

## The Effect of Psychotherapy on Children with Somatic Symptom and Related Disorders: A Systematic Review

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### Abstract

**Introduction:** Somatic Symptom Disorder (SSD) is the diagnosis provided in the DSM-5, which encapsulates several diagnoses that are primarily characterized by somatic symptoms caused by significant psychological distress. The presence of SSD in children/adolescents have been increasingly recognized over the years. This review is aimed at presenting the role of psychological therapy and how effective it is in the treatment of children with somatic symptoms and related disorders (SSD).

**Method:** Articles were obtained from a search on PubMed and PsycInfo and were assessed in July 2023. Articles were reviewed based on the inclusion/exclusion criteria. Thirteen articles were found addressing the role of psychotherapy in treatment of children with SSD.

**Results:** Results showed that the integration of psychotherapy was the key intervention used. Along with the involvement of family which was explicitly mentioned in 7 out of the 13 reviewed studies. A multidisciplinary approach was discussed in six out of the 13 articles. Along that, emphasis was placed on an early accurate diagnosis which results in a shorter disease duration pre-intervention.

**Conclusion:** Findings show that there is a strong effect of psychological therapy, in different forms, in treatment of SSD. Which proves the importance of including therapy in a multidisciplinary approach in treatment of cases with SSD. The limitations in regards to the subject at hand, calls for more involvement of a multidisciplinary approach integrated with psychotherapy for children with SSD.

**Keywords:** Children; Conversion Disorder; Psychotherapy; Somatic Symptom Disorders

### Abbreviations

SSD: Somatic Symptom and Related Disorders; CBT: Cognitive Behavioral Therapy

### Introduction

Somatic Symptom Disorder (SSD) is the diagnosis provided in the DSM-5, which encapsulates several diagnoses that are primarily characterized by somatic symptoms where they are caused by psychological symptoms and are causing significant distress [15]. According to the DSM-5, SSD involves one or more physical symptoms along with excessive time, energy, emotion and/or behavior spent as a result of the dysfunction. Previous editions of the DSM required that the symptoms are not medically explained, but the latest edition

includes both explained and unexplained symptoms by a medical condition. Along that, adding the requirement of the presence of psychobehavioral features [2].

The presence of SSD in children/adolescents have been increasingly recognized over the years. Symptoms come in the form of headache, abdominal pain, musculoskeletal pain, nausea, loss of appetite, dizziness and fatigue [15]. Those symptoms gradually fade over time, with no long-term negative consequences. However, some children/adolescents continue to suffer and their development is impaired [15]. A study on a sample of 21,065 children (4 - 15 years-old) found no gender differences in children but adolescents, girls were significantly more likely to experience somatization. Forty percent had psychosocial problems, and other issues were seen, such as, emotional and behavioral difficulties [15].

A newly proposed therapeutic approach suggests the integration of memory and trauma to detail the traumatic process. Along with attachment therapy, which can touch on the behavioral element. As well as, family guidance which addresses the environmental elements that are factored in the diagnosis. Finally, psychodynamic therapy to address the repressive tendency which could have caused the physical symptoms [8].

### Aim of the Study

This review is aimed at presenting the role of therapy and how effective it is in the treatment of children with somatic symptoms and related disorders (SSD).

### Materials and Methods

All the materials and methods that are used to complete the study should be mentioned.

This review was carried in accordance with the PRISMA guideline for systematic reviews [10]. A comprehensive search was conducted on Pubmed, PsycInfo and PsycExtra databases. The search aimed to identify papers addressing the role of different approaches of psychotherapy in the treatment of children with SSD. The key terms used were: Children, Psychotherapy, Therapy, Psychology, Conversion Disorder, Functional Neurological Disorder, Functional Neurologic Symptom Disorder, Somatoform Disorder, Somatic Symptom Disorder, Illness Anxiety Disorder and Factitious Disorder.

The search was conducted on July 4<sup>th</sup>, 2023, with no date limitation. The initial search identified 92 articles and 29 of them were duplicates. The abstracts of 63 articles were screened and 41 of them were excluded based on the following exclusion criteria: articles written in languages other than English, systematic reviews, studies based on the adult population, studies with no psychological intervention, conference notes and book chapters. Full copies were retrieved for 22 articles to further assess them for eligibility and to meet the following inclusion criteria: having a psychological intervention in a pediatric population and involving a psychosomatic disorder (Figure 1). This methodological decision was made to demonstrate the impact of psychological interventions in the treatment of children with psychosomatic disorders.

### Results and Discussion

A total of 92 articles were initially reviewed and assessed based on the inclusion/exclusion criteria, as illustrated in figure 1. A total of 13 articles were found to meet the criteria and their results are detailed in table 1.

#### Use of therapy in treatment of conversion in children

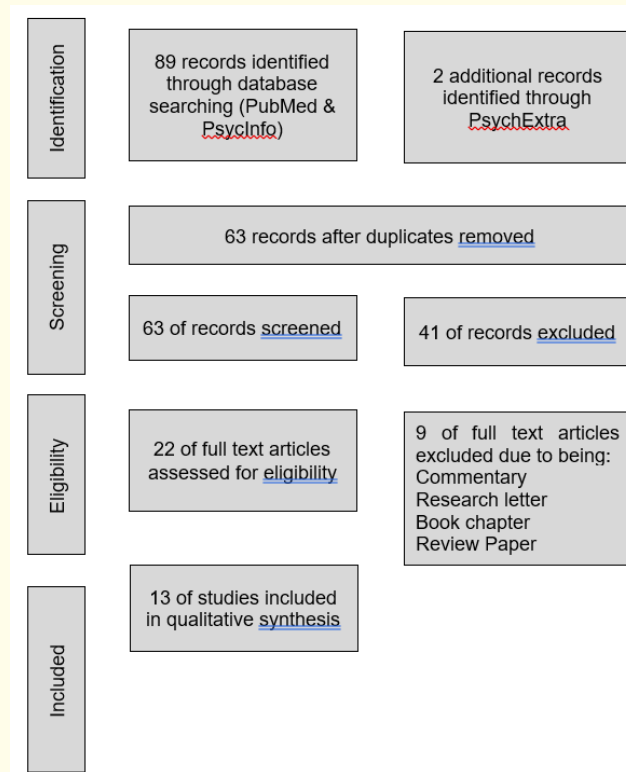
All reviewed studies in this article included therapy in the course of treatment to different extents. Some relied solely on therapy and others combined it with medication, such as antidepressants. One study used a condensed integrative approach of dynamic, insight oriented and/or supportive therapy for the participants [17]. One study used Biofeedback alongside CBT as a treatment method [12].

Author/Year	Diagnosis	Age (Years)	Sample Size	Treatment	Family Intervention	Multidisciplinary Approach	Follow-up Time	Outcome
Turgay, 1990	Conversion Disorder	5-17	89	Integrative child and family therapy	Yes	No	12 weeks	Almost half of the sample recovered in less than two weeks. Two required more than 4 weeks, and the rest recovered in 2 to 4 weeks of therapy.
Peebles, 2005	Factitious Disorder and Malingering	9-15	6	Psychotherapy	Yes	Not specified	Per case	Two patients with malingering responded well to psychotherapy, parental support and attention paid to school difficulties. The remaining patients with underlying psychological conflicts had less fruitful outcomes.
Schwingenschuh, 2008	Psychogenic Movement Disorder (PMD), Conversion in 12 and somatization in 3	7-18	15	CBT	Not specified	Yes	Between 2 weeks to 5 years	Treatment with CBT alongside following with a multidisciplinary team resulted in improvement in most cases. Nonetheless, treatment outcomes were significantly better in children with a shorter gap between symptom onset and getting a diagnosis and treatment.
Laria, 2009	Conversion Disorder	9	1	Psychotherapy	Not specified	Yes	6 months	After 6 months of treatment (psychological and psychiatric), the patient reached total recovery of visual field and visual acuity.
Özsungur, 2012	Conversion Disorder	10	1	Psychotherapy and play therapy	Yes	No	3 months	Patient walked one week after discharge and played with his friends. He continued to follow as an outpatient and has been symptom-free for the last four years.
Bouras, 2015	Conversion Disorder	5	1	Psychotherapy	Yes	No	12 months	One year after initiating psychotherapy, the patient presented with only 2 episodes in early stages of treatment, and was able to manage returning to attend nursery. Four years later, the patient did not present with any more episodes.

Pop-Jordanova, 2016	Somatoform Disorder	M = 10.31 ( $\pm$ 2.75)	243	CBT and Bio-feedback	Yes	No	10 weeks	The biofeedback results were very satisfactory, and proved to be effective in treatment of somatoform disorders.
McFarlane, 2018	FNS	6-17	22	CBT	Yes	Yes	5 years	Eighty two percent of participants showed reliable change post intervention on CGAS.
Lenart-Domka, 2018	Conversion Disorder	9	1	Psychotherapy	Yes	Yes	3 weeks	Patient achieved complete recovery after 3 weeks of comprehensive treatment and was able to return to independent mobility and social functioning.
Malhi, 2019	Conversion Disorder	6-12	50	Psychotherapy	No	Yes	3 months	Eighty-four experienced significant reduction in symptoms and 16% of parents reported some improvement. None reported any worsening post intervention. Emotional and behavioral problems were significantly lower as assessed on CPMS and self-reported adjustment scores significantly improved as assessed on PAAS.
Sakurai, 2019	PIFP	11	1	Psychotherapy	No	Yes	10 weeks	Patient showed improvement through learning stress management skills and psychotherapy. He was able to attend school post intervention with more facial expressions. He became more expressive and worked up his appetite as well.
Mukherjee, 2021	Visual Conversion Disorder	10	1	Psychotherapy	No	No	1 week	Patient showed dramatic improvement 1 week post intervention, and the patient and parents were advised to review periodically.

Stager, 2023	Functional Seizures (FS)	M = 15.00	14	ReACT	No	No	8 weeks	ReACT improved sense of control and general somatic symptoms independent of change in functional seizures. Sixty days post ReACT, selective attention and cognitive inhibition significantly increased. Improvement in sense of control was proportional to a decrease in functional seizures.
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**Table 1:** Key: CBT: Cognitive and Behavioral Therapy; ReACT: Retraining and Control Therapy; PIFP: Persistent Idiopathic Facial Pain; FS: Functional Seizures; CGAS: The Child Global Assessment Scale.



**Figure 1:** PRISMA flow chart showing the research process [10].

Another study used a new approach named (ReACT), which stands for retraining and control therapy [14]. Others incorporated therapy without much detail on the exact used therapeutic approach.

### The role of family in treatment of SSD

Seven out of the 13 reviewed articles mentioned the incorporation of the family throughout the therapeutic process. Especially as they found the family to have part in either the start or the maintenance of the symptoms of SSD in children [1,4,6,9,11,12,17]. Other studies could have involved the family in the therapeutic process but did not clearly mention it as part of the intervention.

### Long-term effects/ results

Reviewed studies ranged in results from one study seeing full remission of symptoms in one week [7], and another following up with the participants for up to 5 years [4]. Overall, most of the studies reported a return to normal function as age-appropriate, post-intervention.

### Prognosis of the disorder

One study proposes that the younger the child, the more likely they are to respond to treatment [17]. Another study found that the shorter the disease duration until a correct diagnosis is made, children had better chances of a complete remission [9].

### Multidisciplinary efforts

Most of the review evidence emphasized the importance of incorporating multidisciplinary efforts in treatment of children with SSD, even where it was not used [3-6,13,16]. As the lack of multidisciplinary team presence could impact the period between the start of the symptoms and the start of appropriate diagnosis and treatment. Impacting the child in such a sensitive developmental age, therefore hindering their growth. As well as, their social functioning and academic performance make them far behind their peers.

### Conclusion

In conclusion, findings show that there is a strong effect of psychological therapy, in different forms, in treatment of somatic symptoms and related disorders. Many of the studies highlighted the importance of integrating multidisciplinary efforts from the beginning which is essential in early diagnosis and can help avoid misdiagnosis and overmedicalization of the symptoms. This could complicate the symptoms and delay treatment for children who are in their development years, affecting their growth compared to their same age peers. The reviewed evidence proves the importance of including therapy in a multidisciplinary approach in treatment of cases with Somatic Symptoms and Related Disorders (SSD).

### Conflict of Interest

Authors declare that no competing interests exist.

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