HIGHER INSTITUTIONS' PHYSICAL EDUCATION TEACHERS AND COACHES PERCEPTION OF ATHLETES' HEALTH INDICES FOR PERFORMANCE IN SPORTS

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Abstract
The study surveyed P.E teachers and coaches perception of Athletes Health indices for high performance. A study of perceived health and fitness indices for athletes by P.E teachers and coaches will help to answer the question, whether the fitness of an athlete encompasses all the indices of health that will enhance highest performance among all levels of athletes. The study design was the descriptive research of the survey type: The population was all the 55 higher institution P. E. teachers and 155 sport coaches in the sports' council of Kwara State, Nigeria. A multistage sampling approach was used to sample subjects for the study. All the P.E. teachers were sampled purposively while 55 coaches were sampled using stratified and systematic random sampling techniques. The't' test and ANOVA statistics were used to analyze data at 0.05 level of significance. The findings revealed that while no significant differences were located in the responses of P.E Teachers in the higher institutions, significant difference was found between P.E. teachers and coaches' perception of the indices of health and fitness for top athletes' performance. It was recommended among others that surveillance and monitoring of flight athletes in the country should be intensified using the suggested health and fitness indices. Medical teams in the contingents must be adequately equipped for these roles.

Key words: Health, athletes, performance, perception, fitness

Introduction

The performance of national athletes in classy competitions reveals that national athletes must achieve exact levels of Health and fitness to be able to excel. Specific training prepares athletes to perform well in

their sports (Wilkipedia 2011). Observation show that a number of athletes fail to make the medals mark because their fitness levels make it difficult for them to make the mark suggested and prescribed by Dipietro and James (2001), Paul and Walton (2002) and Chankova, Nguyen, Chipanta, Kombe and Ogungbemi (2006) of mental, physical alertness, wellness and effective resource application. That is why the elements of scientific basis of selection are being inducted in the procedure of selection of athletes at various levels in some of the advanced countries (Yadav, Sajwan & Sinha, 2009). It is generally accepted that the factors that assist to determine performance in athletes or in any healthy man at all, are broadly categorized as health–related components while others are specific to particular sports (ACSM, 2001 and Francis, 2000).

This category is further broken down (by Fahey, Insel & Roth 2001; Robbin, Powers and Burgess, 2002) into five components as cardio-respiratory endurance, muscular strength, muscular endurance, flexibility and body composition. It is argued by Salmon (2000) and Brill (2000) that attained sustained levels for each of these factors do enhance joy of life, while the body is more able to withstand physical and psychological challenges and protects against chronic diseases and enhance performance among athletes and other professionals, skilled and less skilled workers and home makers. Furthermore, School physical education (PE) classes are confirmed to provide the best opportunity to fulfil the motor and health related fitness and that PE teachers, in particular, have the potential to influence public health by promoting participation in physical activity and assisting students to establish a lifetime habit of regular involvement in physical activity in order to promote Health related fitness (Koutedakis & Bouziota, 2012). Coaches on the other hand will be able to build on the well laid fitness foundation by teachers.

Essentially the itemised health related components according to Fahey et al (2001) are indicators of athletes and active adults' ability to:

- Perform prolonged, long muscle dynamic exercises and sports at moderate-to-high levels of intensity.
- Ability of lungs to deliver oxygen from the environment to the blood stream.

- Ability of the nervous system and blood vessels to regulate blood flow.
- Capacity of the body's chemical systems to use oxygen and process fuels for excise/performance.
- Ability to bring needed amount of force the muscles can monster to produce maximum effort.
- Ability to keep body in proper alignment and prevent pain.
- Ability to sustain a given level of muscle tension.
- Ability for muscles to endure at exercise and performance.

Statement of Problem

Over time and history, sustained interest in sports and athletic performance has been observed. Many more people including youths and adults are developing insatiable interest in competitive and professional sports. Two principal spheres of life stand out clearly as learning fronts for people in sports and games. These are the school from teachers and the stadia from the coaches.

It is not very clear if these two classes of professionals look out for the same characteristics in the individuals they develop nor is it sure that their choice of materials for the purpose of the classroom effects and the sports fields are the same and similar. It is therefore the focus of this present study to investigate the perception of physical education teachers and coaches of athletes' health indices for performance in sports. The study will help to substantiate the differences and similarities in their perception and forge a health indices regimen for athletes as predictors of their propensity for high performance.

To assist in the conduct of the study, the following questions were answered:

(i) Will coaches and physical education teachers perceive the health indices for performance equally?

(ii) Will physical education teachers perceive the health indices for performances similarly?

(iii) Will coaches perceive the health indices for performance similarly?

In line with these questions, the following hypotheses were tested.

(i) There is no significant difference in the perception of P.E. teachers and coaches of the health indices for performance in athletics/sports
(ii) There is no significant difference in teachers' perception of the health indices for performance in sports/athletics.
(iii) There is no significant difference in coaches' perception of the health indices for performance in sports/athletics.

The study will be significant in pre-competition screening of athletes in that the identified perceived indices will be used in athletes' selection. Also, physical education teachers will be more in a position to understand their students' limitations in class and plan to develop the limitations to reposition them towards higher athletics performance.

Finally, sports administrators will find the results of the study highly useful in drawing up training programmes for their athletes and be able to carry out surveillance of their athletes' readiness for competition, and if they fall within expected health norm for athletes. This will help reduce athletic injuries among athletes.

Methods

The study design was the descriptive research of the survey type. This was deemed appropriate since the study was interested in observing already existing perceptions held by the subjects. The population comprised all the 55 higher institution physical and health education teachers and 155 sports coaches in the sports councils of Kwara State Nigeria.

To arrive at the sample size for the study, a multistage sampling technique was adopted. All the 50 physical and health education teachers in the higher institutions of leaning in Kwara State were used. University of Ilorin (15) Kwara State College of Education Ilorin (14), Kwara State College of Education, Oro (11), Kwara State College of Education Patigi (10) were purposively sampled. This method was deemed appropriate because staff strength in the institutions were found to be in the same range. However, a similar number of 50 coaches were sampled for the study using the stratified and systematic

random sampling techniques. In these ways, 35 coaches were selected systematically using sports type from the sports stadium in Ilorin, while all the 15 field coaches were purposively selected.

The main instrument for collecting data was a researcher designed perception gathering questionnaire among P. E teachers and sports coaches (PGQAPETS). It comprised demographic and specific items in 2 sections. The instrument was duly validated for content and tested for reliability among all the P.E Teachers in Osun State College of Education Osun State, Nigeria using a test-re-test method. The Spearman Brown correlation coefficient yielded a .75r. The descriptive methods of measurement were used to present the demographic data and the 't' test and Anova statistics were used to analyse data statistically at 0.05 level of confidence.

Results

The purpose of this study was to find out the perception of physical education teachers and coaches of the health indices for athletic performance. To achieve this purpose, the data collected for the study were statistically analysed and results are presented as follow:-

The first part of the results was the demographic data of respondents. These are presented in table one using simple frequency counts and percentages.

Table 1.
Demographic Data of Respondents Showing Sex, Age, Work Experience, Religion and Class of Respondents.

AGE	**TEACHERS FREQUENCY**	**%**	**COACHES FREQUENCY**	**%**
18-20	0	0	1	2.0
21-23	1	2.0	2	4.0
24-26	4	8.0	2	4.0
26-29	10	20.0	2	4.0
30 & Above	35	70.0	43	86.0
Total	**50**	**100.0**	**50**	**100.0**
SEX				
1 male	30	60	45	90.0
2 female	20	40	5	10.0

Total	**50**	**100**	**50**	**100.0**
WORK EXPERIENCE				
3 Yrs.	12	24.0	2	4.0
3-5 Yrs.	13	26.0	3	6.0
5 Yrs.	4	8.0	7	14.0
7 Yrs.	21	42.0	38	76.0
Total	**50**	**100.0**	**50**	**100.0**
RELIGION				
1	31	62.0	32	54.0

The table describes the demographic information of the respondents. Equal number of P.E. teachers (50) and coaches (50) were sampled for the study. Many of both class of respondents were above 30 years of age, 70% for teachers and 86% for coaches. Out of all these, there were 30 male P.E. teachers (60%) and 45 male coaches (90%). The table also showed the work experience of respondents as A_3 for teachers and B_3 for coaches. For both class of respondents, majority have had more than fives years of work experience. 42% and 76% respectively indicated that they had worked for over 5 years. As for the religion of respondents, they were largely Christians (62% among teachers and 64% among coaches).

Hypothesis 1

There is no significant difference in the perception of PE teachers and coaches of the health indices for performance in athletes.

Table 2
Paired Sample Test of Respondents on Health and Fitness Indices

Paired Sample		Mean	Std. Deviation	Std. Error Mean	t	Df	Sig. (2-tailed)
Pair 3 HLTH INDICES	A5 – B5	.28000	.90441	.12790	2.189	49	0.33
Pair 3 FITNESS COMPON'T	A6 – B6	-.30000	3.09872	043822	-.685	49	.497
Pair 5 CARDIORESP.	A7 – B7	-1.92000	4.41630	062456	-3.074	49	.003
Pair 6 STRENGTH	A8 – B8	-.92000	3.70791	.52438	-1.754	49	.086
Pair 7 ENDURANCE	A9 – B9	-.56000	3.01804	.42682	-1.312	49	.196
Pair 8 FLEXIBILITY	A10 – B10	-.76000	1.61068	.22778	-3.336	49	.002
Pair 9 BODY COMPOSITN	A11 – B11	-.20000	3.04390	.43047	-.465	49	.644
Pair 10 SKILL FITNESS	A12 – B12	-.94000	2.61401	.36968	-2.543	49	.014

The table above represents the paired sample test results. A5 – A12 represent teachers responses on the athletes selected health related variables for athletes, while B5 – B12 represent coaches responses for athletes selected health related variables. Similarly pairs 3 – 12, are the selected health related variables. By a 't' value significant differences or non-differences were determined for each of the variables between P.E teachers and coaches.

Results show that the calculated 't' for respondents perception of the health indices, fitness, cardio-respiratory, strength, endurance and skills related components is higher positively (2.189) and negatively (-.685, -3.074, -1.754, -1.312, -3.336 and -2.543) than the table value of .33,497, .003, .086, .196, .002 and 0.14 respectively at 0.05 level of

significance hence significant differences in the perception of P.E teachers and coaches were sustained for these variables. This means that P.E. teachers and coaches viewed athletes' indices differently for all the indices listed above.

However, for perception of respondents for athletes' body composition index, a no significant difference was obtained (t cal = -.463, t value = .644) at 0.05 level of significance. This means that both P.E teachers and coaches view the body composition index of athletes in the same way.

Hypothesis 2.

There is no significant difference in teachers perception of health indices for performance in sports based on work experience.

Table 3.

F-Distribution of P.E Teachers Perception of the Health Indices of Athletes for Performance in Sports Based on Work Experience.

TEACHERS		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
A6 FITNESS COMPONENTS	Between Groups	18.377	3	6.126	.968	.416
	Within Groups	291.143	46	6.329		
	Total	309.520	49			
A7 CARDIORESP.	Between Groups	12.320	3	4.107	.507	.680
	Within Groups	372.800	46	8.104		
	Total	385.120	49			
A8 STRENGTH	Between Groups	23.714	3	7.905	1.343	.272
	Within Groups	270.786	46	5.887		
	Total	294.500	49			
A9 ENDURANCE	Between Groups	9.794	3	3.265	.609	.613
	Within	246.786	46	5.365		

	Groups					
	Total	256.580	49			
A10 FLEXIBILITY	Between	5.857	3	1.952	.875	.461
	Groups	102.643	46	2.231		
	Within					
	Groups					
	Total	108.500	49			
A11 BODY	Between	23.287	3	7.762	1.665	.188
COMPOSITION	Groups	214.393	46	4.661		
	Within					
	Groups					
	Total	237.680	49			
A12 SKILL FITNESS	Between	35.120	3	11.707	2.387	.081
RELATED	Groups	225.600	46	4.904		
	Within					
	Groups					
	Total	260.720	49			

It is shown in table 3 that significant differences exist in the perception of teachers about athletes' health indices for performance in sports. A derived F-ratio of .968, 1.343, .875, 1.665 and 2.387 which were higher than the table f-ratio of .416, 272, 461, .188 and .081 respectively at 0.05 levels of significance were obtained. This means that teachers of different work experience perceive the fitness, strength, flexibility, body composition and skills related fitness components differently.

However, the table shows that respondents who are teachers do not differ in their perception of the cardio-respiratory components (cal. F = .507, t. value = .680) and cal f = .609, t. value = .613) respectively at 0.05 level of significance.

Hypothesis 3.

There is no significant difference in coaches perception of the health indices for performance in sports by work experience.

Table 4.
F-Distribution of Coaches Perception of Health Indices for Athletes Performance in Sports

TEACHERS		Sum of Squares	Df	Mean Square	F	Sig.
B5	Between Groups	2.233	4	.558	1.154	.344
	Within Groups	21.767	45	.484		
	Total	24.000	49			
B6	Between Groups	1.778	4	.445	.071	.991
	Within Groups	283.442	45	6.299		
	Total	285.220	49			
B7	Between Groups	70.880	4	17.720	2.868	.034
	Within Groups	278.000	45	6.178		
	Total	348.880	49			
B8	Between Groups	69.064	4	17.266	3.751	.010
	Within Groups	207.116	45	4.603		
	Total	276.180	49			
B9	Between Groups	38.941	4	9.735	2.044	.104
	Within Groups	214.279	45	4.762		
	Total	253.220	49			
B10	Between Groups	8.504	4	2.126	2.577	.050
	Within Groups	37.116	45	.825		
	Total	45.620	49			
B11	Between Groups	7.094	4	1.773	.407	.803
	Within Groups	196.186	45	4.360		
	Total	203.280	49			
B12	Between Groups	19.523	4	4.881	1.285	.290
	Within Groups	170.977	45	3.799		
	Total	190.500	49			

The fact that significant differences also exist among coaches based on work experience is also revealed in table 4 at 0.05 level of significance. Calculated 'f' were found to be higher than the table 'f' when data for coaches were analysed for cardio-respiratory components (cal 'f'= 2.868; table f = .038); strength components (cal f = 3.751, table f = .010); endurance components (cal. F = 2.044, table f = .104); flexibility components (cal. F = 2.577, table f = .050); and skills fitness related components (cal. F = 1.285, table f = .290); while no significant differences were found in the perception of coaches of varying work experience for cardio-respiratory components (cal. F =

.071 table f = .991); and body composition components for athletes performance(cal. F = .407 table f = .803) at 0.05 levels of significance.

Table 4b
Post-Hoc Test for Table 3 and 4.

Component	N	Mean	Component	N	Mean
A7			B 7	7 2 38 3	16.57 19.00 20.18 21.00
Sig.					.094
A 8			B 8	7	12.43
				38	13.37
				2	14.00
				3	16.00
Sig.					.210
A9			B 9	7	11.71
				38	13.55
				2	14.00
				3	14.00
Sig.					.561
A 10			B 10	3	7.00
				38	7.24
				7	7.30
				2	8.00
Sig.					.562
A 11			B11	3	7.00
				7	8.86
				2	9.00
				38	9.34
Sig.					.451
A 12			B12	3	16.00
				7	18.14
				38	18.16
				2	20.00
Sig.					.480

Table 4b shows the post hoc multiple comparisons for the components that are significantly different. In more cases, teachers and coaches with less than 3 years on the job revealed means that are lower than teachers and coaches with more than 3 years of work experience. It could be concluded that respondents' level perception of the indices of health for sports performance is related to experiences on the job.

Discussion:

The finding that significant differences were found in the responses of P.E. teachers and coaches for the dependent variables of health indices like fitness, cardio-respiratory, strength, and skills related variables is surprising. It is generally assumed that teachers of physical education and coaches should have similar perceptions of the importance and relevance of these variables to upbringing of athletes for excellent performance. This negates the contention of ACSM (1998), Francis (2000), and Paul et.al.(2002) who are of the view that handlers of athletes at all points should be conversant with the need to focus decided health and fitness parameters in the training of their athletes. This significant difference may have arisen because of the differences in the academic preparations and continuous exposure of P.E. teachers and coaches. This finding does not however water down the fact that P.E. teachers and coaches are skillful and adequately prepared in specific training methods and approaches in bringing up their athletes to expected states of readiness for athletic performance.

Hypotheses 3&4 are discussed based on the data presented in tables 3&4. It was found that significant differences existed in the perception of P.E. teachers and coaches when job experience was examined. The results showed that both teachers and coaches differed in their perception of cardio-respiratory, strength, endurance, flexibility, and skills related components of health and fitness for athletes. The post- hoc tests performed on the scores for both groups showed that the differences were related to experience. The higher the number of years spent on the job the better the perception of P.E. teachers and coaches of the health indices for athletes. This finding is related to those of Dipietro and James (2000) and Chankova, Nguyen, Chipanta, Kombe, Onoja & Ogungbemi (2006) that for most professional vocations, experience play a lead role in competence, perception, application of knowledge and job outcomes.

Conclusion:

Based on the findings of the study, it was concluded that:

(i) Physical Education teachers and coaches significantly perceive the fitness, cardio-respiratory, strength, endurance, and skill related health indices for performance differently

(ii) Physical Education teacher and coaches differ in their perception of the fitness, strength, flexibility, body composition and skills related components differently based on work experience

(iii) Physical Education teachers and coaches do not differ in their perception of the relevance of cardio-respiratory and endurance components of health indices for athletes performance

(iv) Coaches do not differ in their perception of the cardio-respiratory components of health and fitness indices for athletes' performance.

Implication and Recommendation:

The implication of this finding is that the assumption that all Physical Education teachers and coaches are conversant with the health and fitness parameters merely by graduating from school or by being player coach should be discarded. This may not be so in most cases.

Based on this, it was recommended that:

(i) Physical Education teachers should adopt interdisciplinary exchange of ideas and researches in order to improve their perception of the core knowledge areas related to their discipline

(ii) Coaches should eschew academic preparation as a main ingredient of their profession. Training and retraining programmes on the need to prepare athletes to be healthy in all its parameters should be embraced

(iii) Health Education programmes should be conducted for coaches, P.E. teachers and athletes on the significance of sustaining their health through best practices.

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