

Wuqinxi for Mild Cognitive Impairment

A Critical Narrative Review and Research Agenda

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Abstract

Background: Wuqinxi is a traditional Chinese movement practice that combines physical activity with attentional and coordinative demands. Its role in mild cognitive impairment warrants investigation, but improvement in cognitive test performance must be distinguished from prevention of dementia or modification of neurodegenerative disease.

Objective: To examine the clinical rationale and evidence for Wuqinxi in mild cognitive impairment and develop a research agenda that separates feasibility, symptomatic benefit, and disease modification.

Approach: A focused narrative review examined bibliographic records, original research reports, and authoritative guidance identified through targeted web-based searches conducted on 1 October 2026. Direct evidence on Wuqinxi was distinguished from evidence on other movement practices and multidomain interventions.

Synthesis: The direct studies examined provide preliminary, outcome-specific signals rather than conclusive efficacy evidence. Important uncertainties concern diagnostic characterization, control conditions, attrition, multiplicity, intervention fidelity, and durability. Related randomized trials support investigating combined motor and cognitive activity, but their findings cannot establish Wuqinxi-specific effects. Changes in screening scores, mobility tests, or confidence about falling do not demonstrate fewer dementia diagnoses, fewer falls, or reversal of neuropathology.

Conclusion: Wuqinxi merits evaluation as a supportive motor-cognitive intervention for selected adults with mild cognitive impairment. A preregistered, assessor-blinded feasibility trial with an active comparator should precede a definitive efficacy study. Cognitive and functional endpoints should be prespecified, harms actively collected, and any digital delivery component evaluated separately. Current evidence does not justify presenting Wuqinxi as a cure, a proven dementia-prevention strategy, or a disease-modifying treatment.

Keywords: Wuqinxi; mild cognitive impairment; motor-cognitive exercise; qigong; cognitive aging; nonpharmacological intervention

Introduction

Mild cognitive impairment (MCI) describes objectively demonstrable cognitive difficulty that exceeds expectations for an individual's background while broadly preserving independence in everyday activities. It is a clinical syndrome, not a single etiology and not an inevitable stage on the way to dementia. The distinction matters when evaluating exercise – a population selected by a screening score alone can include people with substantially different causes, trajectories, and rehabilitation needs. Clinical assessment, functional history, and appropriate investigation remain necessary to characterize the target population. [1]

MCI should also be distinguished from Alzheimer's disease (AD). Contemporary diagnostic frameworks separate biological evidence of AD from the severity of clinical impairment; the two classifications are related but not interchangeable. A cognitive screening score does not establish AD pathology, and a rise in that score does not establish reversal of it. This distinction is particularly important when an intervention is discussed simultaneously as a way to support daily function and as a possible dementia-prevention strategy. [2]

The World Health Organization's 2026 risk-reduction guidance emphasizes healthy behaviors, management of relevant health conditions, environmental influences, and tailored multidomain interventions. The 2024 Lancet Commission similarly places dementia risk in a life-course context. These frameworks justify investigating accessible forms of sustained activity, but do not validate every exercise tradition or imply that a single activity can prevent all-cause dementia. Wuqinxi research should therefore address its added value within comprehensive care rather than compete with that care. [3, 4]

Disease-targeted treatments provide a separate evidential comparison. Randomized trials of lecanemab and donanemab in selected patients with early symptomatic, biomarker-supported AD reported slower clinical decline than placebo, alongside important adverse events including amyloid-related imaging abnormalities. Those findings neither constitute a cure nor apply automatically to all MCI. They illustrate why claims of disease modification require disease-specific characterization, appropriate clinical endpoints, and safety evidence; small exercise studies cannot substitute for those requirements. [5, 6]

This review asks whether Wuqinxi has a defensible role as a supportive motor-cognitive intervention for adults with MCI. Its central proposition is narrower than a treatment claim – a reproducible movement program may be feasible and may improve selected cognitive or

functional outcomes beyond a credible active comparator. The review evaluates that proposition, identifies alternative explanations for reported benefits, and sets out a sequence of studies capable of confirming or refuting it.

Review approach

This is a critical narrative review and hypothesis-generating research agenda. Evidence identification used targeted web searches on 1 October 2026 to retrieve PubMed and PubMed Central records, publisher-hosted articles, and WHO materials. Search terms included Wuqinxi and Wu Qin Xi combined with mild cognitive impairment, cognition, randomized trial, and cognitive decline. Targeted searches for qigong, cognitively enhanced tai ji quan, exercise in MCI, and multidomain intervention were used to identify informative comparators. Relevant reference lists were examined to place the direct studies in context.

Priority was given to human randomized studies of Wuqinxi in people described as having MCI. Studies of other movement practices were treated as indirect evidence. Mechanistic research in other populations was used only to assess plausibility. Diagnostic guidance and trial-reporting standards informed the interpretation and proposed research design. Published meta-analyses were considered as contextual syntheses, not as additional independent cohorts or substitutes for examination of primary reports. No new pooled effect estimate was calculated.

The appraisal considered population definition, intervention dose, comparator credibility, allocation and masking, analysis population, outcome choice, and follow-up. For the 2022 Wuqinxi report, appraisal was limited to the accessible publisher abstract and bibliographic information. This review did not use independent duplicate screening, a comprehensive multilingual database search, or a formal risk-of-bias or certainty-grading procedure. It is consequently neither an exhaustive inventory of Wuqinxi research nor a systematic review. The resulting judgments are qualitative and should be read with those limitations in mind.

Defining the intervention

Wuqinxi, often rendered as the Five Animal Exercises, is a Chinese qigong practice organized around movement patterns associated with the tiger, deer, bear, monkey or ape, and bird. Its scientific description should specify observable actions rather than rely on traditional explanatory concepts as evidence of efficacy. Relevant components include movement sequencing, imitation, postural transitions, coordination, and attention to breathing. The clinical

exposure is the taught program, including its supervision and adaptations, rather than the historical name alone. [7]

A label such as Wuqinxi leaves important treatment variables unresolved. How much of each session involves exercise rather than explanation? Are movements copied continuously or recalled without prompts? How often is the sequence changed? Are participants supported during weight shifts? These features can alter both cognitive demand and physical risk. A routine delivered through repeated imitation is not equivalent to one requiring independent sequence recall, even if both are called Wuqinxi.

Research protocols should therefore describe the intervention and comparator using the Template for Intervention Description and Replication and the Consensus on Exercise Reporting Template. Manuals should specify instructor training, permitted movement variants, session structure, progression rules, equipment, supervision, adherence, and fidelity. Such reporting enables replication and makes a negative result interpretable – investigators must be able to distinguish failure of the proposed intervention from failure to deliver it as intended. [8, 9]

Clinical evidence

Table 1 separates direct Wuqinxi studies from selected trials that inform the broader motor-cognitive hypothesis. These studies should not be combined as if they tested one standardized treatment.

Direct Wuqinxi evidence

Luo and colleagues randomized 50 older adults identified as having MCI using Montreal Cognitive Assessment (MoCA) scores to Wuqinxi or a nonexercise control. After 40 weeks, a between-group difference favored Wuqinxi for response time on the 0-back task ($P = 0.031$), but not for 0-back accuracy or performance on the 1-back and 2-back tasks. The accessible report does not establish a generalized working-memory benefit. A result confined to the lowest-load condition could reflect attention, response preparation, or processing speed rather than improved manipulation of information. The passive comparator also leaves nonspecific effects of participation unresolved. [10]

Wen and colleagues reported a 12-week comparison with stretching, with 53 participants in the reported analysis. Mean MoCA changes were 1.54 versus 0.52 points; mobility, balance, and several quality-of-life measures also favored Wuqinxi. The per-protocol analysis, unclear timing

of seven withdrawals relative to randomization, and lack of later follow-up limit interpretation. Its diagnostic thresholds and scoring procedures warrant scrutiny before generalization. Importantly, the reported fall-related outcomes were performance and confidence measures, not evidence of fewer prospectively recorded falls. These observations support replication, not a definitive efficacy or fall-prevention claim. [7]

Neither Wuqinxi trial examined here established reduced dementia incidence or a change in AD pathology. The appropriate interpretation is an early signal requiring confirmation, with the clinical importance and durability of any cognitive benefit still unresolved. This conclusion does not rule out a possible benefit. It limits the claim to what the measured outcomes can support. [7, 10]

Evidence from related movement practices

In a three-group trial involving 318 older adults with MCI or self-reported memory concerns, Li and colleagues compared cognitively enhanced tai ji quan with standard tai ji quan and stretching. At 24 weeks, between-group MoCA differences favored the enhanced intervention by 1.5 points versus standard tai ji quan (98.75% confidence interval [CI], 0.7 to 2.2) and 2.8 points versus stretching (98.75% CI, 2.1 to 3.6). Benefits in cognition and dual-task walking persisted at the 48-week assessment. This supports investigating added cognitive challenge, but the mixed population and different movement program prevent direct attribution of those effects to Wuqinxi. [11]

Jin and colleagues studied a tailored qigong program in a one-year cluster trial with 66 older adults, of whom 51 completed follow-up. The reported odds ratio of 0.314 (95% CI, 0.103 to 0.961) concerned progression of cognitive impairment defined through the study's cognitive classification; it was not an estimate of reduced incident dementia. The intervention was not a Wuqinxi-only program. Attrition, the cluster design, and classification based on cognitive scores constrain the strength and transportability of the finding. [12]

A meta-analysis by Yao and colleagues combined 15 trials with 1,127 participants and reported benefits of traditional Chinese mind-body exercises on selected cognitive outcomes. It provides context for the broader intervention family, but variation in practices, populations, and comparators precludes treating the pooled result as a Wuqinxi-specific treatment effect. Reviews that reuse the same primary trials do not constitute independent replication. [13]

Table 1. Selected direct and indirect randomized evidence

Study	Population	Program and comparator	Inferential scope
Luo et al. 2022 [10]	50 adults identified as having MCI	Wuqinxi, 60 minutes weekly for 40 weeks; nonexercise control	Direct evidence; n-back performance. Full-text methodological appraisal was unavailable.
Wen et al. 2026 [7]	53 in the reported analysis; MCI	Wuqinxi, 60 minutes three times weekly for 12 weeks; matched-duration stretching	Direct evidence; screening cognition and fall-related surrogates. Attrition chronology needs clarification.
Jin et al. 2020 [12]	66 randomized; older adults at risk of decline	Tailored qigong versus stretching for one year; cluster design	Indirect evidence; not Wuqinxi-specific and not an incident-dementia trial.
Li et al. 2023 [11]	318 adults with MCI or subjective memory concerns	Enhanced tai ji quan versus standard tai ji quan or stretching; 24 weeks	Indirect evidence for cognitive enrichment; follow-up to 48 weeks. Different intervention and mixed population.

MCI, mild cognitive impairment. Study-specific results are discussed in the text. This is a selective evidence table, not a systematic inventory or a pooled analysis.

Lessons from larger exercise and lifestyle trials

The EXERT study randomized 296 sedentary adults with amnesic MCI to aerobic training or lower-intensity stretching, balance, and range-of-motion exercise. It found no significant between-group difference in the primary cognitive trajectory over the supervised 12-month period ($P = 0.30$), or in the reported AD biomarker comparisons. Cognition remained broadly stable in both groups, but the absence of a randomized inactive comparator prevents that stability from establishing a protective effect. The study demonstrates why an active control is scientifically demanding – organized participation, contact, and lower-intensity movement may themselves matter. [14]

The US POINTER trial compared structured and self-guided multidomain lifestyle interventions in 2,111 older adults at increased risk of cognitive decline. The structured intervention produced a greater annual increase in the global cognitive composite by 0.029 standard deviations (95% CI, 0.008 to 0.050). The clinical meaning and durability of that difference require further evaluation. Participants were not exclusively people with MCI, and the intervention combined several behaviors; the result cannot identify a benefit from any one movement practice or establish Wuqinxi-mediated dementia prevention. [15]

Together, these comparisons favor careful questions over a simple effective-or-ineffective classification. Wuqinxi could be useful if it improves a meaningful outcome, makes sustained participation more achievable, or delivers comparable benefit with less burden. Conversely, an appealing and culturally meaningful format could add no measurable benefit beyond an equally engaging movement program. Both possibilities require direct testing.

Mechanistic rationale and competing explanations

The mechanistic model proposed here is a set of testable possibilities, not an established account of how Wuqinxi acts on the brain. It separates processes engaged during a session from clinical benefits that might emerge after repeated participation. Demonstrating the former does not establish the latter.

Cognitive engagement and transfer

Remembering a sequence, switching between movement patterns, and coordinating observation with action can impose demands on attention and executive control. A candidate hypothesis is that progressive but tolerable motor-cognitive challenge improves performance beyond simple repetition. The enhanced tai ji quan trial provides indirect experimental support for investigating this distinction. However, better recall of the trained sequence may represent task-specific learning rather than transfer to medication management, shopping, or other everyday activities. [11]

A study should test transfer using assessments that differ from the trained routine and include an independent measure of everyday function. It should also measure the cognitive demands actually delivered. Frequent instructor cues may improve movement accuracy while reducing memory demand; this trade-off could be desirable for safety but changes the proposed mechanism. More cognitive challenge is not necessarily better if it undermines balance, enjoyment, or attendance.

Physical conditioning and neural adaptation

Physical activity offers a plausible route through cardiorespiratory fitness and other aspects of general health, but the exercise intensity of a Wuqinxi session cannot be assumed from its duration. Time spent learning or resting should be distinguished from time spent moving. Measurement of exertion, activity exposure, and functional capacity is therefore necessary before invoking cardiovascular adaptation as an explanation for cognitive change.

In a randomized study of 120 older adults, Erickson and colleagues found that aerobic exercise altered hippocampal volume and spatial-memory outcomes. This provides a biological rationale for examining exercise-related neural adaptation, not evidence that Wuqinxi produces the same changes in MCI. Neither hippocampal volume nor peripheral brain-derived neurotrophic factor, considered alone, demonstrates new-neuron formation, clearance of AD pathology, or reversal of neurodegeneration. Mechanistic claims should remain proportional to the population, intervention, and assay actually studied. [16]

Balance and behavioral participation

Repeated postural transitions may improve practiced movement control. Whether that translates to fewer falls depends on more than performance in a supervised test – exposure to hazards, medication effects, vision, footwear, and daily behavior can also matter. A participant who gains confidence may become more active and encounter more opportunities to fall. Trials must therefore record actual events and activity exposure, rather than assume that improved confidence is equivalent to improved safety.

Breathing attention, instructor encouragement, group contact, and the satisfaction of learning a skill may influence mood, engagement, or willingness to continue. These are plausible contributors to benefit rather than methodological inconveniences to ignore. They also create competing explanations for a cognitive test difference. Equalizing contact time and measuring expectations can reduce, but not eliminate, this uncertainty. A mediation analysis would require temporally ordered measurements and adequate sample size; a correlation between two change scores is not sufficient.

What a positive result would and would not establish

An intervention can be worthwhile without modifying a disease process. Improved mobility, greater participation, or lower distress may matter to a person with MCI even if cognition is unchanged. The corresponding claim should be functional or supportive. A short-term difference on a cognitive screening measure supports an even narrower statement about measured performance unless corroborated by broader outcomes.

Screening tools such as MoCA are useful components of assessment, but should not carry the whole efficacy argument. Education, language, repeated exposure, and testing conditions influence interpretation. Trials should prespecify a cognitive endpoint with suitable measurement

properties, standardize administration, and avoid coaching participants on test items. Alternate forms, where validated and permitted, can help address practice effects but do not remove the need for a concurrent comparator.

Multiple cognitive subtests, several balance measures, and numerous quality-of-life domains offer many opportunities for nominal statistical significance. A hierarchy of outcomes and a prospective analysis plan are therefore essential. Effect estimates and CIs should take priority over an inventory of P values. Clinical importance must be justified for the chosen endpoint and population; a statistically significant change is not automatically noticeable or meaningful to participants.

Diagnostic reclassification also requires caution. Moving above a screening threshold can reflect test variability or familiarity and is not synonymous with remission of an underlying disorder. Establishing prevention of dementia would require sufficiently long follow-up, reliable ascertainment of incident dementia, and an appropriate sample size. Establishing disease modification would additionally require convergent clinical and disease-relevant evidence. Neither conclusion follows from a brief improvement on MoCA, a faster reaction time, or a balance score. Table 2 makes these inferential boundaries explicit.

Table 2. Outcomes and the claims they can support

Research question	Relevant evidence	Boundary of interpretation
Can the program be delivered?	Recruitment, retention, attendance, fidelity, acceptability, and harms collection	Feasibility does not establish clinical benefit or exclude uncommon harms.
Does cognition improve?	Prespecified cognitive endpoint, active comparison, effect estimate, confidence interval, and persistence	A test difference does not alone establish improved daily independence.
Does function improve?	Independent everyday-function measures and standardized mobility assessment	Better laboratory performance does not automatically transfer to daily activities.
Are there fewer falls?	Prospective fall counts, injury severity, follow-up, and exposure time	Balance and confidence scores are not substitutes for observed fall events.
Is dementia or pathology affected?	Long-term adjudicated dementia outcomes; disease-relevant biomarkers with clinical corroboration	Short cognitive trials cannot establish prevention, cure, or disease modification.

This framework is proposed by the author to align conclusions with measured endpoints. It is not a validated outcome hierarchy.

A staged research agenda

The immediate question is whether a reproducible, acceptable, and sufficiently safe program can be delivered and evaluated in the intended population. A pilot should answer uncertainties about a future definitive trial, rather than use a small efficacy test to declare success or failure. The recommendations below are a proposed design framework, not a registered protocol or a report of completed research. [17]

Population and design

A reasonable initial study would enroll adults aged 60 years or older with clinically characterized MCI and preserved ability to participate safely with appropriate support. A qualified clinical team should assess cognition, everyday function, comorbidities, medications, sensory limitations, and exercise suitability. A screening cutoff alone should not determine eligibility. Etiological information should be recorded when available; a pilot need not require expensive biomarkers unless its primary question is specific to biomarker-defined AD. [1, 2]

An individually randomized, two-arm, assessor-blinded trial would provide a clear first comparison – standardized Wuqinxi versus a low-impact program comprising walking, mobility, and balance activities without the same animal-sequence training. Both groups would continue usual care. The comparator should match instructor contact, setting, session frequency, social interaction, and approximate physical effort. It should be credible to participants and described with the same detail as Wuqinxi. A later dismantling study could compare standard and cognitively enriched Wuqinxi to isolate added cognitive demands.

Allocation should be concealed until enrollment and baseline assessment are complete. Instructors and participants cannot realistically be blinded to the exercise, but assessors and, where feasible, analysts should remain unaware of assignment. Participants should be reminded not to disclose their group during assessment. Several instructors should contribute to each arm where practical, because assigning a single enthusiastic instructor to one treatment makes instructor effects difficult to separate from treatment effects. Analysis should account for clustering by class or instructor when the delivery structure warrants it.

Dose and fidelity

An initial 24-week program with two supervised sessions of up to 60 minutes per week is a candidate schedule to test, not an established optimal dose. Session duration would include

instruction, rest, and graded activity. Any home practice should follow a predefined, individually approved routine and supervision plan. The active comparator should have an equivalent opportunity for home activity. Both arms should record session exposure, attendance, outside exercise, adaptations, and reasons for interruption.

The intervention manual should specify movement range, pace, support options, permitted cues, and criteria for progression or regression. Adaptation must be documented – seated or supported versions may improve access but change the balance challenge and cannot simply be assumed equivalent to the original routine. Fidelity checks should use a brief prespecified checklist applied to a sample of sessions. Video-based checks, if used, require separate consent and secure handling. [8, 9]

Feasibility and progression criteria

The pilot's primary outcomes should be recruitment, retention, attendance, completion of outcome assessments, acceptability, and completeness of adverse-event reporting. Recruitment should be expressed against both eligible candidates and recruitment time. Attendance denominators should include the sessions offered, with canceled sessions and medically advised pauses distinguished from missed attendance. Qualitative interviews can identify barriers that an average attendance percentage would conceal.

Sample size should follow the precision needed for these estimates. As an illustration, 80 randomized participants with 64 retained would give 80% overall retention with an approximate 95% Wilson CI of 70% to 87%; this calculation does not establish adequate power for cognitive efficacy or rare harms. Each arm's estimate would be less precise. Before enrollment, investigators and participant representatives should specify progression criteria, for example a target of at least 80% retention and 75% attendance, and define when redesign is needed. These proposed thresholds require justification in the recruitment setting; they are not established Wuqinxi benchmarks.

An independent clinical reviewer should examine the nature and severity of any potentially intervention-related harm. Meeting attendance targets should not override a concerning safety pattern. Progression to a larger trial should reflect recruitment feasibility, data quality, participant burden, fidelity, and safety together, rather than a favorable exploratory P value.

Outcomes and analysis

A future definitive trial should prespecify one primary efficacy endpoint and time point. A domain-appropriate cognitive composite may be suitable if selected with neuropsychological expertise; everyday function should be measured alongside it. Secondary measures could include dual-task gait, balance, participant-reported quality of life, and caregiver workload. Falls should be collected prospectively using a defined event description, regular contact, and an exposure denominator. The number of participants who fall, total falls, and injury severity answer different questions and should not be conflated.

Assessments at baseline, end of treatment, and a further 24 weeks would help distinguish immediate learning from sustained effects. Continued activity during follow-up must be recorded, because maintenance of benefit during continued practice differs from persistence after the intervention has ceased. Longer studies would be needed for diagnostic progression and uncommon adverse outcomes.

Analysis should retain participants in their randomized groups, seek outcomes after intervention discontinuation where consent permits, and report the amount and reasons for missing data by group. Baseline-adjusted estimates and CIs should accompany prespecified sensitivity analyses for plausible missing-data assumptions. A per-protocol analysis can supplement but not replace the randomized comparison. The pilot should estimate uncertainty and inform design choices; its observed efficacy estimate should not be the sole basis for powering the next trial.

Protocols and analysis plans should be registered before recruitment and outcome inspection, respectively, with amendments dated and explained. SPIRIT 2025 can guide the protocol, while CONSORT 2025 and the applicable pilot-trial extension can guide reporting. TIDieR and CERT provide complementary intervention detail. These standards improve transparency; citing them does not certify that a study is unbiased or clinically effective. [8, 9, 17, 18, 19]

Digital delivery as a separate research question

Digital prompts could make an approved routine easier to follow, but their effect must be distinguished from the exercise itself. A platform such as MemoryHelm could be studied for instruction clarity, participation, usability, and caregiver workload. No clinical efficacy claim for that platform is made here. Early testing should establish whether participants understand the prompts, can pause or stop reliably, and avoid unsafe reliance on unattended guidance.

Software should present only clinician- or instructor-approved content. It should not generate new movement prescriptions, change exercise intensity autonomously, diagnose symptoms, or encourage continuation despite pain, dizziness, breathlessness, or instability. Any reminders, completion logs, and human follow-up arrangements should be defined in advance. A caregiver's involvement can support participation, but does not replace the participant's consent or professional clinical judgment.

If digital support is added only to Wuqinxi while the control group receives less contact or attention, an observed benefit becomes difficult to attribute. A separate pilot comparing the same exercise with and without digital support would more cleanly estimate its contribution. Suitable endpoints include comprehension errors, adherence, technical failures, time required from caregivers, and adverse events. Records of a completed prompt are not proof that an exercise was performed correctly. Independent observation in a consenting sample would be needed to assess execution fidelity.

Safety, ethics, and applicability

Low-impact exercise is not risk-free. Eligibility assessment and supervision should reflect each participant's balance, cardiovascular status, pain, sensory function, and ability to follow instructions. The research team should define symptom-based stopping rules and an escalation pathway before sessions begin. Adverse events should be actively elicited at scheduled contacts, including events outside supervised sessions, and reported with severity, relatedness, and exposure. Absence of reported events in a small sample is not evidence that rare or delayed harms cannot occur.

Consent procedures must accommodate cognitive and communication needs without assuming that MCI removes decision-making capacity. Information should be understandable, comprehension checked, and willingness to participate revisited. A legally authorized representative should be involved when required by applicable law and the participant's decision-making capacity. A caregiver's approval alone does not replace valid informed consent. Prospective research requires ethics review and appropriate clinical governance before recruitment.

Transport, language, digital access, caregiver availability, and cultural familiarity can determine who is able to join and remain in a program. Recruitment should describe these barriers rather

than presenting a convenient sample as representative of all people with MCI. Delivery costs should include instructor training, venue, supervision, travel, and digital support when applicable. Minimal equipment requirements do not establish cost-effectiveness.

The practice's Chinese origin should be acknowledged accurately and its adaptation developed with qualified practitioners and participants. Cultural relevance may influence preference and adherence, but is not a substitute for comparative evidence. Local adaptations should preserve clearly specified intervention components while recognizing that acceptability and effectiveness may differ across settings.

Limitations and implications

This review is constrained by focused retrieval, incomplete access to at least one direct study, and the absence of independent duplicate appraisal. It may miss relevant Chinese-language reports, unpublished studies, or negative findings. No pooled Wuqinxi effect size or formal certainty rating is justified by the work undertaken. The proposed design choices are reasoned recommendations for testing, not empirically established optimums.

The main research opportunity is to determine whether the combination of sequence learning and movement provides an incremental benefit that is both measurable and important to participants. A convincing positive result would require replication, credible control of nonspecific effects, and evidence of transfer or durability. A well-conducted null result would also be informative. It could indicate no added cognitive benefit while leaving open questions about preference, accessibility, or physical function. Claims of equivalence or noninferiority would require a design specifically powered and specified for those purposes.

Conclusion

Wuqinxi is a plausible candidate for supportive motor-cognitive research in MCI. The direct studies examined suggest limited, outcome-specific benefits, but do not establish prevention of dementia, fewer actual falls, or disease modification. Related exercise trials provide a rationale for testing cognitive enrichment and sustained participation, not proof of a Wuqinxi-specific therapeutic effect. Progress depends on reproducible interventions, clinically characterized participants, active comparison, transparent analysis, and outcomes that matter beyond the training session. Wuqinxi should be investigated as an adjunct to appropriate care, with any digital support evaluated on its own merits.

Declarations

Competing interests

Ventsislav Asparuhov is the creator and project lead of MemoryHelm, which is discussed as a potential platform for future research. This role is disclosed because the article proposes evaluating the platform. No clinical efficacy evidence for MemoryHelm is presented here.

Ethics and data availability

This article reviews published research and proposes future studies. No participants were recruited, and no individual participant data were collected or analyzed for this article. The clinical findings discussed come from the cited publications. Any future trial will require its own ethics approval, informed consent procedures, prospective registration, and appropriate data governance.

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