

Motives for Physical Activity for College Students' Level of Motivation in Physical Activity

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Abstract: ***Background:** Physical activity is any bodily movement produced by skeletal muscles, which when undertaken regularly improves physiological and psychological health. This study only aimed at measuring, evaluating and scoring motives for physical activity for college students' level of motivation in physical activity. **Methods:** Motives for Physical Activity-Revised Questionnaire (MPA-RQ), was adopted as survey instrument. The variables were analyzed using IBM-SPSS-Version-23 Statistics, with a sampled size of 500 participants with a response rate of 100% and a mean and standard deviation age of (28.5±9.5) ranged from (19-38) years selected using simple random sampling. **Results:** A significant difference was recorded for all tested variables in the results with competence scoring highest [$F = 100.832$ with sig. (≤ 0.001), $t = 7.315$ with 2-tailed sig. (< 0.001)] and fitness scoring lowest [$F = 6.319$ with sig. ($.012$), $t = -2.514$ with 2-tailed sig. ($.012$)] in tables 3, 4 & 5 respectively. The results were tested @ significance of $p < 0.05$. **Conclusion and Recommendation:** It was concluded that greater majority of participants responded more in favour of competence followed by interest/enjoyment. Nonetheless, it was strongly recommended that a mandatory course in physical literacy be instituted for all college students before graduation to help improve their motivational level in physical activity.*

Keywords: Motivation, Physical Activity, Physical Education and Physical Fitness

1. Introduction

Physical activity is any bodily movement produced by skeletal muscles that requires energy expenditure, while exercise is a planned, structured, repetitive and purposeful sense of objective that can improve or maintain one or more components of physical fitness, WHO (2011). Regular physical activity (PA) is an important part of a healthy lifestyle that has considerable physical and mental health benefits, Romaguera *et al.* (2011). Higher physical activity (PA) has been associated with a lower risk of all-cause mortality, lower risk of developing cardiovascular diseases, cancer, type 2-diabetes, hypertension, obesity, osteoporosis and depression, Abu-Omar *et al.* (2008). Healthy lifestyle in adulthood is believed to be rooted in habits acquired at early ages, mainly during adolescence, Li *et al.* (2009). However, diverse studies have shown that physical activity (PA) decreases significantly between adolescence and adulthood, and this may be explained by the fact that physical activity (PA) practice becomes a voluntary activity when individuals leave high school and start to work or to study at university, Li *et al.* (2009). A meta-analysis of previous studies on college students' physical activity (PA) behaviours and determinants found that about 40–50% of college students are physically inactive (PI), Keating, Guan, Pinero, & Bridges (2005). Changes in levels of physical activity (PA) and physical fitness between adolescence and young adulthood have been linked to weight gain, Pullman *et al.* (2009), which by implication leads to higher risk of developing cardiovascular risk factors in these young adulthood.

The university is an ideal context in which to learn and consolidate one's personal and professional life, including a lifestyle that will determine one's future health, Quintiliani *et al.* (2009); however, many students face increasing

pressure due to engagement in academic activities, with no time or motivation left for physical activity (PA), Ulla Diez *et al.* (2009) and in fact, physical inactivity (PI) is a serious concern among university students which could contribute to the detriments of being insufficiently active. However, it should be the responsibility of colleges to promote physical activity practice and engagement in sport activities among students and that, it is necessary to examine the physical activity patterns and determinants among students using multiple approaches, Romaguera *et al.* (2011). Therefore, physical education being a set for physical activity is an educational course that teaches students the physique of their human body, that encourages psychomotor learning in a play or movement exploration setting to promote health, and is very important to students' overall well-being, Anderson (1989), especially giving due attention to the teaching and learning of physical education in schools and colleges to improve its literacy level, which by implication also includes physical activity, Bebeley *et al.* (2017).

This study only aimed at measuring, evaluating and scoring motives for physical activity (MPA) for college students' level of motivation in physical activity due to its centrality in maintaining a healthy lifestyle, based at Njala University and Eastern Polytechnic in Sierra Leone.

2. Methodology

Respondents

The survey was carried out on a sampled size of five hundred (N=500) participants with a response rate of 100% and a mean and standard deviation age of (28.5±9.5) ranged from (19-38) years mainly on undergraduate students selected through a process of simple random sampling.

Instrumentation

Motives for Physical Activity Measure-Revised Questionnaire (MPAM-RQ), was the survey instrument used to measure motivation to participate in physical activities, with evidence of reliability and validity provided for by *Frederick et al. (1993)*, showing internal consistency (alphas above .87) and differential relations with physical activities and associated outcomes.

Procedure

The respondents were each interrogated on their respective college campuses and locations within the country using the on-the-spot method for evaluation and scoring purposes adhering to the instructions of the research instrument, through the census survey entry (CSEntry) and census survey processing (CSPro.) application software using smart phones and tablets.

Analysis

Descriptive Statistics, Cross Tabulation, Pearson χ^2 test, ANOVA and Independent Sample Test, from IBM-SPSS- Version-23 Statistics were used to compute, analyze and

compare the findings using a significant value of $P < 0.05$, within the survey scope.

3. Results

The demographic mean and standard deviation values for weight (**69.05±10.908**) and height (**6.23±0.596**) of participants from Eastern Polytechnic is a little higher compared to the weight (**62.04±13.497**) and height (**6.07±0.552**) of participants from Njala University. Comparative factors measured, evaluated and scored under motives for physical activity (MPA) by institution, Njala University scored higher with interest/enjoyment motives, appearance motives, fitness motives and social motives compared to Eastern Polytechnic. However, Eastern Polytechnic scored higher with competence motives compared to Njala University for the response “(very true)”. In all, only fitness, appearance, interest/enjoyment and social motives recorded some form of significance at $p < 0.05$ in the Pearson χ^2 test as slated in tables 1 and 2 respectively.

Table 1: Crosstab Motives for Physical Activity (MPA) by Institution (N=500)

Motives for Physical Activity	Njala University			Eastern Polytechnic		
	Very True	Fairly True	Not True	Very True	Fairly True	Not True
<i>Interest/Enjoyment</i>						
It is fun.	29	30	191	89	40	121
I like to do physical activity.	208	7	35	197	12	41
It makes me happy.	216	11	23	209	18	23
I think it is interesting	214	12	24	202	27	21
I enjoy the activity.	219	8	23	209	19	22
I find the activity stimulating	211	15	24	196	27	27
I like the excitement of participation	215	12	23	208	19	23
<i>Competence</i>						
I like engaging in PA which challenges me.	85	6	159	171	17	62
I want to obtain new skills	69	20	161	156	18	76
I want to improve existing skills	76	13	161	151	24	75
I like the challenge	84	5	161	172	20	58
I want to keep up my current skill level	73	16	161	156	19	75
I like activities which are physically challenging	79	11	160	179	11	60
I want to get better at my activity	111	11	128	181	18	51
<i>Appearance</i>						
I want to look or maintain weight so I look better	202	12	36	193	20	37
I want to define my muscles so I look better	196	16	38	190	25	35
I want to improve my appearance	200	11	39	184	32	34
I want to be attractive to others	161	16	73	101	33	116
I want to improve my body shape	199	14	37	189	27	34
I will feel physically unattractive if I don't	157	19	74	139	34	77
<i>Fitness</i>						
I want to be physically fit	198	15	37	187	25	38
I want to have more energy	185	27	38	157	39	54
I want to improve my cardiovascular fitness	203	11	36	189	25	36
I want to maintain physical strength for healthy life	201	14	35	198	17	35
I want to maintain physical health and well-being	199	16	35	191	24	35
<i>Social</i>						
I want to be with my friends	72	22	156	116	31	103
I like to be with others interested in this activity	218	27	5	195	29	26
I want to meet new people	58	29	163	118	30	102
I have friends who want me to	59	12	179	99	23	128
I enjoy spending time with others doing this activity	209	18	23	190	30	30

Table 2: Pearson Chi-Square Statistics for Motives for Physical Activity (N=500)

Motives for Physical Activity (MPA)	Pearson Chi-Square Tests		
	Chi-square	df.	Sig.
Interest/Enjoyment			
It is fun.	47.642	2	≤.001*
I like to do physical activity.	2.088	2	.352
It makes me happy.	1.805	2	.406
I think it is interesting	6.315	2	.043*
I enjoy the activity.	4.737	2	.094
I find the activity stimulating	4.158	2	.125
I like the excitement of participation	1.696	2	.428
Competence			
I like engaging in PA, which challenges me.	76.726	2	≤.001*
I want to obtain new skills	64.230	2	≤.001*
I want to improve existing skills	59.389	2	≤.001*
I like the challenge	87.693	2	≤.001*
I want to keep up my current skill level	61.679	2	≤.001*
I like activities which are physically challenging	84.214	2	≤.001*
I want to get better at my activity	51.593	2	≤.001*
Appearance			
I want to look or maintain weight so I look better	2.219	2	.330
I want to define my muscles so I look better	2.192	2	.334
I want to improve my appearance	11.265	2	.004*
I want to be attractive to others	29.421	2	.000*
I want to improve my body shape	4.506	2	.105
I will feel physically unattractive if I don't	5.399	2	.067
Fitness			
I want to be physically fit	2.828	2	.243
I want to have more energy	7.257	2	.027*
I want to improve my cardiovascular fitness	5.944	2	.051
I want to maintain physical strength for healthy life	.313	2	.855
I want to maintain physical health and well-being	1.764	2	.414
Social			
I want to be with my friends	22.672	2	≤.001*
I like to be with others interested in this activity	15.578	2	≤.001*
I want to meet new people	34.513	2	≤.001*
I have friends who want me to	22.056	2	≤.001*
I enjoy spending time with others doing this activity	4.829	2	.089

* The Chi-square statistics is significant at the .05 level.

And with analysis of variance and independent samples test for motives for physical activity by institution, the highest scores recorded for **interest/enjoyment** [F = 52.449 with sig. (≤0.001), t = 7.242 with 2-tailed sig. (≤0.001)], **competence** [F = 100.832 with sig. (≤0.001), t = 7.315 with

2-tailed sig. (≤0.001)], **appearance** [F = 25.211 with sig. (≤0.001), t = -5.021 with 2-tailed sig. (≤0.001)], **fitness** [F = 6.319 with sig. (.012), t = -2.514 with 2-tailed sig. (.012)] and **social** [F = 36.836 with sig. (≤0.001), t = -3.606 with 2-tailed sig. (≤0.001)], are slated in **tables 3 and 4**.

Table 3: Analysis of Variance for Physical Activity Motives (N=500)

Motives for Physical Activity (MPA)	Analysis of Variance (ANOVA)				
	Sum of Squares	df	Mean Square	F	Sig.
Interest/Enjoyment					
It is fun.	33.800	1	33.800	52.449	≤.001
I like to do physical activity.	.578	1	.578	1.091	.297
It makes me happy.	.098	1	.098	.266	.606
I think it is interesting	.162	1	.162	.435	.510
I enjoy the activity.	.162	1	.162	.450	.503
I find the activity stimulating	.648	1	.648	1.583	.209
I like the excitement of participation	.098	1	.098	.264	.607
Competence					
I like engaging in physically challenging activities	66.978	1	66.978	81.838	≤.001
I want to obtain new skills	59.168	1	59.168	73.199	≤.001
I want to improve existing skills	51.842	1	51.842	62.816	≤.001
I like the challenge	72.962	1	72.962	90.997	≤.001
I want to keep up my current skill level	57.122	1	57.122	69.760	≤.001
I like activities which are physically challenging	80.000	1	80.000	100.832	≤.001
I want to get better at my activity	43.218	1	43.218	53.506	≤.001

Appearance					
I want to look or maintain weight so I look better	.200	1	.200	.382	.537
I want to define my muscles so I look better	.018	1	.018	.034	.854
I want to improve my appearance	.242	1	.242	.458	.499
I want to be attractive to others	21.218	1	21.218	25.211	.000
I want to improve my body shape	.098	1	.098	.189	.664
I will feel physically unattractive if I don't	.882	1	.882	1.087	.298
Fitness					
I want to be physically fit	.288	1	.288	.536	.464
I want to have more energy	3.872	1	3.872	6.319	.012
I want to improve my cardiovascular fitness	.392	1	.392	.754	.386
I want to maintain physical strength for healthy life	.018	1	.018	.036	.851
I want to maintain physical health and well-being	.128	1	.128	.250	.617
Social					
I want to be with my friends	18.818	1	18.818	22.414	≤.001
I like to be with others interested in this activity	3.872	1	3.872	13.004	≤.001
I want to meet new people	29.282	1	29.282	36.836	≤.001
I have friends who want me to	16.562	1	16.562	20.414	≤.001
I enjoy spending time with others doing PA	1.352	1	1.352	3.188	.075

Table 4: Independent Samples Test for Motives for PA by Institution (N=500)

Motives for PA (MPA)	Levene's Test for Equality of Variances		Equal Variances Assumed					
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	95% CID	
							Lower	Upper
Interest/Enjoyment								
It is fun.	82.830	≤.001	7.242	498	≤.001	.520	.379	.661
I like to do PA.	3.612	.058	-1.044	498	.297	-.068	-.196	.060
It makes me happy.	.729	.394	-.516	498	.606	-.028	-.135	.079
I think it is interesting	.821	.365	-.659	498	.510	-.036	-.143	.071
I enjoy the activity.	1.155	.283	-.670	498	.503	-.036	-.141	.069
I find the PA stimulating	4.519	.034	-1.258	498	.209	-.072	-.184	.040
I like the excitement...	.717	.398	-.514	498	.607	-.028	-.135	.079
Competence								
I like challenging PA...	16.408	≤.001	9.046	498	≤.001	.732	.573	.891
I want new skills...	1.313	.252	8.556	498	≤.001	.688	.530	.846
I want to improve skills	.101	.751	7.926	498	≤.001	.644	.484	.804
I like the challenge	20.927	≤.001	9.539	498	≤.001	.764	.607	.921
I want to keep skill level	.091	.763	8.352	498	≤.001	.676	.517	.835
I like activities which...	12.237	.001	10.042	498	≤.001	.800	.643	.957
I want to get better at...	77.858	≤.001	7.315	498	≤.001	.588	.430	.746
Appearance								
I want to maintain...	.857	.355	-.618	498	.537	-.040	-.167	.087
I want to define my...	.000	.988	-.185	498	.854	-.012	-.140	.116
I want to improve my...	.240	.624	-.677	498	.499	-.044	-.172	.084
I want to be attractive...	1.616	.204	-5.021	498	≤.001	-.412	-.573	-.251
I want to improve my...	.129	.720	-.435	498	.664	-.028	-.154	.098
I will feel physically...	.009	.924	-1.043	498	.298	-.084	-.242	.074
Fitness								
I want to be physically...	1.055	.305	-.732	498	.464	-.048	-.177	.081
I want to have more...	13.614	≤.001	-2.514	498	.012	-.176	-.314	-.038
I want to improve my...	1.403	.237	-.868	498	.386	-.056	-.183	.071
I want to maintain...	.072	.789	-.188	498	.851	-.012	-.137	.113
I want to maintain...	.461	.497	-.500	498	.617	-.032	-.158	.094
Social								
I want to be with my...	3.067	.081	4.734	498	≤.001	.388	.227	.549
I like to be with others...	56.199	≤.001	-3.606	498	≤.001	-.176	-.272	-.080
I want to meet new...	17.476	≤.001	6.069	498	≤.001	.484	.327	.641
I have friends who...	26.504	≤.001	4.518	498	≤.001	.364	.206	.522
I enjoy spending time...	9.762	.002	-1.785	498	.075	-.104	-.218	.010

4. Discussion

In the evaluation process for all factors measured under motives for physical activity in the survey process with regards institution, a good number of participants especially from Njala University responded more positively to

interest/enjoyment and competence motives as a form of intrinsic motivation and as the highest level of self-determination regarding motives for physical activity, and according to *Ryan (2000)*, people who are motivated intrinsically to be physically active participate for sheer enjoyment and in the moment satisfaction of the activity at

hand and that it is autonomous. Nonetheless, DeLong, L. L. (2006) reported that, interventions designed to foster student's sense of autonomy, competence, and relatedness in relation to his/her physical activity should increase the student's intrinsic motivation that will lead to engagement in long-term physical activity, and that by increasing and nurturing feelings of autonomy and competence in the exercise domain, it enhances the likelihood that a college student will adopt physical activity into their lifestyle. DeLong, L. L. (2006) also reported that, focus on motives related to interest and enjoyment, fitness and maintaining health, has more potential to foster adherence than an emphasis on exercise as a way to interact with others.

Therefore, according to Mullan and Markland (1997), the contributions of both self-determination theory and the transtheoretical model have been utilized extensively in exercise adherence research, specifically self-determination which have been utilized to show that as some individual increases in self-determination, they become intrinsically motivated which leads to an increase in physical activity. It seems however that, individuals who choose to exercise see more value in all of the motives, which according to Ingledew, et al. (1998) suggests that, when individuals attach some form of value to physical activity, they are more likely to be more self-determined and to exercise regularly. Motives for physical activity (MPA) need to be fostered in instructional settings where students are taught the value of exercise. Both the extrinsic and the intrinsic motives of physical activity need to be emphasized during the initial stages of an exercise program, and that an individual may have to rely more on extrinsic body motives until the intrinsic benefits of interest/enjoyment can evolve with time, Ingledew et al. (1998).

However, some of the participants mostly from the Eastern Polytechnic responded in affirmative to appearance, fitness and social motives under institution, which is in support of extrinsic motivation and in contrast to intrinsic motivation, and according to Turke, E. G. (2012), perceived pressure to exercise may represent a less salient source of motivation than voluntarily endorsed reasons, and that at this level of regulation, motivation is only spurred through rewards or avoidance of punishment because it is not autonomous.

5. Conclusion and Recommendation

When looked at the overall response of the respondents, it was concluded that greater majority of the respondents clearly responded more in favour of competence followed by interest/enjoyment under motives for physical activity (MPA). However, it was strongly recommended that a mandatory course in physical literacy be instituted for all college students before graduation to help improve their motivational level in physical activity.

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Conflict of Interests:

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