



Comparison of Executive Function in Male Puberty and Andropause

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ABSTRACT

Introduction: Andropause or male menopause is associated with a decrease in executive function, activity, daily living performance, and quality of life. However, no study reported the executive function skill in andropause or male menopause.

Objective: To compare the executive function in male puberty and andropause in five skills, including mental flexibility, inhibitory control, verbal fluency, working memory, and planning.

Methods: 18 male puberty and 13 andropause underwent executive function test including mental flexibility by D-KEFS sorting test, verbal fluency by verbal fluency test, inhibitory control by Stroop test, working memory by trail making test part B and planning by D-KEFS tower test. Statistical analysis by Independent-sample t-test in normal distribution and Mann-Whitney U test in non-normal distribution and p-value is 0.05.

Results: In the male puberty group average age is 20.17 ± 0.79 years old, and in the andropause group, the average age is 48.54 ± 5.52 years old. This study found that there are 3 tests that showed significant statistical differences ($P < 0.05$) between groups, including mental flexibility ($p = 0.002$), verbal fluency ($P < 0.001$), and inhibitory control ($P < 0.001$). However, there are two tests that showed no significant statistical difference, including working memory ($P = 0.068$) and planning ($P = 0.170$).

Conclusion: Executive function, including mental flexibility, verbal fluency, and inhibitory control in andropause, was significantly less than the male puberty group. Therefore, executive functioning skills in andropause should be concerned with preparing for aging.

Keywords: executive function; andropause; male puberty; Delis-Kaplan executive function system (D-KEFS)