

DENTAL CARIES AS CLINICAL CHALLENGE IN AGEING: P3 LONGITUDINAL DESIGN WITHIN MULTICOMPONENT TRIAL



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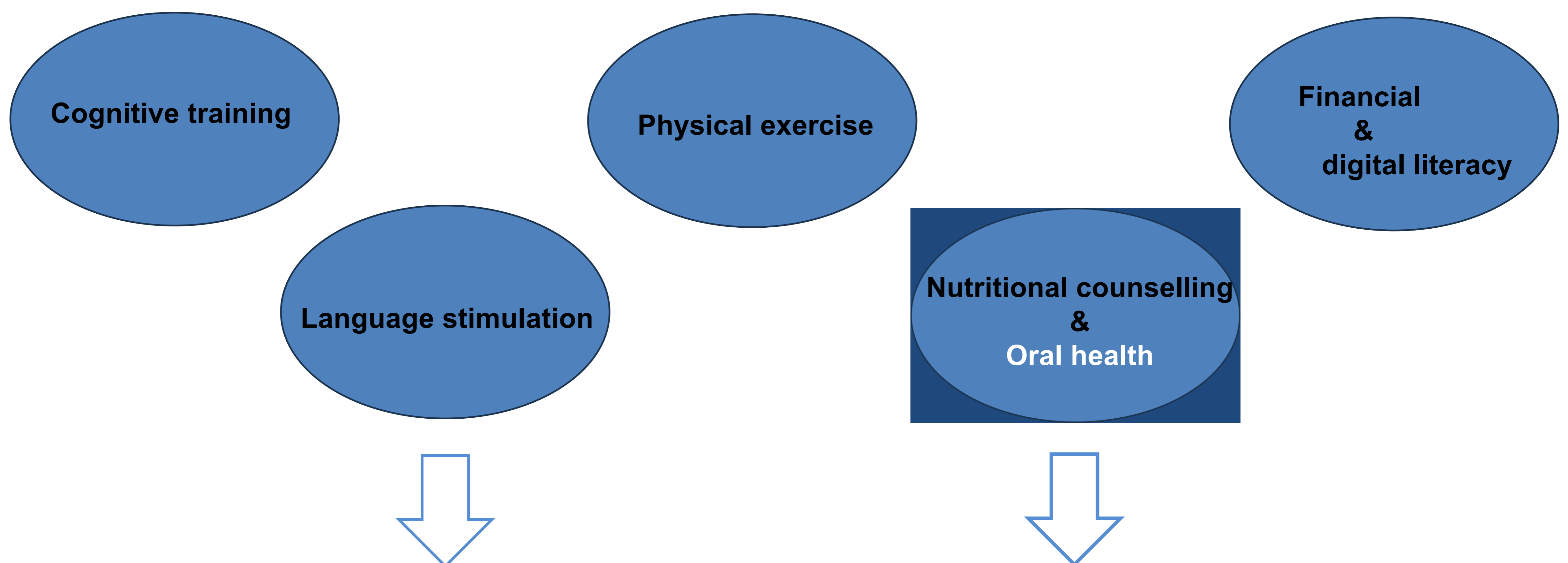


OBJECTIVE: This study describes the design of a longitudinal investigation on oral health in older adults, examining dental caries experience, salivary pH, and changes in oral health perception and prosthetic status over an 18-month period following a transient dietary exposure.



MATERIALS AND METHODS: This longitudinal observational study is embedded within a non-pharmacological multicomponent intervention trial (EMBRACE Project; COMPETE2030-FEDER-00892100; Ethics Committee FCHS/PI-760/25). 120 community-dwelling adults aged 60–80 years will be assessed at baseline (M0), after dietary exposure at 12 months (M1), and at follow-up at 18 months (M2). Participants will receive individualized dietary guidance delivered by a nutrition professional.

Oral health evaluation includes validated self-reported instruments, namely the Geriatric Oral Health Assessment Index (GOHAI) and questionnaires based on World Health Organization (WHO) recommendations, combined with a standardized clinical examination performed by calibrated dental practitioners. Dental caries experience will be recorded using the DMFT index (WHO criteria), and salivary pH will be measured at all time points using a non invasive indicator strip method.



EMBRACE Project: It combines cognitive training and stimulation, physical exercise, nutritional counseling, and **oral health**.
It also aims to promote financial and digital literacy as a means of preventing financial fraud

Oral healthcare evaluations:

- ❖ GOHAI
- ❖ Questionnaires
- ❖ Clinical examination: teeth and prosthetic status
- ❖ Determination of salivary pH

RESULTS: The study design and assessment timeline will be detailed. The protocol allows comprehensive characterization of dental caries experience, prosthetic status, and oral health perception in older adults, and enables longitudinal evaluation of changes following transient dietary exposure. The repeated-measures design permits analysis of temporal variations in salivary Ph and their associations with clinical caries indicators. Planned statistical analyses include descriptive measures, assessment of data normality, within-subject comparisons across time points, and correlation analyses between salivary pH and caries-related outcomes. This approach is expected to yield integrated oral health profiles combining clinical and patient reported measures over time.

CONCLUSIONS: Integrating dental caries and salivary pH assessment within a dietary intervention framework emphasizes oral health as a component of healthy ageing and may support targeted preventive strategies to maintain oral function and quality of life in older adults.

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