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The Impact of Computer-based Cognitive Empowerment Considering the Elderly

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ABSTRACT
The study aimed to determine the impact of computers on cognitive empowerment of the people was elderly. In the study of cognitive function before and after cognitive empowerment computer during the 8 weeks were studied. The population consisted of elderly Jannat Abad district of northern Tehran, which is randomly selected 40 of them in the two control groups were replaced. And control subjects were matched with the experimental group. For data collection, the cognitive tasks brain and cognitive sciences, computer center (MRC) was used at Cambridge University. The results show the effectiveness of computerized cognitive empowerment significant attention on cognitive functions.
Keyword; impact of computer, based cognitive

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INTRODUCTION

Population aging process has been accelerated in recent years, and the number and variety of stress that people in old age facing, such as the loss of jobs and social status, and the loss of loved ones, attention to mental health in old age has become a necessity [1]. Aging process with profound changes in the physiological, psychological and sociological man is. Changes in these three dimensions with different accelerating progress [2]. In addition, the downward trend and increase the quality and quantity of biological processes of aging, stress, how social interactions play an important role in the development of psychiatric disorders in this period. Some theorists believe that the best way to maintain mental health and prevent mental disorders such as depression and anxiety disorders in the elderly to remain active in the community, Lack of acceptance by others and social isolation of the major causes of mental illness in old age are the presence and Participation in social activities cannot be prevented [3]. Almost 70 years of decline in intellectual capacity of people to be seen. It is possible that older people retain their ability to reason, but to provide immediate responses are slowed. Studies have shown that normal aging, cognitive functions are impaired [1]. Side effects of drugs have caused many seniors and their families looking for other measures of cognitive problems are elderly. Several factors and interventions can improve cognitive function in people. For example, computer games computer games, players have the ability to improve cognitive abilities [7]. One of the other issues, that have an impact on cognitive function and improve the performance of the method of empowerment. Research suggests that cognitive empowerment approach has a significant impact on cognitive function [13]. The results of this study should be interpreted with caution because of aggression, anger and physiological arousal these studies have been measured. The problem considered in this study is whether cognitive empowerment techniques can improve cognitive functions (attention) in the elderly? Currently, a wide appeal among psychologists and cognitive psychology [4]. Almost all psychologists perception, attention, Learning, memory, language, reasoning, problem solving and decision making study, cognitive psychologists call themselves, even though Methodologies and theories on this topic vary widely. In addition, other disciplines, such as educational psychology, cognitive approaches have been very impressed [5]. We have a research background, broad appeal among psychologists and cognitive psychology. Almost all

psychologists' perception, attention, learning, memory, language, reasoning, problem solving and decision making are studied. Cognitive psychologists call themselves, even though the methodology and theory on these topics vary widely. In addition, other disciplines, such as educational psychology, cognitive approaches have been very impressed. One extremely important, very important, the number of journal articles in each of these fields. The articles found in journals that include: Annual Review of Psychology, Psychological Bulletin and psychological study of these journals that are widely read and display all areas of psychology [6]. The number of journal articles on cognitive psychology over 20 years (1977 to 1996) has increased. As already mentioned on several factors, one of which affects cognitive function, cognitive empowerment techniques. This technique not only for the elderly cognitive competencies but also applies to every age. For example, children with hyperactivity, preschoolers, children and young people empowerment of cognitive impact on academic performance, academic performance of each individual because of his cognitive functions are influenced by And because the method of cognitive empowerment improves cognitive functions, so it can also have a positive effect on academic achievement. For example, the positive impact of improvements in students' reading and writing ability has been observed [13]. Cognitive empowerment computer program designed by a neural mechanism for language skills in children improves auditory attention [14]. Our results indicate that computerized cognitive empowerment of 10 45-minute sessions over 5 weeks had been implemented, Enable the ability to function and vigilance groups compared with the control group significantly enhance border. The experimental group after making the computer to increase fluid intelligence and cognitive evaluation matrix was developed by the task, The show, and this implies an improved ability to significantly contribute to the enhancement of the complex Performance improved fluid intelligence test group was also evident even after two months of follow up, and this proves the effectiveness of cognitive empowerment computer is not temporary [12]. Empowering effect on cognitive computing is expected to improve fluid intelligence because there is a close relationship between cognitive functioning and operational intelligence [10]. Review of studies on the prevalence of mental disorders in persons aged 15 years and above 21% in Tehran Population of women than men suffer from mental disorders indicates that 5/36 of higher vulnerability. In this study, the prevalence of mental disorders in people 60 years and older, 3 that with increasing age, the prevalence of these disorders is increased [5]. Survey covers 22 districts of Tehran on people using the 28-item questionnaire Public Health in 1387, showed that the prevalence of mental disorders in people 60 to 49 years and above 9 percent [4].

Aging: Aging: Aging to contract with a starting age of 65 is considered synonymous. The gradual disintegration of the organism senescence in building and operating interference caused when the body comes Changes in the structure and function of different organs of the body creates white hair and wrinkled skin, loss of vision, defect Hearing, hogging, slow mobility, decreased muscle strength, and perceived memory impairment and confusion, impaired orientation, reduced cardiovascular capacity are among them. Cognition: Understanding the meaning of internal processes, mental or tips that the data are processed. In other words, knowledge is the means by which traffic data are considered, Diagnosed, and eventually come to encrypt stored in memory to be recalled when required. Cognitive functions, including memory, attention, concentration, and problem solving [6]. Note: The process in which individual inputs and select specific data and focused on it, while simultaneously ignoring irrelevant information interfering [14].

Cognitive Empowerment: A new way to stimulate learning and retraining of cognitive status. This method improves cognitive functions are impaired. Software enabling improved cognitive fitness and cognitive function in healthy individuals of different ages, People with brain injuries and children with learning difficulties and hyperactivity in children with ADHD.

Significant increase in the elderly population worldwide phenomenon of the twentieth century started and will continue in the 21st century. According to reports published by the United Nations in 2006, the number of elderly in the world, about 700 million Estimate and predict that the population will double in 40 years (UN Report, 2007) also suggests that the demographic structure of the population is going to age. According to the 1995 Census, 5% of the population (equivalent to 947,735 people) have over 60 years of age and older were considered, While in 1385 this number to 3.7% of the population (the equivalent of 5,119,000 people) has (Iran Statistical Center, 1385). According to estimates, More than 60 percent of the world's older people live in developing countries. By 2050 this number will rise to 80 percent. The situation is similar in our country over the next 40 years, a quarter of our population will be aged. Therefore, the World Health Organization's World Health Day slogan 91 years dedicated to seniors 'healthy aging' with a focus on (live healthier, longer life) is World Health Day [2]. Due to rising seniors in our country, Iran and the World Health Organization's emphasis on the welfare and health of the elderly and On the other hand, the lack of awareness of cognitive functions in the elderly is a common problem, To enable such studies of cognitive functions in the elderly and prevention of weak functions Based on

these essential cognitive looks like. The empowerment of older people through the provision of high quality facilities and equipment appropriate to the needs of harmony Seniors and will provide skilled and committed. In recent years, researchers in cognitive psychology The impact of computer games on cognitive performance improvement achieved great results [7]. These research results suggest that computer games can improve cognitive functions Players will significantly improve cognitive functions (eg, attention, reaction time, and executive control) are of such importance given the lack of research done in this case in our study, it seems necessary.

METHODOLOGY

The population of this study was aged 89-55 years age range of Jannat Abad, Tehran, according to the plan This is a test sample of 40 patients (20 in the experimental group and 20 in placebo group) was That the elderly were randomly selected. After selecting the subjects randomly divided into control and experimental groups and the control subjects matched for age, education level, socioeconomic level and gender were the control group. Instruments used in the study of brain and cognition cognitive tasks Computing Center (MRC) 28-item General Health Questionnaire and the University of Cambridge. For classification, processing, characterization and classification of data, descriptive statistics such as mean, standard deviation, and frequency graphs for data analysis and Examine the hypothesis of analysis (ANOVA) was used variance. The experimental design of the study was a pretest - posttest control group was Where the dependent variable, cognitive performance (attention) before and after the independent variable (cognitive empowerment computer), the experimental group underwent 30 sessions of 80 minutes during 8 weeks, were studied.

RESULT

Empowerment theory of cognitive computing is to increase the attention of the elderly? Table 1 is the result of regression analysis to determine the presence or absence of a linear relationship between Pre-test and post-test was used.

Significance level	F-value	Mean square	D.f	Sum of squares	Source changes
0/010	7/476	1117/403	1	1117/403	Group
0/267	1/269	189/697	1	189/697	Pretest
0/245	1/398	209/037	1	209/037	Experimental group
		149/475	36	5381/094	Error

Table 1: Results of the analysis is the same as the default slope of regression analysis of covariance

In Table II the results of the regression slope equal covariance is given as default. According to the provisions, Level interaction between line (245/0 = p) is greater than 05/0 so homogeneity of regression assumption will be accepted.

Chi-Ita	Level of significance	F-value	Mean square	D.f.	Sum of squares	Source changes
0/123	0/029	5/185	783/348	1	783/348	Pretest
0/170	0/009	7/568	1143/339	1	1143/339	Group
			151/085	37	5590/131	Error
				40	28482/000	Total

Table 2: Results of analysis of variance to test scores due performance after adjustment for pretest

Table 2. Results of analysis of variance to test scores, performance, attention is given. According to the results of Table Four (568/7 = F and 1 = df and 009/0 = P) is displayed when The effect of the pre-test and post-test results relating to delete the group, the difference between groups at 99% confidence level (009/0> p) is significant. So it can be concluded that the cognitive capacity to increase computer performance will be considered elderly. ITA also squared values indicate that 17% of score changes in variable interest group (difference between groups at post-test) due to the implementation of the independent variable (cognitive empowerment computer) is.

DISCUSSION AND CONCLUSION

Cognitive capacity increases computer performance by considering the elderly. The results of this study support of many researchers [2-10]. The overall results of this study indicate that computerized cognitive rehabilitation interventions to improve cognitive functions in the elderly, especially considering Iranian

item is effective and can be used as an independent Or in combination with existing therapies in the treatment of cognitive decline in elderly Bulls.

One of the other issues, which have an impact on cognitive function and improve the performance of the method. Empowerment of the individual cognitive functions such as attention, cognitive computer, and challenging. Showed that cognitive empowerment approach has a significant impact on cognitive function [13]. Researchers have focused on the many factors that can affect cognitive functions and research shows that cognitive function in old age can be improved [14]. Computer games are violent and non-violent video game players, video games have the ability to improve cognitive abilities. Empowerment boost cognitive function and cognitive effects remain stable over time. Improved functions In turn, improves cognitive function in the elderly will double daily homework [11]. Generally it can be said based on the results of the present study is impressive and remarkable differences between control and experimental groups in grades functions Cognitive there. Therefore, it can be argued that cognitive rehabilitation is effective in reducing the cognitive deficits of attention. The results of this study suggest that cognitive empowerment computer on cognitive functions affect attention. The empowerment of cognitive computer could be important in the prevention of cognitive disorders in the elderly. Therefore, the research findings in counseling centers before old age, elderly care centers, or who are elderly members used.

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