European Journal of Educational and Development Psychology

Vol.4, No.1, pp.1-9, February 2016

Published by European Centre for Research Training and Development UK (www.eajournals.org)

EFFECTS OF ADEQUATE PRESCRIPTION AND ADMINISTRATION OF SPORTS ACTIVITIES IN THE CONTROL OF MENOPAUSAL HEALTH CONDITIONS AMONG UNIVERSITY FEMALE ACADEMIC STAFF

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ABSTRACT: *Menopause is a natural biological process that occurs in the life of every woman from the age of 50 and above which marks the permanent end of monthly periods and fertility. (Menstruation)The condition is accompanied with hot flashes, night sweat, mood swings, fatigue and difficulty in concentration. Considering these health problems associated with menopause which the female staff of any university has to grapple with in addition to the sedentary and stressful nature of the job (task) of lecturing, the researcher decided to further examine the effect of adequate prescription and administration of sports activities in the control of menopausal conditions among university female academic staff of Nigerian universities. A sample of 200 female academic staff of three universities (federal, state and private) respectively were purposively selected, whose age range was between 40 and 55 years, at the rate of 34 respondents from each of the universities. Questionnaire on use of adequately prescribed sports activities in the control of menopausal health conditions experienced by women as they advanced in age on their job (task) as academic staff of their universities. The reliability of the instrument was done using Pearson Product Moment Correlation (PPMC) which gave r = 0.89. All the tested hypotheses were rejected. It was recommended that university authorities in Nigeria must enforce the observance of one lecture-free afternoon per week, during which the female lecturers particularly must be adequately engaged in planned sports activities to enable them attain optimal physical fitness necessary for their job (task).*

KEYWORDS: Menopausal Syndrome, Menopausal Transition Period, Pre-Menopausal, Post Menopause, Menopausal Health Condition.

INTRODUCTION

The job description (task) of any female academic staff of any university involves sitting down for so many hours to prepare lecture notes, conduct researches for paper publication in journals, marking of exam answer scripts, attendance to lecture periods, supervision of research projects of different categories of students assigned to each lecturer and other assigned committee duties of the university/faculty/department. A critical review of the above job description is basically sedentary and stressful in nature. Hence Alagbu (2010) observed that the stress inherent in the job description of an average lecturer is capable of causing physical, emotional and behavioural disorder, which can affect an individual's health, vitality, peace of mind as well as professional and interpersonal relationships, which if not checked through adequate administration of physical activities could lead to serious health problems.

Furthermore, Young (2004) noted that such stress experienced by an average lectures is registered by the brain which triggers a "fight" or "flight or response" whereby the adrenal glands secretes adrenalin, which in turn triggers an increased heart beat rate and blood pressure. Adrenalin induces other metabolic changes and the secretion of another hormone known as cortisol, which is said to be capable of depressing immune function of the body.

An average female academic staff in addition to these highlighted academic induced stress of lecturing is equally to grapple with the health conditions posed by menopause. Chichester & Cirannis (2011) defined menopause as a natural biological process that occurs in every woman's life which marks the permanent end of monthly periods (menstruation) and fertility.

Researchers have tried to classify menopause into pre-menopause, peri-menopause, premature/early menopause, post-menopause and menopausal transition period, in order to make for a better understanding of women generally.

In pursuance of the above, Lisaneza-Suarez (2012) posited that pre-menopause may be described as the years leading up to the last period, when the levels of productive hormones are already becoming more variably lower and erratic. On the other hand North American Menopause Society (2013) posited that peri-menopause is the span of time both before and after the date of the final episode of menstruation in a woman. This period they said may last between four to eight years. Another researcher Prior (2013) described peri-menopause as a six to ten years phase ending twelve months after last menstrual period.

In a similar vein Harlow, Grass, Hail, Lobo, Maki, Rebar, Sherman Slues & Villiers (2012) described post menopause to be all the time that follows the point when women's ovaries become inactive.

Furthermore WHO (2000) observed that premature or early menopause is the occurrence of menopause at an earlier age less than two standard deviations below the mean established as reference age, for a given population; in developing countries, the age of 40 years is frequently used as an arbitrary cut-off point, below which menopause is said to be premature, a situation that may be caused by Premature Ovarian Failure (POF), which may be caused by tuberculosis, mumps, tubal litigation, stress, heavy smoking, racial or ethnic factors.

The world body through their research concluded that 8 out of every 100 women stop menstruating before the age of 40; while at the other divide or spectrum 5 out of every 100 women continue to experience their menstrual cycles until the age of 60 years. Hence they concluded that the average age of menopause is 51. It must be noted however that there is no mathematical formula to determine when the ovaries will stop functioning, however, assumption may be based on family history, life-style, body type or race.

According to Twiss, Wegner, Hunter, Kelsay, Rath-hart, Salado (2007), Lianeza-suarez, Gracia-Partills, Armott, Perez-Lopez (2012) they listed the depressive disorders that accompany the commencement of menopause to include: hot flashes, night sweats, irregular menstruation, libido, vaginal dryness, mood swings, fatigue, hair loss and thinking, sleep disorders, difficulty in concentration, dizziness, weight gain, body odour, depression, incontainance, bloating, brittle nails, irregular heart beat, anxiety, irritability, panic- disorder, breast pain, headaches, joint pain, burning tongue, digestive problems, muscle itches, tension including memory loss. Through research, experts in sports administration are indicating that adequately prescribed and administered sports activities is capable of assisting the female academic staff of universities cope with these listed menopausal symptoms and; health

conditions. Endurance or aerobic exercise routines, such as running, brisk walking, cycling, or swimming, increases the strength and efficiency of the muscles of the heart.

Hence Sady, Haydon, Sady, Carpenter Thompson & Coustan (2005) aver that exercise stimulates the liver (hepatic) increased glucose output, among other functions. For instance, both epinephrine and growth hormone also stimulate adipoccyte lipase, which increases non-esterified fatty acid (NEFA) release. By oxidizing fatty acids, this spares glucose utilization and helps to maintain normal blood sugar level during exercise, thereby taking care of the weight gain women encounter during menopause.

Furthermore, Tory (2013) posited that oxygen consumption (VO_2) during exercise can best be described by the Ficks equation: $VO_2 = Q$ x (a-VO_2 diff). This implies that the volume of oxygen consumed, is equal to cardiac output (Q) multiplied by the difference between arterial and venous oxygen concentrations. More simply put, oxygen consumption is dictated by the quantity of blood distributed by the heart as well as the working muscle's ability to take up oxygen within that blood.

In a similar vein Rowell (2012) reported that fatigue earlier attributed to accumulation of lactic acid in the muscles is no longer the case, but that lactate may stop muscle fatigue by keeping muscles fully responding to nerve signals. That rather what may cause fatigue is, non-availability of oxygen and energy supply, plus disturbance of muscle, (homenstasis). It is therefore the view and submission of this study that regular moderate exercise bouts, will help women during menopause by stabilizing oxygen supply to their working muscles, thereby preventing cellular membrane depolariszation which cause muscle weakness.

Furthermore, American College of Obstetricians and gynaecologist (2013) posited that maintaining a regular moderate exercise routine helps women stay healthy, improve their posture, prevent discomforts like backaches and fatigue. In the same vein, Eschbach (2012) listed some of the positive outcomes women could gain through regular moderate exercises during menopause to include increased cardiovascular fitness, improvements in body composition, decreased anxiety and depression and enhanced feelings of well-being.

In conclusion, it is the position of this study also, that regular physical exercises done over a prolonged period of time help to re-shape the body by building healthy muscles, boosting metabolism and burning of fat. The more healthy muscles a woman has, the more calories of energy such a one can burn off per day, thereby lowering the percentage of the body fat. That causes heat production

The research study carried out by a Swedish scientist in 1990 in which 142 women going through natural menopause (with/without hormone therapy) in which half of them were subjected to regular moderate physical exercises without any hormone therapy. While the other half were merely treated with hormone therapy without any physical exercises. The result showed that the women who were treated to regular moderate exercises reported that they experienced less number of hot flashes and night sweats, while the other control group, reported several and severe hot flashes and night sweats. Eight years later, in 1998 another research study carried out in university of Linkoping, University hospital, further authenticated this earlier study, by reporting that only 5 percent of menopausal woman who are engaged in regular moderate physical exercises experience less severe hot flashes and night sweats, compared with 14 to 16 percent of women who were not treated to moderate physical exercises. These

evidences therefore certainly confirm, that the female academic staff of universities have a lot of benefits to derive from regular moderate physical exercises, that will enable them become more productive and efficient in their task (job) of lecturing in a university system.

Hypotheses

i. The female academic staff of Nigerian universities will not be significantly aware of sedentary and stressful nature of the job (task) of lecturing in a university system.

ii. The female academic staff of Nigerian universities will not be significantly aware of the impact or influence of menopausal symptoms on their job (task) performance as lecturers in a university system.

iii. The female academic staff of Nigerian universities will not be significantly aware of the various stages or phases of menopause and that moderate physical exercises is the only cheap and sure way of controlling the negative symptoms of menopause.

METHOD

A total of 210 questionnaires were distributed and only 200 of all the returned ones were used, the others were not properly filled by the respondents. The respondents in this study therefore were made up of 200 female academic (teaching) staff of four universities from two geo-political zones of south-east and south-west of Nigeria. Using the purposive sampling technique, 100 female academic (teaching) staff were selected from 2 universities each of the 2 geo-political zones, from their faculties of education, Arts, Social Sc., Biological Sc. and management sciences.

The age range of the respondents was 40-55 years. Their teaching experience distributions were as follows:

1-5 years 64 (32%)

6-10 years 37 (18%)

11- 15 years 59 (29.5%)

16- years and above 40 (20%)

The respondents were further categorized into 2 groups of those with under 10 years teaching experience and those with above 11 years teaching experience in the university, the analysis of the responses of the two groups did not differ significantly.

Instrument

The researcher developed a structured questionnaire tagged Effects of Adequate Prescription and Administration of sports activities in the control of menopausal health conditions among female Academic staff union of Nigeria (FASNU) Universities. (EAPASACMHCAFAS)

The draft questionnaire was given to two senior colleagues for content validity. Section A of the instrument dealt with demographic data which included sex, age and years of lecturing (teaching) experience as (female academic staff) of their various universities. The validated

instrument was pilot tested, using the test retest method of reliability and the Pearson Moment Correlation Coefficient (PPMC) was used to analyse the administered instrument:

In addition to the researchers, three research assistants were used in the study. The questionnaire were distributed to female academic staff of the selected faculties of education, social sciences and biological sciences of the various universities used for the study.

Data Analysis

The data collected were coded and analysed using frequency and percentages, while variables in the study were tested using Chi-square (X^2) statistical tool. All hypotheses were tested at 0.05 level of significance

Table I: Chi-Square Analysis of female Academic Staff universities perception of effects of adequate perception and administration of sport activities in the control of menopausal health conditions.

Response (under 10yrs lecturing experience)	SA	%	A	%	D	%	SD	%	X^2value	e/f	Decision
Variables The nature of job(task) of lecturing in a university is sedentary and stressful	67	47	38	38	9	9	6	50.8		3	rejected
Above 11 yrs lecturing experience	51	51	34	8	8		7	7	50.8	3	Rejected

Calculated Chi-Square value = 50.8, Table value = 7.815 P>0.05

Table 1 above shows that 67 (33.5%) and 49 (24.5%) of the respondents (under 10 years teaching experience) strongly agreed and agreed with the statement, that the nature of the job (task) of lecturing in a university is sedentary and stressful, while 50 (25%) and 34(17%) disagreed and strongly disagreed with the statement. The obtained X^2 value of 10.902 is greater than the table value of 7.815, which means that the stated hypothesis I above is rejected.

Furthermore, 71 (35.%) and 45 (22.5%) of the respondents above 11 years of lecturing experience, agreed and strongly disagreed with the statement, while 62 (31%) and 22 (11%) of the respondents disagreed and strongly disagreed with the statement. The obtained X^2 value of 10.902 is greater than the table value of 7.815, which means that the stated hypothesis is rejected.

Table 2: Chi-Square Analysis of female Academic Staff of universities perception of effects of adequate prescription and administration sports activities in the control of menopausal health conditions.

Response (under 10yrs lecturing experience)	SA	%	A	%	D	%	SD	%	X^2value	e/f	Decision
Variables of adequate prescription and administration sports activities can effectively control the health problems women face during menopause	47	47	38	38	9	9	6	6	50.8	3	Rejected
Above 11 yrs lecturing experience	51	51	34	34	8	8	7	7	50.8	3	Rejected

Calculated Chi-Square value = 50.8, Table value = 7.815 P>0.05

Table 2 above shows 47 (47%) and 38(38%) agreed and strongly agreed with the statement that, adequately prescribed and administered sports activities, can effectively control the health problems women face during menopause. While 9(9%) and 6(6%) disagreed and strongly disagreed with the statement.

The obtained X^2 of 50.8 is greater than the table value of 7.815 which means that the stated hypothesis was rejected.

From the table it also showed that the responses of the respondents with above 11 years lecturing experience had 51 (51%) and 34(34%) agreed and strongly agreed with the statement while 8(8%) and 7(7%) disagreed and strongly disagreed with the statement. The obtained X^2 of 50.8 is greater than the table value of 7.815, which means, that the stated hypothesis is rejected.

Table 3: Chi-Square Analysis of female Academic Staff of universities awareness of the various phases of menopause and that moderate sports (physical)exercise is the cheapest and sure way of controlling the negative disturbing health problems associated with the phases

Response (under 10yrs lecturing experience)	SA	%	A	%	D	%	SD	%	X^2value	e/f	Decision
Variables There are various phases of menopause e.g. Pre-menopause, Peri-menopause, premature menopause, post-menopause, and meno-pausal transition period	35	35	29	29	21	21	15	15	8.56	3	Rejected
Above 11 yrs lecturing experience	41	41	23	23	21	21	15	15	8.56	3	Rejected

Calculated Chi-Square value = 8.56 Table value = 7.815 P>0.05

Table 3 above shows that 35(35%) and 29(29%) of the respondents under 10 years lecturing experience agreed and strongly agreed with the statement, while 21(21%) and 15(15%) disagreed with the statement.

The obtained X^2 value of 8.56 is greater than the table value of 7.815 which means that the stated hypothesis 3 is rejected.

Equally, the responses of the respondents with above 11 years lecturing experience followed similar pattern, 41(41%) and 23(23%) agreed and strongly agreed with the statement while 21 (21%) and 15(15%) disagreed and strongly disagreed with the statement. Hence the obtained X^2 value of 8.56 is greater than the table value of 7.815 meaning that the stated hypothesis 3 is rejected.

DISCUSSION

The first hypothesis which stated that the female academic staff of Nigerian universities will not be significantly aware of the sedentary and stressful nature of the job (task) of lecturing in a university was rejected. This finding very strongly supports Alagbu (2010) who stated that the nature of the work of the academic staff is such that they sit down for very long hours at their tables, preparing their lecture notes, marking of continuous assessments, examination answer scripts, supervising student's projects, attending various university's committees they are appointed to serve, all of which are stressful, boring and sedentary. This result further corroborates, Young (2002) who noted that stress is registered by the brain which triggers a "fight" or "flight response" whereby the adrenal glands secretes adrenalin, which further triggers an increase in heart rate (heart beat) and blood pressure. Adrenalin induces other metabolic changes and secretions which are detrimental to the body.

In the second and third hypothesis which sort for the awareness of the respondents regarding the impact of menopausal symptoms (health conditions) on their job (task) as lectures and the various stages or phases of menopause; all of which could be controlled through well prescribed/administered physical activities, were rejected. The result of this second and third hypotheses therefore negates the report of Macleod, Edward & Bouchier (1990) who asserted that peoples indulgence in sedentary and in-active life styles and inadequate regular moderate exercises, is due to ignorance, because most people are not conscious of the exogenous factors of their behaviour. This second and third hypothesis also corroborates that of Denis, Dirk & Daniel (2003) and Baasavanthapa (2005) who asserted that inspite of adequate knowledge of people (adults) on hypertension and other degenerative health conditions caused by in-active lifestyle, most adults still indulge in such acts that makes them susceptible and aggravate their condition.

Furthermore, the result of this study revealed that the two categories of female academic staff years of lecturing experiences, (under 10 years and above 11 years), is in line with WHO (2000) that concluded that 8 out of every 100 women stop menstruation before the age 40; while at the other divide or spectrum 5 out of every 100 women continue to experience their menstrual cycles until the age of 60 years. Hence they asserted that the average age of menopause is 51. The uniformity of the responses of these female academic staff used in the study regarding effects of adequate prescription and administration of sports activities in the control of menopausal health conditions among university female academic staff further gave. Credence to the acertion.

CONCLUSION

Based on the findings of this study it was concluded that the female staff of Nigerian universities know the effect of adequate prescription and administration of sports activities in the control of menopausal conditions. Through this research it was observed they would readily participate in adequately prescribed and administered sports activities if given the opportunity and accessible equipment and was facilities. It was also the conclusion of this study that the female academic staff perceive the job (task) of lecturing as sedentary and stressful; in addition to the health conditions they experience during menopause, hence they agreed that there is need for regular physical exercises to control the negative effects of jobs stress and menopausal heath conditions on them. Hence regular prescribed physical activities, carried out over a long period of time will reshape their body by building up muscles which will boost metabolism through burning of fat. Lowering of body fat and calories will help improve balanced strength, and cardiac health during menopause, thereby controlling the health conditions associated with it.

RECOMMENDATIONS

1. The population of female academic staff in Nigerian universities today is almost doubling or tripling that of the male staff. This implies that a reasonable efforts must be geared towards drastically, reducing to the barest minimum the stressful and in-active nature of the job (task) of this category of university staff; in order to enable them improve on their efficiency and efficiency.

2. Regular workshops, seminars and symposia need to be regularly organised thereby the peculiar problems of female academic staff in the universities will be addressed specifically, and practical/tangible solutions proffered by free provision/donation to these lecturs, physical exercise gargets like bicycle egometers, bicycles, step-up with handles, trade mills.

3. Establishment of Nigerian Association of Female University Academic Staff for fitness and productivity, (NAFUASFP) whose aims would be Among others:

    a) To promote closer working relationships among university female academic staff (between the older and younger female lecturers.

    b) To work closely with various sports organisations that specializes in women sports development.

    c) To afford opportunities to the female academic staff through congress and meetings discuss and help them in solving the problem of women in academics.

    d) To encourage research and exchange of intellectual knowledge persons and ideas on how to promote physical activities related menopausal health conditions.

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