

# STUDY OF THE PREVALENCE AND CHANGES IN COGNITIVE IMPAIRMENTS IN PATIENTS ENROLLED IN A CARDIAC REHABILITATION PROGRAM

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## Background and Aims

Cognitive deficits are common after cardiovascular events, with mild impairments often harder to detect. While exercise is known to improve brain function, data on cognitive changes during cardiac rehabilitation is limited. This study used the Montreal Cognitive Assessment (MoCA) to assess cognitive function before and after rehabilitation, aiming to understand how structured programs impact cognitive outcomes. It also explores how factors like age, gender, educational level, and cardiac diagnosis influence cognitive performance.

## Methods

Patients enrolled in the cardiac rehabilitation program at HGUGM Hospital (April-June 2023) completed the MoCA test at the beginning and end of the program. Data on age, gender, educational level, cardiac conditions, and cardiovascular risk factors were collected. Changes in MoCA scores before and after rehabilitation were analyzed in relation to these variables.

## Results

Seventy-five patients (average age 60) participated, with 79% being men. Ischemic heart disease was the most common condition (82%), and 54.7% had mild cognitive impairment (MoCA < 26). The mean MoCA score improvement after rehabilitation was  $0.53 \pm 0.59$  ( $p = 0.74$ ), with no statistical significance. A correlation coefficient of 0.7 was observed. Educational level was a key factor, with university-educated patients showing significantly higher scores ( $p < 0.05$ ), hypertension ( $p < 0.05$ ), or obesity ( $p = 0.94$ ).

## Conclusion

Cardiac rehabilitation showed a trend toward cognitive improvement, with a mean MoCA increase of  $0.53 \pm 0.59$  ( $p = 0.74$ ). A correlation of 0.7 suggests a larger sample size could show significance. Educational level was a key factor, with university-educated patients showing higher scores ( $p < 0.05$ ).

**Keywords:** Cardiac, rehabilitation, cognitive, impairment, MoCA