

Perspective

A nursing-led conceptual model for virtual reality-based calm rooms in mental health care

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Abstract

This perspective paper develops a preliminary nursing-led conceptual model for using immersive virtual reality (VR) as an optional, brief calming intervention in adult psychiatric inpatient care. Supporting publications were selected purposively from the literature cited in the original manuscript and critically examined for direct relevance; no systematic search, formal evidence grading, expert consensus exercise, or empirical model validation was undertaken. A VR-based calm room is defined here as a supervised care pathway incorporating a clinically appropriate immersive calming experience, rather than a headset or dedicated room alone. Evidence from a systematic review and a small quasi-randomized psychiatric inpatient trial suggests potential short-term improvement in relaxation or well-being, but does not establish superiority over physical calm rooms or non-VR relaxation. The proposed pathway comprises triage and consent, preparation and personalization, guided use, monitoring and stopping, and debriefing with documentation and escalation. A hypothesized mechanism links presence, attentional redirection, sensory modulation, guided self-regulation, perceived control, and therapeutic nursing support to immediate distress responses. Safety checkpoints address acute clinical risk, cybersickness, falls, infection prevention, privacy, and clinical deterioration. The model has not been validated, and its feasibility, acceptability, equity, safety, comparative effectiveness, and resource requirements require prospective evaluation before implementation as routine care.

Background

Adults admitted to psychiatric services may experience episodic anxiety, heightened arousal, emotional distress, and sensory overload while also requiring assessment, observation, and therapeutic relationships. Short periods of structured calming support may complement, but cannot replace, indicated psychiatric care. Acknowledging stigma and barriers to engagement is important in mental health services generally (Choudhary et al., 2024; Clay et al., 2020); neither body of work, however, establishes the effectiveness of a VR intervention. Digital mental health tools likewise require careful clinical integration rather than adoption on the assumption that technology alone improves care (Torous et al., 2025; Alotaibi et al., 2025).

Immersive VR can simulate nature scenes and deliver structured breathing, guided imagery, or mindfulness content. Reviews suggest promising short-term relaxation effects across

heterogeneous interventions and populations (Riches et al., 2023; Ladakis et al., 2024; Wieczorek et al., 2024). Yet an attractive virtual setting is not a complete clinical service: existing studies often vary in participant selection, supervision, content, comparator, outcome timing, and reporting of adverse events. Physical sensory rooms, meanwhile, emphasize individual preferences and a supportive environment rather than immersion alone (McCabe et al., 2025). A small direct comparison of VR and physical calm rooms found improvements in both conditions without demonstrating a meaningful between-group advantage for VR (Ilioudi et al., 2023).

The specific gap is therefore operational, not simply technological. Current evidence offers limited guidance on how nurses should distinguish suitable short-term distress from an urgent psychiatric need; obtain voluntary consent; choose culturally and sensorily appropriate content; stop an unsafe session; document benefits and harms; or escalate deterioration. The

principal contribution of this perspective is a provisional, nursing-accountable service pathway integrating these functions with an explicit mechanism-of-action hypothesis and an evaluation agenda. It does not introduce a tested intervention or establish a new treatment effect.

The intended initial context is an adult psychiatric inpatient unit, at the point where a patient who is clinically stable enough to participate requests or accepts brief support for situational distress, anxiety, or sensory overstimulation. Children, emergency psychiatric presentations, outpatient clinics, community settings, and independent home use are not included in the proposed initial pathway; any extension would require setting-specific redesign and evaluation. The objective is to define the service, appraise the relevant evidence without overstating it, and identify practical safeguards and research priorities for future pilot testing.

Article Type, Approach, and Evidentiary Scope

This is an interpretive perspective and conceptual service proposal, not a primary clinical study, systematic review, scoping review, formal practice guideline, or report of an implemented service. The cited literature was assembled purposively from publications already discussed in the source manuscript and supplemented with directly relevant, verifiable reporting-methods sources. No prespecified electronic database strategy, date limits, eligibility screening flow, protocol registration, duplicate independent review, formal risk-of-bias appraisal, or expert consensus process is documented; none is claimed. The discussion therefore distinguishes direct psychiatric-inpatient evidence from indirect literature and treats all service recommendations as proposed rather than validated.

No EQUATOR Network design-specific guideline for empirical observational, interventional, or qualitative studies appropriately governs this non-empirical perspective. STROBE, CONSORT, PRISMA, and SQUIRE are consequently not represented as having been followed. General principles of transparent rationale, referencing, and balanced presentation informed the narrative (Baethge et al., 2019). The Template for Intervention Description and Replication (TIDieR) checklist is identified as a useful prospective reporting resource for future evaluations rather than claimed as a reporting standard already

satisfied by an untested model (Hoffmann et al., 2014).

Operational Definition and Essential Components

A “VR-based calm room” is operationally defined as a voluntary, time-limited, nurse-supported clinical encounter in which an eligible adult psychiatric inpatient accesses an immersive, predominantly nonprovocative calming environment under an agreed purpose, safety protocol, observation plan, and post-session review. A dedicated physical room is desirable when available but not essential: a portable headset at the bedside can qualify if a safe, private, seated area and the same clinical safeguards are provided. A headset used casually for entertainment or without assessment, consent, monitoring, and follow-up does not meet this definition.

Essential elements are (1) documented eligibility and current-risk triage; (2) capacity-appropriate information and voluntary consent, with immediate withdrawal allowed; (3) a choice of vetted low-stimulation content and a jointly defined immediate goal; (4) equipment fitting, cleaning, and a safe seated environment; (5) an available accountable nurse and individualized observation; (6) an agreed stop signal and prompt termination for symptoms or risk; and (7) debriefing, documentation, and access to usual care or escalation. Optional additions include a dedicated room, a particular headset brand, biofeedback, real-time analytics, additional modalities, or a longer library of scenes. No optimal dose, minimum exposure, or standard content set is asserted in the absence of validation.

The intervention is conceptually distinct from exposure-based psychotherapy: feared or traumatic cues are not deliberately introduced to extinguish avoidance. It is also distinct from seclusion, restraint, and sedation: it must never be used to isolate a distressed patient, decrease required observations, or defer clinically indicated intervention. Virtual content need not reproduce a physical forest: simulated natural settings can influence experience differently from in-person nature (Reese et al., 2022), and designs that look calming to developers may not be calming to every user (Cui et al., 2026; McCabe et al., 2025).

A Hypothesized Mechanism of Action

Table 1 articulates proposed, not demonstrated, pathways. Immersion may increase the sense of being present in a deliberately low-threat environment; attentional redirection may temporarily shift attention away from distressing ward stimuli. Sensory modulation through visual, acoustic, and movement characteristics may lower or, if poorly matched, increase arousal. Guided breathing or mindfulness may provide a structured self-regulation task, whereas choice over scene, duration, and stop signal may enhance perceived control. Throughout the encounter, nursing presence may support orientation, safety, validation, shared decision-making, and transfer of useful coping strategies into care beyond the headset. These processes may interact rather than operate as independent mechanisms (Brelet &

Gaffary, 2022; Irshad & Perkis, 2020; Pancini et al., 2025; Jadhakhan et al., 2022).

This framework yields falsifiable propositions for future research: any short-term improvement should be assessed against non-VR calming with comparable staff attention; perceived control and tolerability may mediate acceptability; and more immersive or more interactive content is not presumed to be better. Physiological response should be a secondary, carefully interpreted indicator rather than a surrogate for clinically meaningful relief (Robbemon et al., 2026). As randomized evidence on VR-based breathing has not shown overall superiority to non-VR breathing, immersion is treated as a candidate delivery attribute rather than an established active ingredient (Cortez-Vázquez et al., 2024).

Table 1. Proposed mechanism and nursing safeguards for VR-based calm rooms

Entry / Context	Hypothesized Processes	Immediate Target
Eligible, consenting adult psychiatric inpatient; situational distress; agreed goal	Immersion and presence → attentional redirection; preferred sensory input; optional guided breathing; perceived control	Patient-reported distress, perceived helpfulness, goal attainment, and adverse symptoms
Nursing triage and co-planning	Therapeutic presence + observation + reassurance + shared control across all processes	Continuity of therapeutic care; timely stopping or referral

Critical Appraisal of the Available Evidence

The most directly relevant body of research concerns relaxation among mental health service users. The systematic review by Riches et al. (2023) included 18 studies (848 participants) and reported feasibility, acceptability, and short-term improvements in relaxation or stress; most studies involved working-age adults, often outpatients with anxiety or stress-related problems, and interventions and comparators varied. These findings support cautious feasibility testing, not a single standardized clinical effect across diagnoses or settings. Broader reviews addressing stress, mindfulness, primary prevention, and relaxation also describe heterogeneous protocols, outcomes, and populations (Bonnetterre et al., 2025; Ladakis et al., 2024; Wiczorek et al., 2024; Pedram & Piatkowski, 2025; Tan et al., 2026).

The strongest contextual test of the calm-room idea is the quasi-randomized psychiatric inpatient study by Ilioudi et al. (2023). Among 60 participants (40 assigned to VR calm room and 20 to a physical calm room), self-reported well-being improved overall after exposure, without a

statistically significant difference between conditions; the primary assessment was immediate and the authors acknowledged low power. This small, nonstandard allocation study cannot establish equivalence, sustained benefit, or that the nursing-led pathway proposed here improves outcomes. Lee et al. (2024) followed 26 psychiatric inpatients in a 10-week, single-arm VR meditation pilot and reported associations between a physiological regulation measure and declining anxiety and depression. Without a control group, regression to the mean, concomitant treatment, and time effects cannot be separated from intervention effects.

A meta-analysis of six randomized controlled trials of VR versus non-VR breathing interventions reported no statistically significant differences in overall mental health outcomes, individual stress, anxiety or mood measures, heart rate, or heart-rate variability (Cortez-Vázquez et al., 2024). This result is particularly relevant to the incremental-value question. Similarity of immediate outcomes cannot be interpreted as proof of clinical equivalence, but the absence of superiority requires an honest comparator in future trials. By

contrast, reports on immersive nature exposure, anxiety-focused virtual landscapes, haptic feedback, and non-VR deep-breathing or guided imagery offer mechanistic or alternative-intervention context, not direct psychiatric calm-room effectiveness (Reese et al., 2022; Cui et al., 2026; Brelet & Gaffary, 2022; Toussaint et al., 2021).

The evidence base also includes populations or approaches outside the initial inpatient target: mindfulness sessions in schools or communities, post-COVID rehabilitation, stress protocols for health workers, stress reduction in general populations, VR applications for trauma symptoms, and digital interventions for children and adolescents (Rafiei et al., 2025; Cano et al., 2024; Pallavicini et al., 2021; Haeussel et al., 2026; Strauch et al., 2026; Goharnejad et al., 2026; Chen et al., 2024). Trials in dialysis populations and older adults with mild cognitive impairment concern different clinical aims and are not evidence that psychiatric calm rooms work (Kang et al., 2025; Yang et al., 2025). Related digital personalization reviews concern adolescents or youth rather than adult psychiatric inpatients (Wanniarachchi et al., 2025). These studies may inform design questions but should not be pooled informally into an inpatient effectiveness claim.

Finally, protocols are not outcome evidence: Shankar et al. (2025) describes a planned systematic review rather than demonstrated clinical benefit. Conceptual discussions of mixed-reality metaverses (Navas-Medrano et al., 2024) and bibliometric or legal/AI reviews (Sharma et al., 2025; Kandeel et al., 2026) raise adjacent governance issues but cannot substantiate symptom reduction, adverse-event incidence, or efficacy of psychiatric calm rooms. Similarly, evidence on procedural anxiety relates to a distinct application (Arthur et al., 2025). Jingili et al. (2023) and other broad VR anxiety literature contribute background only where the exact intervention and population differ. This explicit separation prevents indirect citations from being mistaken for direct validation.

Safety reporting is a major limitation. Lundin et al. (2023) reviewed 73 psychiatric VR/augmented reality studies: seven reported symptom worsening or increased fall risk, 21 claimed no adverse effects while describing recognizable adverse symptoms, and 45 did not mention adverse effects. These figures reflect the reporting practices of the reviewed studies, not rates among all exposed patients. The absence of a harm report must never be read as proof of safety. A cautious

model therefore requires prospective adverse-event ascertainment and full reporting of headache, nausea, dizziness, disorientation, anxiety or panic, perceptual disturbance, falls or near misses, and premature termination (See Table 2).

Table 2. Selected evidence most relevant to the proposed pathway

Source/design	Population and comparison	Direction of findings	Interpretive limits
Riches et al. (2023); systematic review	18 studies; 848 people with mental health conditions; varied VR and other conditions	Short-term relaxation/stress improvement and feasibility reported	Heterogeneous settings and designs; limited support for specific nursing workflow
Ilioudi et al. (2023); quasi-randomized study	60 psychiatric inpatients; VR calm room (n=40) vs physical room (n=20)	Improvement in well-being within groups; no significant between-group difference	Small, imbalanced groups and low statistical power; immediate outcomes
Lee et al. (2024); single-arm pilot	26 inpatients with depression/anxiety; repeated immersive VR meditation without comparator	Regulation measure associated with reductions in anxiety and depression	No control group; cannot attribute change to VR
Cortez-Vázquez et al. (2024); RCT meta-analysis	Six trials; VR breathing vs non-VR breathing in adults	No significant overall superiority on mental health or stress physiology	Not a direct test of a nurse-led calm-room service
Lundin et al. (2023); systematic safety review	73 psychiatric VR/AR studies; adverse-effect reporting	Substantial underreporting of potential harms	No reliable pooled rate of adverse events

Preliminary Nursing-Led Operational Pathway

The five stages in Table 3 are an author-proposed organization of activities described in the original manuscript, interpreted alongside published VR relaxation, patient-preference, safety, and nursing-care considerations. It is a structured conceptual synthesis, not a protocol derived by Delphi consensus, qualitative codes, formal expert consultation, or prospective clinical testing. The model remains preliminary, and each step requires local multidisciplinary approval, pilot refinement, and explicit assignment of responsibility. A nurse's professional judgment

and existing clinical obligations supersede completion of any VR session.

Table 3. Proposed five-stage nursing workflow for an adult psychiatric inpatient VR-based calm room

Stage	Proposed nursing actions	Safety and accountability checkpoint	Minimum documentation
1. Triage and consent	Assess immediate distress, clinical stability, orientation, decision-making capacity, communication needs, prior immersive reactions; agree on an immediate goal; explain choice and alternatives.	Urgent clinical risk takes precedence. Seek appropriate clinical review for uncertainty; confirm that participation is voluntary.	Indication; baseline patient-reported distress; risk screen; capacity/consent; goal and alternative offered.
2. Prepare and personalize	Offer a small menu of vetted low-stimulation scenes, optional audio/guidance, and a stop signal; prepare safe seat; fit and disinfect device.	Check headset fit, cleaning, balance, privacy, triggering content and environmental hazards; follow device instructions.	Selected content; adaptations; comfort; equipment and infection-control check.
3. Guided immersion	Orient patient before use; provide brief, low-intensity exposure; remain available with observation matched to risk; support paced breathing only if desired.	No unsupervised use in patients requiring direct clinical observation. Continue usual ward observations.	Start time, content, nurse coverage, patient feedback and perceived tolerability.
4. Monitor and stop	Check for dizziness, nausea, headache, panic, disorientation, unusual perceptual experiences or agitation; stop on request or deterioration.	Immediately remove headset safely; assess, orient and treat symptoms; obtain urgent review as indicated; manage falls/other incidents per policy.	Duration; early termination; symptoms; adverse-event response; clinical notification.
5. Debrief and escalate	Discuss helpful/unhelpful elements, recheck distress, link to coping plan, document response, offer usual non-VR options and necessary referrals.	Do not defer psychiatric treatment, crisis response or planned observations; hand over any residual concern.	Post-session distress; goal attainment; patient preference; follow-up, escalation and continuity plan.

Risk Stratification, Clinical Oversight, and Scope of Practice

The proposed triage categories in Table 4 are pragmatic clinical decision aids, not empirically validated exclusion rules or universal device contraindications. Conditions requiring urgent standard care must be separated from symptoms

that warrant cautious, individualized review. Psychiatric risks are clinical-state dependent, while device-specific medical contraindications depend on headset instructions, local policy, and relevant clinical assessment. Patients must not be pressured to participate, and capacity to consent must be assessed for the decision at hand.

Table 4. Provisional triage and observation matrix (requires local validation)

Proposed category	Examples of clinical situations	Proposed response
Do not initiate; prioritize urgent assessment or indicated care	Active suicidal intent requiring immediate safety measures; severe uncontrolled agitation or behavioral emergency; acute medical deterioration; inability to provide valid consent; severe confusion or disorientation that prevents safe participation; current infection-control restriction incompatible with shared equipment.	Provide standard psychiatric, emergency, and infection-control pathways. VR is not a de-escalation substitute for acute risk management.
Individual clinical review / relative precaution	Active psychotic experiences with potential for increased perceptual confusion; current or previous dissociation; history of seizures or photosensitivity; severe motion sensitivity or vestibular disorder; migraine, visual impairment, balance problems, or relevant neurological symptoms.	Assess stability, triggers, device guidance, and suitability with appropriate psychiatric/medical expertise. Prefer non-VR support if the balance of benefit and risk is uncertain.
Enhanced observation if judged suitable	Stable symptoms but low VR familiarity, residual anxiety, communication difficulty, mild motion sensitivity, falls risk, or uncertain sensory tolerance.	Choose brief low-intensity content; maintain direct nurse observation as

Proposed category	Examples of clinical situations	Proposed response
Potentially suitable after routine screening	Clinically stable and oriented adult experiencing situational distress who voluntarily agrees and can signal discomfort.	indicated; seated positioning and stop signal; re-evaluate frequently. Proceed only within approved pilot protocol; normal clinical monitoring and planned post-session review remain in place.

Within local scope of practice, nurses may assess distress, explain and obtain consent for nurse-delivered supportive care when authorized, provide therapeutic communication, prepare equipment, monitor symptoms, terminate an unsafe session, document response, and initiate escalation. Formal psychiatric diagnosis, alteration of psychiatric treatment, management of suicidality, medical clearance for neurological risk, psychotherapy requiring specialist competence, and approval of new devices or data systems require the appropriately credentialed professionals and institutional authorization. Information technology and privacy officers should approve configuration and storage; infection-prevention staff should approve reprocessing; clinical leaders should define staffing thresholds and the adverse-event reporting chain.

Implementation is not a time-saving intervention unless proven otherwise. Staff time spent screening, staying available, cleaning, documenting, and debriefing must be counted, and VR use must not lower required observation ratios. Any deterioration remains a clinical event for which the responsible nurse initiates immediate patient-safety actions and escalation according to policy, with treatment decisions resting with authorized clinicians. Competency assessment should cover consent, device operation, accessibility, sensory triggers, cybersickness recognition, falls prevention, infection prevention, data handling, safe termination, and incident simulation. Reviews of healthcare digital readiness and patient-specific preferences underline the need to address training and usability before assuming operational feasibility (Alotaibi et al., 2025; McCabe et al., 2025).

Safety, Infection Prevention, Privacy, and Equity

Physical safety requires a stable seated position, adequate clearance from furniture, observation appropriate to falls risk, careful donning and removal, and reliable access to an immediate stop procedure. Headset straps and touch surfaces require cleaning between users according to manufacturer instructions and institutional

infection-prevention requirements; supplies with noncleanable patient-contact materials, active contact-precaution restrictions, or broken equipment should not be used. Auditory cues, flashing content, rapid virtual motion, and scenes with culturally distressing associations require pre-approval and patient choice. A non-VR alternative must always be available. These safeguards respond to plausible hazards and incomplete adverse-effect reporting, not proven incidence rates (Lundin et al., 2023).

The governance plan should specify the health-care organization's role as controller or custodian of identifiable clinical data under applicable law; software vendors' access rights and processor responsibilities; whether patient identifiers, account details, gaze/eye tracking, head movements, voice, video, physiological signals or behavioral analytics are collected; whether data are stored locally or in third-party cloud systems; where servers are located; and who can access, export or delete records. Default to minimal collection, locally approved user accounts, encryption in transit and at rest where available, role-based access, strong authentication, security patching, breach-response procedures, retention limits, and procurement review of secondary-use or model-training clauses. Such requirements must be tailored to the jurisdiction and device and confirmed by institutional data-protection and IT teams; this paper does not claim current legal compliance of an unspecified implementation.

Consent must differentiate voluntary clinical participation from optional data collection. Patients should understand whether deletion or withdrawal from optional collection is available and what clinical records must legally be retained; withdrawing consent for VR use must never reduce routine mental health care. Biometrics and gaze data merit heightened scrutiny because detailed behavioral profiles may be inferred from device telemetry. AI-enabled adaptive content or autonomous risk decisions should not be assumed safe: wider discussion of AI governance and digital-mental-health ethics (Kandeel et al., 2026; Sharma et al., 2025; Torous et al., 2025) informs risk questions but is not evidence validating such functions in the proposed service. Conceptual

visions of networked mental-health metaverses likewise add data-governance challenges without proving clinical benefit (Navas-Medrano et al., 2024).

Equity entails offering explanations that reflect literacy, language, visual, hearing, motor, neurodivergent, religious and cultural needs; accommodating controllers or offering simple passive scenes; and recording who is offered VR and who declines. A group-specific usability pilot is preferable to presuming that findings among autistic adults, youth, or digitally literate samples generalize to all psychiatric inpatients (McCabe et al., 2025; Wanniarachchi & Greenhalgh, 2025). Patients who cannot tolerate or decline VR should have equivalent access to quiet space, non-VR paced breathing, guided imagery, supportive conversation, and other appropriate care (Toussaint et al., 2021).

Prospective Implementation and Evaluation Agenda

A pilot should be co-designed with psychiatric nursing staff, people with lived experience, psychiatrists, psychologists, infection-prevention specialists, information-technology and privacy teams, and ward management. Phase 1 should test usability of the consent and stop procedures, the suitability of a small curated content set, staffing coverage, technical reliability, and complete adverse-event recording. Phase 2, contingent on initial safety and acceptability, should compare nurse-supported VR calming with a credible alternative such as a physical calm room or audio-guided relaxation while balancing contact time and usual care. Future protocols should predefine a short-term patient-important distress outcome, assess it before and after the session with a validated measure selected for the population, and examine whether any change persists after discharge or across repeat encounters. No particular measure is proposed as having been used in the present paper.

Process outcomes should include eligibility-to-offer ratios, consent and refusal, uptake, session termination, accommodation requests, observation burden, technology downtime, cleaning and setup time, and clinician/patient acceptability. Safety outcomes should include all adverse symptoms, exacerbation, missed or delayed treatment, falls/near misses, and unplanned escalation with denominator-based rates. Equity outcomes should compare offer, uptake, refusal, and adverse-event patterns across relevant patient groups without stigmatizing non-users. Economic outcomes must include

equipment purchase and replacement, licensing, maintenance, training, disinfection, staff time, software security, storage, technical support, and opportunity costs. Comparisons should never infer savings in medication, seclusion, staffing or length of stay without directly measuring those outcomes.

Future intervention reports should specify device model, scene characteristics, amount of motion, content selection, instructions, duration, repetition, nurse support, co-interventions, fidelity, comparator and adherence, as recommended for replicable intervention descriptions (Hoffmann et al., 2014). Appropriate research reporting guidelines must be chosen after the actual design is settled; pilot reporting cannot retrospectively transform a conceptual perspective into a trial. Longer follow-up, mixed-methods work and setting-specific trials may establish which patients benefit, find VR unpleasant, or do equally well with low-technology options. Outcomes for exposure therapies, pediatric applications or geriatric cognitive training are not interchangeable with brief psychiatric relaxation (Goharinejad et al., 2026; Wang et al., 2024; Yang et al., 2025).

Strengths and Limitations

This perspective's strength is its explicit connection of a directly relevant calm-room trial and VR relaxation evidence to nursing triage, shared choice, active observation, stopping rules, escalation, and privacy governance. The model is specified sufficiently to support future protocol development but deliberately avoids invented effectiveness estimates or presumed regulatory approval. Limitations are substantial: supporting sources were selected non-systematically; the author-defined stages were not generated or validated through formal consensus, stakeholder co-design, feasibility testing, or implementation; no patient data were collected; and the proposed mechanisms and risk categories are hypotheses. Available studies are heterogeneous, frequently small, and often focused on outcomes measured immediately after use. Several retained background references involve populations or technologies outside the target context and are identified as indirect rather than confirmatory. The preliminary model cannot be generalized across psychiatric settings or presented as ready for unsupervised clinical use.

Conclusion

The main contribution of this perspective is a preliminary, nursing-led operational definition

and five-stage safety-oriented pathway for optional VR calming support in adult psychiatric inpatient care. Existing literature makes brief relief of distress plausible but does not establish VR superiority, sustained benefit, or cost-effectiveness. The conceptual model and proposed mechanisms have not been prospectively developed with service users, validated, or evaluated in routine care. Before adoption, the pathway requires co-design, local governance approval, prospective assessment of feasibility and safety, and comparative evaluation of acceptability, equitable access, clinically meaningful outcomes, staffing, and costs. VR should remain an adjunct to—not a substitute for—therapeutic nursing relationships, appropriate mental health treatment, and standard safety procedures.

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Declaration of conflict of interest

The authors declare no competing interests.

Declaration on the Use of AI

Generative artificial intelligence was used only to assist language editing, readability, and organization of the manuscript. The authors reviewed, revised, and take full responsibility for the accuracy, integrity, and originality of the final content.

Data Availability Statement

Data sharing is not applicable to this article.

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