

MindCheck: From Silent Struggle to Supported Student

Category: Digital Excellence

Focus Area: Clinical decision support systems and AI-enabled tools

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Problem Statement / Digital Challenge

Suicide is among the leading causes of death in young adults in India, and higher education institutions sit at the epicentre of this crisis. Students navigate academic pressure and social transition, often for the first time away from family with little structural support and even less willingness to seek help. Stigma, fear of judgement, and the friction of formal help-seeking create a wall between distress and care.

The Centre for Mental Health & Wellbeing (CMHW) at IIT Kanpur identified a critical pain point: identifying struggling students before a crisis occurs. TRANSiT Lab and Neuroclinical Innovative Solutions (NCIS) developed MindCheck in direct response - a private, always-available digital tool designed not to diagnose, but to detect early, connect to care, and enable counsellors and researchers to work together. Designed to integrate into orientation programmes, MindCheck normalises mental health check-ins from a student's very first days on campus.

Digital Tool / Solution Implemented

MindCheck is a mobile-first Progressive Web App (PWA), no installation required, enabling students to complete validated questionnaires (PHQ-9, GAD-7, PSS-10, RSES), engage in cognitive game-based tasks (Go/No-Go, Attention, Working Memory, Processing Speed), and maintain structured EMA-style daily check-ins

covering sleep, diet, emotions, and reflection. Students need not be explicitly asked how they feel - brief behavioural nudges and games surface meaningful mental

health signals without triggering defensiveness. Small behaviours tell meaningful things.

All locally stored data is encrypted and identity fully anonymised. Automated crisis support is triggered immediately for elevated scores - no manual supervision needed. CMHW at IIT Kanpur also uses a complementary avatar-based therapy tool from the same team, forming a coherent continuum: from early detection, through self-monitoring, to facilitated therapeutic engagement.

Digital Implementation Highlight

MindCheck was built and deployed within approximately 4 months by TRANSiT Lab and NCIS at IIT Kanpur, ready to use at the center for mental health and well being, covering architecture design, Firebase/Firestore backend, PWA development, admin dashboard, and campus launch.

Departments covered: CMHW (counselling), TRANSiT Lab (cognitive neuroscience), NCIS (digital health products). Accessible via browser to any IIT Kanpur student with no installation required.

Internal champions: Tanvi Padia (product lead, NCIS), Abhsiek Ravi (product developer, Transit Lab), Nikhil Misra (product developer, Transit Lab) and Dr. Pragathi Balasubramani (PI, TRANSiT Lab & NCIS). Dr. Alok Bajpai, Akanksha Awasthy, Amandip Saikia and the entire CMHW team. The shared admin dashboard enables researchers and counsellors to monitor population-level wellbeing trends together enabling researcher-to-clinician collaboration that is rare in Indian academic settings.

Scalability: MindCheck is designed for institutional licensing. Universities can deploy a branded instance maintained by NCIS, configured for local counselling services and helplines, with no on-site infrastructure required.

Digital Impact

MindCheck eliminated paper-based screening entirely. The longitudinal dashboard gives counselors objective symptom trend data across sessions, replacing retrospective self-report and enabling evidence-informed, strategic intervention planning rather than reactive crisis response.

Automated real-time severity classification surfaces crisis support resources immediately for high-scoring students, connecting them to campus counselling and national helplines without any manual triage. Encrypted local storage and full identity anonymisation make engagement safe, especially critical for first-time help-seekers who would otherwise never approach a counselling centre.

MindCheck's integration of cognitive game-based tasks alongside validated questionnaires is, to our knowledge, undeployed in any Indian mental health setting, laying groundwork for predictive digital mental health phenotyping. As one of the few PWA-based mental health tools actively deployed in an Indian academic institution, its architecture and data practices align with NABH digital health standards around privacy, structured workflows, and continuity of care.

Key Enablers / Innovations

Enablers: PWA architecture required no installation, any student onboards in under two minutes, enabling seamless integration into orientation programmes for maximum penetration. Firebase/Firestore provides real-time sync, push notifications, and scalable cloud storage at low costs. Anonymisation-first design enables even stigma-sensitive students to engage freely. The admin dashboard gives researchers and clinicians shared real-time visibility, closing the loop between evidence and clinical practice. Automated crisis triage requires no manual supervision.

Structural innovation: TRANSIT Lab researchers and CMHW counsellors co-designed MindCheck and share its dashboard, a researcher-clinician collaboration model rare in Indian academic mental health. As the platform scales, this model replicates across institutions with NCIS maintaining infrastructure.

Challenges: Sustaining engagement beyond sign-up drove push notification development. Preserving genuine opt-in for cloud sync required careful UX trust-framing, 76% opted in, validating the approach.

Key Learnings & Sustainability

Anonymity is infrastructure, not a feature, it is the prerequisite for engagement, especially for first-time help-seekers. Screening without pathways is incomplete:

automated crisis routing transforms data collection into genuine support. Small

behaviours tell meaningful things: cognitive task performance enriches symptom data in ways self-report alone cannot.

Researcher-to-clinician collaboration is a product feature. MindCheck structurally enables counsellors and researchers to share data, co-design interventions, and move from monitoring toward strategising treatment.

MindCheck is institutionally licensable and actively maintained by NCIS. The IIT Kanpur orientation programme integration is a replicable blueprint, reaching students from day one, normalising check-ins, and building longitudinal data for intervention. It is a buildable platform: modular, expandable, and shaped continuously by the researchers and clinicians using it.

mindcheck-pwa.vercel.app | mindcheck-dashboard.vercel.app

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