

ANTI-AGING AND THERAPEUTIC EFFECTS OF EXERCISE PARTICIPATION AMONG THE UNIVERSITY STAFF MEMBERS

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ABSTRACT

This study is a survey to find out the knowledge of anti-aging and therapeutic effects of exercise participation among the University staff members. The descriptive survey research design was employed for the study while self-structured modified questionnaire was used to elicit information from the respondents. The purposive and simple random sampling techniques were used to select the sample from the target population. The total of two hundred and seventeen (217) respondents participated in the study forming the sample size for the study. The statistical tools used for the study includes the mean, standard deviation, percent counts, frequency and chi-square contingency table. The hypothesis for the study was tested at 0.05 level of significance. The result of the findings showed that there is a significant level of association between the knowledge of anti-aging and level of exercise participation among the members of staff of University of Ibadan.

Keywords: therapeutic effects, anti-aging, exercise participation, aging process

Aging is a universal biological process that leads to progressive and deleterious changes in organisms. When studying knowledge of aging, it has been found that most people know little about aging and their knowledge is based on misconceptions (Palmore, 1998). Older adults have lived through extraordinary events and learning about aging can be exceptionally informative (Rees, King, & Schmitz, 2009). Viewing older adults in a positive manner, is seeing them not only for their capabilities but also understanding them in a sociological, cultural and psychological way. Nowadays, the meaning of anti-aging has been changed from simply prolonging lifespan to increasing health span, which emphasizes more on the quality of life. The concept of anti-aging addresses how to prevent, slow or reverse the effects of aging and help people live longer, healthier, happier lives (Jaiyesimi, 2009). Anti-aging experts assert that with the rise of anti-aging, aging gains a new definition and that the very definition of old is changing daily (Klatz & Goldman, 2003). In other words, the process of aging is resembled to a “ticking clock”. Anti-aging experts state that “our biological clock starts ticking when we were born” (Giampapa, Pero, & Zimmerman, 2004).

Exercise is considered as an inevitable part of anti-aging solutions and it is regarded as basic complementary element of anti-aging nutritional pattern. The benefits of exercise to aging include moulding the body into more youthful contours, reducing stress, balancing hormones, losing weight and providing benefits to physical and physiological health. Anti-aging exercise can be described as an issue which has close relationship with health and life style. Anti-aging exercise includes activities such as biking, brisk walking, swimming, running, jogging, yoga, stretching, pilate mat exercise, racquet sports, golf, house cleaning and small changes in daily life like walking to close ranges instead of driving, pedaling an exercise bike while watching television instead of snoozing in the armchair, lifting weights instead of eating chips during the commercials, walking with dog instead of leaving it in the backyard (Roizen, 2004). Anti-aging experts assert that people who exercise not only increase their life spans, but also feel and perform better, gain an improved memory, have better concentration and develop positive outlook to life because anti-aging exercise fights aging through “normalizing brain chemistry and restoring mental equilibrium” (Klatz and Goldman, 2003). The improved body image is regarded as the bonus of anti-aging exercise (Giampapa et al., 2004).

Amongst the list of therapies available for anti-aging lifestyle; physical exercise and caloric restriction prove to be less expensive and highly effective (Paola, 2003). The use of surgery, lotions, acupuncture, hair coloring and cosmetics only treat the symptoms of aging and not the underlying cause of the problem. Apart from peak athletic performance, the adaptations to cardiovascular training can overcome much of the day-to-day functional limitations that might otherwise be imposed by the physiologic changes of aging (Bouchard, 2001).

MATERIALS AND METHODS

The study was to find out the level of knowledge of anti-aging and therapeutic effects of exercise participation among the University staff members. Descriptive survey research method was used for the study. The population comprised the staff members of University of Ibadan, Nigeria. A total of 217 members of academic staff of the University of Ibadan, Nigeria participated in the survey in proportion of 132 male (60.7%) and 85 female (39.3%) whose age ranges from 30 and above are consecutively recruited for this study. The setting for this study was the ancient city of Ibadan, a semi-urban community in South-western Nigeria. Proportionate and simple random sampling techniques were used to select the respondents for the study. A total of two hundred and seventeen (217) respondents made up of adult male and female staff members were used for the study.

A self-structure modified questionnaire was used to collect information on the knowledge of anti-aging and therapeutic effects of exercise participation. The instrument was validated through construct and content validity. Reliability of the instrument ($r_s=0.82$ correlation coefficient) was done through a pilot study of test re-test method on the sample of neutral population outside the study area. The instrument was administered personally by the researcher and a research assistant. The result was tabulated and coded appropriately using both descriptive and inferential statistics analysis using chi-square contingency table (X^2) statistics to test the hypotheses at 0.05 alpha level.

Research Hypothesis

The University of Ibadan members of staff are not significantly aware of the therapeutic effects of exercise participation on the aging process.

Procedure for Data Analysis

Descriptive statistics of frequency, percent counts, mean and standard deviation were used to summarize the data collected. Chi-square contingency table was used to test the level of significance of exercise participation by the respondents. The significance level was set at 0.05 alpha level.

RESULTS

Table 1: Frequency Distribution Of Respondents By Sex

Sex	Frequency	Percent	Valid percent	Cumulative percent
Male	131	60.7	60.7	60.7
Female	84	39.3	39.3	100.0
Total	217	100.0	100.0	

Table 2: Frequency Distribution Of Respondents By Age

Age	Frequency	Percent	Valid percent	Cumulative percent
30-34	43	20.1	20.1	20.1
35-39	46	21.0	21.0	41.1
40-44	37	16.9	16.9	58.0
45-49	30	14.2	14.2	72.1
50-54	35	16.0	16.0	88.1
55 and above	26	11.9	11.9	100.0
Total	217	100.0	100.0	

Table 3: Frequency Distribution Of Respondents By Marital Status

Marital Status	Frequency	Percent	Valid percent	Cumulative percent
Single	31	14.6	14.6	14.6
Married	177	81.3	81.3	95.9
Widowed	8	3.7	3.7	99.5
Divorced	1	.5	.5	100.0
Total	217	100.0	100.0	

Table 4: Frequency Distribution Of Respondents By Religion

Religion	Frequency	Percent	Valid percent	Cumulative percent
Christianity	188	86.3	86.3	86.3
Islam	26	12.3	12.3	98.6
Traditional	1	.5	.5	99.1
Others	2	.9	.9	100.0
Total	217	100.0	100.0	

Table 5: Frequency Distribution Of Respondents By Cadre

Cadre	Frequency	Percent	Valid percent	Cumulative percent
Junior Staff	50	23.3	23.3	23.3
Senior Staff	167	76.7	76.7	100.0
	217	100.0	100.0	

Table 6: Frequency Distribution Of Respondents By Faculty

Faculty	Frequency	Percent	Valid percent	Cumulative percent
Education	56	26.0	26.0	26.0
Science	76	35.2	35.2	61.2
Social Science	31	14.2	14.2	75.3
Agriculture	54	24.7	24.7	100.0
Total	217	100.0	100.0	

Table 7: Frequency Distribution Of Respondents By Nature Of Work

Nature of Work	Frequency	Percent	Valid percent	Cumulative percent
Teaching	93	42.9	42.9	42.9
Non-teaching	124	57.1	57.1	100.0
Total	217	100.0	100.0	

Table 8: Frequency Distribution Of Respondents By Working Experience

Working Experience	Frequency	Percent	Valid percent	Cumulative percent
Less than 5years	55	25.6	25.6	25.6
6-10years	35	16.4	16.4	42.0
11-15	45	20.5	20.5	62.6
16-20	19	8.7	8.7	71.2
21-25	23	10.5	10.5	81.7
26 and above	40	18.3	18.3	100.0
Total	217	100.0	100.0	

Table 9: Frequency Distribution Of Respondents By Educational Qualification

Educational Qualification	Frequency	Percent	Valid percent	Cumulative percent
O'Level	16	7.3	7.3	7.3
NCE	3	1.4	1.4	8.7
Diploma	20	9.6	9.6	18.3
OND	24	11.5	11.5	29.4
HND	26	11.9	11.9	41.3
Bachelor's Degree	22	10.0	10.0	51.4
Master's Degree	31	14.2	14.2	65.6
PHD	75	34.2	34.2	100.0
Total	217	100.0	100.0	

Table 1 showed that more male participated in the study than female with mean and standard deviation of 1.4 ± 0.5 . Table 2 showed that as at the time of the study 43 respondents (20.1%) were between the age of 30-34 years, 46 respondents (21%) were between the age of 35-39, 37 respondents (16.9%) were between the ages of 40-44, 30 respondents were (14.2%) between the age of 45-49, 35 respondents (16%) were between the age of 50-54 and 26 respondents were between the age of 55 and above in the study (3.2 ± 1.7). Table 3 showed that there were more married respondents in the study than other categories specified (1.9 ± 0.4). Table 4 showed that most of the respondents were of Christian religion. Table showed that more senior staff participated in the study than junior staff. Table 6 showed that most of the respondents were from the faculty of science. Table 7 showed that most of the respondents are non-teaching staff. Table 8 showed that most of the respondents had less than 5years working experience. Table 9 showed that most of the respondents had PhD degree.

Table 10: Questions On The Therapeutic Effects Of Exercise Participation And Aging Process

	Therapeutic Effects Of Exercise Participation And Aging Process	Yes	No	I don't know	Total	X ² Obs	df	X ² Crit	Decision
1	Exercise participation reduces the incidence of heart problems common to the aged	190 (87.6%)	11 (5.1%)	16 (7.4%)	217 (100%)	114.09	6	12.59	Significant
2	Exercise participation could have therapeutic effect on stroke and diabetics patients	155 (71.4%)	15 (6.9%)	47 (21.7%)	217 (100%)				
3	Participation in exercise reduces the risk of colon, prostate and breast cancer	89 (41%)	22 (10.1%)	106 (48.8%)	217 (100%)				
4	Participation in exercise reduces the incidence of bone diseases common to the aged	144 (66.4%)	13 (6.0%)	60 (27.6%)	217 (100%)				

The X² observed value was 114.09 and the X² critical value was 12.592, while the degree of freedom was 6. The hypothesis is confirmed significant. This supports a logical conclusion that the staffs of the University of Ibadan are significantly aware of the therapeutic effect of exercise on aging process. Therefore, the hypothesis is rejected.

DISCUSSION OF FINDINGS

The findings of the study showed that staff members of the university are significantly aware of the therapeutic effects of exercise participation on aging process and the chi-square contingency table also showed a significant level of association. The study showed that most of the respondents have the knowledge of the anti-aging. From the study, 87.6% of the respondents said yes that exercise participation reduces the incidence of heart problems common to the aged and 71.4% Exercise participation could have therapeutic effect on stroke and diabetics patients. The study also recorded that 66.4% of the respondents supported that Participation in exercise reduces the incidence of bone diseases common to the aged but 48.8% of the respondents do know whether participation in exercise could reduce the risk of colon, prostate and breast cancer. According to Hastrup and Adeogun (2005), regular physical activity has been found to promote prevention of weight gain and maintenance of weight loss, when combined with diet, better cardio respiratory and muscular fitness, fall prevention, and better cognitive function in older adults. While some studies have shown how aging undermines physical strength and psychomotor performance, others show that exercise can counteract some of the harmful consequences of aging (Udoh, 2000). Even in debilitated elderly patients, resistance training for a short period can increase isometric force and physical function (Meuleman et al 2000). Long-term exercise trainings also show the improvement of neurobehavioral functions and the reducing risks of fall in elderly individuals (Fujisawa et al. 2007). Some home-based exercise programs have shown benefits to functional abilities in daily activities of elderly individuals (King et al. 1991; McMurdo & Johnstone, 1995).

The World health organisation guidelines also outlined some of the benefits of physical activity that fall into three broad categories: physiological, psychological, and social (Chodzko-Zajko, 1997). Some physiological benefits are immediate, such as improvement in glucose, catecholamine levels, and improved sleep. The longer-term benefits of physical activity include improvement in aerobic or cardiovascular endurance, muscle strengthening, flexibility, balance, and velocity of movement, which is a critical factor in the definition of frailty. Immediate psychological benefits include relaxation, reduction of stress and anxiety, and enhanced mood state. The longer-term effects are improvements in some of these quality-of-life measures plus improvements in cognitive ability, motor control, and skill acquisition. These latter benefits would allow older persons to continue to play golf and tennis and other activities they might enjoy. There are also several social benefits that accrue from being active. An important immediate benefit of physical activity is to empower older people to gain a sense of control over what they do and increased involvement in social and cultural activities. One such benefit is “enhanced intergenerational activity,” where the older person can play tennis, golf, or go on a ski trip with children or even grandchildren.

CONCLUSION AND RECOMMENDATION

Although the health benefits of physical activity for elderly persons are well established, exercise is an underused form of health promotion, especially in the elderly population. Therefore the institutions that play host to the elderly population need to integrate life support program into the aging health maintenance system that involve physical activity that is adequate enough to slow down the aging process. The general recommendation for exercise is that every adult should accumulate 30 minutes or more of moderate-intensity physical activity on most, and preferably all, days of the week (Pate, *et al.* 1995). There are also recommendations for a structured exercise program for older adults. These are 3 to 5 times per week, for 30 to 45 minutes, at an intensity that is vigorous enough to raise the pulse rate to 70–80% of the maximal heart rate (American College of Sports Medicine, 2000).

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