Using EMDR to Address Social Anxiety With Clients Who Stutter: Treatment Considerations

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This article describes the treatment considerations when providing eye movement desensitization and reprocessing (EMDR) therapy to treat clients who stutter. Since stuttering is often developed in childhood and persists into adulthood, it has long-term impacts on the educational, social, psychological, and professional development of those who stutter. While stuttering can present with physiological impairments not amendable to psychological interventions, EMDR therapy may effectively decrease the psychological stressors (such as social anxiety and shame) that can intensify stuttering. The authors present an extensive literature review on the traumatic experiences and adverse effects of stuttering. They also discuss essential treatment guidelines when using EMDR to work with people who stutter (PWS), including processing developmental trauma when stuttering, experiences of being bullied because of stuttering, shame and internalized negative self-statements, distrust of one's body due to inability to control one's speaking, and the social anxiety and avoidance in dealing with triggering situations. The clinical instructions are illustrated with a case example of a 40-year-old college professor who experienced anxiety and shame related to persistent developmental stuttering, and who sought treatment due to difficulties speaking in front of his classes. After completing 20 sessions of EMDR therapy, the client reported decreased social anxiety and shame and was able to teach courses comfortably. Further research considerations using EMDR treatment with PWS are recommended.

Keywords: eye movement desensitization and reprocessing (EMDR); stuttering; social anxiety; shame; developmental trauma

Approximately 1% of the adult population in the United States chronically stutter (Yates et al., 2018), with men being three times more likely to stutter than women (Bloodstein, 1993). Over 70 million people stutter worldwide (Miller, 2016). In children, the incidence of stuttering is 5% of the population, with an 80% recovery rate where these children gain fluency. The remaining 1% of these children will continue to stutter into adulthood (Bloodstein & Ratner, 2008; Buchel & Sommer, 2004; Miller, 2016). This condition is known as Persistent Developmental Stutter (PDS), where stuttering developed in childhood but never resolved or dissipated. Stuttering typically begins between the ages of two and a half and 5 years when children are developing language skills, with most children becoming self-aware of their stutter by 3 or 4 years of age (Altholz & Golensky, 2004; Beilby, 2014; Buchel & Sommer, 2004; Iverach et al., 2016; Iverach et al., 2017).

What Is Stuttering?

Fluent speech is taken for granted by most individuals. In reality, it is a complex behavior that depends on numerous components harmoniously working without disruption. For fluent speech to occur, there needs to be a series of precisely coordinated muscle movements involving breathing, voice production (phonation), throat movement, palate, tongue, and

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lips (articulation) (Miller, 2016). Stuttering is a speech motor disorder that involves an involuntary disruption of speech in the synchrony of respiration, phonation, and articulation. As a result, stuttering hinders the ability to communicate effectively (Altholz & Golensky, 2004; Beilby, 2014; Iverach et al., 2017). Stuttering can present itself in many ways, and the frequency of disfluency can vary depending on the individual (Altholz & Golensky, 2004). Additionally, there are also affective components to stuttering, such as anxiety and stress, that may not overtly present themselves but are nonetheless a part of this speech disorder (Beilby, 2014).

What Causes Stuttering?

Studies of the brain show that the speech-language and coordination components are different in people who stutter (PWS) than those who are fluent (Ratner, 2010). As stuttering research expands, researchers are discovering neural differences between stutterers and fluent speakers, suggesting stuttering is connected to the breakdown in the highly coordinated planning and execution of speech components in both the brain and the speech mechanics (Miller, 2016). In contrast to regular fluent speakers, brain speech movement and listening processes of stutters are less synchronized during speech production. Researchers have found, using diffusion tensor imaging (DTI) and functional MRI, neural abnormalities in both adult and child stutterers (Miller, 2016). According to Buchel and Sommer (2004), two crucial facts about the brains of stutterers were evident during functional neuroimaging studies. First, the right hemisphere of the brain in stutterers appears to be hyperactive, and secondly, there seems to be a timing problem between the left frontal and the left central cortex of the brain. Certain areas of the brain have been noted as being connected to stuttering, such as abnormality in the arcuate fasciculus, disorganized neural connections in Broca's area, and malfunctions in the striatum (Miller, 2016). Researchers proposed that stuttering is likely caused by structural or functional central nervous system abnormality (Buchel & Sommer, 2004), resulting in inefficiency or deficit in the neural processing underpinning the production of spoken language (Iverach et al., 2009). Similarly, Altholz and Golensky (2004) believe the primary cause of stuttering is an issue with the neurological coordination or timing of the speech mechanisms.

Growing evidence shows and helps to dismiss the myth that stuttering is a nervous disorder, emotional problem, or the result of bad parenting, but instead is the result of multiple factors (Altholz & Golensky, 2004). There is not a definitive answer to what causes stuttering, but there is growing consensus on its etiology. Stuttering is seen as a polygenetic disorder (Ratner, 2010), with a genetic component connected to a predisposition to stutter (Iverach et al., 2018). Stuttering may be neurophysiologically determined and maintained by avoidance behavior and learning, along with negative emotional responses and reactions to the stuttering (Altholz & Golensky, 2004; Buchel & Sommer, 2004).

Emotional and Social Aspects of Stuttering

While there is still no definite answer on what causes stuttering, PWS often experience long-term impacts on their educational, social, psychological, and professional development (Altholz & Golensky, 2004; Beilby, 2014; Iverach et al., 2018). Common emotional responses experienced by PWS include frustration, anger, self-contempt, anxiety, fear, shame, stress, grief, helplessness/powerlessness, depression, isolation, and low self-esteem. Stuttering puts one in a constant state of hypervigilance to not look like a fool and be embarrassed in front of others. These emotional distresses often have a greater impact on the PWS and their family and friends than the actual stuttering behavior itself (Altholz & Golensky, 2004; Beilby, 2014; Craig & Tran, 2014; Iverach et al., 2018).

Those with PDS have numerous areas in their life where they have great difficulties as a result of their stuttering. When a stutterer tries to communicate but finds their speech blocked or if they have difficulty in getting syllables and words out fluently, it is common for strong feelings to arise, such as shame, powerlessness, and frustration (Ginsberg & Wexler, 2000). These feelings can easily affect every aspect of their existence, including their self-concept, roles, and way of living (Altholz & Golensky, 2004). Stutterers are often exposed to adverse reactions or rejection in verbal situations or social interactions. Even simple, taken-for-granted activities, such as talking on the telephone, being asked to introduce oneself, or seeking directions, can become major tasks where overwhelming shame quickly arises and can lead to self-imposed isolation to avoid the negative consequences of public speaking (Altholz & Golensky, 2004). Stress and shame regularly exacerbate a person's stuttering and rate of dysfluency (Ginsberg & Wexler, 2000). Arousal, nervousness, and other emotional factors have a strong and controlling influence on the severity of PDS (Buchel & Sommer, 2004). The maladaptive coping strategies of avoidance and isolation negatively affect personal relationships and life choices.

There are many painful and traumatic situations that PWS commonly experience, especially during childhood, such as bullying, adverse listener reactions and stereotypes, and, later in life, educational and occupational disadvantage as well as lowered quality of life (Blood et al., 2007; MacKinnon et al., 2007; Yaruss et al., 2012). Also, PWS often experience the fear of negative evaluation, hypervigilance, social isolation, self-consciousness, and poor self-esteem (Cream et al., 2003; Ginsberg, 2000; Iverach et al., 2009; Messenger et al., 2004). Because of these realities, there is a strong potential for stuttering to hinder healthy social and psychological development (Craig, 2003; Iverach et al., 2009) and cause future social problems. Beilby (2014) pointed out that social interaction can be impaired from an early age since stuttering children often become aware of their stuttering shortly after its onset around the age of 3 and 4. These children often experience higher adverse social interactions than their fluent peers. Because children and adolescents who stutter are at risk of becoming socially avoidant and isolated, and developing negative attitudes about themselves due to stuttering, providing children and adolescents effective treatment can be critical in minimizing the impact of chronic stuttering (Craig & Tran, 2006; Messenger et al., 2015).

For PWS, there are a lot of affective aspects that exist below the surface that are not as obvious to the outside world. Even in adulthood, it is quite common for PWS to purposely avoid speaking situations, reduce social and public participation, and experience a real loss of control due to the unpredictability of their stutter (Blomgren, 2010). The involuntary nature of stuttering reinforces the feeling of being helpless and powerlessness resulting from the inability to control one's body (Quesal, 2010). Altholz and Golensky (2004) explained, "The sense of helplessness stems from a perception that the cause of the stuttering is not internal but rather an alien source in conflict with the self, often referred to by people who stutter as 'it'" (p. 199). They never know when their body will "betray" them, and when they will again become disfluent in their speech. Consequently, how a stutterer deals with this uncertainty and resulting powerlessness affects their level of anxiety and emotional well-being (Craig & Tran, 2014).

Traumatic Experience Due to Stuttering

One of the symptoms of posttraumatic stress disorder (PTSD) is the involuntary, repetitive, and spontaneous images of past traumatic events that arise in the present. The occurrences of these distressing, involuntary images of past traumatic events can also lead to depression and anxiety (Tudor et al., 2013). Tudor and colleagues (2013) compared intrusive memories in both stutterers and nonstutterers. Their findings indicated that significantly more participants who stutter than nonstutterers reported experiencing recurrent intrusive imagery of traumatic memories. These memories were related to their stuttering from childhood. According to Tudor et al. (2013) involuntary and intrusive imagery from past trauma may be a strong motivator for avoidance behavior. Tudor et al. also described specific triggers that can increase and compound the trauma and its effects on PWS. These included adverse reactions by others to their speech, insensitivity of listeners (such as others completing their sentences, being impatient, or laughing and imitating their speech), or being excluded, ignored, or overlooked in school and the workplace. Because the awareness of negative responses to stuttering begins in early childhood, PWS learn to protect themselves from the pain and shame of their stutter and other peoples' reactions by not speaking, word-changing, and avoiding social situations, among other defensive and safety behaviors. PWS tend to organize their whole life around their speech impediment and often see stuttering as the most important aspect of their identity (Starkweather & Givens, 2003).

The trauma from PDS is a particular form of PTSD that primarily happens in a social context. These consistent, ongoing, daily social traumatic incidents are primarily "small-T traumas," which are continuous, repetitive, and frequent, often occur multiple times daily through repeated social interactions, resulting in shame, social embarrassment, frustration, self-hatred, and fear. Because of the consistency and frequency of these small-T traumas, the stutterer comes to anticipate these events and remains hypervigilant to avoid these situations, and can often move to denial and dissociation (Starkweather & Givens, 2003).

Stuttering and Dissociation

Several articles (Heite, 2001; Starkweather & Givens, 2003) addressed the issue of dissociation that stutterers experience at certain times when they stutter. Starkweather and Givens found the dissociation that stutterers experience similar to that experienced by nonstutterers with PTSD. Starkweather and Givens pointed to a study by Heite (2001) based upon a survey of 108 stutterers that found about two-thirds of stutterers experience dissociation during some point of the stuttering sequence, and that in most of the cases the dissociation subsided when stuttering stopped. Additionally, Heite reported that there is a correlation between the frequency of dissociation in stutterers

and the frequency of avoidance behaviors. Starkweather and Givens speculated that dissociation might be used as a way to protect the stutterer from the psychological pain of embarrassment, fear, shame, or anger. However, more research is required on the connection between dissociation and stuttering and that there is insufficient evidence to assume dissociation as an integral part of the stuttering experience (Starkweather & Givens).

Treatments for Stuttering

Treatments for stuttering usually include speech therapy to improve speech motor functions, reduce stuttering frequency, and increase speech fluency as well as psychological interventions to address the affective and cognitive responses to stuttering (Ratner, 2010). Several counseling approaches have been used for PWS. These include person-centered techniques, cognitive behavioral therapy (CBT), narrative therapy, and systematic and interdisciplinary approach. The most prominent counseling theory used for PWS is CBT (Blomgren, 2010). Each of these therapeutic models provides useful therapeutic guidelines to attend to PWS.

Person-Centered Approach

The literature pointed to several guidelines and techniques for counselors working with PWS. Many of these were common to Rogers' Person-Centered Therapy and emphasized the importance of helping the stutterer feel safe to discuss their story and become self-aware of their stuttering behavior and how it affects them physically (Ginsberg & Wexler, 2000). Using this approach, counselors set up a safe therapeutic setting that allows the stutterer to explain their experience and feel both valued and understood. For many stutterers, this is a foreign experience as it is not common for them to feel safe enough to tell their story or think that people want to understand. Ginsberg and Wexler emphasized the importance of the counselor fostering a positive counseling relationship by utilizing common person-centered techniques such as empathy, genuineness, and positive regard. They emphasized the clinician being aware of their personal view of stuttering, attending to possible countertransference and nonverbal responses to the client's disfluency of speech. They pointed out the importance of a counselor maintaining naturally attentive eye contact, which will let the client know that what they are saying matters. Counselors focus on helping clients become more self-aware of specific times and places where their stuttering is more difficult, the situations they avoid, and how they feel and think about their stuttering. Not every PWS experiences their stutter in the same way, so it is vital for the counselor not to assume, but to explore the experience of each client. As the counselor helps the stutterer with self-awareness, the hope is they will feel more known and valued and begin to face the fears and situations they avoid, which tend to exacerbate the problem. Ideally, the stutterer will experience a corrective emotional experience with the therapist as they begin to face their fears and decrease avoidance of social settings (Ginsberg & Wexler).

Cognitive Behavioral Therapy

Several studies demonstrated the effectiveness of using CBT to work with PWS in lessening social anxiety (Helgadottir et al., 2009; Helgadottir et al., 2014a; Menzies et al., 2016; Menzies et al., 2019). Interventions often center on identification and removal of avoidance behaviors (e.g., avoiding particular syllables) and safety-seeking behaviors (e.g., asking questions to keep others talking), exposure to feared situations (e.g., making phone calls), and cognitive restructuring in which clients identify and challenge unhelpful thoughts or beliefs that contribute to social anxiety and avoidance behaviors. Menzies and colleagues (2016) conducted a large international trial on using an online CBT program with 260 stuttering participants and found clinically significant reductions in social anxiety, fears of negative evaluations, unhelpful thoughts and beliefs about stuttering, and avoidance behaviors. In another experimental clinical study with 32 participants, Menzies and colleagues (2019) again found CBT treatment effectively produced similar gains as their 2016 study, with a reduction in percentage of syllables stuttered and stuttering severity.

Narrative Therapy

Narrative therapy is another counseling approach that has been used with stutterers (Ginsberg & Wexler, 2000; Leahy et al., 2012). Ginsberg and Wexler emphasized the importance of helping their clients tell their story and explore how they have constructed their identity and meaning of events in their lives, especially in light of their stuttering. Counselors can assist their clients to achieve greater fluency when they focus on shame and other emotions PWS carry as a result of stuttering. Instead of seeing and experiencing oneself as a victim to stuttering, through the telling and retelling of one's story one can begin to see the heroic efforts one has put forth to overcome obstacles due to

stuttering and gain a sense of self-efficacy, moving into the self-view of being a hero who can face and conquer challenges courageously.

Systemic and Interdisciplinary Approach

The literature suggests a holistic therapeutic model that recognizes the importance of the family system as these are often the PWS's most important relationships. This approach does not focus solely on the PWS, but explores the influence that stuttering has on the full family system. Historically the therapeutic focus has been on the child who stutters rather than on the family and how they deal with the effects of one of their children being a stutterer. Beilby (2014) emphasized the need to help parents with their emotional struggles surrounding having a child who stutters as well as assisting them to parent a child with this type of speech disability.

The literature also emphasized the importance of collaboration between speech-language pathologists and mental health professionals when working with PWS to help assess and treat certain conditions like social anxiety that are often comorbid with stuttering (Iverach & Rapee, 2014; Yates et al., 2018). Since many speech-language pathologists do not have training in counseling, they may feel limited in working with PWS when social anxiety and shame exacerbate speech dysregulation. Interdisciplinary collaboration can help each professional understand the different aspects and difficulties their clients are experiencing, leading to more effective treatment.

Using EMDR to Work With Stuttering

The effectiveness of using eye movement desensitization and reprocessing (EMDR) therapy to treat traumatic memories has been well documented in research since 1989 (Shapiro, 1989). Francine Shapiro, the creator of EMDR therapy, proposed an Adaptive Information Processing (AIP) theory postulating that new experiences are assimilated into existing memory networks. In healthy individuals, when new experiences are processed and "metabolized," what is useful is learned and the experiences are stored with appropriate emotions and cognitions, available as guidance in the future. However, according to the AIP model, pathology occurs when distressing experiences are unprocessed and stored in separate neural networks, unable to link up with adaptive learning, therefore preventing adaptive resolution and successful integration emotionally and cognitively. Additionally, new information or positive experiences cannot be linked to the networks storing unprocessed material. Consequently, these distressful unprocessed experiences become implicit memories that continue to set the groundwork for an individual's impoverished sense of self-efficacy, perpetuating a sense of powerlessness and hopelessness for change, and possibly contribute to symptoms of anxiety, depression, or PTSD. Having conducted studies to test and improve upon EMDR therapy, Shapiro demonstrated that EMDR therapy facilitates AIP by accessing the dysfunctionally stored material in the past through applying bilateral stimulation while processing the physical memories of traumatic experiences along with the emotional arousal and maladaptive cognitive perceptions. Successful EMDR treatment leads to the assimilation of past undigested painful experiences to proper perspective (that they are in the past), discharging of dysfunctional affect, and generalization of more adaptive cognitions (Shapiro, 1995, 2007; Solomon & Shapiro, 2008).

EMDR is not only effective in working with PTSD or "large-T Traumas," it is also effective in addressing "small-t traumas," relatively minor psychologically wounding events that could occur or repeat throughout developmental stages with cumulative negative impacts (Shapiro, 1995). Research has found EMDR an effective treatment for social anxiety (Homer & Deeprose, 2018; Tofani, 2007), anxiety over public speaking (Carrigan & Levis, 1999), dissociation (Knipe, 2015), low self-esteem (Griffioen et al., 2017), upsetting emotional experience (Lee & Cuijpers, 2013), shame (Balcom et al., 2000; Kennedy, 2014)—all stressful "small-t" experiences and conditions that PWS often encounter or develop, as discussed previously. However, to date there has not been an article published on using EMDR therapy to work with stuttering.

Even though there are genetic, neurological, and physiological components of persistent developmental stuttering that are not amenable to psychotherapy, EMDR therapy can be used to treat the psychological challenges discussed previously that PWS often struggle. While EMDR cannot eliminate speech impairments that are of neurological or physiological nature, EMDR can undoubtedly decrease the shame, social anxiety, and avoidance PWS deal with, which may, in turn, lessen the severity of stuttering that could be exacerbated by emotional and psychological distress. Using EMDR, the first author has successfully worked with a client who stutters. Even though the client's stuttering continues, it occurs to a much lesser degree, and the shame and social anxiety were significantly reduced. The client consequently was able to pursue his dream of becoming a full-time college professor

and speak comfortably in classroom settings, which he did not think was possible prior to treatment. In the following section, this clinical example will illustrate the authors' treatment recommendations according to the eight-phase EMDR standard protocol (Shapiro, 1995).

Eight-Phase EMDR Treatment Considerations

While larger-scale research will be required to further support the effectiveness of using EMDR with PWS, based upon extensive research discussed earlier and the case example presented below, the authors propose a comprehensive EMDR treatment of psychosocial effects of persistent developmental stuttering that should include the following considerations in each of the eight phases. Due to the recurrent and cumulative trauma and shame PWS experience throughout their life stages, the treatment to overcome adverse effects of stuttering will likely not be short term.

Case Example

The case example is that of a 40-year-old adult male who presented for treatment of shame and social anxiety related to persistent developmental stuttering. Stuttering began at around age 2–3 when he first started to speak. Over the years, the client received extensive speech therapy, which enabled him to increase his speech fluency and contributed to his relative success in coping with stuttering. The client developed a satisfying career that did not require much public speaking, even though he continued to be plagued with social anxiety and shame inside. However, when his career advancement led him to begin teaching adjunctly at the college level, he found himself filled with dread when speaking in front of students. There was an opportunity for him to become a full-time professor, but the stress of public speaking made him wonder if he could take on professorship full time. Upon learning of the effectiveness of EMDR from a colleague, he decided to try EMDR to address his social anxiety and shame related to stuttering. He proceeded to seek treatment from the first author, then an EMDR International Association (EMDRIA) certified EMDR therapist.

Phase 1: History and Treatment Planning

Taking a thorough history enables clinicians to develop a treatment plan and identify the targets for EMDR processing. In addition to understanding the presenting problems that bring PWS into therapy, there are several areas clinicians need to explore, including the developmental history and traumatic experience of averse responses related to stuttering, symptomology, strategies, and maladaptive behaviors developed to cope with the stuttering-related averse experience and relationship with one's own body. According to the AIP conceptual model, social anxiety, hyperalertness (e.g., to audience facial expression), and avoidance that PWS manifest can be reactions to accumulated implicit memories of repeated trauma experience of struggling to speak. Such conceptualization is supported by Starkweather and Givens (2003), who pointed out the development of both stuttering and PTSD follow parallel courses since the daily painful experiences are a combination of current stuttering, intrusive memories of past stuttering, and anticipation of future stuttering. The traumatic memories can be triggered by specific stimuli in the person's surroundings related to the original event, though outside of the stutters' conscious awareness. It is, therefore, important to explore thoroughly important developmental markers and dynamics surrounding stuttering to ensure comprehensive treatment.

For example, what are the early memories of learning to speak? What did the person remember when stuttering began? What were the parents' reactions to the child's struggles? What were the upsetting experiences or visual memories of being rejected, frowned upon, ignored, made fun of, or bullied by family, friends, or others? What medical, speech, and or psychological interventions were attempted? What was helpful, and what was unhelpful? What coping mechanisms did the person deploy (e.g., word exchange, avoiding talking on the phone)? What situations did/does the person avoid? What opportunities has the person lost or relinquished because of stuttering? What are the current symptoms or difficulties the person is struggling with that contribute to distresses? While clients do not need to provide detailed information to the above questions, knowing the areas of disturbance paves the way to selecting targets for desensitization and reprocessing later.

Assessing safety factors, including client stability and ego strength, affect regulation capacity, health concerns, and current life constraints, is also an essential part of Phase 1. Clients need to be able to withstand intense emotions that could emerge during processing or after progressing between sessions. Because every social interaction could be stressful and the stuttering clients can also be in hyperalert mode surveying potential judgment from the therapist, it is crucial for the therapist to be attentive and patient to build a strong therapeutic relationship that feels safe to the client.

Since stuttering is a chronic condition in which PWS struggle, these clients have likely developed coping mechanisms to lessen their anxiety and shame over stuttering. Researchers working with social anxiety have identified and named the coping mechanisms as safety behaviors—strategies used by the socially anxious as attempts to prevent negative social consequences. However, researchers pointed out that some safety behaviors may contribute to avoidance and, therefore, do not lead to effective coping in the long term (Helgadottir et al., 2014b). Lowe and colleagues identified 27 safety behaviors that PWS may utilize to lessen stuttering-related social anxiety (Lowe et al., 2017), including letting the other person do the talking, avoiding eye contact or attention, keeping answers short, avoiding difficult syllables or words, using gestures or pointing to things instead of talking, or mentally rehearsing sentences before saying them. It is crucial that clinicians become familiar with possible safety behaviors, explore with stuttering clients the strategies they have utilized, and evaluate the effectiveness of these strategies during the assessment phase. Helping clients identify ineffective coping behaviors and formulate reasonable goals for change gives stuttering clients specific ways to assess their progress as they proceed with treatment. While fluency in their speech may be a long-held wish for PWS, it is not a realistic goal for EMDR therapy. Helping PWS clients to accept speech limitations may be an important therapeutic goal.

Clinical Example. The initial assessment was conducted to ensure there were no issues that would present safety concerns. Exploration of client developmental history revealed that his stuttering began at around age 2–3 when starting to learn to speak. The client reported having supportive parents and did not remember experiencing rejection due to his speech difficulties until he entered preschool. Interacting with other students and attempting to speak in class caused him much shame and humiliation as he struggled to speak fluently. The client reported incidents of being bullied and feeling exposed due to stuttering. Extensive speech therapy in childhood enabled him to increase his fluency by practicing prolonged syllables, continued phonation, and appropriate use of speech. He avoided speaking on the phone whenever possible. If having to speak, he would avoid syllables, words, or phrases difficult for him to pronounce fluently. Despite having high academic achievements in school and career success later on, the client reported having low self-esteem and struggling with fear of being exposed. The client identified his therapy goal was to be able to speak without experiencing so much debilitating shame and anxiety.

Phase 2: Preparation

Because physiological arousal can often increase stuttering severity, helping PWS regulate such affects and to relax may lower the threshold when stuttering is triggered (Iverach et al., 2016). It is recommended clinicians assess the level of dissociation when working with PWS. Helping PWS to repair their relationship with their body will also be an essential part of treatment.

Additionally, struggling with stuttering since childhood often undermines one's self-confidence and increases self-contempt, with a result of focusing excessively on stuttering rather than one's competence. It is, therefore, especially important during this phase of resource installation to explore areas of strengths, successes, and accomplishments in the client's life. These internal resources can be utilized as positive cognitions and self-statements during processing and reprocessing.

Clinical Example. The client was high functioning and had good affect regulation. He was able to establish a safe place and feel relaxed. He identified his parents' support as an asset. We also discussed and used slow bilateral stimulation to resource his strengths and his many accomplishments.

Phase 3: Assessment

Targets selected for processing need to include incidents of past traumatic experience due to stuttering, such as being teased or bullied, feeling humiliated when speaking in class, visual memories of averse attention in social situations, or other shame-triggering negative experience. Often clients may not be able to effectively work with current triggers without processing these past stressful events first as these past experiences likely contribute to the clients' social anxiety.

Researchers found that socially anxious clients tend to have heightened worries and rumination when anticipating social interactions and/or seek safety by avoiding feared events (Clark & Wells, 1995). Therefore, in processing current or future events, situations that clients avoid or anticipate with high anxiety should be identified and targeted, especially if such maladaptive coping hampers engagement in relationships, social interactions, or educational and occupational accomplishments (Iverach et al., 2016). Clinicians may also invite PWS to identify the words

they tend to stumble over and ask PWS to pronounce those words to determine if any traumatic memories related to unsuccessful attempts to speak certain words emerge as potential targets.

Studies indicate stuttering might be accompanied by fear of negative evaluation (Blumgart et al., 2010; Iverach et al., 2009), by heightened anxiety in socially evaluative situations (Messenger et al., 2004), and negative cognitions (or unhelpful thoughts about stuttering) (Iverach et al., 2016; St Clare et al., 2009). It is essential to help stuttering clients identify their negative self-beliefs that contribute to increased or debilitating anxiety. St Clare and colleagues (2009) devised the original Unhelpful Thoughts and Beliefs Associated With Stuttering Scale (UTBAS), listing 66 negative thoughts and beliefs stutterers may engage. Later, Iverach, Heard, and colleagues distilled these 66 items into a six-item scale (UTBAS-6) that included fear of negative perception ("People will think I'm incompetent because I stutter," "People will think I'm strange"), avoidance ("I don't want to go—people won't like me"), self-doubt ("I'll never finish explaining my point—they'll misunderstand me"), and hopelessness ("I'll never be successful because of my stutter," "What's the point of even trying to speak—it never comes out right") (Iverach et al., 2016, pp. 969–970). These negative thoughts may contribute to social anxiety, powerlessness, hopelessness, and depression (Iverach et al., 2016). Essential tasks of EMDR therapists include helping clients to articulate these negative thoughts, formulate the negative self-beliefs (turning them into statements about the self, such as "I am not likable/lovable," "I am not competent," "I have no control"), and then working with clients to identify positive self-statements (such as "I am likable," "I have many good qualities," or "I have good points to make"). Therapists need to point out to clients that people's perceptions do not make reality. Meaning, just because somebody may make an unfair judgment about client competence due to their stuttering, this does not make the judgment accurate. Additionally, therapists can confront clients' all-or-nothing thinking and assumption of how "everybody" would react to one's stuttering and helping clients to identify safe people whose acceptance they have experienced and enjoyed.

Identifying deeply held negative perceptions/beliefs (about self and others) and introducing positive/adaptive statements is an important aspect of EMDR treatment when working with PWS. Since stuttering begins in early childhood, PWS often develop and hold negative and "irrational" self-beliefs since childhood, as children are not capable of evaluating situations objectively. Because most stuttering clients have lived with their chronic conditions for years, and because the tendency for avoidance and social isolation may worsen over the years when more traumatic experiences are accumulated, PWS may have given up on the possibility of things getting better for them. Introducing clients to positive self-statements, though they often feel like remote possibilities to despondent clients, can mark the beginning of hope, pointing to the direction of psychological healing for them.

Clinical Example. Incidents of being bullied at schools and on school buses were identified as targets for processing. Memories of humiliating moments due to stuttering were also selected as processing targets. The client often imagined being seen as "ugly," "looking stupid," or "looking like a moron" when he stuttered. He feared the moments of silence in the classroom when he began to stutter. He remembered feeling frozen when the silence descended as he struggled to complete his sentences. The paralyzing fear was a reaction to thousands of accumulated traumatic experiences of public exposure/humiliation stored in his body and memories. Such fear worsened his stuttering.

The client also reported powerlessness over his stuttering. He developed a sense of distrust over his body, feeling a lack of control over being able to speak the way he desired. He felt betrayed and trapped by his stuttering, as it negatively affects him in many areas of life. He was angry that stuttering precipitated bullying and many embarrassing and shameful events in his life. Negative cognitions included: "I am powerless," "I am weak," "I am broken," "I am trapped [in my body]," and "I have no control [over stuttering]."

Currently avoided situations were also targeted, including speaking on the phone and making presentations. Negative cognitions that contributed to anxiety and self-contempt included: "I'm an idiot," "I am exposed [when speaking]," "People will not want to listen," "I look ugly when I stutter," and "I will be laughed at."

The client initially experienced difficulties when trying to identify positive cognitions. Having felt hopeless most of his life, positive self-affirmation statements seemed untrue. Upon further discussion, the client was able to proceed to identify several cognitions, including "I look fine when I speak," "I have much to offer," "I can make a good presentation," "I know what I am talking about," "I am respected for my work," and "I am loved/liked."

Phase 4: Desensitization

Treatment during this phase focuses on the clients' targeted memories, along with their disturbing emotions and sensations as rated according to the Subjective Units of Distress Scale (SUDS). Bilateral stimulation such as eye movements, sounds, or taps is applied during the desensitization process. Because experiences related to stuttering involve a series of distressing events, processing the targeted memories will likely lead to the recall of other (feeder) memories of humiliation, lack of control, or inadequacy. In contrast to other treatment models such as CBT that focus more on present coping, thorough processing of feeder memories (e.g., childhood trauma of being bullied) is an essential aspect of EMDR therapy as these memories of past traumas likely contribute to current anxiety and stress.

Because of the early onset of stuttering, a young child can quickly become overwhelmed by a sense of hopelessness when unable to perform desired tasks such as speaking. As a result, the stuttering child could internalize negative perceptions of self (such as "I am incompetent" or "I am flawed") early on. These negative self-perceptions could become the stuttering child's self-identity, making them difficult to be modified. Consequently, looping (persistent repetition of negative self-statements and self-blame) may occur during this phase when processing early childhood memories, and cognitive interweaves may be required to direct the client's attention to what he can control and areas of competence (as identified during Phase 2). Ideally, the disturbing memories will be processed until SUDS levels are reduced to zero. However, because stuttering will continue to occur in a person's life, a SUDS level of 1 or 2 may be an appropriate outcome.

Clinical Example. During this phase, identified distressing memories from the past and avoided situations in the present were processed and reprocessed. When processing early memories of stuttering, the client was overwhelmed with shame and the feeling of "I am broken" as experienced by the young child. Resourcing was needed to help the client get in touch with his accomplishments in life and work through his sense of powerlessness. On numerous occasions, the client dissociated during bilateral processing. Bringing the client's awareness back to the present helped the client to ground himself and continued with reprocessing. At times, the client got stuck in self-blame, holding his child-self responsible for stuttering, revealing additional unconsciously held negative beliefs that it was the young child's fault for stuttering. Cognitive interweaves were utilized with conversations around the physically involuntary aspects of stuttering and identification of positive (adaptive) self-statements such as "It was not my fault."

Interestingly, during this phase, the client experienced several episodes of fear of flying on a plane. Targeting his fear of sitting on the plane, the negative cognitions of "I am trapped," "I have no control," and "I am powerless" resurfaced. During reprocessing, a variety of situations, current and from childhood, that caused him to feel trapped and having no control emerged during the bilateral stimulation, such as his stuttering and his overwhelming workload. We discussed and addressed the situations where he could have control over (e.g., cutting back on work, knowing that he just needed to get through a few more weeks and the load will lighten). After regaining some sense of control, he was able to board the plane and complete his trips. Such a "detour" during the treatment indicated how a theme/negative cognition, such as feeling trapped (by his body) due to his inability to control stuttering, was activated in other situations and could interfere with coping capabilities of other situations.

Additionally, the therapist (first author) noticed that the client tended to have difficulties pronouncing certain words and displaced reactions of distress when making attempts to speak clearly. These specific difficulties were also used as targets as they represented small-t trauma/anxious moments for the client. Applying the bilateral stimulation, the therapist instructed the client to notice what happens when the client said the words very slowly while feeling his shame and anxiety. Such interventions opened up a cascade of additional painful memories of embarrassment and difficulties due to stuttering. The client was overcome with grief when remembering and "witnessing" scene after scene of his life struggles and his desire to speak "normally." Instead of continuing to be angry at himself for being broken, he came to have compassion over the suffering of his child self who, with no fault of his own, had struggled to speak fluently, a task that seemed so natural and easy for other children but monumentally difficult for him. He realized how he had internalized the shame of his difficulties, which led to a sense of worthlessness, self-doubts, and self-hatred.

Phase 5: Installation

Because of the persistent and repeated childhood trauma around stuttering, much time will need to be spent in Phase 4 to help clients process earlier memories and negative self-perceptions before the PWS can

internalize and accept the truth of their positive self-statement. Through reprocessing, clients gain a sense of confidence and competence, no longer feeling like victims of other's judgment. Their shame and anxiety over stuttering lessen. They move from feeling powerless (over stuttering and the perception of others) to feeling more in control of their lives. Their self-hatred and difficulties trusting themselves (their body) turn into self-compassion and acceptance. Even though stuttering may continue, clients can retain their positive self-perception and see stuttering as something they can cope with without fearing that stuttering will prevent them from pursuing a satisfying career or social relationships. Their positive self-statements can be measured using the Validity of Cognition (VOC) scale. When reprocessing is complete, the VOC can be installed at a level of 7 (completely true).

Clinical Example. As discussed above, the client's past trauma experiences and current anxiety-provoking situations related to feared judgment/rejection were processed until VOC reached 7. The positive cognitions identified in Phase 3 were installed. The client was able to see that he had much to offer and that he was well respected by colleagues and his students.

Phase 6: Body Scan

The purpose of a body scan is to assess whether a memory is fully processed and resolved. When there are still physical tensions associated with the targeted incident, the physical sensations will require further processing. In addition to asking the client to return to the original targeted event, it is also helpful to ask the PWS to speak the words they have had difficulties with and assess whether they still experience physical tension. If the client still experiences anxiety over speaking these words, then more processing will be needed. Reprocessing helps clients to become more relaxed physically when implicit memories contributing to anxiety and shame are desensitized.

Clinical Example. Different targets were processed and reprocessed over 15 sessions. During a body scan, the client reported experiencing no physical distress even when pronouncing words that he knew he could stutter over. He reported feeling relaxed in his body when reviewing the targets.

Phase 7: Closure

As therapy proceeds, clients begin taking risks and enter situations previously avoided. It is essential that clients learn to self-soothe between sessions, anticipate upcoming anxiety-provoking situations, and become prepared for those situations during treatment. Helping clients develop realistic expectations will prevent clients from taking too high a risk or becoming discouraged. It is vital to continue to encourage and remind the client of the steady progress and growth they have made to help them navigate temporary setbacks that may occur during treatment.

Clinical Example. As the client progressed through therapy, he noticed feeling less self-conscious when speaking and more able to enjoy interactions at hand rather than being preoccupied with the fear of stuttering occurring. He became less avoidant of social activities and more confident in teaching. He also reported, with amazement, how when he stuttered, he did not feel as much shame anymore. He noticed that students did not react to his stuttering the way he imagined/feared. Instead, students showed much interest in his lecture and expressed appreciation for his caring and insights. No longer paralyzed by his shame and anxiety, the client reported being able to relax and interact with others more comfortably. While stuttering still occurred, he reported not feeling the need to make concerted effort to control his speech anymore.

Phase 8: Reevaluation

In every subsequent session, the clinician reassess client progress to determine if positive improvements from desensitization and reprocessing have been maintained. Because stuttering may present triggering situations on a regular basis PWS have to deal with, current triggers will need to continue to be targeted and worked through until clients report low SUDS, high VOC, and minimum body tension.

Following the initial successful processing of painful past incidents of stuttering, clients may hope that EMDR can eliminate their stuttering altogether. Thus, upon return for the next session, the client may feel discouraged that their stuttering persists. It is crucial for clinicians to help clients celebrate and take note of the progress made, such as experiencing less anxiety when speaking or less avoidance of situations. To never stutter again is often a wish held deeply by PWS. Clinicians will need to help these clients come to an acceptance of their limitations, grieve the loss of the long-held desire to speak normally, and focus on making progress towards their therapeutic goals. EMDR can help reduce the negative emotional energy connected to the stuttering, which can help decrease its frequency and intensity, but it cannot eliminate the physiological aspect of the stutter. EMDR may deplete the "emotional fuel" that can help exacerbate

one's stutter. As the trauma associated with the stutter is processed, the PWS will gain self-confidence as they are not as affected by negative emotions and anxiety to the same degree as they once were and can engage socially with more confidence.

When clients feel more relieved from the weight of anxiety, shame, and past traumas related to stuttering, they may experience grief or regrets over lost relational and career opportunities in the past due to choices to avoid interactions or exposure. Anger toward themselves and self-blame in statements such as "I should have done better" may emerge. Therapists will need to help their client to forgive their own body and their own choices, and reach the positive self-statements of "I did the best I could, given what I knew," "I overcame a lot of obstacles," or "I came pretty far under the circumstances."

As treatment approaches the end, clients will become more and more confident about facing the future. Instead of being a powerless victim harboring self-hatred, they develop a sense of compassion for their own lifelong trial and a sense of pride for facing their limitations daily. Clients will be able to envision, with excitement, doing what they set out to do.

The work is not complete until a future template is installed. The anticipation of facing potential challenges and the confidence in meeting those challenges indicate clients can realistically engage the future. For PWS, it means to no longer focus their attention upon stuttering. Accepting stuttering as a condition that they need to live with enables them to be more comfortable when speaking. They can also feel more confident that stuttering will not deter them from pursuing the goals they want to accomplish in life professionally and relationally.

Clinical Example. As the client became less self-conscious about his stuttering and more comfortable interacting with others and speaking in class, he became hopeful about becoming a full-time college professor, a dream he previously did not think was possible. By now, the client is already feeling more confident and comfortable when lecturing in his classes. He had no problem installing the future template, seeing himself lecturing in class, and interacting with students and colleagues through a variety of meetings.

The 20-session EMDR therapy included addressing the past (developmental and incidental trauma related to stuttering), present (the processing of current anxiety-provoking situations), and future (installing the future template of being able to speak comfortably to an audience). At the end of treatment, the client was able to develop acceptance of his stuttering, knowing that his stuttering was not an obstacle in his ability to develop connections with others. Successful processing decreased his social anxiety and shame, taking the negative emotional energy out that exacerbated the stuttering. And his self-acceptance reportedly increased his speech fluency. Instead of fearing speaking in front of others, he anticipated with excitement teaching the following semester. Moreover, instead of shame or inadequacy, he was able to feel inspired by his vision to teach and mentor students. He felt confident about contributing to his profession as a college professor. Three-year follow-up revealed that he was a well-respected full-time faculty. While he still stuttered on occasion, he did not feel shame. Smiling, he stated, "I barely notice it."

Conclusion

With the onset in childhood, persistent developmental stuttering can be a debilitating condition that interferes with a child's progression through life. In addition to utilizing speech therapy to help stuttering children and adults to cope with stuttering, working with them to address their social anxiety, trauma, rejection, negative self-statements, and shame will enable them to live a productive and satisfying life despite this chronic condition. The authors hope that the discussion and treatment considerations recommended in this article assist clinicians trained in EMDR to become better equipped to help PWS. The authors also hope that more speech therapists will become aware of EMDR as potentially an effective treatment model to address the social anxiety and shame of PWS and collaborate with EMDR clinicians to increase the functioning and well-being of PWS.

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