment manual, Bergman (2013) recommends assessment for speaking behaviors and an assessment for social anxiety. This child-focused assessment protocol is consistent with Taboas, McKay, Whiteside, and Storch's (2015) observation that "family variables are not comprehensively assessed nor addressed during clinical trials involving individual exposure" (p.17). As a result of this lack of assessment, family patterns are likely to be left intact post child-based exposure treatment (Taboas et al., 2015). The FMSS does provide a brief method to round out child-focused assessment information with information regarding a day-to-day glimpse of family life. While further studies will be necessary to investigate the impact/meaning of the greater prevalence of the increased rates of high expressed emotion and emotional overinvolvement found in this population, the FMSS not only provides this information, but it also provides data regarding some variables that may inhibit treatment progress and information that can be used to strengthen family functioning. The fact that the measure of the FMSS is an indirect means of assessing this information provides both benefits and drawbacks. A benefit of this type of assessment is that the caregiver is not told exactly what is being measured and thus, it may provide a measure that is less vulnerable to the caregiver providing information they think the therapist would like to hear (Raishevich et al., 2010). However, a drawback of this measure is that because this assessment is indirect, important family variables potentially impacting the development and maintenance of SM as well as important family dynamics may be missed.

#### Post Treatment Condition Comparisons

Post treatment condition comparisons from the secondary analysis of the FMSS revealed interesting findings related to differences in language used by mothers at end of condition for

waitlist and active treatment groups, and differences in perceptions between the therapist and mom regarding rates/impact of improvement.

### Improvement in the Course of Treatment

From the language that mothers used to describe their child's progress, it appears that mothers saw an increased benefit to 24 weeks of treatment (active condition) in comparison to 12 weeks of treatment (waitlist condition). For mothers whose child received 12 weeks of treatment, with the exception of one mother who reported her child "blossomed tremendously," words used to describe their child's improvement were more moderated and included the following: "doing a pretty good job on assignments," "still working on several things," and "little by little it's coming out," and "getting much better about going out and being independent."

Mothers of children in the active condition (24 weeks of treatment) reported much stronger positive language regarding their child's improvements. Mothers in this condition stated the following: child is "more self-confident now...just a lot happier kid now...no problems going to school...won't ever raise his hand—will shout out answer," "opened up quite a bit more and she seems to be a happier child because of it... progressing quite well...relatives have noticed change in her too," and "I could hear her from across the room which is a real first...you know that was a breakthrough so she's getting so much better at all these things...she's been better at making new friends at her ballet class...she made a new friend and that's sort of a breakthrough...feels comfortable speaking with family members."

A main difference between those who experienced 12 weeks of treatment compared to 24 weeks of treatment, is that those who received 24 weeks of treatment had continued and advanced exposures practice, and therapy incorporated specific, systematic measures to transfer

control (responsibility for on-going work) from the therapist to the parents and child (Muris & Ollendick, 2015). In addition, those who received 24 weeks of treatment also had a session on relapse prevention. Content of maternal language samples suggests that they found greater improvements with the increased sessions which incorporated these components.

### FMSS and Therapists' Improvement Scales

One interesting finding was revealed from reviewing rates of improvement made by therapists on the Clinical Global Impressions Scale-Improvement measure and comparing them to language used in the maternal speech sample. On this scale, therapists rate children on a scale of 0-6. Zero is “not assessed,” 1 is “very much improved” all the way to 6 which is “slightly worse.” Most of the ratings on this scale were consistent with the language that the mother used with one exception. This child was rated to be a 4 (minimally improved); however, the mother stated: “I could hear her from across the room which is a real first...you know that was a breakthrough so she’s getting so much better at all these things...she’s been better at making new friends at her ballet class...she made a new friend and that’s sort of a breakthrough...feels comfortable speaking with family members.” This discrepancy in improvement might be explained by different perspectives that therapists and parents may take regarding their child’s improvement. The therapist may see the end goal and see that the child has fallen short of that, and thus rated the child low on the rating scale; however, the mother of the child focuses on the distance from the starting point and thus sees how far her child has come.

### Implications for Practice

In addition to EE and parental control discussed above, the FMSS, which provides a glimpse into day-to-day family life, yielded important information that can be used in tandem

with treatment for children with SM. Discussed in this section is how the content of language samples in this study might have been used to provide behavioral and emotional support to families. However, it should be noted that each speech sample is unique to a family's situation and, in practice, each sample's content should be considered on an individualized basis.

### Behavioral Support

#### Difficulties Other Than SM

One mother's language sample repeatedly referenced her difficulty and "battle" over her daughter's control issues and barely referenced her child's SM, thus revealing that this mother had an immediate need for strategies to help manage this behavior. Intervention strategies to address how to handle these difficulties could include conflict management strategies, positive communication within families, and principles of parent management. Similarly, another mother stressed how her son had difficulties with tantrums, she was often guessing why he was upset, and she was being physically hurt as a result. Alternative methods/settings for communication as well as strategies on how to handle her child's tantrums, may have helped this mother cope and address her child's behavior. One mother indicated her child's fear of going into her bedroom and monsters under the bed, yet she attributed her daughter's difficulty with going to bed as her not wanting to miss something. Several strategies could be incorporated including helping this mother see that her daughter's difficulty may not be that she is worried about missing something, but rather she is fearful of going into her room because of her fear of monsters. Strategies could be presented to help her child reduce her fear of the bedroom.

### Rewarding Good Behavior

Many mothers praised their child's "good behavior," and themes of perfectionism were identified. While these can be positive ways of being, psychoeducation regarding helping parents to see the possibility that their child is acting in a restrictive manner, avoidant of trouble/censure, and that some degree of not following directions falls within normal development for a child may prove beneficial to these children. Encouraging parents to tell and act in ways that show their child that they don't have to be/act perfect, it's okay to take risks, and they will still be loved will benefit these children. Parents should consider the benefit of not praising/reinforcing perfect behavior, and instead point out healthy ways that their child has taken a risk or was not perfect and it turned out fine.

### Family Accommodation

Several instances of sibling rescue were presented throughout the language samples, and mothers were relieved that this helped their child rather than an acknowledging that it promoted avoidant behavior. In addition, one mother noted that she was "very protective." The information in these language samples corroborate Bergman's (2013) incorporation of a discussion about the nature of avoidance into the psychoeducation session. Bergman states that "it is important that parents understand that avoidance is a primary part of the cycle of this order" (p.22). In light of the information provided in this language sample, psychoeducation regarding perpetuating an avoidance cycle could have been emphasized with specific examples that pertain to their family situation. A family plan could be developed to address ways to handle these situations.

### Reinforcement Survey

Content provided by some mothers' language samples could be utilized to determine what activities/items might be used for reinforcement in the therapy process. For example, one mother revealed her daughter's love for puzzles, another mother revealed her daughter's love of shopping, and many mothers revealed activities their child likes to do (going out to eat, to the theater, Disneyland).

### Emotional Support

#### Mother's Guilt

Maternal guilt was present in this sample and the mother wondered what she had done to contribute to her son's SM. This is consistent with Bergman's (2013) statement that parents may blame themselves for their child's failure to speak and underscores the necessity to follow her recommendation to provide information in the psychoeducation portion of treatment that "no consistent pattern of family circumstances, education decisions, birth order, and the like has been linked to the development of SM" (p.21).

#### Differences in Parenting Styles

Two mothers' language samples revealed that there is some disagreement within the family regarding the treatment approach to take with their child. Requesting both the mother and father be present in the psychoeducation session and addressing the need and benefits for treatment as well as parenting approaches to take with their children, may reduce/eliminate this conflict within these families.

### Overwhelmed Parent

A parent provided content that she was overwhelmed with caring for her child “that was just always by my side”. Validating the mother’s need for a break and asking the parent to schedule time for such breaks allows for a consideration of the mother’s well-being and promotes self-care.

### Limitations

The limited sample size of these maternal speech samples did not allow for statistical comparison between high expressed emotion and other variables. So, although analysis revealed that high expressed emotion, and particularly emotional overinvolvement is more prevalent among mothers of children with SM in comparison to mothers without children with SM, the meaning of this observation has not yet been determined. Also, the FMSS provides a brief method to capture family dynamics that may be inhibiting a child’s progress or interfering with family relationships. However, the FMSS provides this information indirectly, so it is possible that family dynamics will be present that inhibit progress or interfere with family relationships but will not show up on the FMSS. Finally, because the FMSS is an indirect measure, limited conclusions can be drawn regarding the impact that IBTSM treatment had on family relationships for themes that emerged. For example, even though tantrums were mentioned in the baseline condition but not in the EOC condition, one is not able to conclude that the IBTSM treatment had an effect on tantrums. This question/behavior was not directly assessed.

### Recommendations for Further Research

As this sample indicates a higher percentage of mothers who have high expressed emotion compared to the normal population, further studies which incorporate a larger sample



size are needed to look at why the rates are higher within this population—is it a normal outcome and a result of having children who are experiencing significant impairment with communication? Is this construct associated with specific aspects of SM? Considering the relationship between expressed emotion and child symptom severity, improvement rates, short- and long-term treatment outcomes, and history of parental problematic shy behavior may yield important associations. If an impact is determined, future studies will be needed to determine which components of a parent-based intervention to be used in conjunction with child-focused therapy are necessary to improve these associations. To make the FMSS more robust within the childhood anxiety population, it would also be interesting to add a dimension of parental overcontrol to the construct of expressed emotion to see whether that dimension can produce additional meaningful information. Future research is needed to determine if changes in expressed emotion/family functioning among children with SM are related to better outcomes long term for the child and family.

Although these findings show that the FMSS provides a brief method to capture a glimpse of family dynamics which may be hindering treatment progress or family relationships, it does provide an indirect measure of emergent themes. While some researchers have commented this indirect measure may provide information that is less vulnerable to impression management in comparison to questionnaire measures (Raishevich et al., 2010), further research would be necessary to determine if a more direct measure would provide this information more accurately.


### Summary

The findings in this exploratory study revealed that levels of EE, particularly emotional overinvolvement, among mothers of children with SM are higher in comparison to other samples of mothers of children without SM that are reported in the literature. Previous literature has reported that high levels of EE are linked to poorer clinical course, diminished treatment response and higher rates of relapse among a range of mental and physical health conditions in pediatric population (Peris & Miklowitz, 2015); however, in this exploratory study, the meaning of this information is not clear and further analysis with a larger sample size is recommended to determine the implications of this finding. Levels of EE largely remained the same pre and post treatment. Other findings of this study suggest that the FMSS can be used as an assessment tool to obtain specific content about family dynamics that can be utilized to maximize treatment progress and improve family functioning. While specialized training is necessary to code measures of caregiver EE should future research determine meaningful implications of this construct within the SM population, no training is required to analyze emergent content which may be contributing to the development and maintenance of SM and content that may be used to improve family functioning. However, knowledge of family factors that may contribute to SM and anxiety disorders is necessary. Overall, administering the FMSS to mothers, and likely other caregivers, allows for a better understanding of the family environment. Expressed Emotion and/or emergent information can be used in tandem with child-focused treatment to support families and may contribute to positive short- and long-term benefits for children with selective mutism and their families.

## **APPENDIX A: IRB NON HUMAN SUBJECTS DETERMINATION**




**NOT HUMAN RESEARCH DETERMINATION**

From:   
FWA00000351, IRB00001138  
To: Lisa M. Kovac  
Date: November 22, 2017

Dear Researcher:

On 11/22/2017, the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review: Not Human Research Determination  
Project Title: Analysis of Five Minute Speech Samples from Mothers of Children with Selective Mutism  
Investigator: Lisa M. Kovac  
IRB ID: SBE-17-13591  
Funding Agency:  
Grant Title:  
Research ID: N/A

 IRB review and approval is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are to be made and there are questions about whether these activities are research involving human subjects, please contact the IRB office to discuss the proposed changes.

This letter is signed by:



Signature applied by  on 11/22/2017 08:02:49 AM EST

Designated Reviewer

## **APPENDIX B: COPYRIGHT PERMISSIONS**

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Apr 08, 2018

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OK this is no problem  
All the best Peter Muris

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wrote:

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