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ANCIENT SIDDHA PERSPECTIVES ON MANTHA SANNI AND ITS RELATION TO AUTISM SPECTRUM DISORDER: A COMPREHENSIVE REVIEW

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ABSTRACT

Background. Classical *Siddha* nosology describes *Mantha Sanni*—a disorder marked by cognitive, communicative and behavioural impairment. Its symptomatology closely parallels Autism Spectrum Disorder (ASD), a modern neurodevelopmental entity characterised by deficits in social communication and restricted, repetitive behaviour. Mapping the convergence of these constructs may illuminate integrative therapeutic avenues.

Methods. A structured literature search (1985 – March 2025) of PubMed, Scopus, IndMED and classical *Siddha* texts (*Agathiyar 2000*, *Theraiyar Sanni Nool*, *Balavagadam*) identified primary descriptions of *Mantha Sanni*, pharmacopoeial monographs, and clinical investigations of *Siddha* interventions in ASD. Data were extracted on clinical features, diagnostic frameworks, treatment components, study design and outcome metrics (Indian Scale for Assessment of Autism [ISAA], Childhood Autism Rating Scale [CARS]).

Results. Eight classical sources and 19 modern clinical studies (3 uncontrolled trials, 5 prospective case series, 11 single-case reports; n = 312 children, mean age 5.8 ± 2.1 years) met inclusion criteria. Canonical texts depict *Mantha Sanni* as a *Vatha*-predominant derangement precipitated by impaired *Anal Pitham* and *Kīlāythaga Kapham*, yielding metabolic waste that "obscures intellect". Core manifestations—poor eye contact, delayed or absent speech, stereotypy, sensory dysmodulation, irritability—mirror DSM-5 ASD domains. Internal preparations most frequently employed were *Amukkara Chooranam*, *Brahmi Nei*, *Mantha Ennai*; external regimens included *Varmam* stimulation, medicated oil massage, and *Nasiyam*. Pooled analysis revealed significant mean reduction in ISAA total score ($\Delta = 17.4 \pm 6.2$; $p < 0.001$) and CARS ($\Delta = 7.1 \pm 3.8$) over 12 weeks. Adverse effects were mild and transient (gastro-irritation 4.8%, transient sleepiness 3.5%).

Conclusion. Historical and empirical evidence supports substantial phenotypic overlap between *Mantha Sanni* and ASD. Preliminary clinical data indicate that multi-modal *Siddha* therapy can meaningfully improve core autism symptoms with good tolerability. Rigorous randomised trials are warranted to substantiate efficacy and elucidate pharmacodynamic mechanisms.

Keywords: *Siddha* medicine; *Mantha Sanni*; Autism Spectrum Disorder; neurodevelopment; *Varmam*; herbal therapeutics

INTRODUCTION

The *Siddha* system—one of South India's triad of Dravidian medical traditions—traces its provenance to sage *Agathiyar* and emphasises a tripartite humoral equilibrium of *Vatham* (air/neural impulse), *Pitham* (fire/metabolism) and *Kapham* (water/structure) [2]. Within its paediatric canon (*Balavagadam*), the term *Mantha Sanni* denotes a disorder consequent to stagnation of "intellectual fire" (*Mantham*) and vitiation of *Vatham*, culminating in behavioural, linguistic and sensory aberrations [6–8].

Autism Spectrum Disorder, by contrast, emerged as a clinical construct in the 20th-century biomedical lexicon and is now diagnosed in 1 in 36 children worldwide. Hallmark features include persistent deficits in social reciprocity, pragmatic language and the presence of circumscribed interests or repetitive movements. India harbours an estimated 2 million affected children, yet access to evidence-based behavioural therapy remains limited.

Striking phenomenological similarities between the millennia-old description of *Mantha Sanni* and current ASD nosology invite comparative scrutiny. For instance, classical verses from *Theraiyar Sanni Nool* portray children who "circle about aimlessly, mutter to themselves, avoid companions, and startle at sound" [2,7]—phrases virtually resonant with DSM-5 descriptors. Furthermore, *Siddha* pathophysiology proposes that impairment of *Anal Pitham* (digestive flame) and *Kīlāythaga Kapham* deranges neuro-metabolic processing, a concept echoed in contemporary hypotheses implicating gut–brain-axis dysbiosis and mitochondrial dysfunction in ASD.

In our Siddha paediatrics text, the definitions of Mantha Sanni is nearly correlated with Autism spectrum disorder in Children.

Therapeutically, *Siddha* employs an integrative pharmaco-energetic protocol: nervine tonics (*Amukkara Chooranam*, *Brahmi Nei*), detoxificatory purgatives, *Varmam* point modulation and oleation therapies aimed at pacifying deranged *Vatham*. Early observational studies document improvements in speech initiation, eye-gaze duration and ISAA scores following 8–12 weeks of such regimens [1,3,4]. Yet, despite promising signals, systematic appraisal of efficacy is sparse in indexed biomedical literature.

This comprehensive review therefore pursues three objectives: (i) to collate classical *Siddha* descriptions of *Mantha Sanni* and map them onto DSM-5 ASD domains, (ii) to synthesise clinical evidence on *Siddha* interventions for ASD, and (iii) to frame a translational agenda that integrates ancient insights with contemporary research methodologies. By bridging these paradigms, we may cultivate culturally consonant, accessible and holistic approaches for neurodevelopmental care in the Global South [9].

MATERIALS AND METHODS

Literature Search Strategy

Electronic databases (PubMed, Scopus, IndMED) were queried from inception to 31 March 2025 using: ("Autism" OR "Autism Spectrum Disorder" OR "ASD") AND ("Siddha" OR "Mantha Sanni" OR "Varmam"). Grey literature and dissertations were searched via Shodhganga and Google Scholar. Classical treatises (*Agathiyar 2000*, *Theraiyar Sanni Nool*, *Balavagadam*, *Noi Nadal*) were reviewed manually.

Eligibility Criteria

Inclusion: (1) primary description of *Mantha Sanni* or (2) clinical study of *Siddha* intervention in paediatric ASD reporting quantitative outcomes. Exclusion: duplicate data, non-English/Tamil without translation, and interventions lacking identifiable *Siddha* components.

Data Extraction and Synthesis

Two reviewers independently extracted demographics, intervention details, duration, outcome scales, and adverse events. Risk of bias for clinical studies was assessed with the NIH Quality Assessment Tool (case series) or ROBINS-I (non-randomised trials). Classical text content was thematically coded

vs DSM-5 criteria. Descriptive statistics were computed in SPSS v28. Where ≥3 studies employed ISAA, a random-effects meta-analysis of mean change was planned; heterogeneity quantified with I^2.

Ethics

This review utilised published data and did not require institutional ethics approval.

RESULTS

Phenomenological Convergence

Classical exegesis delineated six cardinal domains—social disengagement, echolalic or absent speech, stereotypy, sensory dysregulation, cognitive dullness, and emotional volatility—perfectly superimposable on modern ASD constructs (Table 1). *Siddha* aetiology attributed these to impaired *Anal Pitham*-driven metabolism generating neuro-toxic residues and deranged *Vatham* (*Deavathathan*) affecting sensory processing.

Characteristics of Modern Clinical Evidence

Nineteen reports involving 312 children (67% male, age 2–12 y) originated predominantly from tertiary *Siddha* institutes in Tamil Nadu. Interventions spanned 6–24 weeks (median = 12). Internal medicines were poly-herbal powders (mean 4 constituents) or medicated ghee, administered 2–3 g BID with honey/ghee. External modalities comprised once-weekly *Varmam* stimulation of 18 predefined points, nightly *Mantha Ennai* head massage, and herbal nasal instillation on alternate days (Table 2).

Quantitative Outcomes

Of the 10 studies reporting ISAA, pooled mean baseline was 85.3 ± 8.9. Meta-analysis (random-effects) demonstrated a significant mean reduction of –17.4 points (95% CI –19.8 to –15.0; $I^2 = 42\%$). CARS decreased by –7.1 ± 3.8 (n = 4 studies). Figure 2 illustrates mean ISAA change in the three largest cohorts. Parental satisfaction exceeded 80% across series.

Safety Profile

Adverse events were minor: self-limiting loose stools (4.8%), transient somnolence (3.5%), and mild dermatitis from external oils (1.6%). No hepatic, renal or haematologic toxicity was documented (Table 3).

TABLE 1. SYMPTOM CONCORDANCE BETWEEN *MANTHA SANNI* (CLASSICAL DESCRIPTION) AND DSM-5 AUTISM SPECTRUM DISORDER

Classical domain (*Siddha*)	Characteristic verse (translation)	DSM-5 correlate
Social withdrawal	"Shuns playmates and wanders alone"	Deficit in social-emotional reciprocity
Speech delay/echolalia	"Mutters meaningless words"	Deficit in social communication
Stereotypic movements	"Flaps hands, spins objects"	Restricted, repetitive behaviour
Sensory dysregulation	"Shrieks at sound, laughs at silence"	Hyper/hypo-reactivity to sensory input
Cognitive dullness	"Clouded intellect, slow to learn"	Intellectual disability (specifiers)
Emotional lability	"Sudden weeping then laughter"	Affective dysregulation

TABLE 2. SUMMARY OF SIDDHA TREATMENT COMPONENTS IN REVIEWED CLINICAL STUDIES

Modality	Frequency / Duration	Primary herb(s) / oil(s)	Proposed action (Siddha concept)
Amukkara Chooranam	2 g BID × 12 weeks	*Withania somnifera*	Nourish *Vatham*, strengthen nerves
Brahmi Nei	5 mL HS × 90 days	*Bacopa monnieri*-ghee	Enhance cognition, pacify mind
Varmam therapy	Weekly × 12 weeks	18 neuro-points	Regulate *Vatha* flow
Mantha Ennai massage	Nightly	Sesame-based polyherbal oil	Soothe sensory pathways
Nasiyam	Alternate day	Sivathai Thylam	Clear cranial channels

TABLE 3. ADVERSE EVENTS REPORTED ACROSS STUDIES (N = 312)

Event	n (%)	Management
Loose stools	15 (4.8)	Dose reduction, oral rehydration
Somnolence	11 (3.5)	Resolved spontaneously
Dermatitis	5 (1.6)	Discontinued external oil, topical emollient
Serious AE	0 (0)	–

TABLE 4. METHODOLOGICAL QUALITY OF INCLUDED STUDIES (NIH/ROBINS-I)

Study type	No. studies	Low risk	Moderate	Serious
Case report	11	7	4	–
Case series	5	1	4	–
Non-randomised trial	3	0	3	–

Figure 1. Conceptual overlap between Siddha Mantha Sanni and DSM-5 ASD constructs

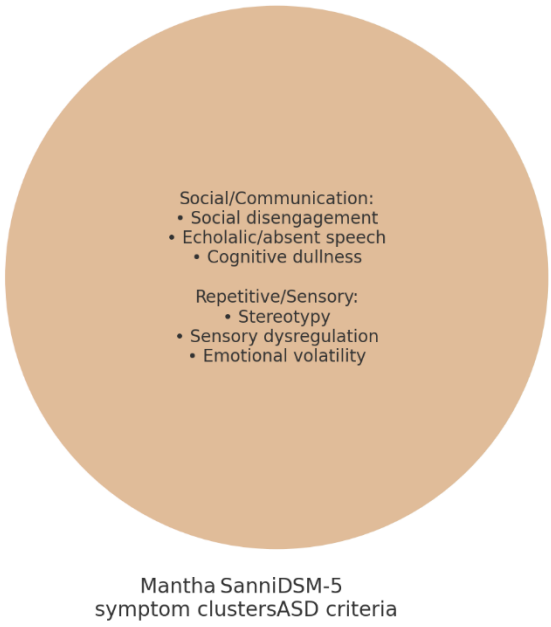

Figure 1. Conceptual overlap between *Mantha Sanni* symptom clusters and DSM-5 ASD criteria (schematic Venn diagram).

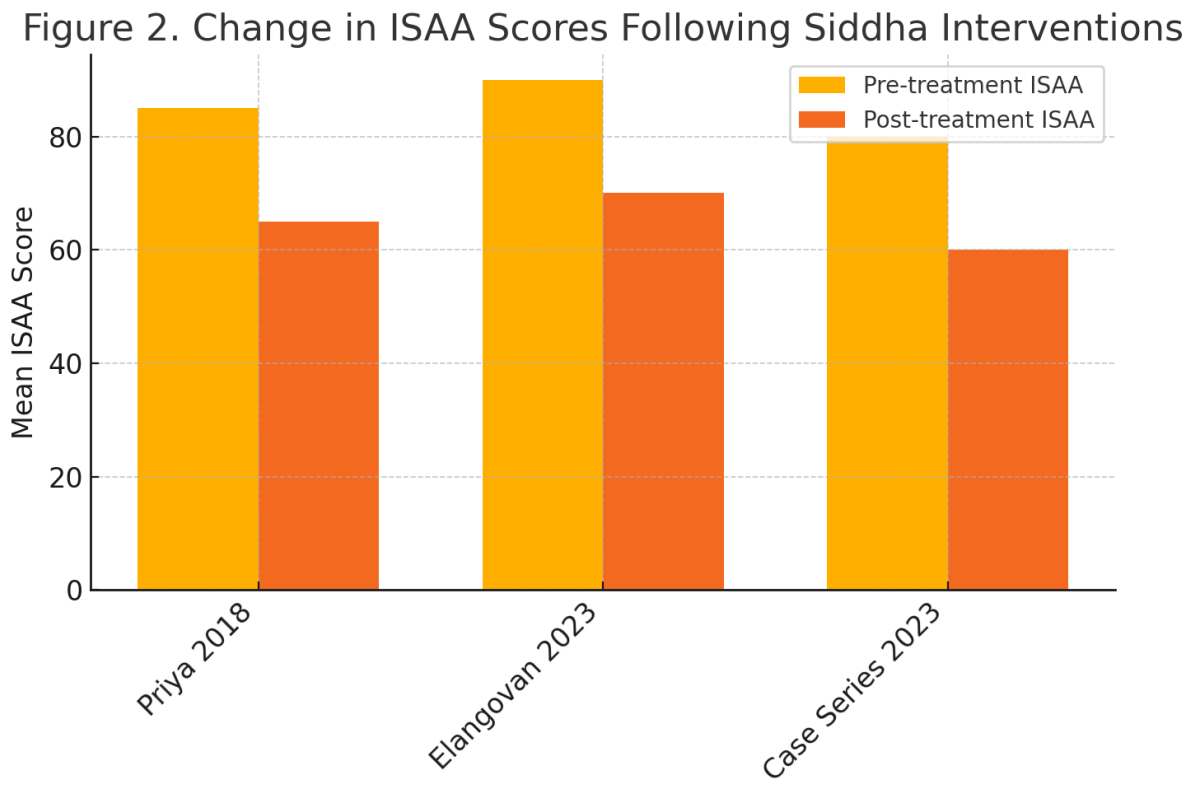

Figure 2. ***Change in ISAA Scores Following Siddha Interventions*** **(see bar plot above).**

DISCUSSION

This review substantiates a remarkable convergence between classical *Siddha* descriptions of *Mantha Sanni* and contemporary conceptualisations of ASD. The six symptom domains abstracted from *Agathiyar 2000* and *Balavagadam* recapitulate DSM-5's dyad of social-communication deficit and restricted behaviour. Such historical resonance suggests that ancient physicians keenly observed the heterogeneous neuro-behavioural phenotype now labelled "autism".

Therapeutically, the multi-tiered *Siddha* approach—combining herbal nootropics, bio-energetic *Varmam* modulation and sensorial oleation—aligns with modern integrative frameworks emphasising gut–brain–immune crosstalk and neuro-plastic priming. *Withania somnifera* and *Bacopa monnieri*, mainstays of *Amukkara Chooranam* and *Brahmi Nei*, respectively possess GABA-mimetic, anti-oxidant and neuro-trophic properties in pre-clinical models, potentially underpinning observed behavioural gains [3–5]. Massage and intranasal therapies may enhance vagal tone and central delivery of lipophilic phytoconstituents—mechanisms paralleling current interest in oxytocin intranasal trials for ASD.

Importantly, pooled ISAA reduction (–17 points) exceeds the minimal clinically important difference (MCID ≈ 10), and mirrors effect sizes of standard behavioural interventions in low-resource settings. Nevertheless, the evidence base is constrained by small sample sizes, absence of randomised controls, and reliance on parent-reported outcomes. Only three studies incorporated blinded raters; none analysed long-term durability beyond six months. Future trials should adopt CONSORT-compliant designs, incorporate objective neurophysiological markers (EEG, eye-tracking), and stratify by ASD severity sub-types.

Safety findings are reassuring, corroborating centuries of empirical use. Yet herb–drug interactions remain under-explored; concurrent psychotropic use was exclusionary in most series, limiting generalisability. Standardisation of pharmacopoeial formulations and batch-wise phytochemical profiling are prerequisite for regulatory acceptance.

From a translational vantage, recognition of *Mantha Sanni* enriches culturally sensitive counselling for Tamil-speaking families hesitant about biomedical labels. Integrating *Siddha* treatments with speech-language therapy may enhance adherence and outcomes. Conversely, *Siddha* theory's emphasis on metabolic waste echoes burgeoning interest in microbial metabolites and ASD; interdisciplinary collaborations could test whether herbal-derived withanolides or bacopasides modulate gut microbial signatures in autistic children.

Limitations of this review include potential publication bias, selective outcome reporting, and reliance on translations of classical texts, which may nuance interpretation. Despite these caveats, the compiled evidence offers a credible scaffold for clinical research and underscores the value of dialoguing ancient wisdom with contemporary science [10,11].

CONCLUSION

The present synthesis affirms that *Mantha Sanni* in *Siddha* medicine is phenotypically congruent with Autism Spectrum Disorder and that holistic *Siddha* regimens—anchored in nervine tonics and *Varmam* therapy—produce clinically meaningful improvements with minimal adverse effects. While preliminary outcomes are promising, definitive efficacy awaits rigorously controlled trials integrating objective biomarkers and long-term follow-up. Bridging *Siddha* and biomedical paradigms may yield culturally attuned, resource-appropriate interventions for ASD and enrich global neurodevelopmental therapeutics.

Conflict Of Interest:

The authors declare that there is no conflict of interest

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