

2.ª Conferência Portuguesa sobre Estimulação Cerebral em Psiquiatria e Saúde Mental

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Faculdade de Medicina da Universidade de Coimbra

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Brain stimulation and mental health: Assessment and Promotion of Well-being in studies from the project The Day Life Span Nowadays

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INTRODUCTION AND PURPOSES

As part of the project The Day Life Span Nowadays - Training Improving quality of life: study and intervention within the role of education and training (period 2022-2026) and focusing on brain stimulation, the three studies focus on assessing the relationships between clinical symptomatology and well-being to promote the psychological resources associated with successful aging with a view to applying an individual Cognitive Stimulation protocol and advanced training for senior technicians.

Overall, the “They Day Life Span Nowadays project” 2022-2030 focuses on quantitative and qualitative studies of issues related to protecting and promoting a life cycle, especially for those most vulnerable to disease, according to the psychological model and ethical concept (Skevington et al., 2004; WHOQOL, 1998; Esther Vilalta, et al., 2023; Neves & Ricou, 2024; (2024a) b).

It includes the right to education and social support, with a view to quality education and reducing inequalities; sustainable cities and communities; and partnerships for the implementation of the goals advocated by the UN.

These changes particularly affect the most vulnerable population groups. Most subjects with Alzheimer's disease show a decrease in cerebral glucose metabolism (a marker of neuronal activity) (Eda Júnior et al., 2025).

According to Ang et al. (2022) and Helmreich et al. (2017) it is also imperative to understand and preserve well-being from the earliest maternal bonds through the various transitions throughout the life cycle.

OBJECTIVES STUDIES A, B, C

Study A - Assess training needs at a selected context (Campenhoudt et al, 2019; Galinha & al., 2025).

Study B - Analyze correlations between GDS-15 (Sheikh & Yesavage, 1986) and the Life Satisfaction Perception Scale (Pavot & Diener, 1993)

Study C - Assess the prevalence of geriatric depression (Sheikh & Yesavage, 1986 as support for the implementation of programs for specialized teams.

SAMPLE AND INSTRUMENTS A, B, C

Convenience sample (Focus Group). Informed consent protocol, confidentiality, and anonymity (Portugal). Ethical procedures and no conflicts of interest. Application Instruments:- Semi-structured face-to-face interview survey- Focus group interview. Sociodemographic questionnaire (Campenhoudt et al, 2019). GDS15 and Life Satisfaction Scale.

STUDIES A, B, C - METHODOLOGY AND RESULTS

Study A - Focus group and interviews with six technicians to assess training needs Results: In terms of the teams' skills in stimulation and activation (Galinha et al., 2025). In study B - Correlations between the Geriatric Depression Scale and all its dimensions with the Life Satisfaction Scale. N=763 Results: 19.8% aged 65-74; 48% aged 75-84; 32.2% aged 85-94. F=72% and M=28%. Correlations are all statistically significant ($p < 0.001$). The results highlight the 75-84 age group and females with scores higher than 65-74 as being more vulnerable (Fig. 1 e 2).

Pearson's correlation coefficient		Life Satisfaction Perception	
N=763			
GDS-15	R		-,786
	P		,000 ***
Factor 1 - Dissatisfaction and Apathy	R		-,745
	P		,000 ***
Factor 2 – Unhappiness	R		-,745
	P		,000 ***
Factor 3 - Lack of energy	R		-,474
	P		,000 ***

Fig. 2 Study B

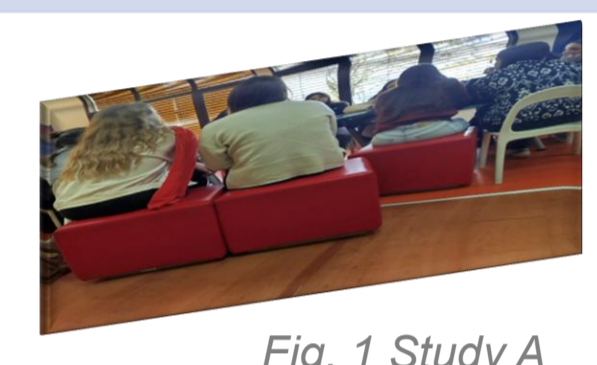


Fig. 1 Study A



Fig. 3 Study C

Study C - Assessment of the prevalence of geriatric depression as support for the implementation of programs for teams. 162 users from two ERPI facilities on the mainland. Sociodemographic characterization performed using percentages. For the association analysis, the Chi-square and Fisher's exact tests were used. Significant associations were evaluated using Cramer's V coefficient. An error of 5% was set. Results: Balanced gender distribution (F=49.38%; M=50.62%) with the majority of users between 65–74 years old (70.99%)(São-João et al., 2025). With regard to SD, 83.33% had no symptoms, 11.73% had mild depression, and 4.94% had severe depression. No association was found between SD and gender ($p=0.74$), but significant associations were found with age group ($p=0.003$) (Fig. 3).

CONCLUSIONS AND FUTURE STUDIES D

The results contribute to the validity of the construct and the discussion of strategies for improving quality of life (65-74 age), highlighting the 75-84 age group and women overall, who already have higher scores. Stimulating cognition and emotion activates the brain to recover, maintain, and transform abilities—it restores autonomy, dignity, and life. Thus, those aged 65 and over should be guaranteed the promotion of well-being and quality of life, the appreciation and training of teams and organizations in line with the quality of psychological intervention.

Upcoming implementation and future studies (D) Multilevel and multicenter. Cognitive and Brain Stimulation – Training aimed at promoting cognitive and emotional stimulation to recover, maintain, and transform abilities—to restore autonomy, dignity, and life—hope, functionality, and independence in longevity (Esther Vilalta et al., 2023; Neves & Ricou, 2024; Duarte, 2025) (Fig. 4).



Fig. 4 Duarte (2025)

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SOBRE ESTIMULAÇÃO CEREBRAL
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