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Research Paper

A case study of a three week physical exercise on self-efficacy and sustained physical activity among Nigerian universities undergraduate freshers

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ABSTRACT

A significant relative contribution towards students' self-efficacy and involvement in sustained Physical Exercise (PE) is needed to upturn the downward trend of physical activity among adolescents in many Western and developing countries, including Nigeria. This a case study of a three week physical exercise on self-efficacy and sustained physical activity among Nigerian Universities undergraduate Freshers. A quasi-experimental research design made up of one experimental group (peer-led) and one control group was employed. All-inclusive random sampling was used to carry out this intervention (n=600) while data were collected using Forum Focus Group Discussion (FFGD) and (pretested semi-structured questionnaire. The FFGD were analyzed into its thematic headings and the data collected from the survey questionnaire were analyzed using SPSS version 21 to facilitate data entry and analysis. ANOVA and multiple regressions were used in testing hypotheses. The result showed that the highest number 218 (36.3%) of participants were from the aged group 17, followed by 147(24.5%) who were 16 years old. Females 379(65.2%) were more than the male 221(36.8%) respondents. The self-efficacy result at pre-test showed that those who cannot do PE at all were 349 (58.2%) while there was a slight increase in the number 308(51.3%) of those who participated because Peer Leader said they could. There was no significant relationship (P> 0.05) between guilt and feeling of not doing right which had a negative pre disposing factor to self-efficacy. The study showed that there was a statistical significant relationship between peer support and self-efficacy and sustained PE (p<0.05). The predictor variable, peer support, (β= 0.268, t(600) = -6.523; p < 0.05) was found to have significant relative contribution towards students' self-efficacy and involvement in sustained PE. It was recommended that there is need to design appropriate policy framework for implementing effective peer led physical exercise in tertiary institutions.

Key words: Peer led, peer support, self-efficacy, sustained physical activities, effect of physical exercise.

Word Count: 301

INTRODUCTION

Regular physical activity/exercise (PA/PE) has beneficial effects on overall health (WHO, 2003)and it is important for combating the escalating problems of obesity and Type 2 diabetes among youth (Harris et al., 2009; CDC, 2012).

Despite overwhelming evidences of debilitating effects of a sedentary lifestyle, and the benefits of an active lifestyle, involvement in PA decreases (Emily et al., 2003; Parvaneh et al., 2008). Healthy People (2010) and Centre for Disease Control and Prevention (CDC) (2010), reported that college students spend more time on video games and television than on physical activity and tend to snack more than students engaging in other activities. Low participation or dwindling involvements in PA/PE in higher institution were pinned on lack of social support from the family of the college student, low self-esteem, and lack of proper health promotion and education on the debilitating effects of inactivity CDC (2010) and also low involvement on the use of PA/PE has been pinned on low self-efficacy, lack of health promoting education and enlightenment, low peer psychological influence, social and family influence, enabling environment, facilities and equipment, motivation and cultural barriers.

Peer involvement and influence is heightened during early adolescence, and peer leadership capitalizes on this developmental reality in a way that has not been demonstrated by many physical activity initiatives. A literature review of evidence-based, state-of-the-art physical activity interventions involving 6th graders shows a void in the utilization of peer leadership frameworks for positive physical activity outcomes. Combining peer leadership with innovative programming can serve as a model for engaging youth at school and at the same time promoting physical activity outside of school (Daheia et al., 2012).Adolescents with poor peer relations carry this to adulthood as evidenced in psychopathological symptoms and this has led to low involvement in PA (Animasahun and Ojo, 2011). The individual, who is influenced by peers follows social expectations and imitates behaviours of peers. Secondly, Self-efficacy has repeatedly been shown to be strongly associated with physical activity participation (Michael et al., 2000).

Despite the fact that regular physical activity (PA) has a beneficial effect on overall health, (WHO, 2003; Strong et al., 2005; Parvaneh et al., 2008),as well as important in reducing the problems of obesity and Type II diabetes and other cardio-vascular diseases, hypertension, genetic and lifestyle related disease among youths and others, physical activity decreases with age and among adolescents in many Western and developing countries, including Nigeria. The decline in physical activity among the youth with age may be the most consistent finding in physical activity epidemiology (Sallis, 2013).Although interventions to increase PA have been developed in a variety of settings and have used a range of behavioural science theories to guide intervention design, the majority of school-based interventions have evaluated enhanced PE programs in primary school settings (Barr-Anderson et al., 2012). There is dearth of scientific documented information to improve participation using peer-driven approach to enhance self-efficacy and involvement in physical exercise among undergraduates. The study also helped to generate information which could be used to design an appropriate policy drives for implementing effective PE in tertiary institutions. The results of this study have great potential for stimulating policy formulation or facilitating necessary curricular review aimed at promoting young persons' participation in PE for the purpose of maintaining good health status and especially for the undergraduate of Babcock University. Results from this exercise will be useful for the design of evidence-based program for facilitating the adoption of PE by university students.

METHODOLOGY

The study is a quantitative method of quasi-experimental research design made up of one experimental group (peer-led) and one control group. It was aimed at investigating the effects of two independent variables which are peer led, this included the peer led in PE and participating in PE among the freshmen of Babcock University.

This study employed both qualitative and quantitative data collection methods and carried out in phases. The students were recruited to the experimental and control groups. Baseline data were collected from both experimental and control. The experimental groups were exposed to the intervention of peer led training, while the control groups were not involved in the intervention. The quasi experiment (intervention) was done within three weeks. The baseline data was collected before the three (3) weeks intervention of peer led physical exercises began and the immediate post intervention was at the end of third week in which the post data was collected.

The dependent variables were the student motivational indices of enjoyment, perceived effort (efficacy) and perceived competence from the peer, student perceived motivational climate, achievement goal orientation as doable and perceived autonomy. All summed up on BU undergraduate student's self-efficacy and actual Participation and involvement in P. E. The independent variable is Peer-led or peer-supported PE training. All variables were assessed before and after the intervention. In order to reduce investigator selection bias, prior to the start of the intervention, participants were randomly assigned into the groups using their departments. At the end of the third-week (3rd) intervention, all students again completed the same questionnaires as post intervention.

Study area

The study was carried out in Babcock University, Ilisan-Remo in Ikenne Local Government Area (LGA) of Ogun Staten in Nigeria. Ikenne-Remo is the Headquarters of the

LGA. The area lies along latitude 60.43'E and longitude 60.51; N of the equator in the South Western part of Nigeria. The annual rainfall is 1,500mm and the mean annual temperature and sunshine is about 27O and 2100-2350 hours respectively, depending on the season. A majority of students live on campus and females are slightly more than males. Babcock University has a full lustre of green and open spaces with a great number of paved walkway that stimulated and enhanced participation in PE. Moreover, there are Sporting facilities such as the Stadium with full radial stadia controlled but not limiting by the Unit of Sports and Social. Such facility included the Tennis courts, Basket Ball Court, volleyball, Badminton, Gymnastic centre and football pitches with Hall side pitches to compliment the above listed facilities and equipment and a reaching hospital. The population for the study was the Babcock University Undergraduate.

Sample size selection

A three steps all-inclusive random sampling method was used to carry out this intervention among the freshmen of Babcock university (n=600). In the step 1, the freshmen were all canvassed into the study within their classroom and all those who volunteered were included in the study.

Step 2: the volunteered freshmen were sorted to their different Department and Schools. A simple random sampling was used to select participants to a forum Focus Group Discussion at the middle of the intervention. This was to elicit direct opinions of the freshmen about the ongoing intervention and to consolidate the effect of the first two weeks of the intervention. The participants were allotted to numbers and all tenth (10) numbers were drafted into the Forum Focus Group Discussion. In all 60 participants were co-opted into the FFGD, however, only thirty (30) of the freshmen participated in the FFGD.

Step 3: The full session of the Forum Focus Group (FFGD). There were three sessions of focus group discussion conducted in three different Classes: that is, Wilfred Rilley Auditorium (WRA), Crystal Hall and Light House (Felicia Adebisi Dada). At the end of the FGD the three groups converged for the closing forum. Contacts were made through their peers representing and the peers also used test messaging to alert them of development.

The experiment

The experimental group participated in the three week intervention in phases. The physical exercise (PE) was organized in three phases:

1. The unorganized session which involved voluntary participation without an organized sports and activities for two one weeks (the first week).
2. The intervention by week two and three included the introduction of planned PE and the introduction of the Peers leading out in the intervention.
3. At week three, the peer leaders were withdrawn again.
4. At the end of week three (3) all the freshmen were exposed to the planned ingredients of the intervention i.e. the Peer participation. The program culminated on the whole University participating in a trek fit and jog fit exercise); Only the control group was not exposed to the intervention of at all.

Instrument for data collection

The data for the study were collected using both qualitative and quantitative method through the Forum of Focus Group Discussion (FFGD) (Susan and Lenon, 2006; Mary, 2007; Aja et al., 2012), and the use of pretested, semi structured questionnaires which were designed based on the research questions, literature and the adapted from WHO (2003) standardized questionnaire were administered at the baseline and at the end of the intervention.

Focus Group Discussion guide was a seven item Forum Focus Group Discussion. The FFGD Guide that was used to elicit a qualitative discussion from the students' had a three phase approach which included the Forum, the Focused Group Discussion and the Closing forum. In all three FGD sessions were conducted.

The questionnaire assessed the self-efficacy of the students on the use of physical exercises as a means of promoting health. The questionnaire was in form of Likert scale includes which probed on self-efficacy rated on scale of 1-100 and a score below average is rated low and means score above the mean is rated high. The self-efficacy was rated 1-3. A score of 1 means cannot do at all and score of three means highly can do.

Perceived capabilities to exercise (self-efficacy) were adapted from an existing exercise self-efficacy scale. This scale included five items (e.g., I do exercise regularly, I could exercise even if I was tired, I need my friend to support me before I exercise, I know there is a benefit for exercise and I love to get involved at any time.) which was rated on a 5-point scale ranging from 1 (not at all confident) to 5 (very confident). Cronbach's (2009) alpha value for the self-efficacy score was used. The second phase involved rating the University Freshmen on Bandura's self-efficacy of 1-100. The freshmen were asked how confident or satisfied they were that they could exercise in the following situation: when they were very tired; when they were bad mood; when they did not have time; when they were on holidays; when it was raining; or when it took a lot of effort. The response scale was a self-rating scale from 100 - point self - rating scales which ranged from 10 - 30

"cannot do at all", 40-60 "not at all confident" or moderately can" and 70-100 "very confident" or "highly can do". The five self-efficacy items were summed to form a single self-efficacy variable which was dichotomized into high and low self-efficacy based on a median split and same as the self-rating scale.

Method of data analysis

The FFGD was transcribed and analyzed thematically and the responses were used to substantiate the result of the quantitative analysis.

The data collected through the questionnaire were analyzed using both the descriptive and inferential statistics. Data analysis involved the use of Pearson Product Moment Correlation and Multiple-Regression procedure to seek for possible predictive capacity of the independent variables and the dependent variable. The hypothesis was tested using a T- test (independent T-test). The self-efficacy was rated on a 5-point scale ranging from 1 (not at all confident) to 4 (very confident). Cronbach's (2009) alpha value for the self-efficacy score was used. Other inferences were drawn using ANOVA. The Statistical Package for the Social Sciences (SPSS) version 21, a statistical package developed by the U.S. Centers for Disease Control and Prevention and WHO, was used to facilitate data entry and analysis. Ethical approval for the study was from Babcock University Post Graduate Ethical Committee. The willingness of the respondents who were asked to volunteer was of great advantage for an inform consent, since a study of this nature deals with human nature, frailties, flexibilities, dynamisms and changes. Hence, a proper informed consent was gotten from both the school and the individual involved apart from the main ethical approval from the Babcock University Health Research and Ethical Committee (BUHREC) Number BUHREC007/14.

RESULTS AND DISCUSSION

The result was presented in two sections. The first section was on the qualitative result and then the second part was the quantitative result (the Survey result).

The result of the FGD

The FGDs was used to explore the meanings of survey findings that cannot be explained statistically, the range of opinions/views on a topic of interest and to collect a wide variety of local terminology. In bridging research and policy, the FGD was useful in providing an insight into different opinions among different parties involved in the change process, thus enabling the process to be managed more smoothly. It is also a good method to employ prior to designing questionnaires. These sessions provided an opportunity for learning about the participants' perceptions, opinion and attitude' or views relating to the following: general impression of their school; awareness and knowledge of PE; types of PE; level of interest in PE; perception and attitudes; benefits of PE; motivation relating to PE and consolidation of the first two weeks of the intervention.

The discussants' general impressions or perceptions of their school

The FGD resulted in two main themes they were the Planning and the execution of the program. The discussants' general impressions or perceptions of their school in terms of their experiences on the Physical exercises training that they have being involved in. These included their opinion view and what they like or do not like about the peer led physical exercise training that was embarked upon in the school. The first issue of discussion was their views about the physical exercise in the passing two weeks of training. Discussants were asked to narrate their experiences since the PE training that started about three weeks ago. Many of the discussants mention of history of good academic work, some said that it has improved the staging of socio-cultural activities in school and participation in PE has increased within the school. They said that this has a change in the personal self-efficacy drive and motivation. These opinions cuts across all the groups of discussants. However the following issues were also raised.

Generally, all the groups mentioned or stated the fact that PE was fun and interesting. Mention was made of their experiences at the baseline on the issues of anthropometric measurement and filling the questionnaire putting it in their words that "filling the questionnaire and having their anthropometric and vital signs measurement was a good approach into revealing their health status since many do not know that they have an underline ailment. They highlighted the importance of participating as beneficiary. Some put it that the since the program was novel it is still at the introductory stage though they came with a high expectation but many were disappointed. Some said the program was just okay. In the opinion of the majority 'it wasn't fun when we started'. The thought of some were that 'I felt there was no real motivation in the first week' in the language of one of the discussant though this view cut across the group. The issues of the planning were not fully unfolded to the participants since it included timeline introduction and withdrawer of the variables in study like the self-motivational drive and the peers. The program is expected that the peers were hidden for the first week since the week one was to be without any support or the peers.

However, few said it seemed normal because I do it with my friends on regular bases. The discussants were asked to express their view on the program in week one. Hence at the wake of the program these were some other listed view as many people put it:

That the program was very stressful and it also took out resting period (Sunday) many said that the school program is hectic enough and no resting time. Many said that the school is stressful. The Sabbath was filled with various activities and the Sunday is also now use for exercises. Majority said it gave room for fun and entertainment, the period was also used for associating with new people. "And that exercise is good but stressful". Majority said that it serves as a "source of inspiration" and also" had a positive impact on my daily activities".

The discussant however on week one revealed the opinion of the participants on the program without the peer or support. The prompting question was that "if the week one was interesting"?

Many responded that there was confusion at week one. "It was muddled up because there was no organization and there was no directive". There was no drive though some teachers were present yet it was choked up. The time set back was also mentioned as many stayed there for more than necessary and was disorganized the stadium could not even contain the turn out.

In the opinion of the student about week one, they said it was discouraging because of its link with Monday and the first day of the week (Sunday) was to be used to prepare for the second day. A further probe into this, revealed that the discussants said that they needed to prepare and get ready for Monday when school work will start. We are not used to waking up early on Sundays and it was indeed a great sacrifice to wake up early and more over for PE early in the morning and to run. To put it in the participants' local word "they are just still started booting," (they supposed to just be waking up).

Other common comments relating to academic work in their school included that:

• The school exposes us to a variety of academic activities such as quiz competitions, games and sports.
• Our school has good and capable teachers, and the teachers are qualified.

Participation

Week one was the focus at this stage and the discussant talked about the total number of participants on the field. The freshmen of Babcock University members said that at week one those who came in to the field were massive. The Entire group accented to the fact that there was a heavy turn up to the program and hence the venue was jam packed. Majority of the discussants were present at week one and two. The number of students who participated in week one showed that there was massive turn out of student at week one but they reiterated the fact that it should be more organized.

Week one without peer involvement

Freshmen strongly affirmed the use of peer as they all said that some few peers like the captain came out to lead the group. These peers that led out were volunteers in their classes. It is easier to follow the peers as they lead out. On the average a group rated week one, four over ten, that is, $(\frac{4}{10})$ and in other groups experiences and participation was rated at its best was rated between forty or forty five percent (40 to 50%). On overall rating, the week one was rated best of well below average. This was below average on a normal rating. In their own opinion week one was "Boring, rowdy, no professional instructor, no directive, no direction, and no adequate information. The freshmen advocated that future participation should not be patterned to the week one. Week one was an introductory and the peer supports were not present, this was planned to view the individual attitude and self-motivational efficacy.

The involvement of peers or classmates as team leaders (students young team) in Week one

The participants were asked if there is involvement of Peers or classmates as team leaders (students/young team leader) in Week one. During the FGD, humans are social being we may not but shows a group dynamics within us. The other group of discussants confirmed that they selected two peers among their classmate to lead out even though some of the participants said that there was at least a volunteer student per class who led out in their group. Among the other group, some however said that it was mainly group leaders that led out. It was observed that the groups worked in harmony with the peer.

Though some of them were able to find something to do on their own, like jogging, stretching jumping, waist exercise, basic warming, skipping, volley ball, football, Badminton, Running, Basketball, Running, Jogging, Skipping and tracking (track and field events). Each group leader was helping out in some areas

Week two focused

Week two was organized the same pattern with week one and most of the responses were noted as week one.

Attendance and participation

About how many students participated in week two? It was unanimously agreed and stated that it was not as week one. The drop in participation was due to the fact that many were discouraged about what happened in week one. The discussants generally said the turn out were about eighty percent of the week one and that there were few participants. Some of the group estimated attendance to between seven hundred and fifty to about a thousand, while some of the freshmen just came to write the attendance and left. Some rated attendance like the week one. In as much many were not around.

Involvement of the peer

The classmates were not recruited as team leader except the volunteers. The peers were volunteer peers who led out the first week. Though as said by some others that most students did not volunteer but some did. In some areas peers were called out by the teachers.

The various activities people participated in during week two?

In general the young under graduate strongly felt that other organized sporting activities and materials should be provided such as plenty ball, racket, bat and tables swimming and not only to dance and jog alone their comments were stated in their view: some said that 'we participated in almost all the games/ exercises available' many were involved in 'jogging, stretching, breathing, waist exercise and other basic warm up exercise, and others were, trekking, football and stretching.

The freshmen were cleared in rating each of the PA engaged in during week two. The students rated second week a little bit above average. Generally, the whole students viewed the overall average score as fifty four.

Program planning

The students generally stated that future PA program should not be patterned as the week two and week one. They were of the opinion that 'I think it still lacks motivation and organization but it can work if it continues this way". They indicated that there may be more improvement if 'the pattern can still be improved; it will still not attract a lot of people" 'more efforts should be asserted to attract a lot of students'.

Week three

Participation students, teacher and peers

The student were not sure of the total numbers of participants but they still put it for well above 700 students. The subject teachers who participated in week three were between 5-6teachers. The professional teachers who were present were about 5-6. However the peers who led out were the classmates who served as volunteered peers who trained other for the whole weeks.

The Peer student leaders had a cordial relationship. The entire group submitted that the music and the training were 'indeed wonderful' they participated in many other PE programs as stated above.

Rating of week three

Week three on the average was rated the best as excellent. The students submitted that future PA/PE program should be like what happened in Week three they said that "yes, it was well organized, interesting, more active and its impact, was felt". Some said that it was "yes, because it was highly motivating" and in the opinion of Majority if not all that "yes, it will be a welcomed idea on the part of the students". If the program is well packed like week three.

General comments

At the end of the FGD the closing forum was an interesting one. The following were the submission of the students:

- Diversify: all types of game/exercise should be encouraged; enough equipment should also be made available.
- Available equipment should be well maintained
- The whole essence of the program was to encourage fitness and I believe it was achieved
- There was no first aid box visible
- The program should be more organized
- Provision of refreshments
- Provision of adequate professionals
- Adequate information should be given before the future program
- Students should be grouped for effective participation.
- Lectures should also be involved as a way of motivating student's participation in the program.
- Division of students in each Department should be employed for effectiveness
- More lectures should be deployed for effective control of students.

The students indicated that the program was successful but because it is a new program I believe it was just a transition state and every new program will also experience such preciousness. Improvement needs to occur on the following areas: organization, activities, information dissemination

Table 1: Showing the frequency table for the demographic status of the respondents.

	Age Actual	Frequency	Percent %	Frequency	Percent %
	17	218	36.3		
	16	147	24.5		
	18	100	16.7		
	Others	51	8.5		
Age	19	39	6.5		
	20	28	4.7		
	15	11	1.8		
	21	6	1.0		
Gender	Male	221	36.8		
	Female	379	63.2		
Marital Status					
	Married	8	1.3		
	Single	591	98.5		
	Divorced	1	0.2		
Total No of Meal	Less than 14 meals	273	45.5		
	14 meals	84	14.0		
	15-18 meals	154	25.7		
	21 meals	88	14.7		
How long do you sleep					
	Less than 4 hours	157	26.2	117	19.5
	Less than 6 hours	260	43.3	293	48.8
	8 hours	162	27.0	152	25.3
	10 hours	15	2.5	38	6.3
	More than 10 hours	6	1.0	600	100.0
Participation in PAPEbefore					
	YES	569	94.8	578	95.8
	NO	30	5.0	25	4.2
Involved in PE this semester					
	YES	537	89.5		
	NO	63	10.5		
Involved PAPE in the past four weeks					
	YES	488	81.3		
	NO	112	18.7		
Kind of PA before					
	Trekking	304	50.7	450	75.2
	Jogging	125	20.8	50	8.3
	Watching films	39	6.5	59	9.8
	Video games	30	5.0	30	5.0
	Brisk walking	19	3.2	11	1.8
Reason for not participating in PE					
	My school work	321	53.5		

Table 1: Conts.

	I don't have interest	86	14.3		
	I don't know the value of participating	30	5.0		
	It is not necessary	46	7.7		
	Don't know/No reason	117	19.5		
Who encourages you to participate in sports (while in school)					
	Father/Parent	98	16.3	83	13.8
	Mother/Parent	21	3.5		
	Guardian	6	1.0	9	1.5
	Friend	135	22.5	255	42.5
	Course mate	54	9.0	66	11.0
	Class mate	57	9.5	77	12.8
	Teacher	77	12.8	34	5.7
	Room mate	48	8.0	68	11.3
	Nobody	104	17.3	8	1.3
Have you ever heard of PE can be used to control certain diseases					
	YES	539	89.8	559	93.2
	NO	61	10.2	41	6.8

and instructions.

The survey result

The study investigated the composite effect of peer support on student's self-efficacy as well as their involvement in physical activities. Data collected were analyzed using frequency count, Pearson correlation and multiple regression, to test and answer the hypotheses at 0.05 level of significance were applied. Some of the salient findings from the results are hereby summarized.

Although, actual age was used, majority 465(77.5%) of the respondents were between the age of 16 and 18 years, females 379(65.2%) and single 591(98.5%),(Table 1).

It was revealed from the result that freshmen have knowledge of physical exercise in order to enhance their state of health (Table 1). Females dropped out of organized physical activity/sports is almost fifty percent more than males due to having too much coursework 321(53.5%) see table 3 also. The study showed that the group age 17 were more predominant 218(36.3) in the study, while, others followed respectively (Table 1). Also, it was revealed that female 379 (63.2%) students participated in the study more than their male 221 (36.8%) counterpart.

Table 2 shows that some 138 (23%) of the respondents were engaged in gymnastics while majority 462 (77%) do not engaged in gymnastics. Some 214 (35.7%) engaged in bicycling and majority 555(92.5%) of the respondents were engaged in trekking to class while few 45(7.5%) do not trekking to class. Majority 451 (75.2%) of the respondents said they engaged in jogging, while 149 (24.8.5%) were sedentary. Others how be it only 221 (36.8%) of the respondents do play football at times before the intervention and at post intervention 307 (51.2%) have started to play football. A few 134 (22.3%) of the respondents play football at the side of the house at the baseline and at post it was increased 289 (48.2%) Trekking at post were majority 590(98.3%) while 348 (53.2%) do not play football at the baseline. Only few172 (28.7%) of the respondents go for swimming. This is obvious at post test that majority 425(70.5%) of the respondents do not swim. This may be due to the non-availability of a swimming pool within the University Campus. Many 328 (54.7%) of the respondents are physically active and many 378 (63%) of the respondents intended to be more physically active. Before the intervention many 340 (56.7%) of the respondents had been regularly physically active in the last four weeks while 260 (43.3%) were not. At the post majority 477(79.5%)were currently active, many 73% were engaging in regular PA and 71.7% confirmed that within the intervention program for the past three weeks they have been regularly active (Table 2).

A composite result of the Pearson Correlation of -0.164 result indicating negative relationship between the predictor variable (peer support) and students' self-efficacy was very low. Also, there exist a significant relationship between peer support and students' self-efficacy at $p<0.05$.

Table 2: Types of PE reportedly enjoyed most among the respondents.

S/No	Type of PE	Pre		Post	
	(N=502*)	Yes %	No %	Yes %	NO %
1	Track Related PE [a]			392(78.1)	110(21.9)
	Jogging N=600			451(75.2)	149 (24.8.5)
	Trekking	555(92.5)	45(7.5)	585(97.5)	15(2.5)
	Bicycling	214 (35.7%)			
	Gymnastics	138 (23%)	462 (77%)		
2	Ball Games Related PE [g]			381	75.9
	Football	221 (36.8%)		307 (51.2%)	
3	Field Related PE [b]			146	29.1
4	Other Related PE [h]			86	17.1
	Swimming			172 (28.7%)	425(70.5%)
5	Gymnastics Related PE [d]			73	14.5
6	Calisthenics Related PE [f]			73	14.5
7	Indoor Games Related PE [c]			28	5.6
8	Outdoor Games Related PE [e]			27	5.4
9	Regularly physically active	340 (56.7%)	260 (43.3%)	477(79.5%)	73%

* There are multiple responses
[a] Track Related PE refer to the following: running, jogging, relay race and matching.
[b] Field Related PE refer to the following: High jump, Long jump, Discus, javelin, shot-put.
[c] Indoor Games Related PE refer to the following: snooker, card, whot, chess, ludo, ayo.
[d] Gymnastics Related PE refer to the following: summersaulting, dancing, skipping and gymnastics.
[e] Outdoor Games Related PE refer to the following: Trekking, cycling, suwe, tenten, hide and seek.
[f] Calisthenics Related PE refer to the following: exercises, standing on toes, press-up, stretching, frog jump.
[g] Ball Games Related PE refer to the following: football, volley ball, hand ball, table tennis, basketball.
[h] Other Related PE refer to the following: swimming.

There was a statistically significant difference between gender on the combined correlates (psychological, social, and environmental) leading to the participation in unorganized physical activity. This was unassociated with the students' decision not to be involved in organized physical activity this showed a slight increase in the number 45(7.5%) of those who have started to always participate in PE as of the baseline number 13(2.20) and to those who were always participating, the same as those 54(9.0%) who never participated was increased to 45(7.5) (Table 3).

Self-motivation is a special indicator of positive self-efficacy and the self-motivation of the individuals in getting involved in physical exercises were shown in the table 4 below. The table showed that less than one-quarter 126 (21%) of the respondents seldom or never engaged in exercise, some 135 (22.5%) had it for less than one time per week; some 105 (17.5%) of the respondents do get involved in PE for only once or twice per week while about one-third 201(33.5%) had it for three to five times per week and only 33 (5.5%) of the respondents had it six times or more per week (Table 3).

The changes in outcome variables across time for each of the two groups have significant interaction effects on time for perceived benefits, self-efficacy, interpersonal norms, social support, counter conditioning, stimulus control, overall time spent being active per week and PA (mean minutes per day), indicating that the groups differed across time. Also, when baseline and post test were compared, there was an increase of participation in PE (on self-efficacy and pattern of practice and involvement in physical exercises) one to two times per week from 105 (17%) to

Table 3: Showing respondents feeling towards Peer led Participation in Physical exercise their social ties

F		Pre Freq	Pre Percentage	Post Freq	Post Percentage
Strength of social tie by planned relaxation with friends	Never	54	9.0%	45	7.5%
	Rarely	191	31.8%	157	26.2%
	Sometimes	252	42.0%	217	36.2%
	Usually	88	14.7%	94	15.7%
	Always	13	2.2%	87	14.5%
Reason for not participating in PE	My school work			321	53.5
	I don't have interest			86	14.3
	I don't know the value of participating			26	4.3
	It is not necessary			46	7.7
	No response			121	20.2

Table 4: Self-Efficacy and pattern of practice and involvement in physical exercises.

Level of Participation in Physical Exercise				
N=600	**Frequency Pre**	**Percent Pre**	**Frequency Post**	**Percent Post**
Seldom or never	126	21.0	118	19.7
Less than one time	135	22.5	89	14.8
One to two times per week	105	17.5	174	29.0
three to five times per week	201	33.5	63	10.5
Six times or more per week	33	5.5	156	26.0

174 (29%) (Table 4).

Main effects tests for the experimental and the control groups at post-intervention compared with the baseline covariate values revealed significant differences for counter conditioning, F = 59.276, mean score within group 1.60, df 2, p= 0.000, R = -282, the overall minutes on those that said they can do PA per week =2.30 (Table 5).

For the Base line test, the multiple regression correlation coefficient indicating the relationship between the predictor variable (peer support) and students' self-efficacy is 0.345. This was revealed from the analysis that the predictor variable, peer support (β= 0.245, t(600) = 6.295; p < 0.05) was found to have significant relative contribution towards students' self-efficacy. Hence, was of importance since the result of the mean knowledge score showed that the mean difference was low hence efficacy of the individual about performance needed to be enhanced. Furthermore, multiple regression correlation coefficient indicating the relationship between the predictor variable (peer support) and student's involvement in physical activities is R=0.152 at 0.005 level of significant. Therefore, we accept the null hypothesis that there is difference between BU undergraduate students' self-efficacy at baseline and post test of the Peer led PE. The predictor variable, peer support (β= 0.100, t(600) = 2.444; p < 0.05) was also found to have significant relative contribution towards students involvement in physical activities.

The posttest result on the multiple regression correlation coefficients indicated the relationship between the predictor variables (peer support) and students' self-efficacy is 0.268. Among the predictor variables, only peer support (β= 0.268, t(600) = -6.523; p < 0.05) was found to have significant relative contribution towards students' self-efficacy. There was an improvement in all the groups except the control. This was not different from what (Parvaneh et al.,2008) said about groups that a significant interaction exist between group, perceived benefits, self-efficacy, interpersonal norms, social support, behavioural processes, and PA behaviour, indicating that the intervention group significantly improved across the intervention, whereas the control group did not. Multiple regression correlation coefficient indicating the relationship between the predictor variables (peer support) and students involvement in physical activities is

Table 5: Showing the means of time spent on activity and the peer.

Report				
Time spent on vigorous exercise				
Exercise if a friend can support me	**Mean**	**N**	**Std. Deviation**	**Variance**
10-30(Cannot do at all)	3.28	189	1.765	3.115
40-60(Moderately can)	1.96	237	0.877	0.769
70-100(Can do highly)	2.30	174	1.044	1.089
Total	2.47	600	1.383	1.912

ANOVA Table							
			Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**
Time spent on vigorous exercise * Exercise if a friend can support me	Between Groups	(Combined)	189.787	2	94.894	59.276	.000
		Linearity	91.270	1	91.270	57.012	.000
		Deviation from Linearity	98.518	1	98.518	61.539	.000
	Within Groups		955.731	597	1.601		
	Total		1145.518	599			

Measures of Association				
	R	**R Squared**	**Eta**	**Eta Squared**
Time spent on vigorous exercise * Exercise if a friend can support me	-0.282	0.080	0.407	0.166

Table 6: Regression Summary Showing Composite effect of peer support on students' involvement in physical activities?

R= 0.312 **R square= 0.097** **Adjusted R square=0.092**					
Model	**Sum of square**	**Df**	**Means square**	**F**	**Sig.**
Regression	1548.591	2	774.295	17.518	.000[a]
Residual	14364.772	325	44.199		
Total	15913.363	327			

0.312 and the predictor variable peer support (β= 0.181, $t(600) = 2.749$; $p < 0.05$) was found to have significant relative contribution towards students involvement in physical activities. Results revealed that although most of the freshmen have decided to be engaging in PE. This indicated that there is significant linear relationship between the predictor variable which is the peer support and students' involvement in physical activities (Table 5).

One of the Research Question was that what is the relative contribution of peer support on students' involvement in physical activities?

Table 6 shows that the predictor variables, peer support, was β= 0.181, $t(600) = 2.749$; $p < 0.05$ were found to have significant relative contribution towards students involvement in physical activities. This implies that the peer support played a very significant role in students physical activities (Table 5). This is found significance P= .000[a] hence the impact of the peer led to increase the self-efficacy of the respondents thereby increases involvement in PE among the freshmen of BU before and after program showed significant difference of p<0.000[a] yet training program by peer has been more effective in helping to shift of the sedentary life.

Participation in physical exercise and the student's self-efficacy

The respondents were exposed to two methods of treatment. The two types of experimental exposure on the

Table 7: Shows the ANOVAs table of the relationship between the self-efficacy and participation in PE among the Respondents.

Variables		Frequency	Percent
Exercise because other people say i should	10-30(Cannot do at all)	349	58.2%
	40-60(Moderately can)	167	27.8%
	70-100(Can do highly)	84	14.0%
Exercise even when I don't feel guilty that I didn't	10-30(Cannot do at all)	291	48.5%
	40-60(Moderately can)	172	28.7%
	70-100(Can do highly)	137	22.8%

experimental group were to make then run through the first week without any support and the second week the the same ran through the third week, while the control group was not given any treatment. The experimental group which is the Peer led group was subjected to the weighted and unweighted deviations where the data from among those who experienced the dosage were analysed and the result was translationary to the sum of squares (x^2) 9.281; df=5 and significant at p< .000. The same significant ratio was found among the respondents who consented to the fact that PA gives them self-contentment. How be it, those who said PA/PE does not give the self-confidence which was also significant p<0.001 (see appendix 1a and b).Hence at post intervention it was not significant using sum of squares (x^2) for the weighted average 1.645; df =1 p> 0.068. There is no difference in having contentment and self-confidence since participation seems compulsory

Tables 7 and 8 show the respondents self-efficacy mean score ranged between one and two. The lower the mean the better their score as only 138=mean score 1.56±1 would not exercise even other people encouraged them. Self-efficacy of those who exercise because significant other say they should exercise was significant at 0.005<0.035 (Table 8). At pre those who cannot do at all were 349 (58.2%) (Table 8) while there was rise in the number 308(51.3%) of those who participated because others said they should at the post intervention and this was the trend across the entire intervention group. Guilt and feeling not doing right is a negative pre disposing factor to self-efficacy like I would have done this or that to have improved my health. It was not significant (P=0.055, or P> 0.05) 48.5% cannot do at all while, 51% moderately can and can do highly with encouragement from people. However, using the fixed model random effects showed the respondents who could exercise if they are tired were found statistically significant P=0.034.

Table 8 shows that there is a significant difference in the self-efficacy of the respondents across the group when the mean square ranges from 0.286 – 18.591: df=3 and P<0.000 exercise with friends support, even when one is tired and making a regular commitment to participating in PA/PE.

Those who would exercise while on holidays, exercise if nobody encourages them and those who sees their counterpart doing it and that others like their teacher and peers do participate were found to be significant P=0.000 using ANOVAs test (see Table 9).

CONCLUSION AND RECOMMENDATIONS

Based on the outcome of this study, school administrators and policy makers should note that enormous contributions of peer support played a very significant role in determining the student's self-efficacy and involvement in physical activities. Also, the study generated information that can be used to design an appropriate policy framework for implementing effective physical exercise in tertiary institutions and stimulating policy formulation or facilitating necessary curricular review, aimed at promoting young persons' participation in physical activities for the purpose of maintaining good health status and especially for the undergraduate students of Babcock University. Therefore, all hands must be on deck on how to improve students self-efficacy and their involvement in physical activities through absolute incorporation into the curriculum of higher learning. Jonathan etal. (2011) and Barr-Anderson et al. (2012) reported that to promote physical activity/sport among university college students, fun, fitness gain, and competition should be prioritized in the planning and delivery of the activity and Universities need to be individually creative in the design and implementation of physical activity/sport promotional strategies to meet the varying needs of their student's intrinsic motivation.

Based on the research findings on the relationship between predictor variable peer support and dependent variables of students' motivational indices, involvement in physical activities, enjoyment, perceived effort, (self-efficacy) and perceived competence of freshmen behavior, therefore the following recommendations are given for consideration by all stakeholders vis a vis administrators, policy makers, curriculum developers and sports handlers.

Accumulating scientific evidence indicates that physical

Table 8: Showing the Descriptive Statistic of self-efficacy of the respondents.

Descriptive										
			N	**Mean**	**Std. Deviation**	**Std. Error**	**95% Confidence Interval for Mean**		**Minimum**	**Maximum**	**Between-Component Variance**
							Lower Bound	**Upper Bound**			
Exercise because other people say i should	Yes		166	1.89	0.766	0.059	10.77	2.00	1	3	
	No		138	1.56	0.662	0.056	10.45	1.67	1	3	
	Sometimes		231	1.52	0.828	0.054	10.42	1.63	1	3	
	At times		65	1.86	0.556	0.069	10.72	2.00	1	3	
	Total		600	1.67	0.765	0.031	10.61	1.73	1	3	
	Model	Fixed Effects			0.749	0.031	1.61	1.73			
		Random Effects				0.106	1.33	2.00			0.035
Exercise even when i dont feel guilty that i didn't	Yes		166	2.13	0.740	0.057	20.01	2.24	1	3	
	No		138	2.05	0.813	0.069	10.91	2.19	1	3	
	Sometimes		231	1.66	0.854	0.056	10.55	1.77	1	3	
	At times		65	2.03	0.935	0.116	10.80	2.26	1	3	
	Total		600	1.92	0.847	0.035	10.85	1.99	1	3	
	Model	Fixed Effects			0.824	0.034	1.85	1.99			
		Random Effects				0.131	1.50	2.34			0.055
Exercise because I value the benefits of involvement	Yes		166	2.46	0.666	0.052	2.36	2.56	1	3	
	No		138	2.37	0.793	0.068	2.24	2.50	1	3	
	Sometimes		231	1.97	0.884	0.058	1.86	2.09	1	3	
	At times		65	2.37	0.486	0.060	2.25	2.49	2	3	
	Total		600	2.24	0.799	0.033	2.18	2.31	1	3	
	Model	Fixed Effects			0.771	0.031	2.18	2.30			
		Random Effects				0.136	1.81	2.67			0.061
Exercise because its fun	Yes		166	2.63	0.607	0.047	2.53	2.72	1	3	
	No		138	2.12	0.867	0.074	1.98	2.27	1	3	
	Sometimes		231	2.03	0.859	0.057	1.92	2.15	1	3	
	At times		65	2.00	0.810	0.100	1.80	2.20	1	3	
	Total		600	2.22	0.833	0.034	2.15	2.28	1	3	
	Model	Fixed Effects			0.794	0.032	2.15	2.28			
		Random Effects				0.164	1.69	2.74			0.089
Exercise regularly at least 3 days a weeks	Yes		166	1.79	0.859	0.067	1.66	1.92	1	3	
	No		138	1.79	1.619	0.138	1.52	2.06	1	13	
	Sometimes		231	1.76	0.856	0.056	1.65	1.87	1	3	
	At times		65	1.75	0.902	0.112	1.53	1.98	1	3	
	Total		600	1.77	1.082	0.044	1.69	1.86	1	13	
	Model	Fixed Effects			1.085	0.044	1.69	1.86			
		Random Effects				0.044[a]	1.63[a]	1.91[a]			-0.008

Table 8: Conts.

Exercise even if you are tired	Yes		166	1.84	0.826	0.064	1.71	1.96	1	3	
	No		138	1.62	0.620	0.053	1.51	1.72	1	3	
	Sometimes		231	1.55	0.832	0.055	1.44	1.66	1	3	
	At times		65	2.03	0.637	0.079	1.87	2.19	1	3	
	Total		600	1.70	0.783	0.032	1.63	1.76	1	3	
	Model	Fixed Effects			0.767	0.031	1.64	1.76			
		Random Effects				0.105	1.36	2.03			0.034
Exercise if a friend can support me	Yes		166	1.89	0.763	0.059	1.77	2.01	1	3	
	No		138	2.20	0.853	0.073	2.05	2.34	1	3	
	Sometimes		231	2.14	0.733	0.048	2.04	2.23	1	3	
	At times		65	2.72	0.625	0.078	2.57	2.88	1	3	
	Total		600	2.15	0.793	0.032	2.08	2.21	1	3	
	Model	Fixed Effects			0.760	0.031	2.09	2.21			
		Random Effects				0.148	1.67	2.62			0.073
Exercise knowing the benefit of participation	Yes		166	2.21	0.745	0.058	2.10	2.33	1	3	
	No		138	2.16	0.757	0.064	2.03	2.29	1	3	
	Sometimes		231	1.95	0.924	0.061	1.83	2.07	1	3	
	At times		65	2.32	0.831	0.103	2.12	2.53	1	3	
	Total		600	2.11	0.839	0.034	2.04	2.18	1	3	
	Model	Fixed Effects			.830	.034	2.05	2.18			
		Random Effects				0.084	1.85	2.38			0.020
Exercise when I am in a bad mood	Yes		166	1.64	0.810	0.063	1.51	1.76	1	3	
	No		138	1.80	0.897	0.076	1.65	1.95	1	3	
	Sometimes		231	1.24	0.529	0.035	1.17	1.31	1	3	
	At times		65	1.89	0.732	0.091	1.71	2.07	1	3	
	Total		600	1.55	0.771	0.031	1.49	1.61	1	3	
	Model	Fixed Effects			0.730	0.030	1.49	1.61			
		Random Effects				0.163	1.03	2.07			0.088
Exercise even when I do not have time	Yes		166	1.91	0.537	0.042	1.83	1.99	1	3	
	No		138	1.40	0.491	0.042	1.32	1.48	1	2	
	Sometimes		231	1.51	0.574	0.038	1.43	1.58	1	3	
	At times		65	1.68	0.471	0.058	1.56	1.79	1	2	
	Total		600	1.61	0.570	0.023	1.57	1.66	1	3	
	Model	Fixed Effects			0.535	0.022	1.57	1.65			
		Random Effects				0.127	1.21	2.02			0.054
Exercise when it was raining	Yes		166	1.81	0.836	0.065	1.69	1.94	1	3	
	No		138	1.82	0.922	0.078	1.66	1.97	1	3	
	Sometimes		231	1.52	0.807	0.053	1.41	1.62	1	3	

Table 8: Conts.

	At times		65	1.75	0.791	0.098	1.56	1.95	1	3	
	Total		600	1.70	0.850	0.035	10.63	1.76	1	3	
	Model	Fixed Effects			0.841	0.034	1.63	1.76			
		Random Effects				0.088	1.42	1.97			0.023
	Yes		166	2.13	0.647	0.050	20.03	2.23	1	3	
	No		138	2.28	0.801	0.068	20.15	2.42	1	3	
	Sometimes		231	1.61	0.832	0.055	10.50	1.71	1	3	
Exercise while on holidays	At times		65	2.31	0.828	0.103	20.10	2.51	1	3	
	Total		600	1.98	0.833	0.034	10.92	2.05	1	3	
	Model	Fixed Effects			0.777	0.032	1.92	2.05			
		Random Effects				0.194	1.37	2.60			0.127
	Yes		166	2.01	0.603	0.047	10.92	2.10	1	3	
	No		138	1.78	0.846	0.072	10.63	1.92	1	3	
	Sometimes		231	1.59	0.812	0.053	10.49	1.70	1	3	
Exercise if nobody encourages me	At times		65	2.26	0.973	0.121	20.02	2.50	1	3	
	Total		600	1.82	0.818	0.033	10.76	1.89	1	3	
	Model	Fixed Effects			0.788	0.032	1.76	1.89			
		Random Effects				0.144	1.36	2.28			0.068
	Yes		164	1.53	0.678	0.053	10.43	1.63	1	3	
	No		138	1.87	0.781	0.067	10.74	2.00	1	3	
	Sometimes		231	2.10	0.785	0.052	10.99	2.20	1	3	
Exercise because other people are doing it	At times		65	2.37	0.720	0.089	20.19	2.55	1	3	
	Total		598	1.92	0.797	0.033	10.85	1.98	1	3	
	Model	Fixed Effects			0.749	0.031	1.86	1.98			
		Random Effects				0.175	1.36	2.48			0.103

a. Warning: Between-component variance is negative. It was replaced by 0.0 in computing this random effects measure.

inactivity is a major risk factor for CVD. Hence moderate levels of regular physical activity confer significant health benefits. It has been found that peer driven physical activities has s direct impact on the self-efficacy and sustained physical activities. It was therefore recommended that the university administrators should employ the use of peer driven collegiate physical activities as this will allow all collegiate engage in regular physical activity at a level appropriate to their capacities, needs, and interests. Since peer support played a very significant role in determining the students' self-efficacy and involvement in physical activities, it was also recommended that there is need to generate information that can be used to design an appropriate policy framework for implementing effective physical exercise in tertiary institutions. Secondly, there is need to generate a stimulating policy formulation for facilitating necessary curricular review, aimed at promoting young persons' self efficacy that will promote participation in physical activities for the purpose of maintaining good health status and especially for the undergraduate students of Babcock University. All collegiate should engage in regular physical activity at a level appropriate to their capacities, needs, and interests while the university administrators need to conscientiously employ the use of peer driven collegiate physical activities to address adolescent identified health issues.

Table 9: Showing the descriptive statistic of self-efficacy of the respondents.

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Exercise because other people say i should	Between Groups	16.764	3	5.588	9.964	0.000
	Within Groups	334.234	596	.561		
	Total	350.998	599			
Exercise even when I don't feel guilty that I didn't	Between Groups	25.571	3	8.524	12.556	0.000
	Within Groups	404.589	596	0.679		
	Total	430.160	599			
Exercise because I value the benefits of involvement	Between Groups	27.619	3	9.206	15.485	0.000
	Within Groups	354.340	596	0.595		
	Total	381.958	599			
Exercise because it's fun	Between Groups	39.793	3	13.264	21.055	0.000
	Within Groups	375.472	596	0.630		
	Total	415.265	599			
Exercise regularly at least 3 days a weeks	Between Groups	.161	3	.054	0.046	0.987
	Within Groups	701.012	596	1.176		
	Total	701.173	599			
Exercise even if you are tired	Between Groups	16.424	3	5.475	9.313	.000
	Within Groups	350.369	596	.588		
	Total	366.793	599			
Exercise if a friend can support me	Between Groups	32.745	3	10.915	18.892	.000
	Within Groups	344.348	596	.578		
	Total	377.093	599			
Exercise knowing the benefit of participation	Between Groups	10.714	3	3.571	5.181	0.002
	Within Groups	410.805	596	0.689		
	Total	421.518	599			
Exercise when I am in a bad mood	Between Groups	39.198	3	13.066	24.542	0.000
	Within Groups	317.302	596	0.532		
	Total	356.500	599			
Exercise even when I do not have time	Between Groups	23.838	3	7.946	27.747	0.000
	Within Groups	170.680	596	0.286		
	Total	194.518	599			
Exercise when it was raining	Between Groups	11.779	3	3.926	5.553	0.001
	Within Groups	421.406	596	0.707		
	Total	433.185	599			
Exercise while on holidays	Between Groups	55.773	3	18.591	30.773	0.000
	Within Groups	360.060	596	0.604		
	Total	415.833	599			

Table 9: Conts.

Exercise if nobody encourages me	Between Groups	30.958	3	10.319	16.609	0.000
	Within Groups	370.315	596	0.621		
	Total	401.273	599			
Exercise because other people are doing it	Between Groups	45.442	3	15.147	26.976	0.000
	Within Groups	333.543	594	0.562		
	Total	378.985	597			

Government should stop trespasser on community land for recreation and open up a new recreation field before the lands are used up.

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Appendix 1a: Pre self efficacy [DataSet4].

Self-Efficacy Increased ANOVA							
				Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
It does give me self contentment	Between Groups	(Combined)		9.281	5	1.856	4.594	0.000
		Linear Term	Unweighted	7.712	1	7.712	19.085	0.000
			Weighted	5.666	1	5.666	14.023	0.000
			Deviation	3.615	4	0.904	2.236	0.064

Appendix 1b: Pre Self Efficacy [DataSet4].

R=0.152
R square = 0.023
Adjusted R square =0.201

Model	**Sum of square**	**Df**	**Means square**	**F**	**Sig.**
Regression	231.822	2	115.911	7.040	0.001
Residual	9829.243	597	16.464		
Total	10061.065	599			