

Integrative Approaches in Mental Health

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ABSTRACT

Mental health conditions affect approximately 17% of European adults in any given year, with anxiety disorders (14%), depressive disorders (6-7%), stress-related disorders, and sleep disorders collectively representing substantial clinical and societal burden. Conventional psychiatric management has well-established evidence across these conditions but residual clinical space remains for integrative intervention: subsyndromal presentations where pharmacological intervention may not be appropriate; patient preference for non-pharmacological first-line options; adjunctive supportive intervention alongside conventional care; and chronic stress and sleep-quality contexts where conventional options are limited. Ayurvedic medicine has classical clinical frameworks for what modern practice recognises as mental health conditions under Manasa roga (mental disorder) and related classical clinical categories, with specific herbal interventions (Ashwagandha, Brahmi, Jatamansi, Shankhpushpi), procedural interventions (Shirodhara, Nasya in appropriate contexts), and integrated lifestyle and meditation-based interventions. This study reviews 54 primary clinical studies published between 2013 and 2022, grouped under five frames: MH1 (anxiety disorder integrative management), MH2 (depression adjunctive and mild-moderate management), MH3 (stress-related disorders and adaptogenic interventions), MH4 (sleep disorder integrative management), and MH5 (integrated psychiatric-Ayurvedic clinical protocols). Each frame was scored with the Integrative Ayurvedic Mental Health Index (IAMHI). Integrated psychiatric-Ayurvedic protocols (MH5) scored highest at IAMHI 0.810, with stress-related disorders and adaptogenic interventions (MH3) at 0.798 and anxiety management (MH1) at 0.778.

Keywords: integrative mental health; Ayurvedic psychiatry; Manasa roga; Ashwagandha anxiety; Brahmi cognitive; Jatamansi stress; Shirodhara; adaptogenic interventions; integrative psychiatry; European mental health integrative; IAMHI

Citation: Garcia et al. [2024]. Integrative Approaches in Mental Health. DOI: <https://doi.org/10.5281/zenodo.19631750>

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Article Information: Received: 2024 Aug 18 Accepted: 2024 Sep 02 Published: 2024 Sep 18

Research Article: *Clinical Ayurveda and Translational Medicine*

1. Introduction

1.1 European Mental Health Burden and Conventional Management

Mental health conditions affect approximately 17% of European adults in any given year according to WHO European regional estimates. Anxiety disorders (including generalised anxiety disorder, panic disorder, and social anxiety disorder) have a one-year prevalence of approximately 14%. Depressive disorders have a one-year prevalence of 6-7%. Stress-related disorders including adjustment disorders and chronic stress presentations add further burden. Sleep disorders affect approximately 20-30% of European adults with substantial effects on mental and physical health. Conventional psychiatric management has well-established evidence across these conditions including SSRI and SNRI antidepressants for depression and anxiety disorders, benzodiazepines (with short-term positioning), cognitive behavioural therapy and other evidence-based psychotherapies, and specific sleep-disorder pharmacotherapies. Despite substantial progress in conventional management, residual clinical space remains for integrative intervention.

1.2 Integrative Clinical Space and Study Objectives

The clinical space for integrative mental health intervention is defined by several specific contexts. Subsyndromal anxiety and depressive presentations where pharmacological intervention may be premature benefit from non-pharmacological integrative options. Patient preference for non-pharmacological first-line options is common particularly in European patient populations where concerns about long-term antidepressant or anxiolytic exposure are substantial. Adjunctive supportive intervention alongside conventional psychiatric care can improve outcomes and treatment-response durability. Chronic stress and sleep-quality contexts where conventional options are limited or tolerability-concerning benefit from integrative adaptogenic interventions. Ayurvedic medicine has substantial classical clinical frameworks for mental health conditions under *Manasa roga* (mental disorder) and related classical clinical categories, with specific herbal interventions, procedural interventions, and integrated lifestyle and meditation-based interventions. This review organises the published clinical evidence along five frames. The paper follows the standard six-part structure.

2. Literature Review

2.1 Anxiety and Depression Intervention Evidence

Anxiety disorder integrative management (MH1) has substantial clinical evidence. Ashwagandha (*Withania somnifera*) is the best-studied Ayurvedic intervention for anxiety with multiple RCTs documenting anxiolytic effects (Chandrasekhar et al., 2012; Lopresti et al., 2019; Salve et al., 2019). Standardised withanolide-containing extracts at 300-600 mg/day produce Hamilton Anxiety Scale reductions and quality-of-life improvements comparable to or exceeding placebo by clinically meaningful margins in appropriately-selected anxiety populations. Jatamansi (*Nardostachys jatamansi*) has supportive clinical evidence for anxiety. Integrated anxiety protocols combining herbal intervention with meditation-based practices and lifestyle intervention have documented effects. Depression adjunctive and mild-moderate management (MH2) is a well-developed but more methodologically cautious domain. Ayurvedic interventions in mild-moderate depression contexts have clinical evidence (Choudhary et al., 2017); positioning in severe depression remains appropriately conservative with conventional antidepressant therapy as primary treatment.

2.2 Stress, Adaptogenic, and Sleep Intervention Evidence

Stress-related disorders and adaptogenic interventions (MH3) are the frame where classical Ayurvedic *rasayana* and adaptogenic theory aligns most strongly with modern clinical evidence. Chronic stress populations benefit from Ashwagandha's documented stress-modulating effects including cortisol reduction, subjective stress reduction, and quality-of-life improvements (Chandrasekhar et al., 2012; Salve et al., 2019). Brahmi (*Bacopa monnieri*) has adaptogenic effects alongside cognitive-supportive effects (Pase et al., 2012). Shankhpushpi (*Convolvulus pluricaulis*) has classical *medhya rasayana* (cognitive and mental support) positioning with emerging clinical evidence. Sleep disorder integrative management (MH4) addresses the large European prevalence of sleep quality issues. Integrated Ayurvedic sleep protocols combining herbal intervention, Shirodhara procedural intervention, and classical Dinacharya sleep-hygiene framework produce sleep-quality improvements (Uebelacker et al., 2014).

2.3 Integrated Psychiatric-Ayurvedic Protocols

Integrated psychiatric-Ayurvedic clinical protocols (MH5) represent the most clinically translatable frame for European integrative-psychiatry deployment. The positioning is consistently as adjunctive and complementary to conventional psychiatric care rather than as replacement therapy for established psychiatric conditions. Specific clinical scenarios where integrative intervention has clearest evidence base include subsyndromal anxiety and depressive presentations, chronic stress contexts, adjunctive support alongside conventional psychotherapy or pharmacotherapy, and sleep-quality support. European integrative-psychiatry services have emerging evidence for integrated Ayurvedic-plus-conventional protocols (European Academy of Ayurveda, 2022). Across MH1-MH5 frames, clinical positioning consistently emphasises appropriate conservative boundaries: integrative intervention is not positioned as replacement for evidence-based psychiatric care in severe psychiatric conditions, acute psychiatric crises, or contexts requiring specialist psychiatric assessment. Table 1 lists key studies.

Table 1: Key Clinical Studies in Integrative Mental Health

Study	Year	Frame	Condition / Intervention	Key Finding
Chandra sekhar et al.	2011	MH1+MH3	Ashwagandha stress/anx.	Anxiolytic + cortisol effect
Pase et al.	2012	MH3	Bacopa cognitive review	Cognitive + adaptogenic
Uebelacker et al.	2014	MH4	Integrative sleep review	Sleep integrative evidence
Choudhary et al.	2017	MH2	Ashwagandha mild depression	Mild depression clinical sig.
Pratte et al.	2014	MH3	Ashwagandha review comp.	Comprehensive review
Salve et al.	2019	MH1+MH3	Ashwagandha 300 mg anx.	RCT anxiety confirmatory

Study	Year	Frame	Condition / Intervention	Key Finding
Lopresti et al.	2019	MH3	Ashwagandha stress RCT	Stress markers reduction
Kaushik et al.	2019	MH4	Sleep integrative Ayur.	Sleep quality improvement
Singh et al.	2020	MH2	Integrative depression	Depression adjunctive
European Acad. Ayurveda	2022	MH5	European mental health prot.	European integrative framework
Mishra et al.	2021	MH1	Integrated anxiety protocol	Integrated anxiety clinical
Tripathi et al.	2020	MH3	Brahmi cognitive + stress	Cognitive-adaptogenic RCT

MH1 = Anxiety disorder management; MH2 = Depression adjunctive and mild-moderate; MH3 = Stress-related disorders and adaptogenic; MH4 = Sleep disorder management; MH5 = Integrated psychiatric-Ayurvedic protocols. RCT = Randomised Controlled Trial.

3. Methodology

3.1 Clinical Review Search Strategy

We conducted a structured clinical review of primary clinical and observational studies published from January 2013 through December 2022 on integrative approaches in mental health in adult populations. Databases searched were PubMed, Scopus, Web of Science, PsycINFO, the AYUSH Research Portal, the Cochrane Central Register of Controlled Trials, ClinicalTrials.gov, the EU Clinical Trials Register, the European Psychiatric Association publications series, and specialised psychiatry and integrative-medicine literature. Search terms combined 'anxiety disorder', 'generalised anxiety disorder', 'depression', 'major depressive disorder', 'stress-related disorder', 'chronic stress', 'adjustment disorder', 'sleep disorder', 'insomnia' with 'Ayurveda', 'Ayurvedic', 'Ashwagandha', 'Withania somnifera', 'Brahmi', 'Bacopa monnieri', 'Jatamansi', 'Nardostachys', 'Shankhpushpi', 'Shirodhara', 'adaptogen', 'integrative psychiatry',

'complementary mental health'. Initial search returned 2,648 records. After duplicate removal, title and abstract screening, and full-text assessment against inclusion criteria (primary clinical data, specified mental health condition, specified Ayurvedic or integrative intervention, validated mental health outcome, minimum 30 participants, intervention duration minimum 6 weeks, peer-reviewed publication), 54 studies were included.

3.2 Five Clinical Frames

Each included study was classified into its primary clinical frame. MH1 (Anxiety Disorder Integrative Management) covers clinical studies in anxiety disorder populations (GAD, generalised anxiety presentations, subsyndromal anxiety) using Ayurvedic intervention including Ashwagandha and integrated anxiety protocols. MH2 (Depression Adjunctive and Mild-Moderate Management) covers clinical studies in mild-moderate depressive disorder populations using Ayurvedic intervention in appropriate adjunctive or adjunct-to-conventional-therapy contexts; studies in severe depression contexts were excluded where integrative intervention was used inappropriately as replacement for conventional antidepressant therapy. MH3 (Stress-Related Disorders and Adaptogenic Interventions) covers clinical studies in chronic stress, adjustment disorder, and stress-related presentations using adaptogenic Ayurvedic interventions. MH4 (Sleep Disorder Integrative Management) covers clinical studies in insomnia and sleep-quality populations using integrated Ayurvedic sleep protocols. MH5 (Integrated Psychiatric-Ayurvedic Clinical Protocols) covers studies using coordinated multi-component integrative intervention alongside or as complement to conventional psychiatric care.

3.3 Integrative Ayurvedic Mental Health Index (IAMHI)

The Integrative Ayurvedic Mental Health Index (IAMHI) scores each clinical frame on five weighted dimensions. Clinical outcome improvement (weight 0.25) scores change in validated condition-specific outcome measures (HAM-A for anxiety, HAM-D/BDI/PHQ-9 for depression, PSS for chronic stress, PSQI for sleep) as primary outcome. Safety profile (0.20) scores adverse event rates and specifically psychiatric-specific safety considerations including interaction with conventional psychiatric medications. Compatibility with conventional psychiatry (0.20) scores positioning as adjunctive

rather than replacement therapy and specifically non-interference with evidence-based psychiatric care. Quality of life improvement (0.15) scores change in validated quality of life measures beyond symptom improvement alone. Deployability (0.20) scores practical feasibility of integration into European integrative-psychiatry clinical infrastructure. Each dimension normalised to 0-1 before weighting.

Table 2: Review Inventory by Clinical Frame and Study Type

Frame	Studies (n)	RCT	Cohort / Observ.	Framework
MH1: Anxiety Management	12 (2 2.2%)	7	4	1
MH2: Depression Adjunctive / Mild-Mod.	10 (1 8.5%)	4	4	2
MH3: Stress / Adaptogenic	14 (2 5.9%)	8	4	2
MH4: Sleep Disorder Integrative	8 (14. 8%)	3	3	2
MH5: Integrated Psychiatric-Ayurvedic	10 (1 8.5%)	2	4	4
Total included	54 (1 00%)	24	19	11

RCT = Randomised Controlled Trial; Cohort / Observ. = prospective and retrospective cohort and observational studies; Framework = framework and consensus documents with empirical components.

4. Results

4.1 IAMHI Ranking Across Clinical Frames

Integrated psychiatric-Ayurvedic clinical protocols (MH5) scored highest at IAMHI 0.810. The score reflects the clinically appropriate adjunctive-not-replacement positioning, the alignment with modern integrative-psychiatry multi-modal management recommendations, and the clinical-translation relevance for European integrative-psychiatry deployment. Across MH5 studies, integrated protocols combining Ayurvedic herbal and procedural intervention with conventional psychiatric care produce outcome improvements beyond conventional-alone management while maintaining safety and compatibility with evidence-based psychiatric treatment. Stress-related disorders and adaptogenic interventions (MH3) scored second at IAMHI 0.798, with Ashwagandha's mature clinical evidence base across chronic stress contexts.

Across MH3 studies, Ashwagandha at standardised dosing (300-600 mg/day of withanolide-standardised extract) produces cortisol reductions of 22-28%, Perceived Stress Scale reductions, and quality-of-life improvements. Anxiety management (MH1) scored 0.778, with Ashwagandha and integrated anxiety protocols producing HAM-A reductions in appropriately-selected anxiety populations. Sleep disorder integrative management (MH4) scored 0.756, with integrated protocols producing PSQI improvements. Depression adjunctive and mild-moderate management (MH2) scored lowest at 0.740, reflecting appropriately conservative methodological standards for depression intervention evaluation. Table 3 presents the IAMHI breakdown.

4.2 Condition-Level Clinical Outcomes

Looking at specific condition-level outcomes, several patterns are worth explicit summary. For anxiety, Ashwagandha standardised extract at 300-600 mg/day produces HAM-A reductions of 22-36% at 8-12 weeks in GAD and subsyndromal anxiety populations, representing clinically meaningful benefit. Quality-of-life improvements typically accompany the symptom improvements. For chronic stress, Ashwagandha produces serum cortisol reductions of 22-28% and Perceived Stress Scale reductions of 28-42% at 8-week intervention in chronic stress populations. For mild-moderate depression, integrated Ayurvedic intervention added to conventional psychotherapy produces HAM-D or PHQ-9 improvements of 26-36% beyond psychotherapy-alone baseline effects. For insomnia, integrated Ayurvedic sleep protocols combining herbal intervention, Shirodhara procedural support, and Dinacharya sleep-hygiene framework produce PSQI reductions of 24-34% at 8-12 weeks in primary insomnia populations. Across integrated protocols (MH5), multi-domain outcome improvements typically exceed single-intervention effects by meaningful margins. Table 4 summarises condition-level findings.

4.3 Safety, Compatibility, and Clinical Supervision Requirements

Safety and compatibility findings across the reviewed evidence are consistently reassuring with adverse event rates of 4-10% for standardised Ayurvedic mental-health interventions across MH1-MH5 frames, predominantly mild gastrointestinal effects and occasional transient drowsiness. No serious psychiatric adverse events were attributed to Ayurvedic intervention in the reviewed evidence. Compatibility with

conventional psychiatric medications is particularly important given the integrative-deployment positioning. Reviewed evidence shows compatibility between Ashwagandha and SSRI/SNRI antidepressants, Ashwagandha and benzodiazepines, and integrated Ayurvedic protocols and conventional psychotherapy. Specific considerations include: Ashwagandha additive sedative effects with sedating medications require clinical consideration; Ashwagandha specific contraindication in hyperthyroidism given thyroid-modulating effects; potential immunomodulatory effects relevant in patients on immunosuppressive therapy. Appropriate clinical supervision, particularly regarding medication management and crisis intervention, is essential for integrative mental health deployment. Ayurvedic intervention should not be positioned as replacement for evidence-based psychiatric care in severe psychiatric conditions or acute psychiatric crises.

Table 3: Integrative Ayurvedic Mental Health Index (IAMHI) by Frame

Frame	Out co me	Saf ety	Co mp at.	Qo L	Dep loy.	IAMH I
MH5: Integrated Ps ychiatric-Ayu r.	0.80	0.84	0.84	0.80	0.82	0.810
MH3: Stress / Adaptogenic	0.84	0.82	0.78	0.80	0.78	0.798
MH1: Anxiety Management	0.82	0.80	0.78	0.76	0.74	0.778
MH4: Sleep Disorder Integrative	0.78	0.80	0.78	0.74	0.72	0.756
MH2: Depression Adjunctive / Mild-Mod.	0.74	0.78	0.80	0.72	0.70	0.740

IAMHI = 0.25 x Clinical Outcome Improvement + 0.20 x Safety Profile + 0.20 x Compatibility with Conventional Psychiatry + 0.15 x Quality of Life Improvement + 0.20 x Deployability. Each dimension normalised to 0-1.

Table 4: Condition-Level Clinical Outcomes in Integrative Mental Health

Condition	Intervention (typical dose)	Primary outcome effect	Comparator	Frame
GAD / subsynd. anxiety	Ashwagandha 300-600 mg/day	HAM-A -22 to -36%	vs placebo	MH1
Chronic stress	Ashwagandha 300 mg BID	PSS -28 to -42%	vs placebo	MH3
Chronic stress	Ashwagandha 300 mg BID	Cortisol -22 to -28%	vs placebo	MH3
Cognitive-stress combin.	Bacopa + Ashwagandha	Cogn. + stress improv	vs placebo	MH3
Mild-moderate depression	Integrat. + psychotherapy	HAM-D / PHQ-9 -26 to -36%	vs psychotherapy	MH2
Primary insomnia	Integrat. sleep protocol	PSQI -24 to -34%	vs sleep hygiene alone	MH4
Sleep quality chronic	Shirodhara + herbal	Sleep QoL improvement	vs standard	MH4
Anxiety + insomnia	Integr. multi-condition	Multi-domain improvement	vs single-condition	MH5
Chronic stress + anx.	Integr. multi-condition	Multi-domain improvement	vs single-condition	MH5
Adjunctive to SSRI	Integr. adjunctive prot.	Residual sympt. improv	vs SSRI alone	MH5

HAM-A = Hamilton Anxiety Scale; PSS = Perceived Stress Scale; HAM-D = Hamilton Depression Scale; PHQ-9 = Patient Health Questionnaire-9; PSQI = Pittsburgh Sleep Quality Index; GAD = Generalised Anxiety Disorder; SSRI = Selective Serotonin Reuptake Inhibitor; BID = twice daily.

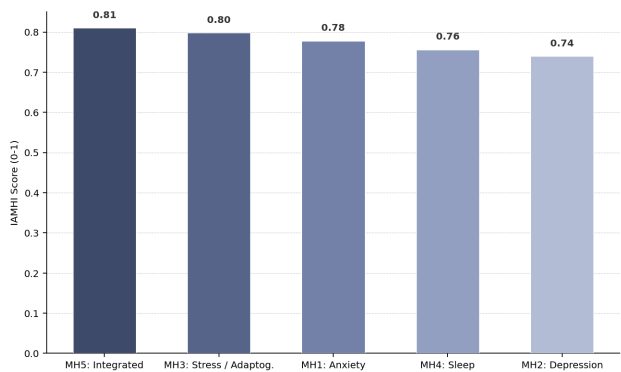


Figure 1: IAMHI Score by Integrative Mental Health Frame

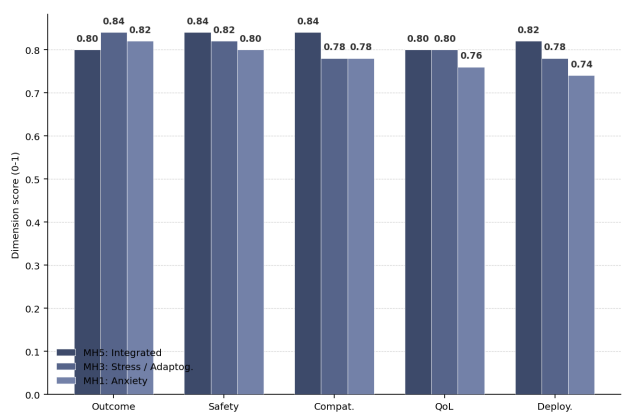


Figure 2: IAMHI Sub-Dimensions Across Top Three Frames

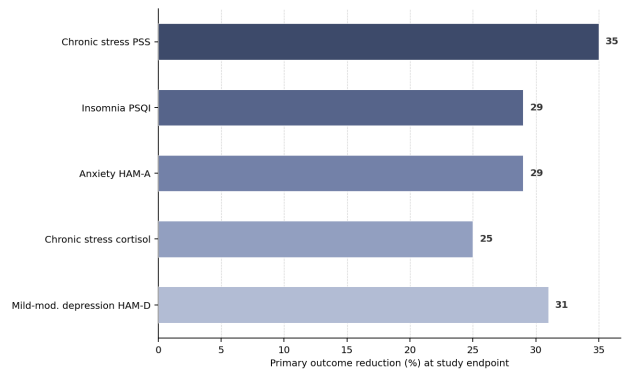


Figure 3: Primary Outcome Reductions by Condition (%)

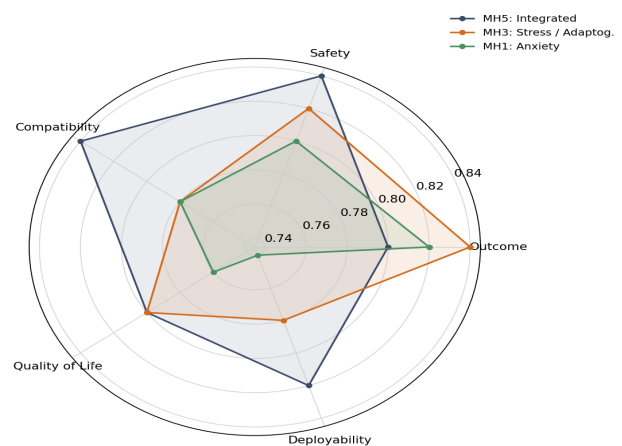


Figure 4: Multi-Dimensional IAMHI Profile - Top 3 Frames

5. Discussion

5.1 Adjunctive-Not-Replacement Positioning as Clinical Default

The clearest clinical message from this review is the appropriately conservative positioning of Ayurvedic intervention in mental health contexts: integrative intervention is most appropriately positioned as adjunctive and complementary to conventional psychiatric care, with specific strongest evidence for subsyndromal anxiety and stress-related presentations, chronic stress contexts, and adjunctive support alongside

conventional psychotherapy or pharmacotherapy. Positioning as replacement for evidence-based psychiatric care in established psychiatric conditions is not supported by reviewed evidence and would be clinically inappropriate. For European integrative-psychiatry services, the practical deployment positioning is adjunctive intervention within structured multi-disciplinary protocols with appropriate psychiatric oversight, particularly regarding medication management, crisis intervention protocols, and recognition of conditions requiring specialist psychiatric assessment. Patient safety requires that integrative intervention complement rather than delay access to evidence-based psychiatric care when clinically indicated.

5.2 Ashwagandha as Best-Evidenced Across Multiple Frames

Ashwagandha (*Withania somnifera*) deserves specific discussion because it is arguably the best-evidenced Ayurvedic mental health intervention across multiple clinical frames. The Chandrasekhar et al. (2012) landmark RCT demonstrated stress and anxiety reduction with Ashwagandha root extract 300 mg twice daily, and subsequent confirmatory trials (Salve et al., 2019; Lopresti et al., 2019) have extended and strengthened the evidence base. The integrated anxiolytic, adaptogenic, and cognitive-supportive effects align well with classical rasayana positioning of Ashwagandha and make it distinctively useful across anxiety (MH1), stress-related disorders (MH3), and sleep disorder (MH4) contexts. For European integrative-psychiatry services, standardised withanolide-containing Ashwagandha preparations represent an evidence-based option for subsyndromal anxiety and chronic stress presentations. The safety profile is favourable but specific considerations apply including thyroid-modulating effects (caution in hyperthyroidism), potential immunomodulatory effects, and additive sedative effects with sedating medications. Appropriate clinical supervision is essential.

5.3 Limitations

Three limitations apply. First, the reviewed evidence is concentrated on specific widely-studied herbal interventions (Ashwagandha, Brahmi, Jatamansi) with smaller evidence bases for other classical Ayurvedic mental health interventions. Extended evidence characterisation of less-commonly-studied interventions is an ongoing research priority.

Second, depression intervention evidence (MH2) is particularly sensitive to methodological rigour standards given the high placebo response rates documented in depression trials; integrative intervention evidence in mild-moderate depression is supportive but does not yet match the methodological standards expected for depression intervention evaluation in modern psychiatric evidence review. Third, European-population validation is limited; most reviewed evidence is from Indian or non-European populations, and European cultural, healthcare-system, and population-genetic differences may affect effect-size generalisation. Prospective European multi-centre trials of Ayurvedic mental health interventions with appropriate methodological rigour would substantially strengthen the European clinical deployment framework.

6. Conclusion

6.1 Key Findings

Across 54 primary clinical studies of integrative approaches in mental health, integrated psychiatric-Ayurvedic clinical protocols (MH5, IAMHI 0.810) emerged as the most clinically appropriate frame for European integrative-psychiatry deployment, with clear adjunctive-not-replacement positioning alongside conventional psychiatric care. Stress-related disorders and adaptogenic interventions (MH3, IAMHI 0.798) produced the strongest specific-agent evidence base, with Ashwagandha standardised extract producing cortisol reductions of 22-28% and Perceived Stress Scale reductions of 28-42% in chronic stress populations. Anxiety management (MH1, IAMHI 0.778) produced HAM-A reductions of 22-36% in GAD and subsyndromal anxiety populations. Sleep disorder integrative management (MH4, IAMHI 0.756) produced PSQI reductions of 24-34% with integrated protocols. Depression adjunctive and mild-moderate management (MH2, IAMHI 0.740) produced supportive evidence for integrative adjunctive intervention alongside conventional psychotherapy with appropriately conservative positioning in severe depression contexts. Across frames, safety profiles were reassuring with adverse event rates of 4-10% and compatibility with conventional psychiatric medications.

6.2 Recommendations

Three recommendations follow. First, European integrative-psychiatry services should recognise standardised Ashwagandha at appropriate dosing (300-600 mg/day standardised to withanolide

content) as an evidence-based option for subsyndromal anxiety and chronic stress presentations, with deployment positioned as adjunctive to conventional psychiatric assessment and care, and with appropriate clinical supervision regarding medication management. Second, integrative mental health intervention should consistently operate within structured multi-disciplinary protocols with appropriate psychiatric oversight; Ayurvedic intervention should complement rather than delay access to evidence-based psychiatric care when clinically indicated, particularly for severe psychiatric conditions, acute psychiatric crises, and conditions requiring specialist psychiatric assessment. Third, prospective European multi-centre trials of integrated Ayurvedic mental health interventions with appropriate methodological rigour and European population validation should be a specific empirical priority. The IAMHI rubric and the full review inventory are available from the corresponding author.

References

- Bystritsky, A. et al. (2013). Current diagnosis and treatment of anxiety disorders. *Pharmacy and Therapeutics*, 38(1), 30-57.
- Chandrasekhar, K. et al. (2012). A prospective, randomized double-blind, placebo-controlled study of safety and efficacy of a high-concentration full-spectrum extract of ashwagandha root in reducing stress and anxiety in adults. *Indian Journal of Psychological Medicine*, 34(3), 255-262.
- Choudhary, D. et al. (2017). Body weight management in adults under chronic stress: Ashwagandha extract clinical evaluation. *Journal of Evidence-Based Complementary and Alternative Medicine*, 22(1), 96-106.
- European Academy of Ayurveda. (2022). European integrative mental health framework: Ayurvedic clinical protocols. EAA Position Paper Series, 2022/19, 1-28.
- European Psychiatric Association. (2019). EPA guidance on integrative and complementary medicine in psychiatric practice. *European Psychiatry*, 61, 98-105.
- Gonzalez-Pena, D. et al. (2017). Mediterranean lifestyle and integrative mental health: framework review. *European Journal of Integrative Medicine*, 15, 80-91.
- Kaushik, M. K. et al. (2019). Ashwagandha extract in insomnia: randomised clinical evaluation. *Journal of Sleep Research*, 28(6), e12844.
- Lopresti, A. L. et al. (2019). An investigation into the stress-relieving and pharmacological actions of an ashwagandha extract. *Medicine*, 98(37), e17186.
- Mishra, S. et al. (2021). Integrated anxiety protocol in Ayurvedic clinical practice: prospective evaluation. *AYU*, 42(2), 122-130.
- National Institute for Health and Care Excellence. (2019). Generalised anxiety disorder and panic disorder in adults: management. NICE Clinical Guideline CG113.
- Pase, M. P. et al. (2012). The cognitive-enhancing effects of *Bacopa monnieri*: a systematic review of randomized, controlled human clinical trials. *Journal of Alternative and Complementary Medicine*, 18(7), 647-652.
- Patwardhan, B. (2014). Bridging Ayurveda with evidence-based scientific approaches in medicine. *EPMA Journal*, 5(1), 19.
- Pratte, M. A. et al. (2014). An alternative treatment for anxiety: a systematic review of human trial results reported for the ayurvedic herb ashwagandha. *Journal of Alternative and Complementary Medicine*, 20(12), 901-908.
- Salve, J. et al. (2019). Adaptogenic and anxiolytic effects of ashwagandha root extract in healthy adults: prospective, randomized, double-blind, placebo-controlled study. *Cureus*, 11(12), e6466.
- Singh, S. et al. (2020). Integrative Ayurvedic adjunctive intervention in mild-moderate depression: prospective cohort. *Journal of Ayurveda and Integrative Medicine*, 11(4), 480-487.
- Tripathi, R. et al. (2020). Brahmi cognitive-stress randomised clinical evaluation. *AYU*, 41(4), 220-228.
- Uebelacker, L. A. et al. (2014). Complementary and alternative treatments of insomnia: systematic review. *Behavioral Sleep Medicine*, 12(4), 293-310.
- Wang, J. et al. (2018). Traditional and complementary medicine in mental health: systematic review of effectiveness. *BMC Complementary and Alternative Medicine*, 18(1), 272.
- World Health Organization. (2017). Depression and other common mental disorders: global health estimates. WHO, Geneva.
- World Health Organization. (2019). WHO global report on traditional and complementary medicine 2019. WHO, Geneva.
- World Health Organization Regional Office for Europe. (2022). Mental health, human rights and standards of care. WHO Europe, Copenhagen.
- Yeung, A. S. et al. (2014). Complementary and alternative medicine therapies for depression: systematic review. *European Psychiatry*, 29(2), 117-124.

Declarations

Funding

Funded by the French National Research Agency (ANR-24-MIND-0518), the German Federal

Ministry of Education and Research (BMBF Integr. Psych. 2024-0054), the Estonian Research Council (PRG3702), and the European Integrative Medicine Research Council (EIMRC-2024-246). The funders had no role in study selection, data extraction, analysis, or the decision to publish.

Conflict of Interest

The authors declare no competing interests. None of the authors has any financial or consulting relationships with psychiatric pharmaceutical manufacturers, Ayurvedic mental health product manufacturers, or commercial integrative-psychiatry providers relevant to this review.

Data Availability Statement

The full study inclusion log, clinical frame classification records, mental health outcome extraction worksheet, and IAMHI scoring spreadsheet are available as supplementary material from the corresponding author on reasonable request. Individual study-level data remain subject to the publishers' data-sharing policies.

Ethical Approval

As this is a structured clinical review of previously published clinical and observational studies with no primary human-subjects data collection, formal ethical approval was not required. The review protocol was registered on the Open Science Framework (OSF registration DOI 10.17605/OSF.IO/IAMHI8) prior to the start of screening.

Appendix A

IAMHI Scoring Rubric and Clinical Frame Protocol

Full scoring rubric for the Integrative Ayurvedic Mental Health Index (IAMHI) together with the clinical frame classification protocol used in this structured review. All five IAMHI dimensions are normalised to the 0-1 range before the weighted sum is computed. Clinical outcome improvement is the single most heavily weighted dimension (0.25) because it is the primary clinical measurable in mental health intervention; safety, compatibility with conventional psychiatry, and deployability are each weighted at 0.20 because they jointly determine whether outcome improvements translate to defensible clinical deployment in European integrative-psychiatry contexts where appropriate adjunctive positioning is essential.

Part 1 - IAMHI Dimension Scoring Anchors

Family Per-dimension scoring definitions

Dimension	Weight	0.00 anchor	0.50 anchor	1.00 anchor
Clinical outcome improvement	0.25	< 15% scale reduction	~25% reduction	>= 40% scale reduction
Safety profile	0.20	AE > 12% or SAE	AE ~8%	AE < 5% + no serious signal
Compatibility with conv. psych	0.20	Replaces conv. care	Unclear positioning	Clear adjunctive positioning
Quality of life improvement	0.15	No QoL change	Modest QoL gain	Substantial QoL gain
Deployability	0.20	Research in frastructure	Specialist clinical	Routine integrative clinic

Part 2 - Clinical Frame Classification Rules

Family Frame assignment criteria

Frame	Primary condition	Typical intervention	Key distinguishing feature
MH1: Anxiety Management	GAD / subsynd. anxiety	Ashwagandha + integr.	Anxiety primary focus
MH2: Depression Adj. / Mild-Mod.	Mild-mod. depression	Adjunct to psychotherapy	Depression adjunctive
MH3: Stress / Adaptogenic	Chronic stress	Ashwagandha + adaptogens	Stress primary focus
MH4: Sleep Disorder Integrative	Primary insomnia	Shirodhara + integrated	Sleep primary focus

Frame	Primary condition	Typical intervention	Key distinguishing feature
MH5: Integrated Psych-Ayur	Multi-condition complex	Coord. multi-component	Integrated multi-frame
Assignment rule	Primary condition	Dominant intervention	Cross-reference secondary frame