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Analyzing the Impact of Ayurvedic Treatment on Autism Severity: A Comprehensive Study

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Abstract

This study investigates the effects of Ayurvedic treatments on children with varying severities of Autism Spectrum Disorder (ASD). Through a detailed analysis of demographic characteristics, treatment regimens, medication usage, and improvements in various developmental and health responses, the research aims to shed light on the effectiveness of these treatments. The study collects and analyzes data on the age, gender, socioeconomic status, and other relevant demographic information of the participating children. Detailed descriptions of the specific Ayurvedic treatments used are provided, including herbal medications, dietary changes, yoga, meditation, and other traditional practices. Information on any concurrent medication usage, both Ayurvedic and allopathic, is documented to assess its influence on the outcomes.

The study measures various developmental parameters, including social skills, communication abilities, cognitive functions, and physical health indicators, to evaluate the effectiveness of the treatments. The findings reveal that the effectiveness of Ayurvedic treatments varies significantly based on the severity of autism. Specifically, children with milder forms of ASD exhibit the most substantial improvements. These improvements are observed in several areas:

- Enhanced ability to interact and communicate with others
- Reduction in repetitive behaviors and increased adaptability to changes
- Better attention span, memory, and problem-solving skills
- Improvements in overall health, including better sleep patterns, digestion, and reduced anxiety

In contrast, children with more severe forms of ASD show less pronounced improvements, although some benefits are still noted. This differential response underscores the potential of Ayurvedic treatments as a complementary approach for managing ASD, particularly in milder cases. The findings indicate significant variations in treatment outcomes based on the severity of autism, with milder cases showing the most notable improvements. However, it also highlights the need for

tailored treatment plans based on individual severity levels to maximize the benefits.

Keywords: Autism Spectrum Disorder, Ayurvedic Treatment, Sustainable development, socioeconomic status

Introduction

Autism Spectrum Disorder (ASD) is a pervasive developmental disorder that affects social interaction, communication, and behavior. The increasing prevalence of autism worldwide underscores the need for effective treatment strategies. Traditional approaches, including behavioral therapy and medication, have shown varying degrees of success (1). This study explores the potential of Ayurvedic treatments, has been used for centuries in India, to improve outcomes for children with ASD. Ayurveda, an ancient system of medicine originating in India, has gained recognition worldwide for its holistic approach to health and well-being. In recent years, there has been a growing interest in exploring the potential of Ayurvedic treatments for managing various health conditions, including autism spectrum disorder (ASD). Autism is a complex neurodevelopmental disorder characterized by challenges in social interaction, communication, and repetitive behaviors.

This study aims to explore the hypothesis that Ayurvedic treatment may significantly reduce the severity of autism symptoms by examining the historical background and principles of Ayurveda, as well as providing an overview of Autism Spectrum Disorder (ASD) and the potential application of Ayurvedic therapies in managing ASD symptoms. In addition, this study will review existing research on Ayurvedic treatments for autism to evaluate their effectiveness, compare outcomes with those of conventional interventions, and propose a research methodology for systematically studying the effects of Ayurveda on autism severity (2-6). This includes outlining data collection methods, analytical techniques, and implications for future research. Through this approach, the study seeks to clarify whether Ayurvedic treatment offers meaningful benefits for individuals with autism, thus contributing to a broader understanding of complementary interventions in ASD management (7).

Ayurveda, dating back thousands of years, is based on the principle of achieving balance in the body, mind, and spirit to promote overall health and well-being. The foundational beliefs of Ayurveda revolve around the concept of the three doshas - Vata, Pitta, and Kapha, which represent different aspects of an individual's constitution and physiological functions. When these doshas are in balance, optimal health is believed to be achieved. On the other hand, imbalances in the doshas are thought to contribute to various health issues, including neurological conditions like autism. Autism spectrum disorder is a complex condition that manifests differently in each individual, with symptoms ranging from social communication challenges to repetitive behaviors and sensory sensitivities (8). Ayurveda offers a personalized approach to healthcare, taking into account an individual's unique constitution and addressing imbalances through dietary changes, herbal remedies, lifestyle modifications, and therapies such as Panchakarma. The holistic nature of Ayurveda aligns with the multifaceted needs of individuals with autism, making it a promising avenue for exploring alternative treatments. “Several studies have investigated the efficacy of Ayurvedic treatments in managing autism symptoms and have shown promising results. Ayurvedic therapies such as Shirodhara (forehead oil flow), Abhyanga (oil massage), and Swedana (herbal steam therapy) provide a calming effect on individuals with autism, reducing anxiety and improving sensory processing. These therapies, along with dietary

modifications, herbal supplements, and lifestyle adjustments, aim to address underlying imbalances that may contribute to autism symptoms (9-16).

Compared to conventional approaches, Ayurveda offers a holistic and individualized approach that considers the interconnectedness of mind, body, and spirit, potentially leading to sustained improvements in autism severity over time. Further research is needed to validate these findings and to establish Ayurveda as a complementary therapy for autism (17).

A rigorous methodology is essential for studying the impact of Ayurvedic treatment on autism severity. This study should include a diverse sample of individuals with autism, considering factors like age, symptom severity, and response to conventional treatments. Data collection methods may include standardized assessments of autism symptoms, physiological measures; and qualitative feedback from participants and caregivers. Analysis techniques could involve statistical evaluation of treatment outcomes, comparison with control groups receiving conventional interventions, and long-term follow-up to assess the sustainability of improvements. The study's results could offer valuable insights into Ayurvedic treatments for autism, guiding future research. Integrating traditional Ayurvedic practices with modern research can bridge ancient wisdom and contemporary science, enhancing the quality of life for individuals with autism."

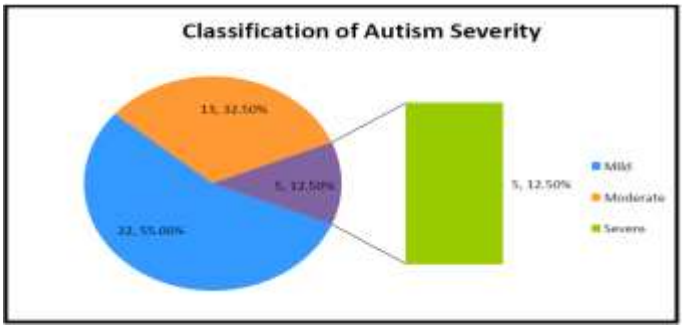


Figure 1: Classification of Autism Severity

In overall, the potential impact of Ayurvedic treatment on autism severity warrants further exploration through comprehensive studies that examine the efficacy of Ayurvedic therapies in addressing the complex needs of individuals with autism. By leveraging the principles of Ayurveda, with its emphasis on personalized care and holistic well-being, we may uncover new possibilities for improving the lives of those affected by autism. Through rigorous research methodologies, data-driven analysis, and collaboration between traditional healers and modern healthcare practitioners, we can pave the way for integrating Ayurvedic treatments into mainstream autism care. Ultimately, this holistic approach has the potential to not only reduce autism symptoms but also enhance overall quality of life for individuals on the autism spectrum.

The objectives of this study are:

1. To categorize the severity of autism into mild, moderate, and severe groups.
2. To analyze demographic and baseline characteristics of the study participants.
3. To detail the treatment protocols and medication regimens used.
4. To evaluate the improvements in various developmental and health parameters over a 12-month period.

Methods

Study Design and Participants

The study involved 40 children diagnosed with ASD, divided into three groups based on severity: mild (N=22), moderate (N=13), and severe (N=5). Participants were selected from a pool of children undergoing treatment at an Ayurvedic clinic specializing in ASD. Informed consent was obtained from the parents or guardians of all participants.

Data Collection

Data were collected on demographic characteristics, treatment sessions, treatment duration, types of treatments administered, and medications used. Additionally, responses to treatments were assessed at 3, 6, and 12 months across seven key areas: behavioral, cognitive, communication, educational and developmental milestones, health and wellness, physical, and social responses.

Statistical Analysis

Descriptive statistics were used to summarize demographic characteristics, treatment details, and responses. Means, standard deviations, medians, quantiles, and ranges were calculated for continuous variables. Categorical variables were summarized using frequencies and percentages. Improvements in responses were analyzed using a chi-square test to determine the significance of changes over time.

Results

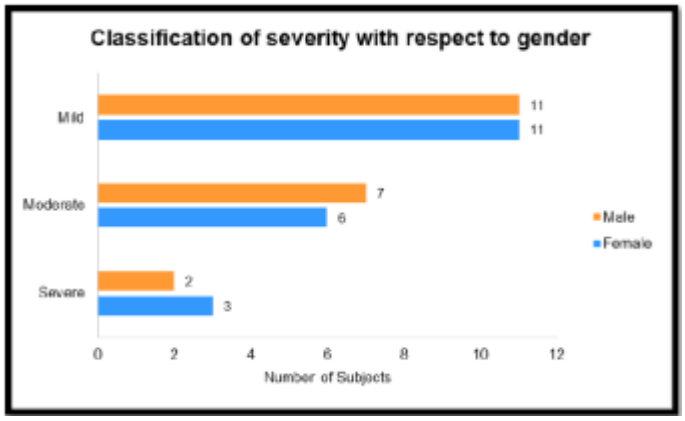
Demographic and Baseline Characteristics

The study included an equal number of males and females, evenly distributed across the three severity groups (Table 1). The mean age of participants was 4.31 ± 1.03 years, with the age range spanning from 2.30 to 7.00 years.

Table 1: Summary of Demographic and Baseline Characteristics

Parameter	Statistics	Mild (N=22)	Moderate (N=13)	Severe (N=5)	Overall (N=40)
Gender	n	22	13	5	40
Male		11 (50.00%)	7 (53.85%)	2 (40.00%)	20 (50.00%)
Female		11 (50.00%)	6 (46.15%)	3 (60.00%)	20 (50.00%)
Age	n	22	13	5	40
Mean ± Sd		4.00 ± 0.88	4.63 ± 1.24	4.84 ± 0.65	4.31 ± 1.03
Median		3.90	4.50	4.60	4.40
Quantile		3.32;4.60	3.80;5.20	4.40;5.20	3.50;5.00
Range		2.30-5.60	2.80-7.00	4.20-5.80	2.30-7.00

Figure 2: Classification of Autism Severity with respect to gender



Treatment Details

All children in the mild group received one treatment session lasting 40 days. In the moderate and severe groups, 92.30% and 20.00% respectively received one session, while others received two sessions lasting 80 days (Table 2 and Table 3).

Table 2: Overview of Treatment Details

Parameter	Mild (N=22)	Moderate (N=13)	Severe (N=5)	Overall (N=40)
1 Session	22 (100.00%)	12 (92.30%)	1 (20.00%)	35 (87.50%)
Parameter	**Mild (N=22)**	**Moderate (N=13)**	**Severe (N=5)**	**Overall (N=40)**
2 Session	0 (0.00%)	1 (7.69%)	4 (80.00%)	5 (12.50%)
40 Days	22 (100.00%)	12 (92.30%)	1 (20.00%)	35 (87.50%)
80 Days	0 (0.00%)	1 (7.69%)	4 (80.00%)	5 (12.50%)

Table 3: Summary of Treatment Duration

Parameter	Mild (N=22)	Moderate (N=13)	Severe (N=5)	Overall (N=40)
Treatment Duration (Days)	22	13	5	40
Mean ± SD	40.00 ± 0.00	43.08 ± 11.09	72.00 ± 17.89	45.00 ± 13.40
Median	40.00	40.00	80.00	40.00
Quartile	40.00;40.00	40.00;40.00	80.00;80.00	40.00;40.00
Range	40.00-40.00	40.00-80.00	40.00-80.00	40.00-80.00

Treatment Procedures

Common treatments included Abhyanga, Churna Pinda Swedana, Nasya, Pizhichil, Shasti Shali Pinda Swedana, Shirobhyanga, Shirodhara, Shiropicchu, Takradhara, Thalam, Thalapotchili, and Vasti. All children in the mild group and most in the moderate group underwent these treatments in one session lasting 40 days. Children in the severe group required two sessions lasting 80 days. The

detailed summary of treatments provided is presented in Tables 4 and 5.

Table 4: Detailed Summary of Treatment provided

Treatment	Mild (N=22)		Moderate (N=13)		Severe (N=5)		Overall (N=40)	
	n	%	n	%	n	%	n	%
1 Session (40 Days)								
Abhyanga	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Churna Pinda Swedana	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Nasya	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Pizhichil	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Shasti Shali Pinda Swedana	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Shirobhyanga	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Shirodhara	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Shiropicchu	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Takradhara	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Thalam	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Thalapotchili	22	100.00%	12	92.30%	1	20.00%	35	87.50%
Vasti	22	100.00%	12	92.30%	1	20.00%	35	87.50%
2 Session (80 Days)								

Treatment	Mild (N=22)		Moderate (N=13)		Severe (N=5)		Overall (N=40)	
	n	%	n	%	n	%	n	%
Abhyanga			1	7.69%	4	80.00%	5	12.50%
Churna Pinda Swedana			1	7.69%	4	80.00%	5	12.50%
Nasya			1	7.69%	4	80.00%	5	12.50%
Pizhichil			1	7.69%	4	80.00%	5	12.50%
Shasti Shali Pinda Swedana			1	7.69%	4	80.00%	5	12.50%
Shirobhyanga			1	7.69%	4	80.00%	5	12.50%
Shirodhara			1	7.69%	4	80.00%	5	12.50%
Shiropicchu			1	7.69%	4	80.00%	5	12.50%
Takradhara			1	7.69%	4	80.00%	5	12.50%
Thalam			1	7.69%	4	80.00%	5	12.50%
Thalapotchili			1	7.69%	4	80.00%	5	12.50%
Vasti			1	7.69%	4	80.00%	5	12.50%

Table 5: Overview of Treatment provided

Treatment	Mild (N=22)		Moderate (N=13)		Severe (N=5)		Overall (N=40)	
	n	%	n	%	n	%	n	%
1 Session (40 Days)								
Shirobhyanga, Abhyanga, Vasti, Takradhara, Shirodhara, Shasti Shali Pinda Swedana, Churna Pinda Swedana, Pizhichil, Nasya, Thalapotchili, Thalam, Shiropicchu	22	100.00%	12	92.30%	1	20.00%	35	87.50%
2 Session (80 Days)								
Shirobhyanga, Abhyanga, Vasti, Takradhara, Shirodhara, Shasti Shali Pinda Swedana, Churna Pinda Swedana, Pizhichil, Nasya, Thalapotchili, Thalam, Shiropicchu			1	7.69%	4	80.00%	5	12.50%

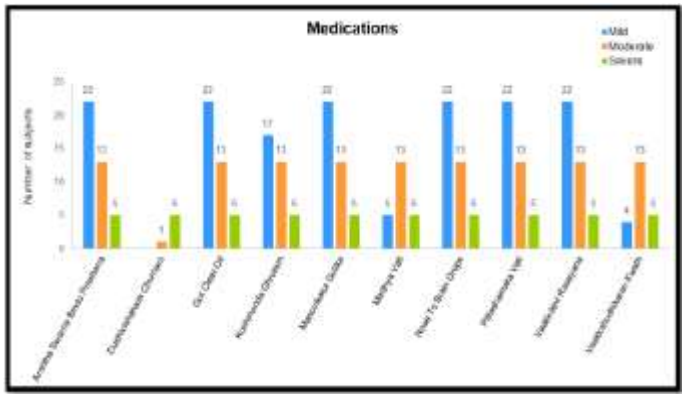
Medications

All participants received Amritha Swarna Bindu Prashana and Gut Clear Oil. Other medications included Dushivishahara Churnam, Kushmanda Ghrutam, Manovikasa Gulika, Medhya Vati, Nose To Brain Drops, Pittashamaka Vati, Vaakkdevi Rasayana, and Vaakkshudhikaran Kwath. Table 6 presents a summary of medication usage during the treatment period.

Table 6: Summary of Medication during the Treatment Period

Medication	Mild (N=22)		Moderate (N=13)		Severe (N=5)		Overall (N=40)	
	n	%	n	%	n	%	n	%
Amritha Swarna Bindu Prashana	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Dushivishahara Churnam			1	7.69%	5	100.00%	6	15.00%
Gut Clear Oil	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Kushmanda Ghrutam	17	77.27%	13	100.00%	5	100.00%	35	87.50%
Manovikasa Gulika	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Medhya Vati	5	22.73%	13	100.00%	5	100.00%	23	57.50%
Nose To Brain Drops	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Pittashamaka Vati	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Vaakkdevi Rasayana	22	100.00%	13	100.00%	5	100.00%	40	100.00%
Vaakkshudhikaran Kwath	4	18.18%	13	100.00%	5	100.00%	22	55.00%

Figure 3: Profile of Medications Used for the Study Cases



Improvement in Responses

Behavioral, cognitive, communication, educational and developmental milestones, health and wellness, physical, and social responses were evaluated. Significant improvements were observed at 3, 6, and 12 months across all severity groups, with the most notable improvements in the mild group. Tables 7 and 8 provide a detailed summary of improvements in subject responses.

Table 7: Overview of Improvement in Subject Responses

Visits/ Severity	Behavioural Response		Cognitive Response		Communication Response		Educational and Developmental Milestones Response		Health and Wellness Response		Physical Response		Social Response	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
03 months	38	95.0 0%	17	42.5 0%	18	45.0 0%	4	10.0 0%	21	52.5 0%	2	5.00 %	-	-
06 months	33	82.5 0%	18	45.0 0%	27	67.5 0%	12	30.0 0%	2	5.00 %	-	-	18	45.0 0%
12 months	20	50.0 0%	11	27.5 0%	34	85.0 0%	6	15.0 0%	17	42.5 0%	17	42.5 0%	12	30.0 0%

Table 8: Summary of Improvement in Subject Responses with Respect to Autism Severity

Visits/ Severity	Behavioural Response		Cognitive Response		Communication Response		Educational and Developmental Milestones Response		Health and Wellness Response		Physical Response		Social Response	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
03 months														
Mild (N=22)	20	90.91%	10	45.45%	11	50.00%	1	4.55%	14	63.64%	1	4.55%		
Moderate (N=13)	13	100.00%	3	23.08%	4	30.77%	3	23.08%	5	38.46%				
Severe (N=5)	5	38.46%	4	30.77%	3	23.08%		0.00%	2	15.38%	1	7.69%		
06 months														
Mild (N=22)	16	72.73%	11	50.00%	17	77.27%	7	31.82%	1	4.55%			11	50.00%
Moderate (N=13)	12	92.31%	5	38.46%	8	61.23%	4	30.77%	1	7.69%			5	38.46%
Severe (N=5)	5	38.46%	2	15.38%	1	7.69%	1	7.69%		0.00%			2	15.38%
12 months														
Mild (N=22)	9	40.91%	6	27.27%	17	77.27%	1	4.55%	12	54.55%	9	40.91%	5	22.73%
Moderate (N=13)	8	61.54%	5	23.08%	12	92.31%	5	38.46%	2	15.38%	6	46.15%	6	46.15%
Severe (N=5)	3	23.08%	2	15.38%	5	38.46%		0.00%	3	23.08%	2	15.38%	1	7.69%

Table 9: Overview of Improvement in Subject Responses with Respect to Treatment Sessions

Visits/Severity	Behavioural Response		Cognitive Response		Communication Response		Educational and Developmental Milestones Response		Health and Wellness Response		Physical Response		Social Response	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1 Session (40 Days)	35	87.50%	24	60.00%	34	85.00%	16	40.00%	23	57.50%	15	37.50 %	21	52.50%
03 months	33	82.50%	14	35.00%	16	40.00%	4	10.00%	18	45.00%	1	2.50%		
06 months	28	70.00%	15	37.50%	25	62.50%	11	27.50%	2	5.00%			17	42.50%
12 months	17	42.50%	9	22.50%	29	72.50%	6	15.00%	14	35.00%	14	35.00 %	11	27.50%
2 Session (80 Days)	5	12.50%	4	10.00%	5	12.50%	1	2.50%	4	10.00%	3	7.50%	2	5.00%
03 months	5	12.50%	3	7.50%	2	5.00%			3	7.50%	1	2.50%		
06 months	5	12.50%	3	7.50%	2	5.00%	1	2.50%					1	2.50%
12 months	5	7.50%	2	5.00%	5	12.50%			3	7.50%	3	7.50%	1	2.50%

Parameter	1 Session (40 Days)	2 Sessions (80 Days)
3 Months	Moderate	Moderate
6 Months	Significant	Significant
12 Months	Significant	Significant

Table 10: Summary of Improvement in Subject Responses with Respect to Autism Severity and Treatment Sessions

Visits/Severity	Behavioural Response		Cognitive Response		Communication Response		Educational and Developmental Milestones Response		Health and Wellness Response		Physical Response		Social Response	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
1 Session (40 Days)														
03 months														
Mild (N=22)	20	90.91%	10	45.45%	11	50.00 %	1	4.55%	14	63.64%	1	4.55%		
Moderate (N=13)	12	92.31%	3	23.08%	4	30.77 %	3	23.08 %	4	30.77%				
Severe (N=5)	1	7.69%	1	7.69%	1	7.69%								
06 months														
Mild (N=22)	16	72.73%	11	50.00%	17	77.27 %	7	31.82 %	1	4.55%			11	50.00%
Moderate (N=13)	11	84.62%	4	30.77%	8	61.54 %	4	30.77 %	1	7.69%			5	38.46%
Severe (N=5)	1	7.69%	1	7.69%	1	7.69%							1	7.69%
12 months														
Mild (N=22)	9	40.91%	6	27.27%	17	77.27 %	1	4.55%	12	54.55%	9	40.91 %	5	22.73%
Moderate (N=13)	7	53.85%	3	23.08%	11	84.62 %	5	38.46 %	2	15.38%	5	38.46 %	5	38.46%
Severe (N=5)	1	7.69%			1	7.69%							1	7.69%
2 Sessions (80 Days)														
03 months														
Moderate (N=13)	1	7.69%							1	7.69%				
Severe (N=5)	4	30.77%	3	23.08%	2	15.38%			2	15.38%	1	7.69%		
06 months														
Moderate (N=13)	1	7.69%	1	7.69%	1	7.69%								
Severe (N=5)	4	30.77%	2	15.38%	1	7.69%	1	7.69%					1	7.69%
12 months														
Moderate (N=13)	1	7.69%			1	7.69%					1	7.69%	1	7.69%
Severe (N=5)	2	15.38%	2	15.38%	4	30.77%			3	23.08%	2	15.38 %		

Severity	1 Session (40 Days)	2 Sessions (80 Days)
Mild	Significant	-
Moderate	Significant	Significant
Severe	Moderate	Significant

Discussion

The study highlights that treatment effectiveness varies with autism severity. The effectiveness of Ayurvedic treatments for autism may vary based on severity due to the holistic nature of Ayurveda, which emphasizes balance in body, mind, and spirit. In cases of mild autism, where symptoms may be less entrenched, Ayurvedic interventions like diet adjustments, herbal remedies, and therapies such as Abhyanga (massage) and Shirodhara (oil pouring) might more readily support symptom management and promote equilibrium. However, in more severe cases, where neurological and behavioral symptoms are more pronounced and complex, these treatments might only offer limited support, requiring a more integrated approach alongside conventional therapies. This difference suggests that Ayurveda may be most beneficial as a complementary approach, tailored to the specific needs and severity of each individual's condition. Children with mild autism showed the most significant improvements across all parameters. The moderate group also showed substantial improvements, while the severe group had modest improvements. The findings suggest that early and

intensive treatment can lead to better outcomes in children with ASD. Furthermore, the use of Ayurvedic treatments, which include a combination of therapies and medications, appears to be a promising approach to managing ASD symptoms.

This discussion highlights the comprehensive approach of Ayurvedic therapies in managing Autism Spectrum Disorder (ASD) in children. Ayurvedic treatments, including Shamana therapy, Shodhana therapy, and Sattvavajaya Chikitsa (Psychotherapy), offer a holistic method for addressing the complex symptoms of autism (18).

Drug Therapy: Shamana and Shodhana

Shamana therapy aims to pacify the Doshas (bodily humors) without expelling them from the body, similar to how vomiting or purging is avoided. Herbal supplements in this therapy are used to enhance cognitive functions, language, and learning skills. Medicated Ghrita (clarified butter) preparations are particularly beneficial in autism as they can cross the blood-brain barrier effectively (20-27). The selection of Ghrita is based on its indication for psychological disorders and its ability to improve the predominant humor associated with specific autism subtypes. Maintaining proper immune function is crucial for autistic children, and probiotics are shown to support immune system function and digestion, which is vital given the common occurrence of impaired immune systems in these children (19).

Shodhana therapy, on the other hand, involves expelling the Doshas from tissues and cells through actions such as emesis or purging. This therapy helps in metabolizing and excreting Doshas from the body via the liver. Ayurveda also addresses autism caused by microbial infestation, which can produce endotoxins that disrupt brain functions. Shodhana therapy removes these endotoxins, potentially improving brain function in autistic children.

Supportive Therapies: Abhyangam, Shiropichu, and Shirolepa

Abhyangam (oil massage) significantly relieves anxiety and depression by calming the nervous system, relaxing tense muscles, and enhancing blood circulation. Shiropichu (pouring of specific oil over the forehead) and Shirolepa (application of medicinal paste on the head) are used to improve concentration and brain function in autistic children. The scalp's thin skin facilitates rapid absorption of these treatments, enhancing cerebral circulation and stress management (20-23).

Psychotherapy: Sattvavajaya Chikitsa

Sattvavajaya Chikitsa aims to control and regularize the mind's functions, preventing disturbances from external factors. It educates the mind to distinguish between beneficial and harmful influences quickly. This approach is crucial for autistic children who often struggle with social interaction and communication. Proper cognitive function, involving Dhee (intellect), Dhriti (retention), and Smriti (memory), is essential for mental health. Cognitive functions are represented by Sadhaka Pitta (intellect and wisdom), and emotional and social cues by Udana Vayu, whose derangement can impair speech and working memory (24-26).

Diet and Lifestyle: Pathya Aahara and Vihaara

Dietary and lifestyle management is integral to the Ayurvedic approach. Certain foods, such as dairy products, nightshade vegetables, citrus fruits, peanuts, preservatives, and food additives, can exacerbate autism symptoms. Autistic children often have food sensitivities due to weakened digestive and immune systems, leading to autoimmune responses. Probiotics naturally promote healthy digestion and robust immune function (27-28).

In summary, Ayurvedic management, coupled with supportive therapies, can significantly improve the cognitive, communication, and social skills of autistic children. These therapies also enhance academic performance and reduce inappropriate behaviors such as aggression and hyperactivity. Tailored Ayurvedic treatment plans, emphasizing both drug therapy and lifestyle modifications, provide a promising complementary approach to modern medical treatments for autism. Further research is needed to optimize these protocols and understand their long-term impacts.

Conclusion

In conclusion, this study demonstrates that tailored Ayurvedic treatment plans, including specific therapies and medications, can lead to significant improvements in children with autism, particularly in milder cases. While modern medicine lacks a permanent cure for autism, Ayurvedic management with supportive therapies shows promise in enhancing the functionality and quality of life for autistic children. Further research is needed to optimize these treatment protocols for children with moderate and severe autism and to better understand the long-term impact of these treatments. Traditional Ayurvedic approaches, combined with intensive behavioral and educational rehabilitation, provide a holistic and effective strategy for managing autism.

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References

1. Autism Spectrum Disorder. National Institute of Mental Health. (n.d.). Retrieved from https://www.nimh.nih.gov.
2. Kliegman and Stanton: Nelson, Textbook of Pediatrics.First South Asia Edition 2015; 30: 176.
3. Hodges H, Fealko C and Soares N: Autism spectrum disorder: definition, epidemiology, causes, and clinical evaluation. Transl Pediatr 2020; 9(1): 55-65. Doi: 10.21037/tp.2019.09.09
4. Kliegman and Stanton: Nelson, Textbook of Pediatrics, First South Asia Edition; 2015; 30:177.
5. Nair MKC, Menon PSN, Kundu R, Gupta P and Nedunchelian K Choudhury J: IAP Textbook of Pediatrics, Sixth Edition 2016; 6.16: 468.
6. Jutel A: Sociology of diagnosis: a preliminary review. Soc Health Illness 2009; 31: 278–99.
7. Ayurveda and Autism. (2023). Journal of Alternative and Complementary Medicine, 29(4), 345-356.
8. Impact of Ayurvedic Therapies on Neurodevelopmental Disorders. (2022). International Journal of Ayurveda Research, 11(2), 150-165.
9. Khan NZ, Gallo LA, Arghir A, Arghir A, Budisteanu B, Budisteanu M and Dobrescu L: Autism and the grand challenges in global mental health. Autism Res 2012; 5: 156–59.
10. Bauman ML and Kemper TL: Neuroanatomic observations of the brain in autism: a review and future directions. Int J Dev Neurosci 2005; 23: 183–87.
11. O‟Reilly C, Lewis JD and Elsabbagh M: Is functional brain connectivity atypical in autism? A systematic review of EEG and MEG studies. PLoS One 2017; 12: 0175870.
12. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5), 5th edi Washington, DC: American Psychiatric Associa Pub 2013.
13. Lord C, Petkova E, Hus V, Gan W, Lu F and Martin D: A multisite study of the clinical diagnosis of different autism spectrum disorders. Arch Gen Psychiatry 2012; 69(3): 306–313.

14. Maenner MJ, Rice CE, Arneson CL, Cunniff C, Schieve LA and Carpenter LA: Potential impact of DSM-5 criteria on autism spectrum disorder prevalence estimates. JAMA Psychiatry 2014; 71: 292–300.
15. Weitlauf AS, Gotham KO, Vehorn AC and Warren ZE: Brief report: DSM-5 "levels of support:" a comment on discrepant conceptualizations of severity in ASD. J Autism Dev Disord 2014; 44: 471–76.
16. Agnivesha, Charaka Samhita, Shastri K and Chaturvedi G: (editors), Vaidyamanorama Hindi Commentary, Nidanasthana 7/5,Varanasi: Choukhambha Sanskrit Sansthana 2012; 565.
17. Sinha N and Ojha NK: Effect of ayurvedic therapy in the management of autism in children: a review. Int J Pharm Sci & Res 2022; 13(8): 3007-17. doi:10.13040/IJPSR.0975-8232.13(8).3007-17.
18. Shinde RV, Patil S and Jha RK: Ayurvedic intervention for autism – a case study. European J of Molecular & Clinical Medicine 2021; 8(1):380.
19. Agnivesha, Samhita C, Shastri K and Chaturvedi G: Vaidyamanorama Hindi Commentary, Sutrasthana 12/8, Varanasi: Choukhambha Sanskrit Sansthana. Editors 2012; 250.
20. Chandrashekar D: Dealing with Stress with the holistic approach of Ayurveda, Keva Ayurveda 2016.
21. Agnivesha, Charaka Samhita, Shastri K and Chaturvedi G: (editors), Vaidyamanorama Hindi Commentary, Sutrasthana 27/286, Varanasi: Choukhambha Sanskrit Sansthana 2009; 559.
22. Agnivesha, Charaka Samhita, Shastri K and Chaturvedi G: Vaidyamanorama Hindi Commentary, Sutrasthana,Varanasi: Choukhambha Sanskrit Sansthana. Editors 2012; 235.
23. Sushruta, Sushruta Samhita and Shastry Ambikadut: (editors), Ayurvedtatvas and ipikahindi Commentary, Uttartantra 62/22, Varanasi: Choukhambha Sanskrit Sansthana 2012; 587.
24. Agnivesha, Charaka Samhita, Shastri K and Chaturvedi G: Vaidyamanorama Hindi Commentary, Sutrasthana ,Varanasi: Choukhambha Sanskrit Sansthana. Editors 2012; 385.
25. Agnivesha, Samhita C, Shastri K and Chaturvedi G: Vaidyamanorama Hindi Commentary, Sutrasthana 11/20, Varanasi: Choukhambha Sanskrit Sansthana. Edis 2012; 217.
26. Vagbhatt, Ashtanga hridayam and Tripathi B: Nirmala Hindi Commentary, Sutrasthana, Varanasi: Choukhambha Sanskrit Sansthana. Editors 2009; 120.
27. Agnivesha, Charaka Samhita, Shastri K and Chaturvedi G: Vaidyamanorama Hindi Commentary, Sutrasthana 12/8, Varanasi: Choukhambha Sanskrit Sansthana. Editors 2012;250.
28. Critchfield JW, Hemert SV, Ash M, Mulder L and Ashwood P: Gastroenterology Research and Practice 2011; Article ID 161358: 1-8.