YIWEI Medical

Leader in AI Solutions for CNS

VR Cognitive Assessment and Rehab Training System



QuickMind

New era of digital therapy platform

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PRODUCT INTRODUCTION

VR-EMCA & Rehab System

QuickMind is an innovative digital therapy platform that uses VR, eye-tracking, and AI to transform clinical rehabilitation. Through immersive and data-driven environments, we enable precise cognitive assessment, personalized recovery, and engaging motor training. QuickMind is the comprehensive solution for providers looking to lead the next generation of patient-centered care.

All-in-One Cognitive Management Solution



VR Eye-tracking Device



Diversified Clinical Rehab





Quick and Non-invasive Screening



Remote Home Rehab

Revolutionary Cognitive Health System

6DOF
Room-scale tracking

98°
High Fidelity Fov

Wireless PC VR Streaming

Ergonomic Counterweight Design

Qualcomm Snapdragon™XR2

Built-In Eye Tracking & Foveated Rendering

Built-in Spatial Stereo Speakers



QuickMind Multiple Configurations

VirtualBrain-A

Clinical | Assessment

Device: PICO VR

Capabilities:

- VR Eye-Tracking Cognitive Assessment System
- Brain Health Management Platform

VirtualBrain-R

Clinical | Rehab

Device: PICO VR

Capabilities:

- VR Cognitive Rehab Training System
- Brain Health Management Platform

VirtualBrain-H

Home | Rehab

Device: PICO VR

Capabilities:

- VR Cognitive Rehab Training System
- Brain Health Management Platform

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VR-EMCA System

VR-EMCA, an efficient and convenient AI-based assessment tool, leverages eye-tracking technology and virtual reality to accurately evaluate cognitive function and assess the risk of MCI progression to dementia.

- Attention
- Recall
- Calculation
- Abstraction
- Memory
- Execution



Advantages

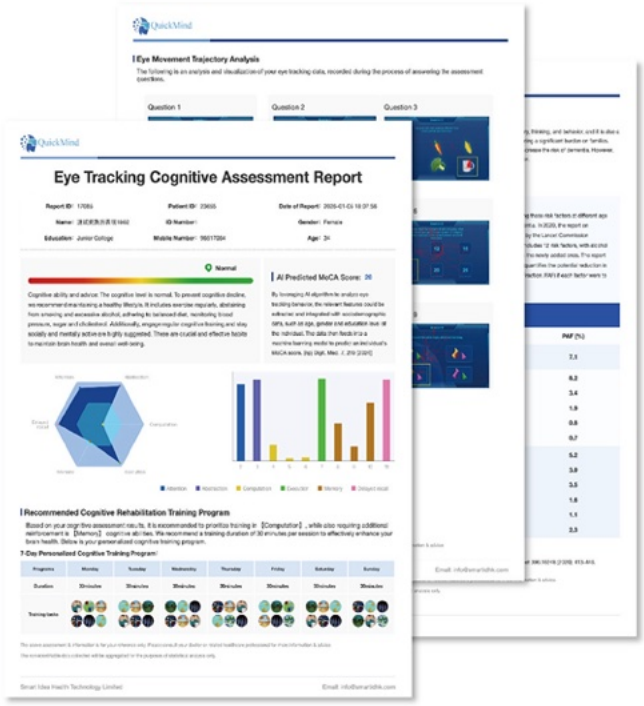
- **Fast** All within 5 mins
- **Accurate** More than 90% accuracy
- **Convenient** All with eye movement
- **Objective** Big Data Analysis
- **Intelligent** AI Algorithms
- **Portable** VR Suitcase

QuickMind

VR-EMCA System

Objective • Accurate • Efficient

Cognitive Assessment Report



Validated by Clinical Trails

Screening evaluation

In this study executed in Shenzhen, demographic characteristics of participants were analyzed (Table 3), with a particular focus on educational levels. Given the varying numbers of participants across different.

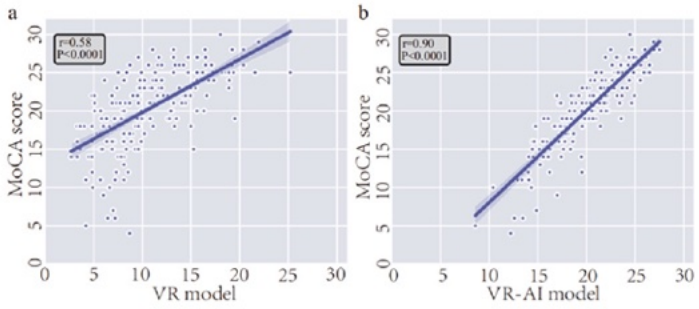


Fig. 1 Correlation comparison of baseline VR model and VR-AI model. The coordinates of scatter points consist of model predicted scores(X-axis) and MoCA scores(Y-axis). Linear regression lines were also given to manifest linear relevance of models and MoCA score (**a** VR model vs. MoCA, r=0.58, p<0.0001; **b** VR-AI model vs. MoCA, r=0.90, p<0.0001).

20,000 + Eye-Tracking Sequences Analyzed

90% Consistency with MoCA Assessment

83% Time Saved vs Traditional Methods

Core Advantages

- Validated by Clinical Trials
- Real-Time Report with Red Line Eye Tracking Visualization
- Objective screening evaluation for cognitive impairment
- Ultra-early screening for dementia CNS disorders

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VR Rehab System

QuickMind: A Comprehensive Rehabilitation Solution
All-in-One Support: Seamlessly connects clinicians and patients from assessment to recovery.
Real-World Simulations: Realistic scenes and characters create a safe, controlled training environment.
Dual-Path Recovery: Integrated modules for both motor and cognitive health.
Enhanced Engagement: Proven to increase patient enthusiasm and maximize the overall training effect.



Personalized

AI-matched individualized rehab plan



Intelligent

Adaptive difficulty



Data Analysis

AI-Optimized Rehab Strategies



Quantitative

Doctor follow-up made easy



Immersive

91% patient adherence



Dual-Mode Rehab

Enhance rehab effect

Intelligent Training Support & Clinical Efficacy



Intelligent Support System

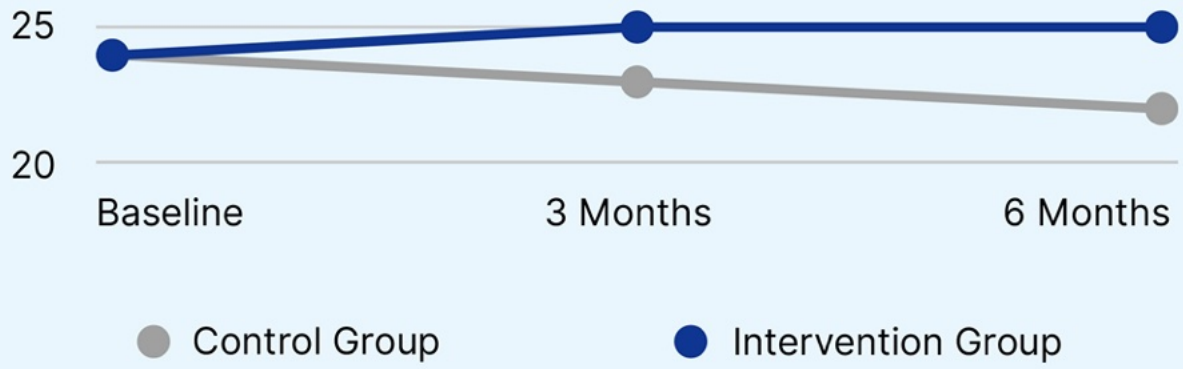
- Smart guidance for personalized patient training programs.
- Real-time therapist supervision & exercise.
- Enhanced training prompts to optimize therapy sessions.
- Clinical Adaptation:Moderate-severe cognitive impairment; Communication / reading difficulties.

Technology Experience

- AI-driven data optimization & adaptive difficulty adjustment
- Real-world scene simulation for natural, engaging training.

Validated by Clinical Trials

MoCA Score Trend (Baseline vs 6 Months)



Clinical Outcomes

≈ 20% Improvement **Slowed** Decline

Cognitive function vs Control Significant effect at 3 months

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VR Cognitive Home Rehabilitation





- Convenient access to therapy
- Personalized training programs
- Comfortable home environment
- Real-time progress tracking









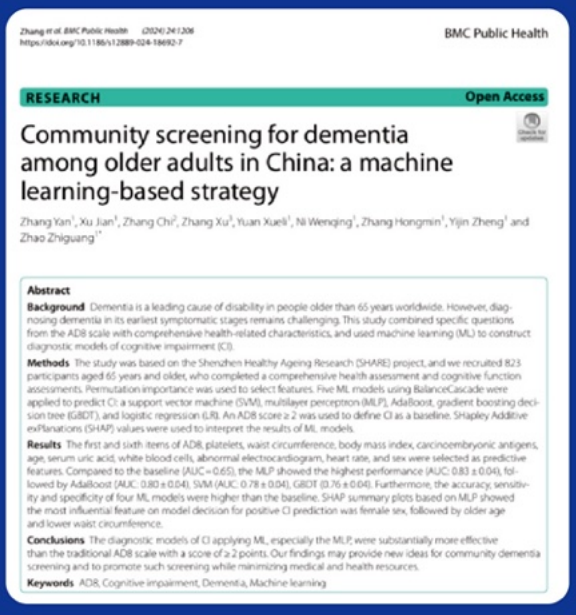
QuickMind

Global Certifications & Strong Clinical Evidence

Global Authority



Top-tier Publications



BMC Public Health

RESEARCH Open Access

Community screening for dementia among older adults in China: a machine learning-based strategy

Abstract

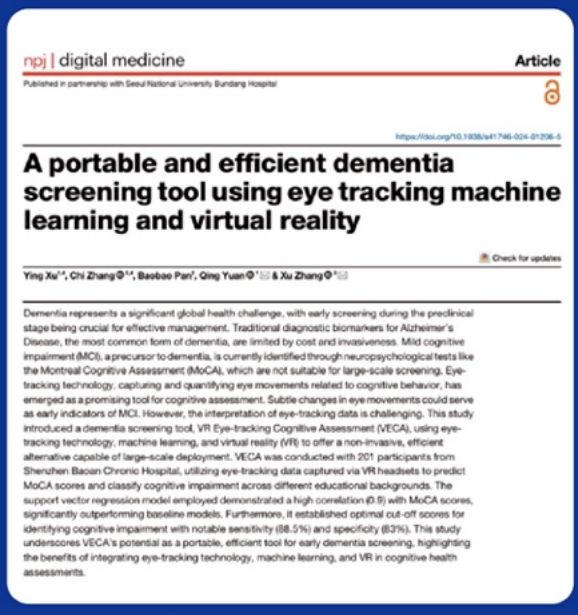
Background Dementia is a leading cause of disability in people older than 65 years worldwide. However, diagnosing dementia in its earliest symptomatic stages remains challenging. This study combined specific questions from the AD8 scale with comprehensive health-related characteristics, and used machine learning (ML) to construct diagnostic models of cognitive impairment (CI).

Methods The study was based on the Shenzhen Healthy Ageing Research (SHARE) project, and we recruited 823 participants aged 65 years and older, who completed a comprehensive health assessment and cognitive function assessments. Permutation importance was used to select features. Five ML models using BalanceCascade were applied to predict CI: a support vector machine (SVM), multilayer perceptron (MLP), AdaBoost, gradient boosting decision tree (GBDT), and logistic regression (LR). An AD8 score ≥ 2 was used to define CI as a baseline. SHapley Additive exPlanations (SHAP) values were used to interpret the results of ML models.

Results The first and sixth items of AD8, platelets, waist circumference, body mass index, carcinoembryonic antigens, age, serum uric acid, white blood cells, abnormal electrocardiogram, heart rate, and sex were selected as predictive features. Compared to the baseline (AUC = 0.65), the MLP showed the highest performance (AUC: 0.83 ± 0.04), followed by AdaBoost (AUC: 0.80 ± 0.04), SVM (AUC: 0.78 ± 0.04), GBDT (0.76 ± 0.04). Furthermore, the accuracy, sensitivity and specificity of four ML models were higher than the baseline. SHAP summary plots based on MLP showed the most influential feature on model decision for positive CI prediction was female sex, followed by older age and lower waist circumference.

Conclusions The diagnostic models of CI applying ML, especially the MLP, were substantially more effective than the traditional AD8 scale with a score of ≥ 2 points. Our findings may provide new ideas for community dementia screening and to promote such screening while minimizing medical and health resources.

Keywords AD8, Cognitive impairment, Dementia, Machine learning



npj | digital medicine Article

Published in partnership with Seoul National University Bundang Hospital

A portable and efficient dementia screening tool using eye tracking machine learning and virtual reality

Dementia represents a significant global health challenge, with early screening during the preclinical stage being crucial for effective management. Traditional diagnostic biomarkers for Alzheimer's Disease, the most common form of dementia, are limited by cost and invasiveness. Mild cognitive impairment (MCI), a precursor to dementia, is currently identified through neuropsychological tests like the Montreal Cognitive Assessment (MoCA), which are not suitable for large-scale screening. Eye-tracking technology, capturing and quantifying eye movements related to cognitive behavior, has emerged as a promising tool for cognitive assessment. Subtle changes in eye movements could serve as early indicators of MCI. However, the interpretation of eye-tracking data is challenging. This study introduced a dementia screening tool, VR Eye-tracking Cognitive Assessment (VECA), using eye-tracking technology, machine learning, and virtual reality (VR) to offer a non-invasive, efficient alternative capable of large-scale deployment. VECA was conducted with 201 participants from Shenzhen Baoan Chronic Hospital, utilizing eye-tracking data captured via VR headsets to predict MoCA scores and classify cognitive impairment across different educational backgrounds. The support vector regression model employed demonstrated a high correlation (0.9) with MoCA scores, significantly outperforming baseline models. Furthermore, it established optimal cut-off scores for identifying cognitive impairment with notable sensitivity (88.5%) and specificity (83%). This study underscores VECA's potential as a portable, efficient tool for early dementia screening, highlighting the benefits of integrating eye-tracking technology, machine learning, and VR in cognitive health assessments.

Community screening for dementia among older adults in China
Published in: BMC Public Health
IF=3.5

A portable and efficient dementia screening tool using eye tracking
Published in: npj digital medicine (Nature)IF=12.4

Scientific Validation: Our technology is rigorously tested and proven effective in peer-reviewed joumals, ensuring clinical reliability.

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APPLICATION SCENARIO



Clinical Applications

Senior Living-Skilled Nursing · Memory Care Private-Pay Services · Cognitive Screening

Goverment

Disability Federation · Civil Affairs.Local Communities · Community Health Services





Hospitals

Rehabilitation/Neurology/Psychiatry/Geriatrics /GeneralPractice/Health Screening/Surgery/Anesthesiology/Oncology/Obstetrics & Gynecology /Inpatient Departments/Research

Enterprise Clients

Banking/Insurance/Health Screening





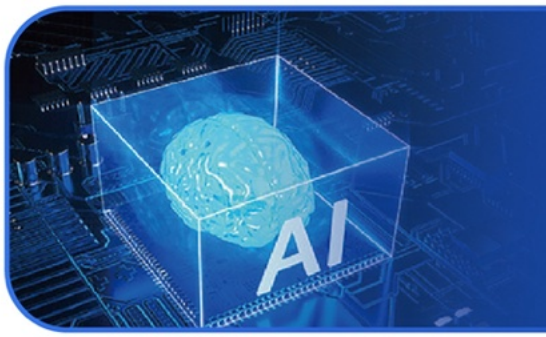
Universities Colleges

Teaching/Research/Training

QuickMind

COMPANY PROFILE

YIWEI Medical is at the forefront of neurological care, delivering AI-driven solutions for ultra-early screening, precise diagnosis, and personalized rehabilitation. Our digital platform provides a seamless continuum of care for Alzheimer's disease, stroke, and childhood developmental disorders. By bridging the gap between clinical data and patient recovery, we are redefining the entire brain health journey.



YIWEI Medical delivers a comprehensive AI-driven ecosystem for the diagnosis and management of major central nervous system (CNS) disorders, ensuring precision care throughout the patient journey.

Achieves industry-leading AI diagnostic accuracy in AD, stroke, small vessel disease (SVD) et al.





Our platform is powered by a million-scale database of brain scans across the entire lifespan.

Setting the global standard for neuro-diagnostics, Yiwei Medical is a premier AI innovator holding NMPA Class III certification for major CNS disorders, supported by a world-class portfolio of 15 international regulatory approvals (NMPA, FDA, and CE).



Join YIWEI Medical

Neuroscience Global Network

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