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Gamified naming therapy versus traditional speech-language pathology for post-stroke anomia in Arabic speakers

Submission date 07/04/2026	**Recruitment status** No longer recruiting	[_] Prospectively registered [_] Protocol [_] Statistical analysis plan [_] Results [_] Individual participant data [X] Record updated in last year
Registration date 08/04/2026	**Overall study status** Completed	
Last Edited 08/04/2026	**Condition category** Circulatory System	

Plain English summary of protocol
Not provided at time of registration

Contact information

Type(s)
Principal investigator, Scientific, Public

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Additional identifiers

Study information

Scientific Title
Gamified naming therapy versus traditional speech-language pathology for post-stroke anomia in Arabic speakers: a randomised pilot trial

Study objectives

Traditional speech-language pathology services face structural limitations: the global Speech-Language Pathologists (SLPs) shortage constrains access, particularly in the Middle East, and therapy is typically limited to one to two hours per week — far below the intensive dosage required for consolidation of lexical-retrieval improvements. Computerised naming treatment platforms can deliver high-dose practice with real-time feedback. Gamification — the application of game-design principles to non-game contexts — has demonstrated clinical utility in motor and cognitive rehabilitation. The iTalkBetter Phase II randomised trial demonstrated that AI-driven gamified digital therapy achieved significant improvements in chronic aphasia naming. Systematic reviews confirm high feasibility and safety of digital interventions for post-stroke language rehabilitation. No prior study has delivered gamified naming therapy within a fully Arabic-language platform, nor compared such a platform against a controlled comparator condition in a randomised design.

This study has two primary objectives:
(1) a detailed technical description of the Naming Gaming App platform;
(2) a randomised pilot trial comparing gamified app-based therapy to an equated-contact-time traditional SLP comparator in Arabic-speaking adults with post-stroke anomia. As a pilot trial, the primary purpose is signal detection and feasibility evidence to power a definitive multisite RCT, not to provide conclusive efficacy evidence.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 28/01/2026, Johns Hopkins Aramco Healthcare Institutional Review Board (IRB) (Johns Hopkins Aramco Healthcare 2894 Floor 1 Dhahran Blvd, Dhahran, 34465, Saudi Arabia; +966 013 877 9000; yusufmohammed.albustanji@JHAH.com), ref: IRB # 24-04-039

Primary study design
Interventional

Allocation
Randomized controlled trial

Masking
Blinded (masking used)

Control
Active

Assignment
Parallel

Purpose
Diagnostic, Treatment

Study type(s)

Health condition(s) or problem(s) studied
Post stroke aphasia

Interventions
Arabic-speaking adults with confirmed post-stroke anomia (≥3 months post-onset) were randomly allocated (1:1, block randomisation, allocation concealment) to an Experimental Group (EG; n = 12) receiving 15 supervised gamified app sessions (45 min, 3×/week, five weeks), or a Control Group (CG; n = 12) receiving an equated-contact-time comparator condition of traditional SLP (2×/week, five weeks; total contact time equated at 675 minutes). Independent blinded assessors administered all outcome probes. Primary outcomes were trained item naming accuracy (/30) and untrained item generalisation (/30) at baseline and post-treatment. A post-hoc power analysis will be reported.

Intervention Type
Behavioural

Primary outcome(s)
1. Trained item naming accuracy (/30) and untrained item generalisation accuracy (/30) measured using the Reliable Change Index (RCI) by a blinded independent assessor at baseline, five weeks of treatment and post treatment

Key secondary outcome(s)
1. A-CAT Aphasia Quotient (/100) and naming subtest (/20); naming latency; object vs. action naming (/15 each); error-type classification; four-week maintenance probes measured using the Reliable Change Index (RCI) by a blinded independent assessor at baseline, five weeks of treatment and post treatment

Completion date
14/03/2026

Eligibility

Key inclusion criteria
1. Acquired aphasia following a single left-hemisphere stroke, confirmed by neuroimaging
2. Arabic as primary spoken language
3. Anomia confirmed by A-CAT naming subtest
4. ≥3 months post-stroke onset (revised from the initially planned ≥4 weeks threshold to minimise the contribution of acute spontaneous recovery)
5. Adequate vision and hearing to engage with app interface or clinic-based materials
6. Capacity to provide written informed consent

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
24 Years

Upper age limit
78 Years

Sex
All

Total final enrolment
24

Key exclusion criteria
1. Participants with progressive neurological conditions
2. Significant cognitive impairment
3. Prior app-based therapy within the preceding six months

Date of first enrolment
07/01/2026

Date of final enrolment
14/03/2026

Locations

Countries of recruitment
Saudi Arabia

Sponsor information

Organisation
Dhahran Health Center

ROR
https://ror.org/03pjj1n42

Funder(s)

Funder type

Funder Name
Johns Hopkins Aramco Healthcare

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available