



KNOWLEDGE AND UTILIZATION OF EXERCISE PLATEAU MANAGEMENT STRATEGIES FOR HEALTH PROMOTION AMONG EXERCISERS IN ENUGU METROPOLIS

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Abstract: Exercise for weight loss is one of the several goals of an exerciser wishing to improve upon his or her health status and good body form. The study Investigated Knowledge and Utilization of Exercise plateau management strategies for health promotion among exercisers in Enugu metropolis. Literature was extensively reviewed in line with conceptual framework. Three research questions and one hypothesis in line with the purpose of the study guided the study. The hypothesis was tested at 05 level of significance 216 out of 541 male and female exerciser from two exercise spots in Enugu metropolis formed research respondents. Researchers' developed and validated questionnaire titled "Knowledge and utilization of Exercise plateau. Management Strategies Questionnaire (KUEPMSQ)" was used as instrument for data collection while data analysis was done with frequency counts, simple percentages and t-test statistic. The results of the findings showed that exercisers in Enugu metropolis had low level of knowledge of exercise plateau and the causes. Furthermore, gender was found not a constituting factor of variance regarding the utilization of exercise plateau management strategies. Conclusively, exercisers in Enugu metropolis had low level of knowledge of exercise plateau while the utilization of management strategies for the phenomenon was also found to be low when moderated by gender. The recommendation among others is that urgent appreciation courses on exercise plateau management by the ministries of health and sports in form or seminars for the exercisers and their instructors in Enugu metropolis to minimize possible abandonment of their exercise programmes be organized.

Keywords: Knowledge and Utilization, Exercise Management and Health Promotion

Introduction

Regular exercise pursuit for health promotion at tertiary level constitutes a potential phase of modern exercise physiology targeting adult fitness. Exercise pursuit unlike food is basically on self-evolution although an individual could engage in one form of physical activity or the other in form of domestic chores or other activities requiring the use of skeletal muscles that results in energy expedition in an unconscious manner (Okuneye, 2002; Otinwa, 2010). Holistically, exercise has been described as a sub-category of physical activity that is planned or structured and it

involves repetitive bodily movements done to improve or maintain one or all of the components of physical fitness; aerobic capacity, muscular endurance, muscular strength, muscular flexibility body composition agility, balance, power, reaction, time, co-ordination and space (Polowman & Smith 2003, Neiman, 2003, Otinwa, 2010b). The activity in question must be of sufficient in both intensity, duration and frequency to be able to achieve wellness. There is abundant evident on the benefits of regular participation in physical activities and exercise. Exercise helps people to live long and gain protection against stroke,

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hypertension, obesity, Osteoporosis, diabetes, muscular and skeletal problems and certain kinds of cancer (Emiola, 2008, Okuneye, 2014). It has been observed that regular participation in exercise could result to negative energy balance, when caloric intake is less than calories expended (Otinwa, 2014). Perhaps, it could probably be due to the numerous benefits derived from exercise participation that motivate people like the exercisers in Enugu metropolis to participate in it. In most cases, participants in exercise programmes often set targets which has to be achieved to guarantee continued participation. However, if there is a hindrance to set goals such as weight loss, the individual most likely will drop from the exercise programme. One of the hindrances to weight loss is exercise plateau.

Exercise plateau is a common phenomenon in exercise especially when targeting weight loss for general wellness and aesthetic reasons. Plateau means that the individual is no longer responding to stimulus because he or she has become accustomed to it. Plateau exists in other aspects of human endeavours. Plateau may appear in learning when students experience a dwindling benefit from the learning effort (Hattie, 2008). Plateau is reached when the nose becomes acclimatized to a certain smell or drug tolerance, when a person's reaction to a specific drug is progressively reduced, requiring an increase in the doses of the drug he received (Glen, Venturelli & Fleckenstein, 2009). Exercise programme can witness plateau at a certain stage of the programme.

Plateau in exercise provides additional challenge to the exerciser. According to Mayo Clinic, 2010; Sullivan and Hugh (2013), exercise plateau is a state that is experienced when the human body fails to respond to exercise that has proven effective in the past. This may imply that plateau occurs in exercise when an individual enters into a period where there is no improvement or decrease in performance. Exercisers in Enugu metropolis may have experienced a condition in which their body no longer respond to fitness or diet routine. When plateau occurs, the pin on the

weighing scale will cease to shift when an individual gets on it.

Hitting plateau may be a positive marker of progress in someone's exercise programme (Micheal 2013; and Pinola 2015). Hitting plateau means that an individual has made progress in exercise programme. They maintained that it is a perfect time to look back and see how far one has gone because no human endeavor is linear as all learning take time, with improvements coming in waves of easy progress, then stagnation followed by bursts of more progress. This may point to the fact that hitting plateau during exercise is not a sign that you are doing something wrong; it could also be a sign that you are completely normal, and has hit a point that everyone hits on their weight loss journey. In a literal form, plateau in exercise is like a mark on the road, letting you know you are heading in the right direction and that you have made a lot of progress (Pinola, 2015).

There are other worries or dangers that come with plateau in exercise. In this regard, Gorman, 2015; and Anderson (2015), warned that a weight loss plateau can last indefinitely if no conscious adjustment is made in exercise and eating habits, the type of plateau notwithstanding.

Plateau in exercise has been categorized into fitness weight loss, and muscle body plateaus. Weight loss plateau means sudden stoppage of weight loss after beginning a playout or diet plan while muscle plateau is a sudden stop in the body's ability to gain muscle, weight or increased strength (Wahlig, 2011). Both plateaus are direct results of the body's successful adaptations to a fitness routine programme (Body building. Com). However, weight loss is much easier to breakthrough than the later. In this study attention was focused on weight loss plateau to ascertain the level of knowledge and management strategies adopted by exercisers in Enugu Metropolis for improved health. Both plateaus in exercise have several causes.

The occurrence of plateau has been linked to several factors. According to Wahlg (2014), the body mass is the major factor that determines the body's Basal Metabolic



Rate (BMR), that is the rate at which an individual burns calories for essential body functions hence, when someone reduces mass through exercise, the BMR also declines so that the body burns fewer calories at rest and weight loss tend to slow down or stop completely as a result of reduced metabolic rate. Carrighan, (2011), and Pary (2015), submitted that the beginning of an exercise programme results in decline of metabolism so that few calories are burnt. Quick (2013), corroborated that muscle soreness resulting from exercise tend to hold extra water and inhibit weight loss.

Other causes include keeping rigid exercise programme, physiological and psychological variables playing out in the mind of the exerciser such as mental loss of motivation, distraction, exercise malingering (putting up an attitude just to avoid keeping fate with his or her exercise routine by giving excuses) low immunity, bad exercise timing distorted data, distraction, failing slowly and perfectionism (Allard, 2010, Raivis, 2012; Foster, 2013, Sullivan and Hugh 2013 and Coffey, 2014).

Plateau delimits effort, hence for effective management, the famous Japanese Karatist (Bruce Lee) has this word of advice:

“If you always put limits on everything you do, physical or anything else, it will spread into your work and, into your life. There are no limits. There are only plateaus and you must not stay, then you must go beyond them-Bruce Lee (Godin, 2014)

The existence of plateau in the exercise programme of Enugu exercisers may spread into their lives, and work and may also influence their fitness and wellness set goals. It therefore, means that exercise plateau should not be allowed to spread into peoples work and life but must be fought to stand still for continued exercise participation for health promotion.

Health promotion at tertiary level involves regular involvement in physical exercise programmes unhindered. Majority of exercisers including Enugu residents step out

to exercise to improve upon their health status, keep appropriate body form and possibly avoid diseases and conditions associated with sedentary lifestyles. For these aspirations to come to fruitfulness, they require high level knowledge and understanding of exercise plateau and its causes.

The possession of knowledge of a phenomenon according to advanced Learner’s Dictionary (2015), means information, understanding and skills gained through education or experience. Knowledge of exercisers’ plateau could be related to knowledge of other aspects of health promotion drives. For example, Solomon and Nnamani (2015), observed that adolescent students in secondary schools in Enugu State had low level of knowledge on Reproductive Health Services (RHS). Also Amadi and Ejike (2015), reported that secondary school teachers in Enugu State possessed high knowledge of contraception, Eze (2018), found female teachers in Enugu State public secondary schools possessing high level of knowledge of exclusive breastfeeding (EBF) while Igboke (2016), reported senior secondary students in Nsukka education zone of Enugu State having high level knowledge of use of contraceptive methods. Exercisers in Enugu metropolis may possess high or low level of knowledge of exercise plateau which may have far promotion drives. Knowledge of exercise plateau by exercisers in Enugu urban implies understanding when weight loss starts, the possible causes and applying good management techniques to overcome it. Management of exercise plateau could be one good step towards overcoming its effects. Management as a concept relates to the process of planning, organizing, directing, coordinating and controlling a phenomenon (Awoyinfa, 2012). This may imply that to manage a phenomenon like exercise plateau requires a highly organized and coordinated programme of activities.

There are literature evidence on management strategies adopted for health promotion drives among adult population. A report by Ani (2018), observed that female teachers in public secondary schools in Enugu East L.G.A



did not utilize exercise, diet and alternative therapies in the management of overweight during pregnancy. Ekewunwa (2018), found academic staff in the faculty of Education, Enugu State University of Science and Technology, (ESUT), Enugu not utilizing exercise and diet in the management of high blood pressure. Exercisers in Enugu metropolis could be part of the populations that did not utilize those health promotion drives. It could also be possible for these exerciser not adopting the exercise plateau management strategies. Overcoming exercise plateau could be one good step towards health promotion. According to Robin (2013), the most logical step to get out of plateau is to look for signs of one. Notable signs include inability to progress at one's goals regardless of the type of plateau, fatigue and low motivation. Lawson (2013) in Oprah. Com identified six steps to overcome plateau namely.

Adequate rest and relaxation that involves taking a week or 10days off training and this could be useful for individuals who feel tired or unmotivated

- Eating habits with emphasis on cutting caloric intake
- Change of exercise routine
- Stay Frequency, Intensity and Time (F.I.T) principle to modify one's cardio and resistance training programmes.
- Adequate sleep so that regeneration and repairs of muscle tissues can be faster
- Keep playout under an hour (Lawson, 2013). According to online reports Fontamila 2014; National Academy of Sports Medicine (NASM) (2013), overcoming plateau could also involve:
- A change in the person's playout including adding periods of rest
- Track other metrics other than the scale.
- Taking weekly photos
- Taking measurements of important parts of the body for example hips, girth and waist line

- Tracking body percentage fat
- Goal adjustment
- Reducing daily caloric intake (Katz, 2003, Mayoclinic. Com, 2010)

There is also the concept of excess post exercise oxygen consumption (epoc) and use of Kick-boxing and yoga. According to epoc theory, the harder you train, the more fat you burn at rest while Kick-boxing and yoga have positive relationship with metabolism. Exercisers in Enugu metropolis may have knowledge of these management strategies without a corresponding utilization of it.

This disposition may further pose a hindrance to their health promotion drives, utilization is the proportion of the available time (expressed usually as a percentage) that a piece of equipment or a system is operating (Zhantu, 2016). Studies on utilization of health promotion indices have been reported in literatures. Okuneye, Ani and Ugwuegede (2016) reported low gymnasium equipment utilization equipment are not utilized for health by Enugu residents. Solomon and Nnamani (2015), found students in secondary schools in Enugu State utilization of Reproductive Health Services (RHS) to be low, Nwankwo and Ejike (2014), reported that students in secondary schools in Abia state had low level of utili utilization of HIV/AIDs preventive Services such as Universal Sexual Precautions (USP) and post Exposure prophylaxis PEP while the utilization of Deleyed Sexual Activity Abstinence was found to be high. This is due to the fact that they can wake up the muscle you never thought you had (Mogavero, 2014). The application of these management strategies by exercisers in Enugu metropolis could minimize the impact of exercise plateau and possibly enhance their weight loss aspirations.

Statement of the Problem

The journey to weight loss by an exerciser comes with weight loss plateau which must be appropriately handled if future progress is to be guaranteed. Ironically most exercisers are ignorant of the phenomenon so much so that



they give up their exercise programmes in most cases unannounced. This disposition could present additional health challenges to the exerciser. For example low exercisers adherence could result in conditions and diseases associated with inactivity such as hypokinetic diseases ranging from hypertension, diabetes, cancers, arthritics, muscle atrophy and others.

The researchers have observed with keen interest low attendance ratio at the major exercise spots in Enugu metropolis namely; Nnamdi Azikiwe Stadium and Michael Okpara Square in Ogui Road and Independence Layout respectively. This follows 2 week head count conducted by the researchers from Monday – Saturday. It was observed that the average attendance at those centres were 35 male and female adults for week days and 58 on weekends for Nnamdi Azikiwe Stadium and 47 week days and 63 weekends at Okpara Square.

These figures are against the previous records in the beginning of the year (January-February, 2018) which stood at 93 week days and 150 on weekends at Nnamdi Azikiwe stadium and 180 week days and about, 3150 on weekends at Okpara square. Although it is customary for a lot of people after Christmas and New Year holidays to start exercise programmes as part of their New Year resolutions or advice from their doctors during medical examination during these periods, this low attendance could also be attributable to lack of progress or evidence caused by exercise plateau. It was also observed that exercisers in the two centres only walk and jog week in, week out and without fitness instructors to supervise them. Those of them that exercise in groups do not have the privilege of having the services of certified fitness and wellness instructors. Perhaps, the most worrisome is that they may not have high level of knowledge of plateau in exercise. Again the reduced attendance could be attributable to some other factors. The study therefore, investigated management strategies adopted by exercisers in Enugu Metropolis for exercise plateau. The findings of this work will help to sensitized exercisers in metropolis

about the existence of plateau in exercise and management strategies for possible sustenance of health promotion.

Purpose of the Study

The specific objectives of study were to

1. ascertain the level of knowledge of concept of exercise plateau by exercisers in Enugu metropolis
2. examine the level of knowledge of causes of weight loss plateau by exercisers in Enugu Metropolis.
3. find out the extent of utilization of exerciser plateau management strategies by exercisers in Enugu metropolis

Area of the Study

The study was conducted in Enugu metropolis. This is because, it has recognized fitness and wellness arenae where the residents converge week days and on weekends to exercise free of charge and under adequate security operatives.

Research Questions: The following research questions guided the study

1. What is the level of knowledge of concept of exercise plateau by exercisers in Enugu Metropolis?
2. What is the level of knowledge of causes of exercise plateau among exercisers?
3. To what extent do exercisers in Enugu Metropolis utilize exercise plateau management strategies for health promotion?

Hypothesis: The hypothesis below was postulated for the study and testes at 0.05 level of significance

Gender will not be a factor of variance regarding the utilization of management strategies of exercise plateau in Enugu Metropolis.

Method

The methodologies and procedures adopted in the conduct of the study include:

Research Design

The study adopted descriptive survey design. The population for the study consisted of 541; male and female



exercisers (176 males and 365 females) that utilized Nnamdi Azikiwe stadium and Okpara Square exercise centers in Enugu metropolis (Researchers' 2 week Head counts at Nnamdi Azikiwe Stadium and Okpara Square, 2018)

Sample and Sampling Techniques

A total of 216 male and female (70 males and 146 females) exercisers from 12 out of 22 exercise groups from Nnamdi Azikiwe stadium and Okpara Square exercise spots were used as research respondents. The sample size was determined using the principles of the rule of the thumb. According to Ikete (2014), if a population runs in few hundreds 40% can be sampled. Applying this principle to the total population 541 yielded 216. To arrive at this sample. Multi-stage sampling procedure was deployed. First, purposive sampling techniques were used to draw six exercise groups each from the two exercise spots. Using stratified proportionate sampling technique, 40% of the exercisers in the two exercise spots were drawn (Ikete 2014). To determine the number of respondents used for the study, proportionate sampling technique was used for the sampled exercise groups. This technique was adopted because the population of exercisers from each exercise group is not equal and all the exercisers in Enugu metropolis were not studied. Finally, using simple random sampling (balloting) without replacement, until the required number of respondents were determined for each of the exercise groups studied. All together 216 male and female exercisers from the two exercise spots in Enugu metropolis were used as research respondents.

Instrument for Data Collection

Researchers' developed and validated questionnaire titled "knowledge and Management Strategies Adopted for Exercise Plateau Questionnaire (KMSAEPQ)". The

instrument administration was carried out with the help of three research assistants. The administered instrument was collected on the spot.

Data Analysis

The analysis of data was done with frequency counts and simple percentages mean (x), standard deviation (SD) and t-test statistic. The decision rule on knowledge was made in line with Ashur (1977) recommendation which categorized the level of knowledge into four namely; 01-39% as Very Low Level (VLL), 40-59% as Low Level (LL), 60-69 as High Level (HL) and 80-100% as Very High Level (VHL) for research questions 1 and 2 while research question 3 was answered using a 4- point scale of Very Great Extent (VGE), Great Extent (GE), Low Extent (LE) and Very Low Extent (VLE) respectively.

The decision rule for research question three is that mean response scores of 2.50 and above signify Great Extent while mean response scores below 2.50 signify Low Extent and not a management option adopted for exerciser plateau. For the hypothesis, if the calculated t-test is greater or equal to t-critical value, reject the null hypothesis otherwise do not reject

Result

Data presentation and results or findings of the study are in line with the purpose of the study, research questions and hypothesis that guided the study are presented in tables as follows:

Research Question 1

What is the level of knowledge of concept of exercise plateau by exercisers in Enugu metropolis



Table 1: Mean Response Distributions of the Respondents on the Level of Knowledge of Concept of Exercise Plateau

Plateau		n=216				
s/n	Item	Correct	%	Incorrect	%	Dec
2	Exercise plateau means the body no longer respond to exercise stress because it has become accustomed to it	18	(8.2)	198	(91.7)	LL
3	It means the body no longer respond to diet routine	117	(54.2)	99	(45.8)	HL
4	Exercise plateau is like diminishing returns in other aspects of life	110	(51)	106	(49)	HL
5	Body's failure to respond to exercises' that has proven effective in the past	36	(16.7)	180	(83.3)	LL
6	Plateau means that there is no improvement or decrease in exerciser performance	29	(13.4)	187	(86.6)	LL
7	Exercise plateau means that an exerciser has made a lot of progress in his or her exercise programme	109	(50.5)	107	(49.5)	HL
8	It is a sign that the exerciser is completely normal, and have hit a point that everyone hits on their weight loss journey	118	(54.6)	98	(45.4)	HL
Total			35.5		64.5	LL

From the data presented in Table 1, out of 216 male and female exercisers that responded to items 2-8 that deal with knowledge of the concept of exercise plateau, 19 (8.3%), 117 (54.2%), 110 (51.0%), 36 (16.7%), 29 (13.4%), 109 (50.5%) and 118 (54.6%) all possessed high level of knowledge of the concept of exercise plateau. However, items 2, 5, 6, and 8 did not have high level knowledge of exercise plateau. The total percentage of 35.5 correct answers shows Low Level. On the other hand, 198 (91.7%), 99 (45.8%), 106 (49.0%), 180 (83.3%), 187

(86.6%), 107 (49.5%) and 98 (45.4%) did not have full knowledge of exercise plateau. The total percentage of 64.5% incorrect answers signifies low extent. Generally speaking, 35.5% had high level of knowledge of exercise plateau while 64.5% had low level of knowledge of it.

Research Question 2:

What is the level of knowledge of the causes of exercise plateau?



Table 2: Mean response Distributions of the Respondents on the Level of knowledge of the Causes of Exercise Plateau?
N=216

S/N	ITEMS	CORRECT	%	INCORRECT	%	DEC
9	Decline in basic metabolic rate (BMR) causes exercise plateau	79	(36.6)	137	(63.4)	LL
10	Defect of “fat metabolism” caused by levels of certain hormones such as adrenal, testosterone etc.	98	(45.4)	118	(54.6)	LL
11	Muscles holding extra water or body retention of water	113	(52.3)	103	(47.7)	HL
12	Consuming same calories of food items on daily basis	72	(33.3)	144	(66.7)	LL
13	Obtaining supplements for strength gains	110	(50.9)	106	(49.1)	HL
14	Lack of high intensity interval training	121	(56)	95	(44)	HL
15	Being stressed by measuring scale	67	(31)	149	(69)	LL
16	Diet skimp	111	(51.4)	105	(48.6)	HL
17	Keeping a rigid exercise programme	95	(44)	121	(56)	LL
18	Physiological and psychological variables playing out in the mind of the exerciser eg. Bad exercise timing. Distorted data, distraction, failing slowly, perfectionism	78	(36.1)	138	(63.9)	LL
19	Low Immunity	43	(19.9)	173	(80.1)	LL
Grand Total			41.5		58.5	LL

Data presented in table 2 shows that out of 216 male and female exercisers that responded to items 9 – 19 that deal with knowledge of causes of exercise plateau, 79 (36.6%), 98 (45.4%), 113(52.3%), 72(33.3%), 110(50.9%), 95(44.0%), 121(56.1%), 67(31.0%), 111(51.4%), 95(44.0%), 78(36.1%) and 43 (19.9%) did not possess high level of knowledge of causes of exercise plateau. However, items 11, 13, 14 and 16 received high level knowledge. The total percentage of 41.5% correct answers signifies low level knowledge. On the other side 137 (63.4%), 118 (54.6%), 103(47.7%), 144 (66.7%), 106 (49.1%),

95(44.0%), 149(69.0%), 105(48.6%), 121(56.0%), 138 (63.9%), and 173 (80.1%) did not possess high level knowledge of it. The total percentage of 58.5% incorrect answers signifies low level of knowledge. Generally speaking, 41.5% correct answers and 58.5% incorrect answers signify low level of knowledge of exercise plateau.

Research Question 3

To what extent do exercisers in Enugu Metropolis adopt management strategies of exercise plateau?



Table 3: Mean Response Distributions of the Respondents on Management Strategies Adopted for Exercise Plateau.

S/N	ITEMS	VGE	GE	LE	VLE	X	DEC
20	I identify early occurrence of signs and symptoms of exercise plateau eg. Knowing when there is a stall in progress	39	42	46	89	2.14	LE
21	I Keep training within a good thresh hold and usually not more than 1 hour	71	84	56	5	3.0	GE
22	I try to obtain adequate rest and relaxation after my exercise.	63	78	50	25	2.83	GE
23	I try to cut my calorie intake for negative energy balance.	41	43	65	67	2.83	LE
24	I change my exercise routine from time to time	39	40	71	66	2.27	LE
25	I track other metrics like chest and waist line circumference other than the scale.	13	24	86	93	1.80	LE
26	I take weekly photos for comparison.	67	61	53	35	2.74	GE
27	I track my body percentage fat	-	-	64	152	1.28	LE
28	I adjust my set goals for instance I move away from focused weight loss and focus on others like running faster, push-up etc	-	51	56	61	2.40	LE
Grand Mean						2.30	LE

Data presented in table 3 show that out of 2016 male and female exercisers that responded to items 20 – 28 that deal with the management strategies adopted for exercise plateau, 20 (2.14 -), 21 (3.0, -), 22 (2.83, -), 23 (2.27,-), 24 (2.24,-), 25 (1.80,-), 26 (2.74,-), 27 (1.28,) and 28 (2.40,-) respectively. The total grand mean of 2.30 signifies low

extent. This means that exercisers in Enugu metropolis do not utilize exercise plateau management strategies.

Hypothesis:

Gender will not be a factor of variance regarding the utilization of management strategies of exercise plateau in Enugu metropolis

Table 4: t-test of Difference between the mean ratings of male and female exerciser in Enugu metropolis regarding the utilization of exerciser plateau management strategies

Gender	N	X	SD	DF	t-cal	t-crit	Dec
Male	70	1.64	0.93	214	1.575	1.971	do not reject H ₀
Female	146	1.70	0.78				

Data presented in Table 4 show that the calculated t-value at .05 level of significance and 214 degree of freedom is

1.575 while the t-critical value under the same level of significance and degree of freedom is 1.971. therefore,



since the t-cal is less than t-crit, the null hypothesis is not rejected. This means that male and female exercisers in Enugu metropolis share similar pattern of utilization of exercise plateau management strategies which was low.

Summary of Findings

1. Exerciser in Enugu metropolis possessed low level of knowledge of exerciser plateau.
2. Majority of the exercisers in Enugu metropolis had low level of knowledge about the causes of exercise plateau.
3. Exercisers in Enugu metropolis adopt management strategies for exercise plateau at a very low level.
4. Male and female exercisers in Enugu metropolis share similar pattern regarding the utilization of management strategies for health promotion.

Discussion

The finding of the study revealed that exercisers in Enugu Metropolis had low level of knowledge of the concept of exercise plateau. This finding agrees with other reports bordering on health promotion, for example, it is in agreement with Solomon and Relramani (2015), who stated that adolescent schools in Enugu State possessed low level of knowledge of reproductive health services. However in contrast reports, in the reports of Amadi and Ejike (2014); Igboke, (2015); and Eze (2018) they observed high level of knowledge of conceptive methods and EBF among the subjects used as research respondents. The cause of these differentials are quite obvious these studies focused on the program levels of health promotion while the study focused on health promotion tertiary level. Again the research respondents in these studies were students and teachers who most likely may show differentials in their knowledge of a phenomenon.

One of the findings also showed that exercisers in Enugu metropolis disagreed in the causes of exercisers plateau. This finding disagreed with Wahlig (2014); which implicated plateau occurrence in BMR decline which according to Carrighan 2011; and Pery (2015), attributed

to decrease in metabolism hence few calories are burnt. Also disagreeing with the finding were reports handed down by Allard, (2014), who linked exercise plateau occurrence to certain physiological and psychological variables playing out in the mind of an exerciser. Also in disagreement was Quick (2013), who stated that muscle soreness tends to make muscles retain extra water which triggers plateau in exercise. The cause of this disagreement could be a direct result of low level of knowledge of exercise plateau by the exercisers in Enugu metropolis. It could also be that probably exercisers in Enugu metropolis do not keep records of their exercise progress such as hip and waist circumference measures or some other factors. The findings of the study also revealed that exercisers in Enugu metropolis utilized exercise management strategies to a low extent. This finding agrees with Okuneye and Ugwuogede (2016), which reported that Enugu residents' utilization of gymnasium equipment was low. Nwankwo and Nnamani (2014), also reported that students in Enugu State had low utilization of reproductive Health Services. In contrast, however, Nwankwo and Ejike (2014), Observed that students in Abia State Utilized Delayed Sexual Activity Abstinence at a very high level. It may be that people generally do not utilize health promotion services including exercise plateau management strategies. However, the indices investigated in the reports centered on students which may also have accounted for the contrasting report.

Findings also showed that gender is not a factor of variance regarding the utilization of exercise plateau management strategies for health promotion. This finding is consistent with the finding of Nwankwo and Nnamani (2014) who stated that male and female students in Enugu State had low utilization of RHS. The finding is also in agreement with Okuneye and Ugwuogede (2016), which found male and female Enugu residents utilizing gymnasium equipment at a very low extent. However, the finding disagreed with Nwankwo and Ejike (2014), report which stated that female students in Abia State utilized Delayed



Sexual Activity Abstinence more than their male counterparts. It could probably be that the health promotion indices investigated are different which most likely could attract differentials in utilized by gender. Also male and female exercisers in Enugu possessed low level of knowledge of exercise plateau hence the utilization of management strategies of it may likely follow a similar pattern.

Conclusions

Based on the findings, the study concludes that exercisers in Enugu metropolis have low level of knowledge of exercise plateau. The utilization of exercise plateau management strategies was also low and this trend cuts across gender. A trend that must ought to be reversed

Recommendations

From the findings and conclusions of the study, the researchers wish to recommend as follows:

1. Fitness and wellness appreciation course be organized for exercisers at different exercise spots in Enugu metropolis by the ministry of sports in collaboration with the ministry of health in order to sensitize them on barriers to exercise goals.
2. Instructors/trainers workshops and seminars to sensitize them about the existence of plateau in exercise and the management strategies to stem the tide should be organised
3. Electronic and print media should be sensitized on the need to create columns and airtime windows for fitness and wellness talk-show. This could be achieved through the imitation of experts in movement science to throw more light on exercise plateau as well as other barriers to this aspect of health promotion programmes

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