EFFECTIVENESS OF A VIRTUAL BOARD GAME TO IMPROVE SELF-AWARENESS IN ACQUIRED

BRAIN INJURY PATIENTS

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OBJECTIVES

Acquired brain injury (ABI) is a complex disease that involves impairment in motor and cognitive skills and in psychological functions, including the self-awareness. An alteration of this capacity slows the rehabilitation progress and represents one of the greatest impediments to social integration and optimal adjustment.

The objective of this study is to study the effectiveness of a therapeutic and recreational virtual game board to rehabilitate self-awareness deficits following ABI.

METHODS

The system consists of a 42" multitouch display embedded in a conventional table. The participants are distributed in the 4 sides of the table. In the game, the participants compete for reaching the top in first place. To move forward they are required to answer questions, which can be related to knowledge (anatomical and pathological matters), reasoning (situational exercises), action (role-playing exercises), or cohesion (jokes and sayings).

 After inclusion-exclusion, fifteen patients with ABI participated in this study. All the participants underwent one hour session per week during 8 months and were assessed at the beginning and at the end of the program with the Self-Awareness Deficits Interview (SADI) to know the participants' awareness of their deficits, functional limitations, and the implications in their future plans, and with the Social Skills Scale (SSS), which is a Spanish scale that assesses the participants' behavior in specific situations. The SADI is a 3 items questionnaire and the SSS is a 33 items questionnaire. Both tests are formulated like a 4-point Likert scale.

RESULTS

With regards to the SADI, at the beginning 4 participants had problems perceiving their deficits, 7 participants had difficulties perceiving their disability, and 7 participants had difficulties in making future plans. After the treatment, all the participants perceive their deficits properly, only 2 participants still had difficulties perceiving their disability, and 5 participants (50%) had difficulties establishing realistic goals.

Regarding the SSS, at the beginning 6 participants showed altered levels in social skills. After the rehabilitation program only two participants showed altered levels, while the rest of the participants presented normal values.

CONCLUSION

According the scores, the system is effective for the rehabilitation of the self-awareness and the social cognition deficits. However, the realistic future planning is still a therapeutic challenge.