

2017

Examining the Literature on Fluoxetine Treatment for Selective Mutism in Children

Kelsey West

Augustana College, Rock Island Illinois

Follow this and additional works at: <http://digitalcommons.augustana.edu/psycstudent>



Part of the [Child Psychology Commons](#), and the [Psychiatric and Mental Health Commons](#)

Augustana Digital Commons Citation

West, Kelsey. "Examining the Literature on Fluoxetine Treatment for Selective Mutism in Children" (2017). *Psychology: Student Scholarship & Creative Works*.

<http://digitalcommons.augustana.edu/psycstudent/2>

This Student Paper is brought to you for free and open access by the Psychology at Augustana Digital Commons. It has been accepted for inclusion in Psychology: Student Scholarship & Creative Works by an authorized administrator of Augustana Digital Commons. For more information, please contact digitalcommons@augustana.edu.

Running head: FLUOXETINE FOR SELECTIVE MUTISM IN CHILDREN

Examining the Literature on Fluoxetine Treatment for Selective Mutism in Children

Kelsey West

Augustana College

Examining Fluoxetine Treatment for Selective Mutism in Children

Selective mutism (SM), previously referred to as elective mutism, is a disorder that is classified by the refusal or failure to talk in one or more social situations, despite the mental capacity and physical ability to comprehend and participate in spoken language (Black & Uhde, 1994). While this disorder can be extremely debilitating to the children affected, there is little known about this disorder. This is largely because there were no studies describing etiology, history, characteristics and treatment of children with SM until around 1993 (Dummit, Klein, Tancer, Asche, & Martin, 1996). This disorder can negatively impact the ability to reach childhood developmental milestones, especially socially and academically, because of the lack of verbal communication. Because of these devastating effects in early childhood that can occur and shape the rest of a child's education and social experiences, it is very important to learn more about this disorder and the treatment options. One treatment option has been to administer Fluoxetine, a selective serotonin reuptake inhibitor often used as an antidepressant or to help with anxiety symptoms. This paper will provide a review of the evidence of Fluoxetine as a treatment for selective mutism, and then critique the evidence in comparison with other treatment options. A short overview of etiology and background will be provided, followed by an overview of treatments available for SM and an explanation of fluoxetine treatment. The literature regarding fluoxetine treatment will then be critiqued. The side effects of fluoxetine in comparison to other pharmacotherapy options will be discussed and finally, other non-pharmacotherapy options will be examined.

Etiology of Selective Mutism

Selective mutism is characterized by a failure to speak in social situations or respond when spoken to. The *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013) states that this failure to speak must interfere with communication in a variety of settings (social, academic) for at least one month, and that it cannot be due to a lack of knowledge of spoken language. This disorder is rare, with a prevalence of between .03 – 1%. It usually begins before five years of age, and persistence varies with each individual. Some children ‘outgrow’ it with time, and others require clinical intervention in order to be successful in academic or social environments. In many cases, the symptoms of SM may disappear, but symptoms of another anxiety disorder may still exist, often social anxiety or social phobia (American Psychiatric Association, 2013). The causes are largely unknown; some parenting factors may play a role in development, such as demonstrating social inhibition or overprotective parenting, as well as negative affectivity of the child, or other possible language difficulties. Most frequently, other anxiety disorders or oppositional defiant disorder have been known to be comorbid with selective mutism. Overall, there is little conclusive information known about the cause and course of this disorder, and more research needs to be done in order to gain more insight about the disorder itself and how to treat it.

Treatments Available

Many different kinds of psychosocial and pharmacological interventions have been utilized for the treatment of selective mutism in children. Psychosocial interventions have included behavioral therapy, group therapy, family therapy, and intensive programs focusing on multimodal psychosocial treatment (Manassis, 2009). Many case reports have

studied these types of treatment, as well as a few large-scale studies, with findings that support these treatment options when administered appropriately (Harvey & Milne, 1998; Wright et al., 1995; Manassis, 2009). There is more data supporting behavioral and multimodal treatments because of the larger research base for these, and cognitive behavioral therapy is thought to be a positive treatment option for children who are older than 8 years (Manassis, 2009). Generally these types of treatments are the first ones tried when treating children with selective mutism.

There has also been research regarding pharmacotherapy for selective mutism in children, most frequently involving SSRIs or other medications known to be helpful in treating social phobia, a closely related disorder (Dow, Sonies, Scheib, & Moss, 1996). One type of MAOI medication used as treatment for SM is phenelzine. This drug seems to have some positive treatment effects, however, there are significant food, dietary, and drug interactions and restrictions associated with its use, making it a less-than-ideal option for children (Kaakeh & Stumpf, 2008). Common SSRIs used include fluvoxamine, sertraline, paroxetine, and fluoxetine. The first three listed have very few studies involving them as treatment at all, and the studies that are available lack standardization, randomization, and have had very small sample sizes. These factors are part of the reason there is a very small body of research findings regarding the use of these drugs as treatment. The most frequently administered and studied pharmacotherapy for selective mutism is fluoxetine.

Fluoxetine Treatment Overview

Pharmacological treatment of selective mutism often includes the administration of selective serotonin reuptake inhibitor (SSRI) medications because of their effects on closely related mood and anxiety disorders (Dow, Sonies, Scheib, & Moss, 1996). The most

commonly studied SSRI in the treatment of SM is fluoxetine, most likely because of the high efficacy it has showed when treating social phobia (Kaakeh & Stumpf, 2008). Fluoxetine has been regarded as an ideal medication for children, largely because of the minimal side effects associated with it, including markedly less sedation affects in comparison to other SSRIs (Harvey & Milne, 1998). In addition, the dosage of the drug allows for a variety of different titration methods and flexibility when being administered to children, which is extremely important for countering side-effects the drug may have in clinical studies. Many studies begin with a low dosage and slowly increase the medication, depending on the overall effects of the drug with each individual child. If negative side effects occur, dosage is lessened.

Literature Review

There are many literature reviews discussing studies of fluoxetine treatment in children with selective mutism, many of them agreeing of this as a valid treatment option. However, considering limited information is known about the efficacy of any drug therapy for this disorder, pharmacological treatment should usually be considered as a secondary treatment when psychotherapy alone has failed (Kaakeh & Stumpf, 2008). When pharmacological intervention is necessary, fluoxetine has more evidence of efficacy than other medications, likely because it has been studied more widely (Manassis, 2009). In many studies, dosages should start low and increase gradually with close monitoring. This is because it is easier to control positive and negative effects of the drug for the children it is being tested in. It is noted in some review articles of case studies that there are reports of 'positive effects' of fluoxetine therapy, but minimal detail or explanation is given in these reports (Dow et al., 1996). This is important to note because it illustrates the necessity for

future research on this topic in order to understand if it is a safe and effective treatment option for children.

The bulk of information on fluoxetine treatment for children with SM has been reported through case studies. Though low in efficacy and generalizability, they provide the groundwork needed for further research into this treatment. One of the most frequently cited case reports studied a 4 year old female named Leah, with pervasive symptoms of selective mutism that were not improved through an intensive preschool program focused on diagnosis and intervention of child disorders (Wright, Cuccaro, Leonhardt, Kendall, & Anderson, 1995). After the first five days of fluoxetine treatment at a beginning dose of 4mg/day, Leah began to increase verbal communication in some environments. At the end of twenty days of treatment and with an increased dosage of 8mg/day, Leah was talking at an age-appropriate level in all settings.

Other case studies report similar findings of positive improvement regarding verbal communication increases with varying time frames of the children responding to fluoxetine (Harvey & Milne, 1998; Silveira, Jainer, & Bates, 2004). All case studies in this review administered fluoxetine treatment only after participant's symptoms were not improved through other interventions, such as behavior therapy, intensive programs, and psychotherapy. Detailed accounts of these individual case studies are important for piloting future experiments of fluoxetine treatment for children with selective mutism.

Manassis and Tannock, working with many other researchers, have published multiple sources regarding selective mutism and fluoxetine treatment. A correlational study they published examines many language, cognitive, and anxiety symptoms in comparison with children who have a diagnosis of selective mutism and/or other anxiety disorders

(Manassis et al., 2007). The results from this study were used as the basis for a study that utilized a portion of the same participants for a quasi-experimental design study comparing treatments for selective mutism (Manassis & Tannock, 2008). All participants received school interventions for an amount of time, and then slightly more than half also began receiving SSRIs. All but two participants were administered fluoxetine at dosage appropriate on an individual basis. The children who were receiving medication treatment showed significantly more improvement of symptoms when compared to those who were not receiving medication. While it cannot be determined what the impact of medication alone is for selective mutism symptoms, the results of this study suggest some significant positive impact of administering medication and noticing a positive change in symptoms.

Finally, there are only two well known experimental design studies published at this time that examine the impact of fluoxetine treatment on children with selective mutism. The first administered fluoxetine to a randomly assigned group of participants on a titrated schedule while receiving parental and teacher reports of symptoms over approximately 14 weeks of the school year (Black & Uhde, 1994). The second study administered fluoxetine on a titration schedule for 9 weeks while measuring progress through weekly visits with the treating psychiatrist (Dummit et al., 1996). Each of these experiments found that fluoxetine was well tolerated in the children and seemed safe for the short amount of time that it was monitored. However, Black & Uhde found fluoxetine to be of limited usefulness, because their findings did not reach significant differences when compared to the control group regarding reports of parents and teachers (1994). Dummit et al. found significant improvement in symptoms, but the study did not control for other factors, it was difficult to determine what role the medication played in this improvement (1996). In each study,

minimal side effects were reported and symptoms for each individual seemed to improve for the better.

Critique

The research of fluoxetine treatment for children with selective mutism is not extensive, but is able to begin the discussion on this topic. The research at this time does not allow for a conclusion about the effectiveness or efficacy of fluoxetine treatment in children with SM to be determined. Some of the research has illustrated a correlation between administering SSRI medication and decreasing symptomology of selective mutism (Manassis & Tannock, 2008). However, with a lack of randomization and controlling for confounding variables including the impact of other treatments administered at the same time, this information should not be taken as concrete evidence.

The bulk of information on this topic is derived from case studies involving one or two individuals. While case studies are beneficial and important to providing some insight onto a treatment option, they are extremely limited in offering information about a treatment option as a whole. While a case report can illustrate that a treatment option worked for an individual, such as with Leah who was discussed earlier (Wright et al., 1995), the information is not generalizable to other individuals with similar problems. Case studies simply do not provide enough information to safely determine if a treatment works or not.

Slightly better in being able to determine outcomes of a specific treatment plan are quasi-experimental studies. Two of these studies have been done regarding selective mutism, with one of them focusing specifically on intervention options to help symptoms of the disorder (Manassis et al., 2007; Manassis & Tannock, 2008). A correlation between symptoms of selective mutism and school intervention and/or medicinal intervention was

found. Children who were administered medication, including fluoxetine, were significantly improved in symptoms by the end of the study (Manassis & Tannock, 2008). However, because there was no randomization of participants into different groups, only a correlation between a decrease in SM symptoms and administration of SSRI medication can be determined at this time. As correlation does not equal causation, the only conclusion that can be made from this study is the negative correlation between administering SSRIs and decreasing symptoms; no information on the cause of this relationship can be determined.

In addition, only two randomized control studies have been published at this time, with combined participants totaling 36 children. This alone is not consistent with the amount of participants necessary to determine a treatment's efficacy within a controlled environment or the effectiveness for children in natural environments. The low participant numbers and the experimental designs of the information that is currently available regarding fluoxetine treatment for children with SM create significant limitations, and are a large reason that no concrete conclusions can be drawn about the efficacy or effectiveness of treatment.

As stated, essentially all published information on fluoxetine treatment uses it as a secondary treatment plan. Reports vary on whether the initially administered treatment is continued or stopped when pharmacological treatment begins. Black & Uhde explicitly excluded participants who required other treatment during the time of the experiment, making their study one of the only ones that attempted to control for interference of other treatment while studying the effects of medication alone. Dummit et al. also controlled for confounding variables associated with other treatment by administering psychotherapy to any participants who had not previously received it and excluding those who responded to

it alone. Without controlling for the effects of other treatments while examining the treatment at hand, confounding variables can skew the data that is found from the study.

While the low numbers and overall design of the studies examining fluoxetine treatment for SM are weaknesses of the research on this topic as a whole, there are some strengths within this research body. Fluoxetine has been regarded as a superior treatment option within pharmacotherapy as a whole because of the minimal side effects when compared to other types of SSRI or pharmacotherapy options as a whole (Harvey & Milne, 1998). Additionally, as previously stated, Fluoxetine is the most frequently studied SSRI type of medication when administered to children with selective mutism diagnosis or symptoms (Kaakeh & Stumpf, 2008). This being said, there is more information known about this specific pharmacological treatment than there is about any other for selective mutism.

There also seems to be evidence that fluoxetine should not be considered a primary treatment option. All of the individuals in the case studies mentioned were initially treated with differing kinds of behavioral therapy or intensive psychotherapy treatment programs before being administered fluoxetine as treatment (Harvey & Milne, 1998; Silveira et al., 2004; Wright et al., 1995). Review articles also note that this treatment option should be considered for children with severe selective mutism that has been unresponsive to other types of interventions previously administered (Manassis, 2009). This consensus of fluoxetine as a secondary treatment option is a concrete strength of this body of research.

In addition, there is a general consensus among all published studies that fluoxetine works in improving symptoms of selective mutism. While no concrete conclusions of efficacy or effectiveness can be drawn from this data, it gives a positive outlook on this

treatment option. It is the hope that vast future research will continue, specifically research that addresses the weaknesses of this body of research as a whole. More randomized, controlled experiments should be administered with larger sample sizes in order to effectively analyze the outcomes of fluoxetine treatment for children who are administered the drug for treatment of selective mutism. In these experiments, comparisons with other SSRIs, pharmacotherapy options, and psychological interventions should be examined separately in order to determine the best available treatment for children affected by SM. In addition, controls for co-morbidity, sex differences, and environmental factors need to be studied with the administration of fluoxetine to determine if this option is valid for certain populations or the generalized public as a whole.

Conclusion

Selective mutism is a debilitating childhood disorder that impacts developmental and academic milestones, as well as social relationships within the children who are affected. As illustrated through the studies cited in this paper, the information that is available largely supports the theory that fluoxetine has the potential to be a successful treatment for children with selective mutism and that there are few side-effects when administered correctly, but more information and research is necessary to be able to determine concrete conclusions. The literature suggests a consensus that this treatment option should be considered secondary, as providing young children with any type of pharmacological psychiatric treatment is often controversial and can have many negative impacts. In addition, there have been studies proving it's efficacy as well as it's effectiveness in treating symptoms of SM, but most of the literature available focuses on small sample sizes and short periods of assessment. For these reasons, the data is not

generalizable or significant enough to determine if this is a truly valid treatment option for children.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM 5*. Washington, D.C: American Psychiatric Association.
- Black, B., & Uhde, T. W. (1994). Treatment of elective mutism with fluoxetine: A double-blind, placebo-controlled study. *Journal of the American Academy of Child & Adolescent Psychiatry, 33*(7), 1000–1006. <https://doi.org/10.1097/00004583-199409000-00010>
- Dow, S. P., Sonies, B. C., Scheib, D., & Moss, S. E. (1996). Practical guidelines for the assessment and treatment of selective mutism. *Annual Progress in Child Psychiatry & Child Development, 452–472*.
- Dummit, E. S. I., Klein, R. G., Tancer, N. K., Asche, B., & Martin, J. (1996). Fluoxetine treatment of children with selective mutism: An open trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*(5), 615–621. <https://doi.org/10.1097/00004583-199605000-00016>
- Harvey, B. H., & Milne, M. (1998). Pharmacotherapy of selective mutism: Two case studies of severe entrenched mutism responsive to adjunctive treatment with fluoxetine. *Southern African Journal of Child and Adolescent Mental Health, 10*(1), 59–66. <https://doi.org/10.1080/16826108.1998.9632346>
- Kaakeh, Y., & Stumpf, J. L. (2008). Treatment of Selective Mutism: Focus on Selective Serotonin Reuptake Inhibitor. *Pharmacotherapy, 28*(2), 214–224.

- Manassis, K. (2009). Silent suffering: understanding and treating children with selective mutism. *Expert Review Ltd.*, 9, 235–243. <https://doi.org/10.1586/14737175.9.2.235>
- Manassis, K., & Tannock, R. (2008). Comparing Interventions for Selective Mutism: A Pilot Study. *Comparer Les Interventions Pour Le Mutisme Sélectif: Une Étude Pilote.*, 53(10), 700–703.
- Manassis, K., Tannock, R., Garland, E. J., Minde, K., McInnes, A., & Clark, S. (2007). The Sounds of Silence: Language, Cognition, and Anxiety in Selective Mutism. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46(9), 1187–1195. <https://doi.org/10.1097/chi.0b013e318076b7ab>
- Silveira, R., Jainer, A. K., & Bates, G. (2004). Fluoxetine Treatment of Selective Mutism in Pervasive Developmental Disorder. *International Journal of Psychiatry in Clinical Practice*, 8(3), 179–180. <https://doi.org/10.1080/13651500410006143>
- Wright, H. H., Cuccaro, M. L., Leonhardt, T. V., Kendall, D. F., & Anderson, J. H. (1995). Case study: Fluoxetine in the multimodal treatment of a preschool child with selective mutism. *Journal of the American Academy of Child & Adolescent Psychiatry*, 34(7), 857–862. <https://doi.org/10.1097/00004583-199507000-00008>