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Editorial Comment

The Ghana Journal of Health, Physical education, Recreation, Sports and Dance (GJHPERSD) is a journal that published twice a year by the Department of Health, Physical Education and Recreation, University of Cape Coast, Ghana in which topical issues concerning exercise physiology, administration, health, biomechanical and behavioural aspect of physical and health education are publish. Majority of the articles are derived from researches and scientific investigation

Manuscripts in the present volume are selected by the Editorial Board from among submissions made by interested contributors. In these two issues, articles were compiled on knowledge and attitudes of Nursing and college of education students, Level of education and marital distress among married couples, extent and use of ergogenic substance, factors predicting recreational sports participation and the Stigma attend to obesity, risk factors and coping Strategies. The final determination is made on the basis of the professional and scientific relevance, need and extent of information to Health and Physical Education. The Editorial Board is receptive to suggestions concerning selections of potential manuscripts and topics worthy of publication.

For the present volume, the Editorial Board wishes to acknowledge the contributions of our consultants and reviewers in the manuscripts.

Editorial Board
Ghana Journal of Health, Physical Education
Recreation Sports and Dance (GJOHPERSD)

Ghana Journal of Health Physical Education
Recreation Sports and Dance (GJOHPERSD) Vol. 5, 1-9

ASSESSMENT OF PRIVATE SECTOR FUNDING FOR PROFESSIONAL FOOTBALL CLUBS PLAYING IN PREMIER LEAGUE IN NORTHERN NIGERIA

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Abstract
This study assessed private sector funding for professional football clubs playing in premier league in Northern Nigeria. To achieve this, questionnaire on private sector funding for professional football clubs was developed, validated and utilized for this study. Kitting of players, building of stadium, travelling, insurance and television rights constituted items in the questionnaire. A major hypothesis sought to find out if there were significant differences in private sector funding among the professional football clubs in Northern Nigeria as viewed by respondents. The questionnaire was administered on 90 respondents from the 6 clubs randomly picked from the 3 geo-political zones in Northern Nigeria (2 clubs from each zone). This gave us 30 respondents from each of the geo-political zones. Mean and Analysis of Variance were applied to describe and test the hypothesis. The result showed that private sector does not give meaningful funding to professional football clubs in Northern Nigeria. It was also found that there was significant difference in private sector funding for professional football clubs in

Northern Nigeria playing in the Premier League. It is therefore recommended that professional football clubs in Northern Nigeria should seek for private sector funding for the activities of their clubs.

Key words: Football, Professional League, Funding, Private sector

Introduction

Professional League Competition featuring football clubs has age long history all over the world. The governing bodies for football in every country operate league system, normally comprising several divisions in which teams gain points throughout the season depending on result.Nigeria Premier League Report (2008) stated that, National League in Nigeria came into full existence in 1972 with eight clubs. In 1989 the Professional League System was introduced but commenced in 1990. At present the Nigeria Premier League is the highest level of domestic Nigerian football. The League is presently being organized by Nigerian Football League (NFL).NFLmajor sponsor being Globacom Telecommunication Company.

Funding Professional football clubs requires money. Kuba (2000), stated that sports organizations need funding for their sports programmes, facilities, maintenance, procurement of sports supplies and other technical and administrative costs. Nearly all the Clubs in Nigeria playing in Premier League are funded directly or indirectly by state government or government establishments. For example, Gombe United sponsored by Gombe State, Kano Pillars by Kano State, Niger Tornadoes by Niger State, Enugu Rangers by Enugu State, Jos University Teaching Hospital Club by Management of the Teaching Hospital and host of others (Kuba 2000). The researchers fear that leaving the funding of these professional clubs exclusively in the hands of government and its parastatals might have unappreciable consequences for the clubs performance as the government alone might not be able to meet and provide for the clubs needs in terms of

kitting, travels, insurance, facilities etc.

Brenda (2008) reveals that advertisement and sponsorships have become the backbone of football wealth. According to her, many multinational corporations are now involved in sponsoring football game. The relative wealth and good performance of professional football clubs in European Football League might be attributable to levels of support they enjoy from the numerous corporate and multinational corporations.

The following partnerships are testimonies to the support of private sectors professional clubs across Europe, Chang has been the principal sponsor of Everton (England) since the start of 2004/2005 season. By this arrangement Everton players wear the premium beer's logo across their shirt. According to Everton Chief Executive Robert Elstone, this partnership has helped Everton FC to grow international (http://www.footballleague.co.uklfootballleagueboard/profiles/20100126/ thefootball- league-board) Retrieved 13th September, 2010.

On the 19th January 2010, Newcastle United Football Club (England) announced a new partnership seeing Puma become the official supplier and official licensee of replica merchandise for Newcastle United (http://www.footballgroundguide.com/newcastleunited.htm). Retrieved 2010-04-14. Emirate an Airline company is also sponsoring Arsenal Football Club. Their signed sponsorship arrangement was put at around £100 million. Part of the deal was for Arsenal to wear the logo of Emirate on the shirts. It was also revealed that a major source of revenue for clubs to support their activities is Television. In November 2007, the football league announced a new domestic rights deal worth £264 million with Sky and BBC for three seasons from 2009-2012 (www.footballleague.premiumtv.co.uk). Retrieved 2010-04-14.

In Nigeria however, the situation and practices cannot be said to be the same. Nearly all the professional football clubs are owned by the

government. Financing these clubs has been pointed out by Enyadike (2003), to be relatively exclusive responsibility of the various governments that own the clubs. This in itself can pose limitations as government allocations may not meet the major demands of these clubs which may consequently affect the performance of these clubs. Major demands can be salaries, allowances, travels, medicals, apparels etc. The proposition is that, if these clubs were adequately funded by getting private sector support, the demands stated above would have been reasonably satisfied which might result to better performance.

Ikhioye (1993), revealed that because a number of football clubs in Northern Nigeria cannot afford Air-tickets, they travel long hours on the road to honour their away league matches. According to him, by the time they get there, they are too tired to perform. Salaries and other player's entitlements were sometimes not paid on time due partly to delay in release of fund by the government. These and the fact that there is paucity of information in this study area has motivated interest in this research. The following questions and hypothesis were formulated to give direction to this study.

1) Does the private sector contribute to the funding of Professional Football Clubs activities in Northern Nigeria?
2) There is no significant difference in private sector funding among the Professional Football Clubs in Northern Nigeria as viewed by respondents.

Methodology

In this study, purposive method was used to select only Professional Football Clubs playing in the Premier League in Northern Nigeria. Northern Nigeria was stratified into three geo-political zones namely North West, North East and North Central. From each zone, two (2) professional football clubs were randomly picked using the balloting method. This gave

us six (6) clubs from the total of ten (10) Professional Football Clubs in Northern Nigeria.

Respondents were stratified into Coaches, organising secretaries, team managers, players and members of the Football Associations Boards totalling ninety (90) respondents presented in Table 1. The inclusion criterion for coaches, organising secretaries and members of Football Association Board was based on seniority. Nassarawa United and JUTH FC were randomly picked from North Central, Wikki Tourist and Gombe United from North-East, Kano Pillars and Kaduna United from North West.

Table 1: **Distribution of respondents according to status and geo-political zones**

North-Central							**North-East**				**North-West**				**Total**
Coach	Org. Se	Team Manag	Players	Board Members	Coach	Org. Sec	Team Manage	Players	Board Members	Coach	Org. Sec	Team Manag	Playe	Board Members	
2	2	2	20	4	2	2	2	20	4	2	2	2	20	4	90

Data Collection Instrument

Questionnaire on Private sector funding was developed and validated. A reliability co-efficient index of 0.78 was obtained through test-retest. Part 1 of the Questionnaire consisted of demographic characteristics of respondents, and part 2 had statements on private sector funding of club activities. In scoring the responses, each item in the questionnaire that was scored 2.5 points was considered negative and items scored 2.5 and above was considered positive. Average mean score of the five items used to test for private funding was used to determine the direction of opinion of respondents.

Statistical Analysis

Descriptive statistics of mean and standard deviation were used to describe the data and One-way Analysis of Variance (ANOVA) was used to

find out if there was significant difference in private sector funding among the professional clubs in Northern Nigeria.

Results

Table 1: Mean scores of respondents opinion on private sector funding for professional football Clubs

S/N	STATEMENT	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE	MEAN	SD
	Kits players to Promote performance	5 (5.6)	6 (6.7)	42 (46.7)	37 (41.1)	1.76	.80797
2.	Private sector Contributes to payment of players salaries	0 (0)	5 (5.6)	51 (56.7)	34 (37.8)	1.67	.57724
3.	Professional football club receives contribution from private sector to build stadium	5 (5.6)	12 (13.3)	35 (38.9)	38 (42.2)	1.82	.86865
4.	Professional football club travels are partly sponsored by private organisation	1 (1.1)	1 (1.1)	37 (41.1)	51 (56.7)	1.46	.58444
5.	Club sells broadcasting rights to Television house to improve finances of the club	2 (2.2)	0 (0)	43 (47.8)	45 (50.0)	1.54	.062100
Average Mean:						**1.65**	

The data on Table 1 revealed an average calculated mean (1.65) which is less than the constant mean (2.5) that was used as base-line for decision making. This translates to private sector not funding professional football clubs in Northern Nigeria. To find out if there was significant difference in private sector funding of professional football clubs in Northern Nigeria, ANOVA was applied, the results of which are presented in Table 2

Table 2: ANOVA Summary of differences in Private Sector funding of professional football clubs

Variables	DF	SS	MS	F	F. critical
Private Sector	Between Group	5 10.456	2.091	8.286	2.37
	Within Group	84 21.200	252		
	Total	90 31.656			

F(5,84) = 8.286>2.37 at 0.05

Table 2 shows that there was significant difference in private sector funding of selected professional football clubs in Northern Nigeria as the calculated F- value 8.286 is greater than the critical value of 2.37 at 0.05. This means that the six professional football clubs in Northern Nigeria are not funded the same way by private sector.

Application of pair wise (Scheffee Post hoc) comparison involving the six professional football clubs revealed that Kano Pillars enjoys better private sector support than Kaduna United, Wikki Tourist, Gombe United, JUTH FC and Nassarawa United.

Discussion

The result of this study revealed that the position of respondents on private sector funding on professional football clubs in Northern Nigeria was inadequate as the average mean 1.65 was less than 2.5 which constitutes baseline for decision making. From the data collected, private sector did not contribute adequately to payment of players' salaries, construction of stadia for team and team travels. Professional football clubs do not sell broadcasting rights to Television houses. This is in contrast to practices in Europe. Manchester United Football Club for example has £56.6 million deal with AIG for four years. By this arrangement, Manchester United Players wear AIG logo on their shirts (Man U, 2008). Andrew (2008) also

pointed out that Football League relied on yields from Television rights to support activities.

This can be said to be a rider to the earlier position of Ikhioya (2001) when she pointed out that the money acquired from the sales of media rights by sporting clubs is a source of fund for the clubs. On the 19th January, 2010, Newcastle United Football Club announced a new partnership with Puma to supply the club with kit and training equipment. All of these are examples of how private sector in Europe contributes to fortune and finances of the professional football and other clubs. This undoubtedly has implication for the performance of these clubs. If professional football clubs in Northern Nigeria in particular and Nigeria in general also enter into partnership with private sector, their sporting needs and activities would be better financed and supported.

Another finding of this study was the significant difference that existed between Kano Pillars Football Club and other clubs in private sector support. This is not surprising as Kano Pillars Football club did very well in the 2008, 2009 edition of the Premier Football League in Nigeria — one as the Premier League Champion and as the semifinalist at the CAF Championship in 2009. Although, their exploits in these championships might not be attributed largely to private sector support.

From the findings of this study, it is therefore recommended that professional football clubs in Northern Nigeria playing in the National Premier Football League should seek for private sponsorship to assist in carrying out their activities.

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Comparision of HIV/AIDS Knowledge and Attitude of Nursing and College of education Studends in Kumasi

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Abstract
The purpose of the study was to compare HIV/AIDS knowledge and attitudes of nurses and teachers in training. A questionnaire was administered to a cross section of 200 nurses and teachers in training at Kumasi. Respondents were asked to provide information on HIV/AIDS knowledge and attitudes. The data obtained were presented and analysed using the Statistical Product and Service Solutions (SPSS) version 16.0. Study results indicated that the majority of the respondents had a high level of HIV/AIDS knowledge, acceptance and positive attitude towards HIV/AIDS issues and patients. Nurses in training had higher HIV/AIDS mean knowledge score ((x=14.55) than teachers in training (x= 14.23). However, independent samples t-test analysis showed insignificant difference between knowledge scores of nurses and teachers in training (t (198=.95, significance level=0.05, sig. (2-tailed)=.33). Also, the nurses in training had higher HIV/AIDS mean attitude score (x= 14.54) than teachers in training (x=14.34). However, independent sample t-test showed insignificant difference between attitude scores of nurses and teachers in training (t (198) =.60, significance level = 0.05, sig (2-tailed) =.54). There was no statistically significant bivariate correlation between knowledge

and attitude scores of respondents (r(198)=0.01, significance level=0.05,sig.(2-tailed)=.89). The study recommends that future HIV/AIDS prevention strategies and campaigns in schools and colleges should focus not only on HIV/AIDS knowledge but also on developing and maintaining safe sexual behavior and positive attitudes towards HIV/AIDS issues and patients.

Key words: HIV/AIDS, knowledge, attitude, comparison, nurses and teachers in training.

Introduction

One major challenge of the world today is the threat of the infection of the Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome (HIV/AIDS), which has become a scourge. HIV/AIDS has already infected many Ghanaians. About 3% of the entire adult population of the country is HIV/AIDS infected. Most of these people do not even know they carry the virus. In 2000, about 330,000 adults and 20,000 children were infected. From the beginning of the epidemic in Ghana and the end of 2000 about 185,000 people have already developed AIDS (HIV/AIDS Ghana, 2001).

The Longman Dictionary of Contemporary English explains the concept of knowledge as the information, skills, and understanding that you gained through learning or experience. According to Denning Steve 201 A frequently used definition of knowledge is "the ideas or understandings which an entity possesses that are used to take effective action to achieve the entity's goal(s). This knowledge is specific to the entity which created it."

The alarming rate of the HIV/AIDS disease and its spread, the magnitude of its infection, the long incubation period, the resultant propensity of spread, the lack of curative therapy and vaccine to prevent spread, mandate the acquisition of thorough knowledge of it. This

acquisition of knowledge on HIV/AIDS is not only required by medical and paramedical personnel, but also by the majority of the population, particularly students.

The increase in the spread of HIV/AIDS transmission is often said to be due to interlinked dynamics of poverty, low level of knowledge, poor attitudes, gender inequality, population mobility and lack of access to basic services like basic health facilities (Skolnik, 2001). UNAIDS (2002) stated that with the inception of the disease in the beginning of the 1980's, it has turned to be a global problem.

Jenda (2001) indicated that, despite the international attention that the HIV/AIDS epidemic has received, knowledge of the disease is not universal among people in sub-Saharan Africa and even among those who know about HIV/AIDS; as such perceptions of personal risk are sometimes at odds with reality. He further stated that most people are still unaware as to how the disease spreads from one person to another and they become infected due to lack of knowledge.

Bankole, Singh, Woog and Wulf (2004) indicated that while at least 90% of women and men aged 15-19 in most countries in the sub-Saharan Africa have heard of HIV/AIDS, substantial proportion in some countries have not.For example,43-46% of young women in Chad and Niger, 26% in Nigeria and 19-21% in Burkina Faso, Ethiopia, and Mozambique. Also in majority of countries with data, roughly half of the adolescent women and men who have heard of HIV/AIDS think they are at some risk of becoming infected. However, in Ghana, Niger, Nigeria and Tanzania, not more than 3 in 10 young women consider themselves at some risk.

The concept of attitude by the new Encyclopedia Britannica (vol. 1 page 36, 1980) indicates that, it is predispositions to classify objects and events and to react to them with evaluative consistency. Zanna (1981) indicated that when attitudes arise from direct or personal experiences they

are far more likely to endure and to guide actions. In effect, attitudes are described as evaluative because they are judged either good or bad by societal standard and deals directly with a person's predisposition to act or react favourably or otherwise based on factors that are closely related to one's perceptions of things or issues.

Jenda (2001) indicated that, because sexual relations between partners are not openly discussed, little is known about the implication and linkage of unprotected sex to the spread of HIV/AIDS. There are instances where due to lack of knowledge people resort to traditional healers to heal their HIV/AIDS infection, a clearly inappropriate cause of treatment. Jenda stated that false hopes are raised as mythical treatment further aggravate the situation as HIV/AIDS positive men carry out native doctors prescribed cure by having sex with virgins.

Lanier, Pack and DiClement (1999) indicated that, given the prevalence rate of HIV/AIDS in the United States and the fact that condom can prevent the spread of HIV; one may wonder why so many young people are still becoming infected with the virus through sexual contact. One possible reason is that adolescents and the young adults may not know enough about HIV/AIDS to realize that they are at risk. Although this is a plausible reason, past studies hold a different view. For instance, Lanier et al, stated that, knowledge about HIV/AIDS among incarcerated adolescents was quite high. Furthermore, the adolescents knowledge of HIV/AIDS increased from 1998-1999 without known reason to what might have brought about this increase in knowledge. But it can be speculated that it was a result of better HIV/AID education programmes in schools and an increase in the dissemination of HIV/AIDS information among young people.

In another study, Hawa, Munro and Doherty-Poirer (1998) found an increase in Canadian students' knowledge of HIV/AIDS. However, Hawa et

al indicated that knowledge alone is not enough to prompt college students to have safer sex; instead, one must have both knowledge and how to prevent HIV and motivation to use that knowledge to practice safe sex. From these two studies, it is clear that though the youth have high knowledge of HIV/AIDS, this does not necessarily lead to practices that prevent the spread of HIV/AIDS. Therefore, one is temped to ask, what other factors influence the decision to practice safe sex?

According to Oppong and Agyei-Mensah (2004), both sexually active and promiscuous young people in Ghana are more likely to be among the affected target population, because in recent years they have developed more casual attitudes towards premarital sex. If these individuals lack adequate information regarding HIV/AIDS knowledge and attitudes, they might be hit hard by the HIV/AIDS pandemic. Therefore, it is essential to compare HIV/AIDS knowledge and attitudes of Nursing and College of Education Students before planning appropriate intervention measures.

The impact of HIV/AIDS to the socio-economic, demographic and total development of the people in Kumasi is of serious concern. Experts claimed that the disease becomes uncontrollable once it exceeds a 5% prevalence rate. What this implies is that the rising prevalence rate and the rapid spread of HIV/AIDS suggest that the epidemic has not reached its equilibrium in most Ghanaian communities hence the need for continued research on students knowledge and attitudes of the pandemic thereby paving ways of interventions in order to minimize its spread and the social and economic impact. Kumasi is the Regional Capital of Ashanti Region and one of the leading commercial cities of Ghana where all practices such as casual attitude towards premarital sex, influence of mass media on the perception of sex, commercial sex workers and the degradation of traditional values promote the spread and transmission of HIV/AIDS. The recent increase in HIV/AIDS cases in Kumasi has opened a new era of

thought among policy makers and health workers. For instance, the devastating nature of the disease in the form of wiping out of the population through death, fear, sorrow and the scare, with its attendant socio-economic implications is a matter of great concern to the people of Kumasi. (Daily Guide, 2008).

AIDS patients are found in Kumasi just as they are found in most parts of the country. They are usually shunned, ignored and neglected to their own fate, especially when they begin to show the signs and symptoms of the disease. They suffer injustice and die early. Nursing and College of Education students' knowledge about basic facts of HIV/AIDS, its mode of transmission, preventive measures as well as their attitudes towards HIV/AIDS should be assessed since these two groups of students have a potential role to play so far as dissemination of information and imparting of knowledge are concerned.

The purpose of this study was to compare Nursing and College of Education students' knowledge and attitudes of HIV/AIDS in Kumasi.

Research Questions

1. What is the difference between the knowledge of trainee nurses and teachers in training in Kumasi about HIV/AIDS?
2. What is the difference in attitude of trainee nurses and teachers in training in Kumasi towards HIV/AIDS?
3. Is there any relationship between respondents' level of knowledge and their attitudes towards HIV/AIDS?

Methodology

The descriptive survey was used as the research design to assess HIV/AIDS knowledge and attitude of nursing and college of education students in Kumasi. A quantitative approach was used in the study and the survey information was collected at a point in time. The study was carried

out at Komfo Anokye Teaching Hospital Nurses Training College and Wesley College of Education in Kumasi with a total student population of 621 and 680 respectively. The study was only restricted to second year students of both schools which had a target population of 408. This was made up of 212 students from Wesley College and 196 students from Komfo Anokye Nurses Training College. Out of the target population of 480 students, a sample size of 200 was selected. One hundred students were selected from each school using simple random sampling specifically the lottery method.

Data were collected by means of questionnaire which consisted of close-ended questions or statements. The basic structure of the questionnaire was based on true/false/don't know for knowledge items and yes/no for attitude items. The questionnaire was divided into three parts. The first part was designed to record personal attributes of respondents such as age, sex, as well as some general issues concerning awareness of HIV/AIDS. The second part sought information to assess respondents' knowledge on basic facts of HIV/AIDs including general knowledge, mode of transmission, signs and symptoms and preventive measures. The items were 20 in number. The third part required respondents to respond to some items regarding attitudes towards HIV/AIDS. The items were 20 in number and included general attitudes towards HIV/AIDS, attitudes towards transmission routes, preventive policies as well as attitude towards HIV/AIDS patients. The Statistical Product and Service Solutions (SPSS) version 16.0 was used to analyse the data. Obtained data were evaluated by means, standard deviations, independent samples t-test and Pearson correlation. Testing was done using the .05 level of significance.

Results

Differences in Knowledge towards HIV/AIDS between Nurses and Teachers in Training

The knowledge scores of nurses and teachers in training were analysed to obtain the differences.

Table 1: Means and Standard Deviations of HIV/AIDS Knowledge Scores

Students	N	Mean scores	Standard deviation scores
Nurses in Training	100	14.55	2.60
Teachers in Training	100	14.55	2.08
Total	**200**	**14.39**	**2.36**

To ascertain the differences in HIV/AIDS knowledge between nurses and teachers in training, the means of the two different groups were compared. From Table 1 above, the mean score of nurses in training is higher than that of teachers in training. However, independent samples t-test analysis showed insignificant difference between knowledge scores of nurses and teachers in training (t (198) =.95, significance level = .05, sig. (2-tailed = 33).

Table 2: Table for Computation of t – test of Knowledge Scores

t	df	Significance level	Sig. (2failed)
.95	198	.05	.33

Differences in Attitude towards HIV/AIDS between Nurses and Teachers in Training.

The attitude scores of nurses and teachers in training were analysed to obtain the differences.

Table 3: Means and Standard Deviations of HIV/AIDS Attitude Scores

Students	N	Mean scores	Standard deviation scores
Nurses in training	100	14.54	2.43
Teachers in training	100	14.34	2.27
Total	**200**	**14.44**	**2.35**

To ascertain the differences in HIV/AIDS attitudes between nurses and teachers in training, the means of the two different groups were compared. From Table 2 above, the mean score of nurses in training is higher than that of teachers in training. However, independent samples t-test analysis showed insignificant difference between attitude scores of nurses and teachers in training (t (198) = .60, significance level = .05, sig. (2- tailed) = .54).

Table 4: Table for Computation of t – test of Attitude Scores

t	df	Significance level	Sig. (2- tailed)
60	198	.05	.54

Relationship between Respondents' Level of Knowledge and their Attitude towards HIV/AIDS

The Pearson product moment correlation coefficient (r) was computed from the knowledge and attitude scores to establish the relationship. Study result indicates that there is no statistically significant bivariate correlation between HIV/AIDS knowledge and attitude scores of respondents (r (198) = .01, significance level = .05, sig. (2- tailed =.89). Thus, it can be stated that there is no relationship between respondents' level of knowledge and their attitudes towards HIV/AIDS.

Table 5: Table for Computation of Pearson Product Moment correlation

Co- efficient (r) of Knowledge and Attitude Scores			
r	**df**	**Significance level**	**Sig.(2-tailed)**
.01	198	.05	.89

Discussion

The results of the analysis revealed that most students had a good to excellent knowledge of HIV/AIDS. The total HIV/AIDS knowledge score ranged from 8-19. When the sample was stratified into low (scores of 0-6), moderate (scores of 7-13) and high (scores of 14-20), the data showed that although some (n = 72, 36%) had moderate scores, none had low scores. The majority had high knowledge (n=128, 64%). Even though when compared, the nurses in training had higher HIV/AIDS mean knowledge score than teachers in training but the difference is insignificant. Previous studies have reported high HIV/AIDS knowledge among students and adolescents (Lanier, Pack & Diclement, 1999; Hawa, Munro & Doherty-Poirer, 1998; Xiaodong et al, 2007).

The implication for educational practice so far as the foregoing findings are concerned is that, respondents high level of knowledge of HIV/AIDS sources, mode of transmission and prevention methods could mean that, in practice they would be able to impart and disseminate HIV/AIDS knowledge to students and the general public. This will go a long way to overcome the ignorance and misconceptions people have on the disease which is the essential first step towards achieving behavioral change which for now remains the most important strategic option for control of the epidemic. Therefore, in our present situation, HIV/AIDS prevention largely depends on health education which should target on knowledge acquisition and application.

The results from the study demonstrated that most students had tolerant and positive attitudes towards HIV/AIDS issues, policies and patients. The total HIV/AIDS attitudes score ranged from 10-19. When the sample was stratified into negative attitudes (scores of 0-10) and positive attitude (scores of 11-20), the data show that although some had negative attitudes towards HIV/AIDS (n = 5, 2.5%), the majority had positive attitudes (n=195, 97.5%). The comparism shows that the nurses in training had higher mean attitude score than teachers in training. Previous studies have reported positive attitudes towards HIV/AIDS (Bekta, & Kulaka, 2007; Xiaodong et al, 2007). Bekta & Kulaka stated that feelings of pity, empathy and willingness to care for people living with HIV/AIDS were indicated by majority of respondents while Xiaodong et al also stated that respondents generally expressed positive attitudes towards people living with HIV/AIDS.

These findings have a number of implications for educational practice. Among them is that, the nurses and teachers in training tolerant and positive attitudes towards HIV/AIDS issues, policies, prevention methods and patients in general will go a long way to inculcate in students and the general public the need to have a positive attitude towards the disease thereby eradicating the stigmatization and the discrimination suffered by people infected with the disease.

The study found out that there is no statistically significant bivariate correlation between knowledge and attitude scores of respondents. Although this finding does not support any of the previous studies revealed in the literature, however, it will increase the research base for HIV/AIDS. Also, the lack of a standardized survey to measure nurses and teachers in training knowledge and attitudes towards HIV/AIDS prohibits researchers from making true comparisons across samples.

Conclusion

From the findings of the study it can be concluded that the high performance of respondents on both the HIV/AIDS knowledge and attitude items is attributed to the inclusion of HIV/AIDS education in the curricula of nurses and teachers in training. The high quality of HIV/AIDS education received by students can also play a role in students' good performance in the study. Besides, a favourable fact which cannot be neglected is that today's students live in an era of mass information in which they have easier access to HIV/AIDS information compared with decades ago.

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KNOWLEDGE OF TRANSMISSION PATTERNS OF HIV/AIDS AMONG STUDENTS OF TERTIARY INSTITUTIONS IN KWARA STATE, NIGERIA

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Abstract
This study investigated knowledge of transmission patterns of HIV/AIDS among students of tertiary institutions in Kwara State, Nigeria. A proportionate sampling technique was used to select 700 students from five tertiary institutions in Kwara State. The hypotheses formulated were tested using Chi-square and analysis of variance (ANOVA) at oc = 0.05 level of significance. In the findings, calculated X^2 value of 124.69 revealed that the students have adequate knowledge about HIV/AIDS transmission through sexual contacts, also calculated x^2 value of 67.83 revealed that students have adequate knowledge that HIV/AIDS can transmit through mother to child and the ANOVA result of 3.52 showed that students of various tertiary institutions in Kwara State have varied knowledge about HIV/AIDS transmission in health care setting. Fisher least significance difference was used as multiple range comparison test to identity where the significant difference between and within the group of students. Based on the findings, it was recommended that AIDS education to include STDs, sexuality and reproductive health education should be made compulsory and be

incorporated into the syllabi and curricula from primary, secondary and tertiary institutions in Nigeria among others.

Key words: Accidental exposure to blood (AEB), Blood splash (B/splash), Needle stick injury (NSInj), Percutaenous exposure (PE), Viral load.

Introduction

To date, epidemiological studies from throughout the world have documented that HIV transmission is manly implicated through blood, semen and vaginal secretions. The etiological agents of AIDS are transmitted in the following ways: **Sexual Contact**. Sexual contact with an infected individual sexual contact is the main mode of HIV transmission. Although AIDS seems to have started among homosexuals, it is not restricted to them. Infected men can infect their female sex partners as well and infected women can similarly infect men. Transmission occurs through anal, vaginal and oral sex intercourse, although the relative efficiency of each route is not known. Anal intercourse which frequently results in slight ruptures of the rectum is though to be a frequent mode of transmission. Through these rupture, semen containing virus can enter the blood stream of the sexual partner (Mann, 1997).

Mother to Child Transmission (MTCT)

HIV can also pass from mother to child during pregnancy, labour and delivery or through breastfeeding (Rosser, 2010). If a woman who is infected with HIV become pregnant, there appears to be about a 50% chance that her child will be infected with HIV. Mother to child transmission may occur in utero during childbirth or shortly after birth (Mann, 1997).

Baggaley et al, (2009) said that, mother to child transmission is also called vertical transmission and that mother to child transmission in pregnancy and

childbirth is also called perinatal transmission. In developing countries, between one in three babies or one in four babies bora to HIV positive women are born with HIV themselves. Some of these babies become infected during pregnancy, but not infected during the birth itself. There appears to be a greater risk of HIV transmission during pregnancy and childbirth if the mother has a high viral load or if her immune status is poor. Her viral load will be higher if she is HIV positive just before or during her pregnancy, and if she is continuing to be exposed to the HIV through unprotected sex in pregnancy and has symptomatic HIV (Olaitan, 2002, Rosser, 2010).

Exposure of fetus to the virus in cervico-vaginal secretion is though to play a role. In addition, recent reports have indicated that mode o delivery may affect the transmission rate. Caesarean section whether elective or emergency has been shown to decrease transmission in some studies (ECS, 1994). Landesman et al, (2006) concluded that, prolong rupture of membranes (more than four hours) increase the risk of transmission.

Transmission of HIV in Health Care Settings.

Bouvet and Laporte (2008) discussed on the transmission of HIV infection through exposure to blood and blood products. This occurs as a result of the receipt of infected blood or blood products, the blood-contaminated needles or equipment by drug abusers, or the use of inadequately sterilized needles or other skin-piercing instruments.

Accidental exposure to blood (AEB), percutaneous exposure (PE), needle stick injury and blood splash have been discovered as the ways through which hospital workers may be infected with HIV following exposure (Bouvet and Laporter, (2008), Olaitan (2004) opined that viral transmission due to percutanous exposure to blood in a hospital occurs in three ways:

1. Exposure of hospital workers to blood of patients
2. Exposure of patients to blood of health workers

3. Exposure of patients to blood of other patients.

In practice, exposure of hospital workers to the blood of patients is the major concern. The rate of transmission of HIV infection to hospital worker depends on the prevalence of infection in-patients, the frequency of exposure to blood, and the risk of transmission (Olaitan, 2004).

Research Questions:

1. To what extent do students of tertiary institutions in Kwara State have knowledge about sexual contact as a transmission pattern of HIV/AIDS?
2. What is the knowledge of students of tertiary institutions in Kwara State about mother to child transmission as a transmission pattern of HIV/AIDS?
3. Do students of various tertiary institutions in Kwara State have Knowledge about health care setting practices as transmission pattern of HIV/AIDS?

Research hypotheses

1. Students of tertiary Institutions in Kwara State will not significantly have knowledge about sexual contact as a transmission pattern of HIV/AIDS.
2. Students of tertiary Institutions in Kwara State will not significantly have knowledge about mother to-child transmission a transmission pattern of HIV/AIDS.
3. Students of tertiary various Institutions Kwara State will not have significant difference in their knowledge about health care setting practices as transmission patterns of HIV/AIDS.

Methodology

A descriptive survey research method was used to achieve the purpose of the study. The population comprised all the students in tertiary

institutions in Kwara State. In order to avoid interference and bias proportionate sampling techniques was used to select a total number of seven hundred students. This number represents 10.2% of the target population of the year three students of all selected tertiary institutions which was 6,850. The researchers constructed the instrument which seek to elicit information from respondents on their knowledge of transmission patterns of HIV/AIDS.

Results

Table 1: Table: Age and Sex of Respondents

Age (in years)	Frequency		Total	Percentage (%)
	Male	Female		
16-20	39	32	71	10.1
21-25	65	57	122	17.4
26-30	107	85	192	27.4
31-35	99	68	167	23.9
36-40	44	40	84	12.0
41 & above	36	28	64	9. 2
TOTAL	**390**	**310**	**700**	**100**

Table 1 showed that 390 male and 310 female participated in the study by responding to the questionnaire. In the age of respondents, 10.1% of the respondents are within ages 16-20years, 17.4% (21-25years), 27 .4% (26-30years), 23.9% (31-35yeras), 12.0% (36-40years) and 9.2% (41years and above). This depicts that highest number of respondents' ages are within 26-30years.

Table 2: Chi square Analysis of Students' Knowledge about Sexual Contacts as a Transmission Pattern

S/No	Sexual Contact through	SA	A	D	SD	χ^2	DF	Cal. X^2
1.	Man and woman (Heterosexual)	152	268	83	—	124.69	15	25.00
2.	Man and man (homosexual)	319	28	261	—			
3.	Woman and woman (lesbianism)	77	296	115	—			
4.	Man/woman and animal (Bestiality)	315	212	109	—			
5.	Male multiple sexual partners (Polyandry)	372	106	98	—			
6.	Female multiple sexual partners (Polygamous)	359	123	101	—			

P< 0.05

In table 2, since the calculated value of 124.69 was greater than the critical value of 25.00 at 0.05 level of significant, the null-hypothesis was therefore rejected. This means that students in tertiary institutions in Kwara State have significant knowledge about sexual contacts as a transmission pattern of HIV/AIDS.

Table3: Chi square results on knowledge about mother-to-child as a transmission pattern of HIV/AIDS

S/N	Mother-to-child-transmission through	SA	A	D	SD	X^2	DF	Cal.χ^2	REJECT
1.	MTC during pregnancy (Antenatal transmission)	89	280	360	—	67.83	9	16.9	
2.	MTC during labour/childbirth (parinatal transmission)	101	421	219	—				
3.	MTC during breast feeding (postnatal transmission)	216	150	305	—				
4.	MTC during Cesarean (sectional transmission)	92	389	115	—				

P< 0.05

Table 3 shows that calculate value of 69.83 was gather than the critical value of 16.92 at 0.05 level of significant, the null-hypothesis was therefore rejected. This means that students in tertiary institutions in Kwara State have significant knowledge about mother-to-child-transmission as a transmission pattern of HIV/AIDS.

Table 4: Percentage Performance of Health Care Setting Practices as Transmission Patterns of HIV/AIDS

S/N	Variables	Age	PE	NSINj	B/Splash	X
1.	Unilorin	38.8	39.6	71.9	50.1	50.1
2.	Fed.Poly Offa	57.1	47.3	68.5	39.9	53.2
3.	COE, Oro	41.4	36.8	70.7	28.6	44.4
4.	Nursing Sch. Ilorin.	62.2	60.7	82.5	51.4	64.2
5.	COE, Lafiaji	32.3	41.6	63.4	12.5	37.5

Table 4 showed the percentage performance of students of various tertiary institutions in Kwara State on their knowledge about ways HIV/AIDS can be transmitted in the health care setting. They are, through accidental exposure to blood (AEB), percentage exposure (PE) needle stick injury (NSInj) and blood splash (B/splash) on the overall analysis, students of college of nursing Ilorin have performance score of 64.2% followed by Federal Polytechnic Offa (53.2) Unilorin (50.1) while students of COE Oro and COE Lafiaji have below average knowledge with performance scores of 44.4% and 37.5% respectively.

Table 5: ANOVA results on Health Care Setting (HCS) Practices as Transmission Patterns of HIUV/AIDS

Source	Ss	Df	Ms	F-Ratio
Between	7277.2414	41	819.31035	3.52
Within	7760.1661	15	517.34440667	
Total	15037.4075	19		

Crit value @ $0.05F_4,i_5$ =3.06 Decision on the hypothesis = rejected.

In table 5, since the calculate value of 3.52 was gather than the critical value of 3.06, at 0.05 level of significant, the null-hypothesis was therefore rejected, i.e. there existed significant differences in the knowledge about the

health care setting practices as means of transmission partterns of HIV/AIDS. Hence the need for multiple comparison test to know where the significant difference lies.

Table 6: Multiple Range Comparison Tests (Fiser's LSD)

Main effect	COE Lafiaji	COE, Oro	Unilorin	Fedpoly	Nursing Sch
_	5	3	1	2	4
Means (X)	37.5	44.4	50.1	53.2	64.2

Conclusion: 5 is significantly different from 3, 1,2, and 4
3 is significantly different from 1. 2-r-afld 4
1 is significantly different from 4=
The results showed that there existed significant differences in the knowledge about health care setting practices as means of transmission of HIV/AIDS among students of various Tertiary Institutions in Kwara State as stated in the conclusion above.

Discussion

The analysis revealed that students had knowledge about the transmission patterns of HIV/AIDS. Even through their knowledge varied from one Institution to the other. The students were knowledgeable that HIV/AIDS can transmit by sexual contact through heterosexual, homosexual, lesbianism, bestiality, polyandry and polygamy practices. This corroborates the findings of Mann, (1997) who also found that transmission occurs through anal, vaginal and oral sexual intercourse. However, it is imperative that one who has sexual contact would in one way

or the other involve in any of the sexual practices above. The students were knowledgeable about the transmission of HIV from mother to the child antenatally, perinatally, postnatally, and sectionally, this is in line with Mann (1997), Baggaley et al. (2009) and Rosser, (2010) that HIV can also pass from mother to child during pregnancy labour and delivery or through breastfeeding. Some of the subjects knew that HIV cannot pass to another person through swimming pool, this is in line with WCTO/WHO/UNESCO/ILO (2005) that AIDS is not transmitted by insect, food, water, swimming, etc.

The students were knowledgeable that a person may contact HIV by sharing syringes and needles, and piercing instrument with AIDS patient, this is in line with Bouvet & Laporte (2008), Olaitan (2004) and Achalu (1993) that needle stick injury and blood splash have been found as the ways through which hospital workers may be infected with HIV following exposure an not sharing needles, syringes razors or other skin piercing instruments respectively. They also have knowledge about transmission of HIV/AIDS through semen, vaginal fluid and blood, this is in support of Mann (1997) that the sexual contact is the main mode of HIV transmission, i.e. transmission occurs through anal, vaginal, and oral sex intercourse, semen containing virus can enter the blood stream of the sexual partner.

According to Bouvet and Laporte (2008), and Olaitan (2002) and Marcus et al (1999) transmission of HIV can and does occur in health care settings. They further stressed that, the rate of transmission of HIV infection to hospital worker depends on the prevalence of infection in patients. This is to support the responses of the subjects who said that, in the health care setting HIV transmission is more likely from the patient to health care worker. They knew that HIV/AIDS cannot be transmitted through mosquito bite, this is in line with WCTO/WHO/UNESCO/ILO (2005) that there is

considerable evidence to show that HIV is not transmitted by insects, food, water, sneezing, coughing, toilet, urine, swimming pools, sweat, tears, shared eating and drinking utensils, or other items such as protective clothing, telephone, shared toys, books furniture or athletic clothing.

Conclusions

From the result of the study and within its limitations, the following conclusions were drawn:

1. Students of tertiary institutions in Kwara State have adequate knowledge that HIV/AIDS can be transmitted by sexual contacts through heterosexual, homosexual, lesbianism, polyandry and polygamy practices.
2. Students of tertiary institutions in Kwara State have adequate knowledge that HIV/AIDS can be transmitted through mother to child, antenatal, perinataly, postnataly and Caesarean sections.
3. Students of various tertiary institutions in Kwara State have varied knowledge about the ways HIV/AIDS can be transmitted in health care setting. The students of college of Nursing in Ilorin, Federal Polytechnic Offa, and University of Ilorin have quite above average knowledge, while students from Colleges of Education, Oro and Lafiaji have below average knowledge. This may be due to the exposure of these categories of students to health care setting practices and their knowledge about HIV/AIDS transmission patterns.

Based on the above findings and conclusions, the following recommendations were made:

1. More and adequate information on knowledge of HIV/AIDS transmission patterns should be made available to the students and the entire population regardless of age, sex, religion, groups, occupation, etc.
2. AIDS education to include STDs, sexuality and reproductive health

education should be made compulsory and be incorporated into the syllabi and curricula from primary, secondary and tertiary institutions in Nigeria

3. Federal and State Ministries of Health and Education should lay more emphasis on campaign against HIV/AIDS and should make students have access to posters, handbills, billboards, mass media both printed and electronic on the possible transmission patterns of disease.

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LEVEL OF EDUCATION AND MARITAL DISTRESS IN GHANAIAN MARRIED COUPLES

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Abstract
This study set out to examine how much distress men and women experience in their marital relationships, and whether or not education level is associated with marital distress. This was done by using the Marital Happiness Scale, and a questionnaire that measured demographic characteristics, as measuring instruments. Four research questions were formulated and four hypotheses were tested. They covered the differences that exist in the marital distress experiences among husbands and wives, and differences in education and their impact on marital distress. A total of eighty (80) married men and women comprising 40 husbands and 40 wives were conveniently and purposively selected to take part in the study. Descriptive statistics and t- Tests were used to analyse the data to bring out differences and to determine associations among variables. The findings showed that many persons who said they experienced distress in their marital relationships also tested distressed on a scale of marital distress; that among this population, wives tested more distressed than husbands in marriages. There were no significant differences between husbands and wives of low education and those of high education in their distress. Those with high education were not less distressed than those with low education. Marital distress is not a respecter of level of education. Suggestions were

made for future research to consider other factors that account for distress in Ghanaian marriages other than education status.

Key words: education, level of education, marital distress, married couple

Introduction

According to Fadem (2004), "close to half of all marriages in the United States end in divorce" (pg 42), approximating 50% of all first marriages that end in divorce, one of life's most stressful events according to the Holmes and Rahe Social Readjustment Rating Scale. Even for those marriages that do not end in divorce in Ghana, many are characterized by unhappiness (Alhassan, 1997). For example, it has been estimated that approximately 20% of all married couples experience marital distress, or discontent with their marriage, at any given time. Despite the risk associated with marriage, almost 90% of the population chooses to marry at least once, and nearly 75% of divorced individuals choose to remarry. Therefore, understanding marital distress, its dynamics and its consequences, and developing effective marital therapy or treatment programs, have been major foci of individuals in the field of mental health.

It is indicated in relationship research that many marriages go through turbulent times that cause great distress among couples. These put couples at risk for developing higher levels of depression and anxiety (Bradbury, Fincham & Beach, 2000). According to Snyder, Heyman and Haynes (2005), because there is a strong relationship between distress and personal emotional disturbance, it is important to research causes for relationship distress. Then implement effective intervention strategies to either avoid the dissolution of a marriage or entering into one that might end in divorce.

Happiness in marriage seems to elude some couples. Distressed marriages are common in many countries including Ghana. According to

Sabini (1992), not all unhappy marriages end in divorce. Some stay together for the sake of the children, or for religious or other reasons. Alhassan (1997) had the conviction that many marriages in Ghana could best be described as distressed, unhappy, and in discord, but these had not yet ended in divorce. Amuzu (1997) observed that women sustain injuries as a result of marital violence which includes cuts, broken bones, concussions, miscarriages, as well as permanent injuries such as damage to joints, partial loss of hearing or vision, scars from burns, knife wounds and even death. In Ghana, although the incidence of physical abuse of women is thought to be commonplace and pervasive, only few women report or even admit being victims of domestic violence. In several instances, it is only reported when grievous harm has been caused. In addition, many victims face pressure from society to keep the family together at all costs and many women who are severely battered by their husbands love them and continue to cling to the relationship hoping that something would eventually happen that would change the bad situation. In Safo's (1997) opinion, women also commit violence against men almost as often as men do against women.

Despite much effort being made by relatives, pastors, chiefs and clan elders, the law courts and family tribunals, amateur and trained counsellors, and clinical psychologists, marital problems and conflicts are still on the ascendancy. The distress is so prevalent that one finds it difficult to assign a particular reason or factor to the phenomenon. Some authors blame it on factors including differences in the sexes, differences in personality or temperaments, differences in upbringing, communication difficulties, Western education and emancipation of women, intrusion of third parties and failure to adjust (Adei, 1991). Mcvey (1990) highlighted financial problems, immaturity before marriage, in-laws, accommodation problems and sexual incompatibilities as resulting in marital distress. Holtsworth-Munroe and Jacobson (1985) also identified expectations and negative

attributions as important.

Recently, self-esteem and assertiveness were researched and found to also significantly affect marital distress in Ghanaians (Anim 2011). With self-esteem and assertiveness not properly developed in people, they enter in marital relationships only to find out that they are not really mature enough to handle physical, social, emotional, mental and spiritual conflicts that erupt in marital relationships.

Western education and its consequent 'emancipation' of women may have also affected marital distress in a society where male dominance is taken for granted. An educated wife may seek to exert 'equal-status' authority in the marriage, and may challenge her husband's final decisions pertaining to the home. Some highly educated couples find it difficult agreeing on who controls affairs in the marriage: the husband, wife, or both? Many educated women answer that it is both, for in marriage both should share the same authority or exercise equal-status rights and power. These ideas may make some wives behave in traditionally or culturally unacceptable ways in their relationships and this may spark a lot of friction, communication problems, marital dissatisfaction and distress.

Rather than face marital problems when they arise, many married couples get around it, seeking the route of least resistance. McDowell (1985) pointed out such ineffective substitutes for dealing with conflicts as failing to acknowledge the problem, withdrawal (the silent treat), trying to ignore the conflict's significance, spiritualising the problem with religious jargon, keeping scores, attacking the person instead of the problem, blaming someone else, desiring to win no matter the cost, giving up just to avoid conflict, and buying a special gift for the other person.

All these ineffective solutions have one thing in common: they try to avoid dealing with the problem. In the end, the accumulation of unresolved conflicts take their toll with painful physical, psychological, emotional,

mental, and spiritual consequences, which can be termed distress in marriage. There is a need for further study to determine other psychosocial factors that are responsible for marital distress in Ghana, apart from those above that have been researched empirically in Ghana.

In this study, therefore, some potential associates of marital distress were explored in order to understand the dynamics of a distressed marriage. One way to understand the dynamics of marital distress is to identify factors that most likely contribute to marital distress. In this study, education level was explored.

Education level was chosen because there is a correlation between education level and marital distress. Bayer (1969, 1972) found in his research that women are more likely to stop their education after marriage. Cherlin (1979) also found that women with more education have less stable marriages. So did Janssen et al., (1998), and Kalmijn (1999). On the contrary, Heaton (2002) found that higher education level could predict marital satisfaction. In a more recent research by Adler (2010) in the USA, she concluded that "although the correlation between education level and marital satisfaction was not statistically significant, more research is needed in this area because of the conflicting and outdated existing research." Therefore the aim of this study was to empirically determine how education level of spouses in Ghana was associated or correlated with marital distress.

Objectives:

One objective of this study was to find out the intensity of marital distress among couples.

Second, to find out whether men were more distressed than women on the measuring instrument.

Third, to find out if educational status had to do with marital distress.

Research questions

1. Would husbands and wives who experience marital distress obtain high distress score on the marital happiness scale?
2. Would wives report higher distress than husbands?
3. Would highly educated husbands be found to be more distressed than those with low education?
4. Would highly educated wives be found to be more distressed than those with low education?

Hypotheses:

1. **$H_{0=}$** There will be no difference in score of husbands and wives who experience marital distress using the marital happiness scale.
   $H_{1=}$ There will be difference in score of husbands and wives who experience marital distress using the marital happiness scale.
2. $H_{o=}$ There will be no significant difference in the level of distress of wives and husbands.
   $H_{1=}$ There will be significant difference in the level of distress of wives and husbands.
3. $H_{o=}$ There will be no significant difference in marital distress of husbands with high and low education.
   $H_{1=}$ There will be a significant difference in marital distress score of husbands with high and low education.
4. $H_{o=}$ There will be no significant difference in marital distress of wives with high and low education.
   $H_{1=}$ There will be a significant difference in marital distress score of wives with high and low education.

Methodology

Design: This was a comparative study, comparing two groups (husbands and wives), and two levels of educational status (high and low), as well as two levels of distress (high and low).

Study site: Madina in Accra, and Somanya, Odumase Krobo, and Akuse, a cluster of towns in the eastern region of Ghana, were the areas of the study. In order to collect significantly useful data fairly rapidly within the confines

of financial and time limitations, as well as by reason of proximity to the researcher, it was preferable to limit the study to these specific localities. Distressed couples who had been married two years or more with a minimum of Middle/Junior Secondary school education were used. The reason was to recruit participants who could read and understand English to respond to the questionnaire. The participants were from some churches, Department of Social welfare, a district grade two court, some schools, and civil service institutions. In all, 80 married men and women who reported marital distress on the measuring instrument were selected. Subjects, whose marital distress was associated with known psychiatric conditions, particularly substance related disorder, schizophrenia, major depressive illness, and other psychotic disorders, were not included in the study.

Sampling for equal numbers of husbands and wives was done in order to include presumably typical groups in the sample. The researcher contacted married men and women in the said areas and purposefully recruited forty (40) distressed husbands whose ages ranged from 28 years to 64 years. The mean age for the group was 40.4 (SD= 7.3796). The wives were also 40 and aged from 25 to 56 years.

The mean age for the wives was 38.6 years (SD= 7.7849). Twenty five of the husbands (62.5 %) had high education and fifteen (37.5%) had low education. Twelve (12) wives had high education (30%) while twenty eight (28) wives (70%) had low education as shown in Table 1 (NB: Up to GCE O-level was considered as low education, and from A-level was considered as high education). Husbands in the sample had been married an average of 8.05 years with a range of 3- 28 years (mean = 8.05; SD= 6.63). Also wives in the sample had been married an average of 13.9 years with a range of 2- 29 years (mean= 13.9; SD= 7.9). Refer to Table 1.

Instruments used were a questionnaire and a screening interview. The screening interview had structured questions of the closed-ended type

to which subjects responded either 'yes' or 'no'. The questions covered alcoholism, substance-related disorders, schizophrenia, psychosis, and depression. They were meant to eliminate subjects who suffered from these conditions. The main data collection instrument was a comprehensive questionnaire made up of socio-demographic data such as age, sex, religion, occupation, number of children, etc. Then a 33- item 4- point Marital Happiness scale (being the combination of the marital happiness and the Dyadic Adjustment Scales, which were modified by the researcher for Ghanaian respondents).

Procedure:

Verbal consent was obtained before the interview, and then the questionnaire was given out. The researcher supervised the completion of the questionnaire which took about thirty minutes on the average for almost all respondents whose level of education was low. In all, 90 questionnaires were given out. Four were not returned. Three were discarded because of incompletion, and three were not used in the final analyses because the respondents were not distressed. They exaggerated their responses. The completed questionnaires were collected same day.

Method of Scoring Marital Happiness Scale:

This questionnaire was scored to differentiate high scorers and low scorers.

The highest score obtainable	= 132
The lowest score obtainable	= 33
Range: 132 – 33	= 99
Midpoint:	= 49
Therefore, from 33 – 82	= low distress
From 83 – 132	= high distress.

Method of data analyses

Descriptive statistics (frequencies and percentages), were used to deal with hypothesis one and the other research findings. t-Test was used to test

hypotheses 2, and a One-way ANOVA was used to test hypothesis 3. Post hoc comparison of ratio of means of husbands and wives with high and low education and the effect on marital distress was also conducted. All analysis in this study was done using SPSS 1998 (8.0)

Demographic characteristics of sample are presented in Table 1 above. About 38% of husbands had low education as compared to 70% of wives of low education, whilst 63% of husbands had high education compared to 30% of wives who also had high education. A high percentage (97.5) of husbands were monogamous and only 2.5% of them were polygamous. Compared to husbands, 80% of wives were also monogamous and only 20% were polygamous. 32.5% of husbands were civil/public servants and 12.5% of wives were of similar job status. 40% of husbands were in the teaching field and about the same percentage of wives were also in the teaching field (35%). For farming, 20% of husbands and 7.5% of wives engaged in it. Finally, a small percentage of husbands (7.5%) were traders and a large percentage of wives traded (45%).

RESULTS

Table 1: Demographic characteristics of Sample

Variables	**Husbands (No.)**	**%**	**Wives (No.)**	**%**
Educational Level				
Low (Up to O-level)		37.5	28	70
High (A-Level upwards)		62.5	12	30
Marriage Type:				
Monogamy		97.5	32	80
Polygamy		2.5	8	20
Occupation Type:				
Civil/Public Service		32.5	5	12.5
Teaching		40	14	32
Farming		20	3	7.5
Trading		7.5	18	45
Religious Type:				
Catholic		10	3	7.5
Protestant		70	24	60
Pentecostal/Spiritual		17.5	9	22.5
Islam		2.5	0	0
Religion not indicated				
Age:		**Maxim**	**Mean**	**St. Dev.**
Husbands		64	40.5	7.38
Wives		56	38.6	7.38
Years of Marriage:				
Husbands		28	8.0	6.62
Wives		29	13.9	7.9
Number of Children:				
Husbands		6	2.6	1.7
Wives		6	2.5	1.6

Hypotheses

Hypothesis One: This hypothesis predicted that there would be no difference in scores of husbands and wives who experience marital distress using the marital happiness scale. That is, husbands and wives who report marital distress would not score higher on the marital happiness scale.

Table 2 shows data on the levels of marital distress from both husbands and wives.

Table 2: Marital Distress Levels for Husbands and Wives.

	Husbands		Wives			
Score	Number	Percentage	Number	Percentage	total	Percentage
33-82	20	50	11	27.5	31	38.75
Distress						
Level						
83-132	20	50	29	72.5	49	61.25
Total	40	100	40	100	80	100

Table 2 shows that out of a sample of 40 distressed husbands, 20 (50%) fell in the low distress level, and 20 (50%) fell in the high distress level. Unlike the husbands, 11 wives (27.5%) had low distress while 29 (72.5%) had high distress. In aggregate however, 49 (61.5%) husbands had high distress and 31 wives (38.75%) had low distress levels. The hypothesis was not supported in the case of the wives but supported in the case of the husbands.

Hypothesis Two: It was hypothesized that there would be no significant difference in the level of distress of wives and husbands; i.e. wives would not report high marital distress than husbands. This hypothesis was tested using an independent t-Test. Results are summarized in Table 3.

Table 3: Summary Table of t-Test showing mean comparison of husbands and wives on Marital Distress

Marital Distress		
Variable	Husbands (n = 40)	Wives (n = 40)
Mean	82.6	92.6
SD	19.2	19.6
Mean Difference	-9.8	
Df	78	
t	2.28	
One-tail significance	P = 0.013 < 0.05	Significant

Table 3 shows that husbands and wives differed significantly on marital distress (P = 0.013 < 0.05). That wives were more distressed (m = 92.4; sd = 19.4) than husbands (m = 82.6; sd = 19.2). This way, the hypothesis that wives would not experience greater distress than husbands was refuted. The alternative hypothesis was rather supported, that wives would experience greater distress than husbands.

Hypothesis three: This predicted that there will be no significant difference in marital distress of husbands with high and low education. The hypothesis was tested using an independent t-test. The result is shown in Table 4 as follows:

Table 4: Summary Table of t-test Showing Mean Comparison of High and Low Education of Husbands on Marital Distress

Variable	N	Mean	SD	f	t- Value	Table value	Sig
High Educ	23	75.2	17.4				
				38	-3.11	2.02	Not. sig.
Low Educ	17	95.5	17.3				

95% CI; P < 0.05

The result of the t-test in Table 4 indicates a t value of -3.11 with a degree of freedom of 38. The P value is 0.86. The calculated value of t (-3.11) is lower than the table value of 2.02. Since P (0.86) > 0.05, there is no statistically significant difference in the marital distress scores of husbands of high and low education. On the basis of this, the null hypothesis is upheld. Level of education has no significant influence on the experience of marital distress.

Hypothesis 4: This predicted that there will be no significant difference in marital distress of wives with high and low education. The hypothesis was tested using an independent t-test. The result is shown in Table 5 as follows:

Table 5: Summary Table of t-test Showing Mean Comparison of High and Low Education of Wives on Marital Distress

Variable	N	Mean	SD	Df	t- Value	Table value	P	Sig
High Educ	12	85.3	19.6					
				38	-1.53	2.02	0.9	Not sig
Low Educ	28	95.4	18.8					

95% CI; P< 0.05.

From Table 5, no significant difference exists between wives of high and low education with regards to distress. At 38 degrees of freedom and at 0.05 alpha level, the calculated value of t (-1.53) is lower than the table value of t (2.02). In other words, since P (0.93) > 0.05, there is no statistically significant difference in the marital distress scores of wives of high and low education. On the basis of this, the null hypothesis is upheld. Level of education has no significant influence on the experience of marital distress among wives.

Discussion

This study set out to answer the following research questions: what are the levels of marital distress on the measuring instrument? Are husbands and wives of high education more distressed than those of low education? Finally, who are highly distressed: husbands or wives? This discussion considers the degree to which the results of the study answered the above questions.

Marital Distress Level of Husbands and Wives.

The first alternate hypothesis stated that husbands and wives who said they experienced marital distress would score high on the marital happiness scale. The results did not support the case for husbands. But it did for wives. Equal numbers of husbands reported low and high distress. Unlike the husbands, a few number of wives (27.5%) had low distress while the majority (72.5%) had high distress. This result suggests that wives in this population were highly distressed in their marriages. Thus, there were relatively more wives testing distressed on the marital happiness scale than husbands in the population studied. In aggregate however, relatively more married men and women (61.3%) who reported distress tested distress on the research instrument than those who tested low distress (38.8%).

Hypothesis two stated that wives would not report higher marital distress than husbands. This was not confirmed. Rather, wives were significantly more distressed than husbands. This could be accounted for by the fact that even in a distressed relationship with a husband, a wife in Ghana would strive to keep the home from disintegrating or stay for the sake of the children, or for religious reasons (Sabini, 1992), or stay because of pressures from family members or society; or still stay hoping that something would eventually happen which would change the bad situation (Safo, 1997). All or most of these and other reasons kept wives in distressed relationships. Here, they suffered more than their husbands who although

distressed too, might have other outlets for their distress. Some of these outlets, as revealed by male respondents, were having girlfriends, staying away from home for long period, sheer pretence as if they were alright. Some resorted to drinking alcoholic beverages and smoking cigarettes to alleviate their distress.

Another possible reason for this finding is that in our society, women are noted for reporting their emotions more frankly than men. And this has appeared here in reporting their distress more than the husbands. This is in consonance with Adei's (1991) statement that 'men are not expected to display emotions and vulnerability. These are feminine characteristics'.

Level of Education and Marital Distress

The study also investigated education and distress experiences of husbands and wives. To this end, the hypotheses "there will be no significant difference in marital distress of husbands with high and low education and there will be no significant difference in marital distress of wives with high and low education" were tested. Findings showed no significant differences between the two groups. The findings were that highly educated husbands and husbands with low education did not experience significant differences in marital distress. Also, wives of high education and those of low education did not show any significant difference in their experience of marital distress. It suggests that educational status did not influence the experience of distress in marriages. Even though this study revealed that husbands and wives experienced high marital distress, the distress could not be explained by reason of differences in their educational levels. Other factors would account for the experience of distress in marriages. The results mean that high education per se cannot prevent marital distress. Marital distress is not a respecter of educational status.

It was expected that couples with low education had the most satisfying marriages. But there is evidence now which seems to be that husbands and wives with low education are not the most satisfied at the moment. Neither did high education help couples to avoid marital distress. A possible reason could be that education as a means of leading or bringing people out of ignorance, poverty and disease (both physical and psychological) did not benefit these distressed couples because of their having received little or more of it.

About 70% of wives attained low education and only about 38% of husbands had low education. Previous findings already indicated that many wives were more distressed than husbands. This, together with the fact that most of the wives in the sample were school dropouts (researcher gathered during interview sessions), point to certain facts. Research indicated that sex of children influenced parents' decision as to who to educate. According to Rosen & Aneshensel (1978), in a situation where there are more claimants than resources, preference is given to the males to ensure their occupational advancement. Samson's (1974) research in the US indicated that girls needed the same kind of studies for both sexes but for a shorter period of time for girls. This discrepancy between boys' and girls' education is also predominant in Ghana. Twumasi (1986) commented that "when the family finances are at low ebb, the young girl is asked to stop her schooling." This implies that girls' education is of a second order importance. It can be deduced from these researches that some parents have different aspirations for children depending on their sex and that their aspirations for their daughters is lower.

Alexander et al., (1974) stipulated that the educational attainment of females tends to depend more heavily on family background and less on ability than that of males. It can be postulated, based on these findings that educational and vocational achievement are not regarded as a major task for

girls and are considered less important than it is for boys, in many societies. There is the tendency of parents to invest the limited finances and available resources in the person who is most likely to bring the highest and surest dividend. Many parents, thus, believe that boys will be more certain to remain in school to complete a course. Hence, when they are to choose between educating a boy or a girl, they normally do not overlook the risks involved in educating the latter, such as premature pregnancy and early marriage. They feel that when pregnancy occurs while the girl is in school, the money invested in her is wasted. In a recent study on attitudes towards female education by Mensah (1992), a correlation was made between level of education and attitude toward girls' education. It was found that parents with little or no education fail to appreciate the importance of schooling for female children. Parents were also more likely to remove their daughters from school because of pregnancy. As a result, girls are not encouraged to continue in education. Sabini (1995) observed that a variable that has been shown to relate to divorce is whether the partners finish whatever educational institution they have entered. To him, in general, the more educated a couple is the less likely the couple is to divorce. But this relationship breaks down for who fail to complete a level of education. So though people with one, two or three years of school education are more educated than those of no school education, they are more likely to divorce than those of no school experience. This has been interpreted as indicating that the same people who lack the persistence to finish an educational programme they have began also lack the persistence needed to stay married. Laudable though this interpretation seem, the majority of women in this study (57.5%) (though of low education), do not seek divorce or separation.

Conclusion

The primary purpose of this study was to find out the marital distress level of married men and women who report distress and what role level of education plays. This study was conceived against the background of increased marital distress in Ghana. So the research focused on marital distress and level of education. 80 married Ghanaians who reported marital distress men (40) and women (40) aged between 28-64 years (husbands) and 2-56 years (wives) responded to a questionnaire. The researcher used descriptive statistics and t-tests to analyze the data. The main results of the study might be summarized as follows:

1. In the aggregate, more married persons in the sample experienced high distress than the number that reported low distress.
2. Wives were more distressed than husbands. Thus, the study has shown that in terms of who experienced the greatest distress in marriage relationships in Ghana, it was the wives. Some studies (Adu- Gyamfi, 1986) found (as in this present one) that women were more likely to report problems in the emotional and social domains more readily, but that sex differences might lie in differences in ability to admit and to report certain kinds of marital problems.
3. There were no significant differences between husbands of high and low education and wives of high and those of low education in their experience of marital distress.

Clinical Implications of Findings and Suggestions

The findings of this research have some clinical implications. Unlike adults seeking psychological services in the US for the most common presenting problem of marital dissatisfaction (Behrens, Brett, & Sanders, 1994), most Ghanaian distressed women (and men) do not look for psychological services. It is therefore suggested that psychologists be trained in couples'/marriage/family therapy and to publicize the availability

of such services for the benefit of distressed couples who seek assistance from unqualified sources and thus worsening their distressed conditions.

It was found that educational status did not affect the experience of distress in marriages. It means that factors other than education and its levels account for marital distress in couples. Factor such as temperament types and differences and personality differences could be researched in detail to see if they are the causes of high marital distress levels in married couples in Ghana. How much informal and non-formal education couples received prior to or during their marital relationships, have also not been researched. This research assumed that level of education meant level of formal education or schooling. But education and schooling may not be the same things.

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AWARENESS LEVEL, SOURCE OF INFORMATION AND EXTENT OF USE OF EGROGENIC SUBSTANCE AMONG ATHLETES IN TERTIARY INSTITUTIONS IN NIGERIA

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Abstract
This paper investigated the awareness level, source of information and extent of use of ergogenic substance to enhance performance by athletes in tertiary institutions in Nigeria. A total of 220 athletes (135 male; 85 females) who participated in the 15 accredited sports by the Nigeria University Games (NUGA) Council at the 22nd biannual games held at University of Nigeria, Nsukka consisted the sample for the study. A structured questionnaire designed by the researchers was used to collect data for the study. The result showed that 40.0% of the athletes were aware of some of the ergogenic substances that enhance performance, 11.6% had seen and 2.2% on the average had used the substance at one time or the other. Many of the athletes 97.8% claimed that though they had heard and seen some of the substances, they had never used them. The study concluded that though the extent of ergogenic substance use was not high among the athletes, early intervention can prevent future outbreak since there is sufficient awareness already. It was recommended among others that appropriate measures should be taken to educate the athletes on the dangers and side effects of ergogenic substances.

Introduction

One of the major problems of the world today is that of drug use and drug abuse. Athletes also as social beings pressurized to indulge in the use of toxic substances in their bid to enhance performance. Certain prerequisites are invaluable for the attainment of athletic performance; these include natural endowment of the relevant talents, ability to master the proper techniques; adherence to arduous training protocol and enduring the hardship of training, the use of the most suitable equipment and facilities, optimum health, diet discipline, necessary competitive experience, proper motivation including other psychic factors. According to Salokun and Ogungbenro (2006) certain human traits have been known to be fundamental to excellent performance in sports. These traits include indices of physical fitness such as speed, balance, agility, flexibility neuro-muscular coordination and explosive power. Psychological factors also play an important role in sport performance hypnosis, covert rehearsal; strategies and stress management procedure have been successfully used to improve sport performance.

However the idea of winning in sport competitions by athletes become alarmingly and excessively and commercialized competitive in nature. Winning athletes becomes instantaneous national heroes, the final gains are tremendous, sometimes, and victory has been regarded as evidence of national superiority. Hence the pressure to win at all cost can be overwhelming. The rewards for winning are so high today and the penalties for losing are so severe that sport administrators, coaches and athletes succumb to the temptation of winning at all cost. Adeyanju (2002) opined that increased emphasis on success has resulted in increased pressure on athletes while high level competition has brought more demands on them. The author maintained that they go into the competition carrying with them the hopes and expectations of family, friends, teammates, the public, and

even the state or country. Okonkwor (2006) stated that participation in sport creates enduring legacy for good will and opportunity for sound human relations. Sport, she maintained serves as a great melting pot for people, races and cultures and ipso facto for breaking down the wall of individualism, hatred, and other social characteristics. Sport have played an important role in most societies, this had made modern day sporting activities become a multi-billion naira industry, thereby escalating the price of victory. The public only recognizes the best in any event or game. So much is at stake that the whole of the immediate beneficiaries; coach, manager, physiotherapist and sport psychologists to mention a few, will do whatever is practicable, legal or illegal, including giving the athlete drugs to secure victory. According to Elsass (2010), it is this need to win and gain a competitive edge that drives athletes to seek a variety of ergogenic aids.

Ergogenic aids are generally classified into five categories:

1. Mechanical aids, such as aerodynamic devices on bicycles;
2. Psychological aids, which could include hypnosis
3. Physiologic aids, such as "blood doping", which is designed to increase red blood cell content;
4. Pharmacological aids, which includes anabolic steroids; and nutritional aids (Elsass, 2010).

The focus of this study was on pharmacological drug aids.

Calfee and Fadale (2006) noted that ergogenic drugs that are commonly used by youths today include anabolic-androgenic steroids, steroid precursors (androstenedione and dehydroepiandrosterone), and growth hormone, creatine, and ephedra alkaloids. Elsass (2010) observed that anabolic steroids are popular among athletes and body-builders because they increase muscle mass. He noted that a variety of types are combined in a process called "stacking", which athletes use to gain the best attributes from each particular drug. According to Calfee and Fadale (2006),

commonly used anabolic-androgenic drugs include Anadrol (oxymetholone), Oxandrin (oxandrolone),Dianabol (methandrostenolone), Winstrol (stanozolol), Deca-durabolin (nandrolonedecanoate), Durabolin (nandrolonephenpropionate), Depo-testoterone (testosterone cypionte), and Equipoise (boldenoneundecylenate).

Drug and supplement use is not uncommon today especially among students in institutions of learning. Drug use among athletes is also a global concern. It is estimated today that 1 to 3 million US athletes are taking steroids, and 2500 metric tons of creatine were consumed in 1999 (Calfee & Fadale, 2006). Durant, Rickert and Ashworth (1993) surveyed 224 boys who were in the 10^{th} grade to assess high school growth hormone use. Nearly 5% agreed using growth hormone, with 10 students indicating explicitly that it was for improving sports performance. More than half used growth hormone in conjunction with steroids, and 70% reported use more than once per month. Of concern was the fact that half of the students could not name a single risk associated with taking growth hormone. Estimates of high school steroid use range from 4% to 11% in boys and up to 3.3% of girls (American Academy of Pediatrics Committee on Sports Medicine and Fitness, 1997). National Collegiate Athletic Association (NCAA) (2001) reported a 3.9% incidence of ephedrine use in the past 12 months for men and women athletes.

Verroken (2006) stated that drug use in sport is contrary to the very principles upon which sport is based. Sport is considered as character building, teaching the virtue of dedication, perseverance, endurance and self-discipline. Doping circumvents these requirements, producing a "short cut" effect, given significant unmerited advantage in-terms of concentration, endurance, strength etc. Ergogenic aids, drugs or doping in athletics or doping in athletics or sport are terms used to refer to the administration of any product by athletes to artificially augment

performance. According to Mottram (2006), doping is defined in rule 144 of the International Amateur Athletic Federation (I.A.A.F.) as the employment of drugs with the intention of increasing athletic efficiency by their stimulating action upon muscles or nerves or by paralyzing the sense of fatigue. Ergogenic aids are substances that some athletes use to improve strength and endurance (Elsass, 2010). Drug use is potentially the most serious threat to the credibility of competitive sport. It concerns the deliberate, illegitimate use of drugs in an attempt to gain unfair advantage over fellow competitors. Francis (1990) stated that drug misuse today has increased in sophistication; athletes are seeking out ways to improve performance using the most advance technology. The author cited the former coach of Ben Johnson who claimed that "there are thousands of possible synthetic permutations of the testosterone molecules. The great majority of these steroids remain an un-explored frontier. Private laboratories stand ready to synthesis any number of these steroids and keep the athletes ahead of the game.

Verronken (2006) maintained that "Today's athlete may simply be following previous traditions. At the Ancient Olympic Games, athletes had special diets and were reported to have taken various substances to improve their physical capabilities. According to Finlay and Plecket (1976) the winner of the 200m sprint at the Olympic Games of 688B.C was said to have used a special diet of dried figs. The ancient Egyptians used a drink made from the hooves of asses, which had been ground and boiled in oil then flavored with rose petals and rose hips to improve their performance. In Roman times gladiators used stimulants to maintain energy levels after injury. Similar behavior by Medieval Knights has also been noted (Donohoe & Johnson, 1986). Various societies since ancient times have attempted the use of stimulants to improve physical performance and suppress the feeling of fatigue. The Romans gave their racing horses a

mixture of honey and water to increase their speed, while the Indians of South American chewed coca leaves (Astrand, & Rodahl (1977). Weinberg (2003) stated that it is no secret that performance enhancing drugs have been used by world-class athletes and Olympians for decades or that some athletes will do almost anything to gain a competitive advantage. He maintained that the disqualification of athletes in recent Olympics and Tour de France competitions for using performance enhancing drugs bears witness to the potential negative sport related consequences of substance abuse.

Adrain Mutu was given a seven moth ban for his positive test in 2004, Mark Bosnich another Chelsea player was banned in 2003; Martina Hingis retired after testing positive for cocaine at Wimbledon in 2007, Diego Maradona suffered an overdose in 2004, Mark Lewis-Francis sprinter was stripped of his silver medal at the 2005 European indoor championships when he tested positive for cannabis (Somefun, 2009). Within the Nigeria contest, it has been confirmed that the use of drugs among athletes is not new, while Nigeria was preparing for the 1992 Olympics in Barcelona, the National Sport Commission (NSC) ordered an investigation into the alleged drug use scandal amongst some of the Nigerian athletes (Daily Times, 1992) the athletes; ChiomaAjunwa, Clement Chukwu, Tina Iheagwam, Charity Opara, Innocent Asonze and Daniel Philips were consequently dropped from the Olympic team after testing positive for drug use. The African record set by Chioma Ajunwa in the sprints was cancelled by the Athletic Federation of Nigeria (Daily Times, 1992).

Aside sports related side effects of ergogenic substances; they are also associated with a number of serious adverse health effects. For instance, continuous anabolic-androgenic steroids use results in acne, balding and reduced sexual urge (Maisto, Galizo & Connors, 1999);

multiple organ systems, infertility, gynecomastia, female virilizaiton, hypertension, atherosclerosis. Physical closure, aggression, depression (Calfee & Fadale, 2006). Continuous use of some nutritional supplements are found to increase estrogens in men, cause dehydration, muscle cramps, gastrointestinal distress, and compromised renal function; while ephedrine alkaloids cause cerebral vascular accident, arrhythmia, myocardial infarction, seizure, psychosis, hypertension, and death (Calfee & Fadale 2006). Effects of large consumption of caffeine include muscle twitching, rambling flow of thought and speech, cardiac arrhythmia, periods of inexhaustibility and psychomotor agitation (Maisto, Galizio & Connors, 1999). In addition to physical effects, a number of psychological effects of ergogenic drugs exist. According to Maisto, Galizio and Connors (1999) most users of steroids report mild euphoria, withdrawal symptoms and dependence, increased irritability and aggressiveness, sometimes leading to violent behavior as well as mood swings and psychotic reactions. Maisto, Galizio and Connors (1999) reported a study of 41 body builders and football players who had used steroids. Nine of the subjects (22%) experienced emotional disturbance associated with the steroid use, and five (21%) developed psychotic reactions during their steroid regimens.

Despite the identified sports and health related negative effects of ergogenic substances, athletes persist in their use of them, and Maisto, Galizio and Connors (1999) predicted that the use of steroids by athletes will continues as long as athletes believe their fellow competitors are competition is using them. Better testing methods are regularly being introduced by international sporting bodies. These may reduce cheating by the use of ergogenic aids. But what of the thousands of young men and women who are not Olympic-caliber athletes who are taking ergogenic substances to improve their performance at the college and university level? It is in doubt whether these young athletes receive any drug education

to prepare them to make informed decision concerning this unethical and unhealthy practice. How far drug education has been infused into the present schools' curriculum in Nigeria remains uncertain. It is against this backdrop that this study was conceived.The purpose of this study is to investigate the awareness level, source of information and extent of usage of ergogenic drugs or substances by athletes in tertiary institution in Nigeria.

Methodology

This is a descriptive survey. Respondents for this study were two hundred and twenty (220) randomly selected athletes irrespective of gender and sport who were representing their institution at the 22nd biannual Nigeria University Games (NUGA) held 2009 at the University of Nigeria Nsukka. Data for this study were collected using a structured questionnaire designed by the researchers. It has two sections. Section A deals with the demography of respondents while Section B contain 17 items that elicited information on the level of awareness, extent of use and sources of information on ergogenic drugs. The validity of the designed questionnaire was established usingseasoned sports and health professionals from the Department of Physical and Health Education, ObafemiAwolowo University Ile-Ife, Nigeria. The Pearson product moment correlation coefficient was used to calculate for reliability of the questionnaire and a correlation coefficient value of 0.72 was obtained. Data collected was analyzed statistically using frequency and percentages.

Table 1: Awareness and Extent of Ergogenic Drugs use by Respondents

Types of Drugs	Heard aboutfrag -(%)	Seen	Used But discontinuedf reg. (%)	Used as occasionallyf reg. (%)	Used currentlyf reg. (%)	Never usefrag (%)
Morphine	89(40.5)	9(4.1)	1(0.5)	1(0.5)	1(0.5)	217(98.6)
Nandrolone	30(13.6)	2(0.9)	0	0	0	220(100)
Stanozolol	74(33.6)	11(5.0)	0	0	1(0.5)	219(99.5)
Heroine	150(68.2)	22(10.8)	0	1(0.5)	1().5)	217(98.6)
Dianabol	63(28.6)	11(5.0)	2(0.9)	3(1.4)	3(1.4)	212(98.6)
Ephedrine	109(49.5)	45(20.1)	1(0.5)	10(4.5)	8(3.6)	201(91.4)
Cocaine	161(73.3)	46(20.9)	1(0.5)	4(1.8)	1(0.5)	214(97.3)
Opium	82(37.3)	16(7.3)	0	0	0	220(100)
Caffeine	97(44.1)	44(20.0)	1(0.5)	6(2.7)	5(2.3)	208(94.5)
Methamphetamine	62(28.2)	16(7.3)	0	0	0	220(100)
Methadone	62(28.2)	9(4.1)	2(0.9)	2(0.9)	2(0.9)	214(97.3)
Amphetamines	81(36.8)	22(10.0)	1(0.5)	1(0.5)	1(0.5)	217(98.6)
Barbiturates	78(35.5)	22(10.0)	1(0.5)	1(0.5)	0	218(99.1)

The data in table 1 reveals that majority of the respondents had heard about cocaine (73.3%), heroin (68.2%), and ephedrine (49.5%). Only 13.6% has heard that about nandrolone. Majority of the athletes claimed to have seen cocaine (20.9%), ephedrine (20.1%) caffeine (20.0%), heroine (10.8%), while 10% of the respondents respectively had seen amphetamine and barbituarates. Ephedrine was the most commonly used ergogenic drug (0.5% used but discontinued, 4.5% used occasionally and 3.6% were currently using) followed by caffeine (0.5% used discontinued, 2.7% used occasionally and 2.3% were currently using). None of the respondents had ever used nandrolone, opium and methaphitamine. The overall result shows that while 40% of the respondents had heard about the ergogenic drugs studied and 11.6% had seen them, only 2.2% had actually used them (97.8% had never used).

Table 2: Source of Awareness of Ergogenic Drugs by sex of Subjects

Source of Information	M (N = 135)	F (N = 85)	Total (N = 220)
Friends who are not athletes	19(8.8)	12(5.6)	31(14.4)
Other athletes	52(24.1)	24(11.1)	76(35.2)
Mass media	33(15.3)	33(15.3)	66(30.6)
Coach	9(5.2)	4(1.9)	14(7.1)
Sport organizer	4(1.9)	22(0.9)	6(2.8)
Books	7(3.2)	6(2.8)	13(6.0)
Doctors	11(5.1)	4(5.1)	15(6.9)

Table 2 above shows the sources from which the respondents became aware of the identified ergogenic drugs. The respondents indicated that co-athletes (35.2%) mass media (30.6%); were their highest sources of information, while friends who are not athletes (14.4%); coaches (7.1%) and sport organizers (2.8) were the least sources of information on ergogenic aid / drugs. Also male (24.1%) more than female (11.1%) consulted co-athletes on performance enhancing drugs. More male respondents (8.8%) than female respondents (5.6%) reported to have consulted their friends who were not athlete.

Discussion

Many of the respondents in this study were not ignorant of performance enhancing drugs. More than half of the respondents have heard about anabolic steroids, heroin, cocaine, amphetamines and caffeine. Furthermore, the present results showed that the respondents in this study were not only aware of drugs that could improve sports performance; they were also able to identify such drugs. However, with regards to use, the findings of the present study which showed that only 0.04% of the respondents had tried and discontinued different forms of ergogenic drugs;

1.0% used them occasionally and 0.8% were in the habit as at the time of the study (totaling 2.2%). This is an indication that ergogenic drug use, among the athletes was not high,even though should be given attention. This varies with the findings made by American Academy of Pediatrics Committee on Sports Medicine and Fitness, (1997) and National Collegiate Athletic Association (NCAA) (2001) which found drug use among young school athletes to be 4%-11% and 3.9% respectively.

Majority of the respondents indicated that their commonest source of drug knowledge were co-athletes (35.2%) and mass media (30.6%) respectively. The least source of drug awareness was the sports organizers (2.8%); and that they easily obtained on demand from other athletes, coaches and physicians. These findings are not unexpected since people would normally seek to obtain advice from those who share a common goal or problem with them. Also the mass media including electronic and print media readily carry news of athletes who are banned from substance use. This source of information may have both positive and negative impact by deterring athletes who may not want to risk being caught and banned as well as open the eyes of those who may believe they are invincible to try the substances to enhance their performance. These findings have some similarity with a study regarding anabolic androgenic steroid(AAS) use by football players in Indiana High School which indicated that 6.3% were either current or former users of AASs. Further, half of the respondents also stated that AASs were easily obtained on demand from other athletes, coaches and physicians (Baker,Cleveland and Heyneman, 2008). In another study, friends, peers, parents, siblings, members of the community, school and the media were all noted as sources of information about drugs (Dillon Chivite-Mathews, Grewal, Brown, Webster, Weddell, Brown and Smith, 2007).

Conclusions

Based on the findings of the present study, the following conclusions were drawn; that appreciable percentage of the respondents in the study were aware of what ergogenic drugs are, not as many had seen them and few use them. Also, the major sources of information about drugs in sports included co-athletes, the mass media, non-athletes and the team doctor.

Recommendations

Based on the conclusions drawn from the present study, the following recommendations were made:

1. Drugeducation should be an integral part of the school Health Education curriculum at all levels of the educational system.
2. Appropriate authorities should educate athletes about the effects of drug abuse
3. Educatorsmust be informative and accurate regarding the negative side effects of the various performance enhancing drugs.
4. Coaches and handlers should provide a supportive environment that discourages incidences of drug or substance use through the use of punishable measures on offending athletes
5. The expertise of a sport psychologist should be harness to work with athletes in training them on some psychological cues that promote peak performance during training and completion
6. Document and circulate information on athletes who had used drugs and its effects on their career
7. Educate athletes on the legal implications or legal sanctions against drug use

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ECONOMIC FACTORS PREDICTING RECREATIONAL SPORTS PARTICIPATION AMONG ACADEMIC STAFF OF TERTIARY INSTITUTION IN KWARA AND KOGI STATES, NIGERIA

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Abstract
Participation in recreational sports plays an important role in physical, mental, emotion and social status of an individual. The study investigated the economic variables predicting recreational sports among academic staff of tertiary institution in Kwara and Kogi States, Nigeria. The descriptive survey research design was adopted for the study. A simple random sampling technique employing the fish bowl method was used to select 12 government-owned tertiary institutions used for the study. One thousand six hundred and twenty five (1,625) were selected through stratified sampling technique. A modified standardised Recreation Sports Questionnaire on 4 point Likert type scale with reliability value of r=0.83 was used. A letter of introduction was collected from the department of Human Kinetics Education, University of Ilorin, Kwara State, Nigeria. The hypotheses was tested at 0.05 alpha level while data were analysed using multiple regression analysis. Results of findings showed that all the independent variables of provision of equipments, availability of facilities

and economic status were significant and predicted academic staff participation in recreational activities. Recommendations made include, quality and standard recreational equipment and facilities should be made available to the participants at subsidize cost and recreation should be accessible to staff at no cost.

Key words: Recreational sport, Economic factors, Tertiary institutions

Introduction

Recreation is an aspect of physical education which has always been a part of the live of everyman without regards to race or nationality. The health problems often associated with physical inactivity tend to suggest that men and women were constructed and designed for movement and physical activities. Anejo (2006) observed that, it is obvious that a great deal of changes haven taken place both in conditions of living and in the general pattern of life. Societal changes resulting from scientific and technological advancement has also produced disastrous effects upon the physical fitness of everyone.

Historically, according to Oduyale (2004) the word 'Recreation' is a Latin derivation from the word “Recreare” meaning “to create a new” or “refresh” after toil. Recreation serves as an antidote to physical, mental and emotional fatigue. It refreshes both the mind and the body. Airebamen (2005) defined recreation as an activity that yield the individual satisfaction in his leisure times, that is, thing we choose to do that we ourselves enjoy in our leisure time. In their observation, Adesoye and Talabi (2004) explained that, recreation is widely regarded as activity including, physical, mental, social or emotional involvement in contrast to sharp idleness or complete rest. It may include an extremely wide range of activity such as sports, games, crafts, performing arts, music, drama, travels, hobbies and social activities. These activities may be engaged in briefly or in a sustained way

for simple episodes or throughout one's life time.

Studies conducted in learning institutions revealed that, attitude of workers toward recreation varies from one person to the other, and their choice is predetermined by many factors. Omolawon and Sanusi (2006) revealed that, provisions of equipment and availability of facilities hindered academic staff of university of Ibadan from participating in worthwhile recreational activities. While Adesoye and Talabi (2004) asserted that, variety of problems in contemporary Nigerian learning institutions are socio-economic problems as well as the traditional work-ethics of school life. Also daily activities that were associated with lecture room, dining hall, library, hostel or hall of residence impede the realisation of potential benefits of leisure and recreational activities, therefore, in selecting recreational pursuits, it is more appropriate to choose those activities that we enjoy, especially those that give us a balance between active and effective recreational pursuits, and provide a change of pace and provide experience not found in our regular work. Generally, satisfaction in the participation of recreation depends largely on the availability of recreational equipment and facilities.

Bucher and Krotee (2002) opined that, two principles relating to equipment and facility management should be uppermost in the mind of physical educators. Equipment and facility are built as a result of community and programme needs and cooperative planning are essential to design and construct of quality equipment and facilities. In their submission, Parks, Zanger and Quarterman (1998) defined facility management, as the process of planning, administering, co-ordinating and evaluating the day to day operations of a facility. These duties encompasses a wide variety of responsibilities, including marketing and promoting not only facility of events, but also facility, maintenance hiring and firing facility personnel. Based on these Omolawon and Sanusi (2006) opined

that, for complete conduct of recreational activities and sporting programmes for the people within a particular community, effective planning and provision of adequate equipment and facilities are very important.

Therefore, Onokwakpor and Ebor (2006) suggested that learning institutions should make provision for recreational facilities since the availability of such facilities could motivate staff to start using them. Socio-economic stratification makes for the automatic seeking of one's own level for recreational pursuits. Omoruan (1996) asserted that, the game of polo as a recreation is only for those who can afford to maintain horses and as a result, many academic staff of tertiary institutions in Kwara and Kogi will not participate in such recreational activities. The cost and maintenance of the equipment and dress for some recreational sports are factors that help to decide who plays the game. However, there are instances, where recreational equipment is hired out there by making it possible for those who cannot afford to buy and participate. In urban towns and cities, there are golf clubs and other fraternal organisations that provide recreational facilities among other things for their members.

Studies of Omolawon and Sanusi [2006] showed that, academic staff and workers generally do not participate actively in worthwhile recreational sports. Omolawon and Sanusi (2006) although had previously investigated two variables; provision of equipment and availability of facilities perceived to be the determinants associated with non-participation of University of Ibadan academic staff in physical activities, this obviously left out other important variables. The study had also generally observed that, most academic staff in tertiary institutions do not maximally utilize leisure opportunities due to the following economic reasons; provision of equipment, availability of facilities and health status. In all likelihood, these factors may be interrelated. Consequently, the study set out to investigate

the socio-economic barriers of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria.

Methodology

Descriptive survey research design was employed for the study. Six government owned tertiary institutions were selected in each state totaling twelve (12) schools (Kwara and Kogi), through the simple random sampling technique of fish bowl method. While stratified sampling technique was adopted to select sixty percent (60%) of the respondents in these schools, amounting to one thousand seven hundred and twelve (1,712) out of the total population of two thousand, eight hundred and fifty four (2,854). The respondents were selected because they possess needed characteristics which the academic staff required for the study. A standardized and modified research instrument of a 4-point likert scale type of Strongly Agree (SA), Agree, (A), Disagree (D) and Strongly Disagree (SD) questionnaire was used to test the hypotheses. The instrument was pretested on 20 academic staff on the Benue State University of Agriculture, Makurdi through test re-test method of interval of 2 weeks. The collected data, using crombach alpha to test the internal consistency of the instrument produced r=0.73. Copies of the questionnaire were distributed to the respondents with the help of four (4) research assistants. Data collected were analysed using inferential statistics of multiple regression with each hypotheses tested at 0.05 alpha level.

RESULTS

Ho – Economic variables of provision of equipment, availability of facilities economic status will not significantly predict recreational sports participation among academic staff of tertiary institutions

Table 1: Relative contribution of provision of equipment towards recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria

Independent variable	Unstandardised Coefficient		Standardized coefficient	t	Sig.	Remark
	B	Std Error	Beta			
Provision of Equipment	0.057	0.034	0.185	7.637	0.000	S

α 0.05

Table 1 showed that, provision of equipment is a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria. The computed outcome has the Beta weight of 0.185, indicating that, equipment is positively correlated with the predictor and t = 7.637 and p = 0.000 and since P = 0.000 < 0.05.

Table 2: Relative contribution of availability of facilities towards recreational sports participation among academic staff of tertiary institutions in Kwara

Independent variable	Unstandardised Coefficient		Standardized coefficient	t	Sig.	Remark
	B	Std Error	Beta			
Availability of facilities	0.210	0.034	0.159	6.650	0.000	S

α 0.05

Table 2 revealed that, availability of facilities is a significant predictor of recreational sports participation among academic staff of

tertiary institutions in Kwara and Kogi States, Nigeria. The computed outcome has the Beta weight of 0.159, indicating that, facilities are positively correlated with the predictor, while t = 6.650 and P = 0.000 and since P = 0.000 < 0.05.

Table 3: Relative contribution of economic status towards recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria

Independent variable	Unstandardised Coefficient		Standardized coefficient	t	Sig.	Remark
	B	Std Error	Beta			
Economic Status	6.738E-02	0.034	0.048	2.006	0.045	S

α 0.05

Table 3 revealed that, economic status is a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria. The computed outcome has the Beta weight of 0.048 indicating that economic status correlated positively with predictor and t = 2.006 and P = 0.045 and since P = 0.045 < 0.05.

Table 4:Summary of Regression Analysis showing the composite effects of Independent variables on recreational sports participation on academic staff in Kwara and Kogi States, Nigeria

Source of variation	**df**	**SS**	**MS**	**F-ratio**	**Sig f**	**Remark**
Regression	3	1297.854	1297.854	86.989	0.000	S
Residual	1614	8071.98	4.973			
Total	1624	8504.215				

α 0.05

Multiple R = 0.248
Multiple R^2 = 0.125
Adjusted R^2 = 0.123
Standard Error = 2.230

Table 4 shows that, the combination of the three independent variables (provision of equipment, availability of facilities and economic status) in predicting academic staff participation in recreational sports, yielded a coefficient of multiple regression of 0.498; a multiple R square (R^2) of 0.126 and adjusted multiple R^2 of 0.123. This means that, all the three independent variables when taken together accounted for 12.3% of the variance in academic staff participation in recreational sports. The analysis of variance also confirmed this further as the computed details showed that, the independent variables significantly predict academic staff participation in recreational sports with the F-ratio of 86.989, df = 3/1614, P = 0.000 which is significant at $P < 0.05$.

Discussion

Table 1 indicates that, equipment is a significant predictor of academic staff participation in recreational sports. It was demonstrated in the responses of the respondents that, provision of recreational equipment is vital in the utilization of one's leisure hours. It was also confirmed by the majority that, recreational centres in their various schools were not well equipped through provision of equipment which predicted their participation in recreational activities. The result confirmed the submission of Obiyemi, Adesoye and Ojo (2006) that, equipment are programmes related, so that if they are available, adequate and well maintained, there is the possibility of having a good sporting programme. Omolawon and Sanusi (2006) lamented that, so much money required for the procurement of sporting equipment and related materials are vital to the health and safety of participants, good playing conditions and the value derived from the programme.

Furthermore, table 2 also revealed that availability of facilities is a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria. Inadequacy

of recreational facilities in the institutions hindered participation in recreation, especially in the activity of their interest as pointed out by the majority of the respondents. Some of the available facilities are sub-standard and not properly maintained. Hence, availability of recreation predicted academic staff participation in recreation. The findings further supported the claim, as submitted by Odumuh (2004) that, without adequate provision and effective maintenance of sporting facilities, sports practices would be hampered, reduced and in some cases, made impossible. Echuro and Yakassai (2006) stressed that, the utilization of sports facilities that are provided to an acceptable degree provides conducive training and coaching environment for leisure time participants. Mull, Bayless, Ross and Jamiesson (1997) suggested that, if noise does not pose any problem, facilities should be located near establishment to facilitate accessibility for workers. Therefore, Onokwakpor and Ebor (2006) supported that; the authority of learning institutions should make provision for recreational facilities since the availability of such facilities could motivate staff to start using them.

Table 3 shows that economic status is a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria. The respondents believed that, the cost and maintenance of equipment and dress for some recreational sports affect one's choice of recreational activities. Besides, the recreation centres within the campus should be accessible at little or no cost. This corroborates the findings of the General Household Survey 1997 in London as quoted by Adogbeji and Ekpon (2006) who examined household income. It was found that the income levels were closely linked to participation rate for almost all the leisure activities examined and the proportion of participation rose with income. Sheu and Adegbite (2005) supported the view that, people with lower socio-economic status are more likely to have

manual jobs. And with a higher physical demand, also have access to some recreational activities which may be limited due to their costs. Asagba (2006) submitted that, the economic atmosphere at a particular time had a direct impact on recreation and negative effects on individual's choice of recreational activities.

Conclusions

Based on the investigation, it was concluded that

1. Provision of equipment was a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi states, Nigeria.
2. Availability of facilities was a significant predictor of recreation sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria.
3. Economic status was a significant predictor of recreational sports participation among academic staff of tertiary institutions in Kwara and Kogi States, Nigeria.

Recommendations

On the basis of the findings of this study, the following recommendations are suggested.

1. Quality and standard recreational equipment and facilities should be made available to participants in order to encourage and promote participation in recreational sports.
2. Recreational equipment and facilities should be made available to the staff at subsidized costs and recreation centres should be accessible to the staff at no cost.
3. Tertiary institutions in Kwara and Kogi States, Nigeria should endeavour to construct more recreational arena from the institutions sports' budget so that, more academic staff will be encouraged to activsely participate during their leisure time in worthwhile recreational activities.

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THE SOCIAL STIGMA ATTACHED TO OBESITY: RISK FACTORS AND COPING STRATEGIES

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Abstract
The medical effects of obesity are well-documented and well-publicized. But, just as obesity may be associated with a variety of health issues, it can also bring a less well-understood effect: stigma and discrimination. The social consequences of being overweight and obese are serious, pervasive and throughout our culture, and is evident at different levels across lines of gender, race, ethnicity and socioeconomic status. Overweight and obese individuals are often targets of bias and stigma, and are vulnerable to negative attitudes in multiple domains of living including places of employment, educational institutions, medical facilities, the mass media, and interpersonal relationships. Along with implications to physical health, obesity often carries a stigma that negatively impacts the social, emotional, and psychological functioning of those who are overweight or perceive themselves as overweight. This paper seeks to review on causal attribution of obesity and its social consequences. Interpersonal sources, multiple domains and coping strategies are also captured. In light of the immense burden of obesity on health care systems and also on the individuals' quality of life, it is recommended that stigma-reduction interventions should focus on educating students at all levels of educational system and the general

public about size acceptance and further challenge negative attitudes. Also, prevention programs with information campaigns might have a high potential in increasing awareness about stigmatization.

Key words: Obesity; Overweight; Social stigma; Coping strategies; Domains

Introduction

Obesity or overweight is a social health problem. To The American Heritage Dictionary of English Language (2007), obesity is the condition of being obese; increased body weight caused by excessive accumulation of fat. Obesity the dictionary contends carry with it a devastating social stigma. Children, especially are described as being "at risk for overweight" if their body mass index (BMI) is within the range of 85th-94.99th percentile (manipulated for sex and age), and "overweight" if their BMI is at the 95th percentile or higher (Mei, Grummer-Strawn, Pietrobelli, Goulding, Goran & Dietz, 2002; Ogden, Carroll, Curtin, McDowell, Tabak & Flegal, 2006). Although BMI categories of weight according to Puhl and Latner (2007) are important for identifying health risks among children, it is not clear from existing research to what extent BMI cut-offs are meaningful for understanding weight stigma in youths.

Puhl and Latner (2007) have examined the relationship between degree of obesity and exposure to stigma among children, the youth and adults which we will examine in this review. However, because studies do not universally distinguish between *overweight* or *obese* or use additional descriptors to describe weight (e.g., fat or heavy), we use the terms *obesity* and *overweight* interchangeably to describe the condition of excess weight, in line with Puhl and Latner's descriptors.

Stigma generally refers to negative attitudes and behaviours that affect our interpersonal interactions and activities in a detrimental way. Obese individuals are highly stigmatised and face multiple forms of

prejudice and discrimination because of their weight (Puhl & Brownell, 2001). Weight stigma has been assessed in children and adolescents with a variety of different methods, including experimental laboratory studies, self-reported playmate preferences, ratings of line-drawing silhouettes and target figures, semantic differential ratings of target figures, peer and friendship nominations, qualitative interviews, and adjective attribution tasks that ask children to ascribe a variety of positive and negative characteristics to pictures or photographs of targets with different body sizes (Bell & Morgan, as cited in Puhl & Latner, 2007). Cramer and Steinwert (1998) cite storytelling methods and identification of pictures of various body sizes as an additional approach for studying children.

A thorough understanding of weight stigma and its impact may be important to document the social and psychological consequences of obesity, and may be central to revealing the totality of effects of excess weight on health and well-being. Those most exposed to stigma, for instance, may be vulnerable to psychological effects such as depression and social effects such as economic hardship and isolation, which in turn may link obesity with a health outcome like heart disease. Consequences of bias such as isolation or social withdrawal could contribute to the exacerbation of obesity through psychological vulnerabilities that increase the likelihood of over-eating and sedentary activity. While such links with health can only be postulated at present, it is clear that bias, prejudice, and discrimination are part of everyday life for overweight individuals. This has real effects on real people and merits further attention.

A stigmatized person possesses some attribute, or characteristic, that conveys a social identity that is devalued in some particular social context (Crocker, Major & Steele, 1998). Such individuals are ascribed deviant labels and face negative effects from discrimination and prejudice (Crocker & Major, 1989). The stigma of obesity is very strong. Individuals

will go to great lengths to prevent weight gain, and the possibility of becoming obese is considered a disastrous outcome. One survey reported that 24% of women and 17% of men said they would give up three or more years of their lives to be the weight they want; some women reported that they were choosing not to become pregnant because of fears of fatness (Garner, 1997). Others assume the enormous risk of smoking cigarettes in hopes of remaining slim. These examples highlight ideals of thinness in North American society where the message that it is good to be thin and bad to be fat is so widespread that expressing negative attitudes toward obese people has become an accepted form of prejudice (Falkner, French, Jeffery, Neumark-Sztainer, Sherwood & Morton, 1999: Kilbourne, 1994).

The causality of obesity has been attributed to biological, genetic, and non-controllable causes to the extent that one's physiological make up and the family lineage are important determinants in causing obesity. The attributions according to Sigelman (as cited in Puhl and Latner, 2007) about control and causality are related to negative stereotyping of overweight targets in young children. Sigelman carried out a study of elementary school children (N = 99) and indicated that they were less likely to blame an obese peer for being heavy if they were provided with information suggesting the target had little responsibility for her obesity, although this information would not change their liking of the peer. Amoah (2003) touching on the social pressures that may be partly responsible for the increasing rates of obesity stated that Ghanaians generally associate fatness with beauty in women and success in both men and women. He said men in Ghana are known for their preference for fuller women to thin women. In this wise affluent people are eating more leading to over nutrition. Also media representation of HIV/AIDS in which people are considerably emaciated also makes it difficult if not undesirable for people to lose weight for fear of being stigmatised, he concluded.

Stigma may come in several forms, including verbal types of bias (such as ridicule, teasing, insults, stereotypes, derogatory names, or pejorative language), physical stigma (such as touching, grabbing, or other aggressive behaviours), or other barriers and obstacles due to weight (such as medical equipment that is too small for obese patients, chairs or seats in public venues which do not accommodate obese persons, or stores which do not carry clothing in large sizes) (Obesity, Bias & Stigmatisation, 2010). The report further states that in an extreme form, stigma can result in both subtle and overt forms of discrimination, such as employment discrimination where an obese employee is denied a position or promotion due to his or her appearance, despite being appropriately qualified. Overweight and obese individuals are often targets of bias and stigma, and they are vulnerable to negative attitudes in multiple domains of living including places of employment, educational institutions, medical facilities, the mass media, and interpersonal relationships (Obesity, Bias, and Stigmatisation, 2010). This stems from the contention that overweight and obese persons are lazy, unmotivated, lacking in self-discipline, less competent, noncompliant, and sloppy (Puhl & Brownell, 2001, 2003). These stereotypes are prevalent leaving overweight and obese persons vulnerable to social injustice, unfair treatment, and impaired quality of life as a result of substantial disadvantages and stigma.

Sandberg (2007) analysed 1,925 articles from Swedish daily newspapers from 1997 to 2001 and found that obese people were often presented as stupid, ugly, naïve, irresponsible, lazy, greedy, without manners, and repugnant. Overweight people, according to the author, have been compared to parasites within discussions of health-care givers. Furthermore, news items that have presented successes in weight loss regimens have also contributed to victim-blaming and the stigmatisation of overweight individuals. People who have lost weight have described their

previous selves as weak and uncontrolled. It can be deduced from the foregone that stigma associated with obesity is dehumanising and has untold psychological stress on victims. If avenues are not found for the relief of these stressors, and the obese individuals mainstreamed into all fabrics of societal development, some talented and motivated beings would be left on the flip side of events which might have a toll on the economy. Through a review and evaluation of existing theoretical and empirical literature, this paper examines reasons and risk factors for the stigma of obese individuals as well as ways to reduce bias. Specifically, the paper primarily focuses on discussing the under listed issues;

a. Accounts of the Causes of Obesity
b. Stigmatisation/Victimisation of Obese Individuals: Interpersonal Sources and Domains
c. Consequences of Weight Bias
d. Coping Strategies to Weight Bias.

Accounts of the Causes of Obesity

Magness (2010) laments that a careful and an objective look at the data on obesity indicate that the war on obesity is being lost. With many diet and exercise programs failing to produce significant results, the question becomes "were we designed for obesity and diabetes?"

Physicians' Account

Physicians view obesity as largely a behavioural problem caused by physical inactivity and overeating (Foster, Wadden & Makris, 2003). A study of British health-care professionals (N = 255) found that providers perceived overweight people to have reduced self-esteem, sexual attractiveness, and health. Providers believed that physical inactivity, overeating, food addiction, and personality characteristics were the most important causes of overweight (Harvey & Hill, 2001). In a British

qualitative study, primary care physicians (N = 21) reported beliefs that obesity was caused by an unhealthy diet and lack of exercise and that it was the responsibility of the patients themselves to manage their weight (Epstein & Ogden, 2005). Adding their finding to the subject, Elendu and Dike (2010) attributed overweight in the adolescent to a decline in their physical activity level.

The Epigenetic and the Thrifty Gene Hypothesis Account

Magness (2010) related that the geneticist James Neel proposed the thrifty gene hypothesis in 1962 to partially explain the rise in Type 2 diabetes in the world. The central core of this theory is that through natural selection we evolved to be efficient at food storage and utilisation. In Neel's (as cited in Magness, 2010) original hypothesis, he stated that ancient humans went through a cycle of feast and famine. The people who had bodies that were better at fuel storage or utilisation were more likely to survive during the famine portion of the cycle. Thus over many generations, we developed genetically to be exceptionally efficient at the intake and utilisation of fuel as this was beneficial and possessed adaptations throughout the majority of human life. However, during the last century the transition to an overabundance of food and limited physical activity has created a situation where our previously advantageous thrifty genes now make us susceptible to diabetes and obesity. The contention is that physical activity was integrally linked to food procurement so that the humans who were more capable physically of surviving the hunt or gathering food, would survive and pass down their genetics. During both feast and recovery from exercise, in Magness' view, the physiological response is to increase blood glucose, insulin, and muscle glycogen levels while decreasing fatty acid oxidation. Similarly, during famine and exercise, blood glucose, insulin, and glycogen levels decrease, while fatty acid oxidation increases. This shows the intricate linking behind the physiological mechanisms

needed during feast or famines and that needed during exercise. It makes sense then that when combined the selective pressure for natural selection is increased.

What impact has famine on birth rates? During famine, individuals have lower body fat levels and this impact female reproduction (Prentice, Hennig & Fulford, 2008). Therefore it is likely that fertility plays a larger role in the natural selection than previously thought. Humans not adapted to better fuel storage and utilisation would be more likely to lose significant fat to the point that reproduction would be impaired. While on the other hand, those better adapted would not lose reproduction ability and would pass on the genotype to the subsequent generation. Concluding on who possess the thrifty genes, Stoger (2008) hypothesised that we all have thrifty genotypes, not just obese individuals.

If we all have thrifty genes, then why is obesity seemingly more heritable in certain groups and individuals than others? The answer comes from having a thrifty epigenome. Research shows that epigenetic changes largely occur when the baby is in development, for instance, through the mother's nutrition. It is thought that this occurs to match the unborn baby to its outside environment. Thus, if the baby is in development during a famine, the genes related to food storage will be up regulated to prepare it for the famine environment it is about to enter. Problems occur, when the outside environment no longer matches the environment the baby was prepared to enter. This so called mismatch concept states that disease, such as diabetes or obesity, likely occurs when the mismatch between expected environment when epigenetic changes are high does not match the outside environment later in life (Godfrey, Lillycrop, Burdge, Gluckman & Hanson, 2007).

Evidence for this mismatch concept can be seen in the Ravelli et al. (as cited in Magness, 2010) study which looked at the consequences of a

famine in the Netherlands in 1944-45. They found that obesity was much higher in those whose mothers went through famine during their first two trimesters of pregnancy. In line with this, the Stoger (2008) "thrifty epigenome" hypothesis stress that, we are pre-programmed with a certain metabolic profile, and when our food intake and physical activity does not match this profile, obesity and diabetes is likely to occur. This would explain why certain groups of people or individuals, especially the Pima Indians, for example, seem to overreact and become obese at a much higher rate than others. They went from an expected environment filled with physical activity and a traditional diet, to a high calorie diet with little activity. The rapid rise in obesity in a matter of two generations would also partially be explained by this new evidence. Stoger concluded that the genetics of obesity are not like other diseases where a single gene variant is the major player. Instead, obesity is a polygenic problem, meaning that the interaction between numerous genes may contribute to the issue.

Stigmatisation/Victimatisation of Obese Individuals: Interpersonal Sources and Domains

Social marginalisation and stigmatisation of obesity in children and adults have been extensively documented, with evidence that overweight and obese individuals face social disadvantages in multiple domains of living, including employment, education, healthcare, and interpersonal relationships (Brownell, Puhl, Schwartz, & Rudd, 2005; Puhl & Brownell, 2001). Research suggests that overweight and obese youths are victims of bias and stereotyping by peers (Kraig & Keel, 2001; Neumark-Sztainer, Falkner, Story, Perry, Hannan, & Mulert, 2002), educators (Bauer, Yang & Austin, 2004), and even parents (Crandall, 1995; Davison & Birch, 2004). This is particularly concerning during childhood and adolescence and could hinder their social, emotional, and academic development and exacerbate adverse medical outcomes that they already face, such as impaired glucose

tolerance, insulin resistance, hypertension, dyslipidemia, and long-term consequences for cardiovascular and liver morbidity (Daniels, 2006; Weiss & Caprio, 2005).

Interpersonal Sources of Weight Stigma

The components of interpersonal sources of weight stigmatisation are the peers, educators, and parents.

Peers

Several studies have demonstrated that negative attitudes toward overweight and obese peers begin as early as age 3. Specifically, 3-12 year olds were significantly more likely to ascribe negative characteristics to overweight targets including; mean, stupid, ugly, loud, lazy, sad, sloppy, lying, getting teased, and having few friends, dirty, cheats, more lazy, less popular, less happy, and less attractive (Brylinksy & Moore and Wardle et al., as cited in Puhl and Latner, 2007). Children overwhelmingly preferred the thin target for a playmate. Obese adolescents reported that peers commonly stereotyped them as being lazy, unclean, eating too much, unable to perform certain physical activities (e.g., dancing), not having feelings, unable to "get a boyfriend", lazy, self-indulgent, less attractive, having lower self-esteem, less likely to be dating, sexually unskilled, and deserving of heavier and less attractive partners (Reagan, as cited in Puhl & Latner, 2007).

Educators

Puhl and Latner (2007) contend that the common occurrence of weight stigmatisation occur in the school setting where teachers and educators add to the sources of weight bias. High school teachers in a study believed that obese persons are untidy, less likely to succeed than are thinner persons, more emotional, and more likely to have family problems (Neumark-Sztainer et al., 2002). Many teachers did not associate obesity with common stereotypes, but over half believed that obesity is often caused by a form of compensation for lack of love or attention, and 43%

strongly agreed that most people feel uncomfortable when they associate with obese people. Physical Education (PE) teachers (N = 105) perceived overweight children to have poorer social, reasoning, physical, and cooperation skills than average-weight children have (Greenleaf & Weiller, 2005). Obese students were significantly less likely to be accepted to college despite equivalent application rates and academic performance to nonobese peers (Canning & Mayer, as cited in Puhl & Latner, 2007).

Parents

Perhaps the most surprising source of weight stigma toward youths is parents. Puhl and Latner (2007) contend that this perceived parental responsibility combined with obstacles encountered in helping their child achieve successful weight loss may create an atmosphere of frustration and anger in the household. It is possible that parents may take out their frustration, anger, and guilt on their overweight child by adopting stigmatising attitudes and behaviour, such as making critical and negative comments toward their child. Davison and Birch (2004) in a study postulated that fathers with higher education and income were more likely to endorse stereotypes, as were both parents who reported a strong investment in their own appearance. Girls were more likely to display negative stereotypes if their parents emphasised the importance of a thin body shape and weight loss. Weight-based teasing by family members was reported by 47% of very overweight girls and 34% of very overweight boys (Neumark-Sztainer et al., 2002; Puhl & Brownell, 2001). In Crandall's (1995) research examining high school seniors (N = 833-3,386), it came out that overweight girls received less financial support from their parents for college than did average-weight girls, even after controlling for parental income, ethnicity, family size, and education.

Domains of Weight Stigma

Weight stigma is identified in domains of employment, health care, education, interpersonal relationships, and the media.

Employment Settings

In reviewing literature, Puhl and Brownell (2001) summarised research documenting weight-based prejudice and discrimination in employment settings. At that time, emerging evidence demonstrated that overweight and obese workers face stereotypical attitudes from employers and disadvantages in hiring, wages, promotions, and job termination because of their weight. Self-report studies in a survey study of obese women (N = 2,249) indicated 25% reported experiencing job discrimination, 54% reported weight stigma from co-workers or colleagues and 43% reported experiencing weight stigma from their employers or supervisors (Puhl & Brownell, 2006). Being the target of derogatory humour and pejorative comments from co-workers and supervisors, and differential treatment are some of the examples of weight stigma in employment settings. Wage penalty (0.7 to 3.4% for obese men and 2.3 to 6.1% for women) was also cited by Baum and Ford (2004). A study by Tunceli, Li and Williams (2006) estimated the effect of obesity on future employment and concluded obesity was associated with reduced employment for both men and women. Other population-based studies from outside the United States support these findings (Morris, 2007; Viner & Cole, 2005). Research suggests that the most common stereotypes about obese employees include being less conscientious, less agreeable, less emotionally stable, and less extraverted than their normal-weight counterparts (Polinko & Popovich, 2001).

Health-Care Settings

Overweight and obese patients are vulnerable to multiple forms of weight bias in health-care settings. In 2001, Puhl and Brownell summarised a number of studies demonstrating that health-care professionals (e.g., physicians, nurses, psychologists, and medical students) possess negative attitudes toward obese patients, including beliefs that obese patients are lazy, noncompliant, undisciplined, and have low willpower. In a study of

over 620 primary care physicians, >50% viewed obese patients as awkward, unattractive, ugly, and noncompliant. One-third of the sample further characterised obese patients as weak-willed, sloppy, and lazy (Foster, Wadden & Makris, 2003). Physicians also reported that seeing obese patients was a greater waste of their time and those heavier patients were more annoying and less likely to comply with medical advice than patients with lower body weights.

Nurses also have the view that obese patients are lazy, lacking in self-control, and noncompliant. A study by Brown and Thompson (2007) revealed that nurses with lower BMIs expressed more negative perceptions of obesity and others expressed frustration with patients' noncompliance and wanting an "easy way out". The authors stated that nurses with high BMIs felt self-conscious about their size and reported that patients made rude comments about their weight. On the contrary, Zuzelo & Seminara (2006) found that registered nurses (N = 119) had positive attitudes toward adult obese patients and that nurses were concerned with providing respectful patient care (the response rate to this study was only 16.2%).

Medical students' attitude towards severely obese patients are that they are the most common target of derogatory humor by attending physicians, residents, and students, which occurred most often in surgery and obstetrics-gynaecology settings. Dental students have reported negative attitudes toward obese patients; 30% felt that obese people are lazier, 26% felt they lacked willpower and motivation, 18% were uncomfortable examining an obese patient, and 17% considered it difficult to feel empathy for an obese patient (Magliocca, Jabero, Alto & Magliocca, 2005). The majority of dietetic students (ranging from 71 to 91%) in a recent work (Berryman, Dubale, Manchester & Mittelstaedt, 2006) strongly agreed with the stereotypes that overweight people overeat, are inactive, slow, insecure, shapeless, have no endurance, low self-esteem, and poor self-control.

Educational Settings

Wardle, Volz and Jarvis (2002) reported from a study that obesity was associated with lower educational attainment in both men and women. Additionally, a 2007 study using data from the National Longitudinal Study of Adolescent Health (N = 10,829) reported that obesity undermined the educational attainment of female students. Obese women were half more likely to attend college than non-obese women (Crosnoe, 2007). Karnehed, Rasmussen, Hemmingsson and Tynelius (2006) reported a complimentary study of over 700,000 Swedish men in 2006 and indicated that those who were obese at age 18 had a lower chance of attaining higher education than their normal-weight peers. These findings are supported by another study demonstrating that the relationship between obesity and lower academic achievement was stronger in schools with a lower average body size among students (Crosnoe & Muller, 2004). Puhl and Latner (2007) found that obese students have poor relationships with peers at school, which may interfere with their success in educational settings. In contrast, some studies have found no educational differences between obese and non-obese groups (Patt, Yanek, Moy & Becker, 2004; Viner & Cole, 2005).

Research indicates that teachers report stigmatising attitudes toward obese students (Puhl & Latner, 2007). If biased attitudes unintentionally result in differential treatment of obese students, their educational potential may be compromised. More recently, studies have demonstrated that physical educators also have negative perceptions of obese students. One hundred and five PE teachers studied by Greenleaf and Weiller (2005) also perceived overweight students to have poorer social, reasoning, physical, and cooperation skills compared to non-overweight students.

Interpersonal Relationships

Weight bias can be indicated in interpersonal relationships from romantic partners, family members, and friends, especially toward obese

women. Research suggests that obesity negatively affects dating relationships for women. Puhl and Latner (2007) referencing Sheets and Ajmere in a survey of 554 undergraduates, found that overweight women were less likely to be dating than thinner peers, and that body weight was negatively correlated with relationship satisfaction. In a study (N = 449) on college students to rank order six pictures of hypothetical sexual partners, including an obese partner, a healthy partner, and partners with various disabilities (including a partner in a wheelchair, missing an arm, with a mental illness, or described as having a history of sexually transmitted diseases) (Chen & Brown, 2005), both men and women ranked the obese person as the least desirable sexual partner compared to the others. However, men ranked the obese partner more significantly less preferable than women did. Obese women (but not men) are rated as being less sexually attractive, skilled, warm, and responsive, and less likely to experience sexual desire compared to normal-weight peers (Regan, 1996).

Individuals may also experience weight stigma from family members and friends. In a survey to determine which specific family members stigmatised overweight most often, participants reported being stigmatised by mothers (53%), fathers (44%), sisters (37%), brothers (36%), sons (20%), and daughters (18%) (Puhl & Brownell, 2006).

Media

Puhl and Heuer (2009) described the media as a striking illustration of the social acceptability of weight stigma and comprise of the entertainment, advertising, and news media. The authors stressed that whether it be situation comedies, cartoons, movies, advertisements, or news reports, the media is unkind to overweight people. In advertising and entertainment alike, thin characters are ascribed desirable attributes and dominate central roles. Compared to thin characters on television, heavier characters are rarely portrayed in romantic relationships, are more likely to be the objects of humor and ridicule, and often engage in stereotypical eating

behaviours (Greenberg, Eastin, Hofshire, Lachlan & Brownell, 2003). Sandberg (2007) also described overweight people in the industry as parasites, without manners, greedy, irresponsible, repugnant, evil, unattractive, unfriendly, and cruel. Similarly, thin characters had traits such as sociability, kindness, happiness, and success. Boys were also more likely to associate thin girls with characteristics such as "nice", "smart", "clean", "tells the truth", and "has lots of friends".

Consequences of Weight Bias

Below, we have summarised to what degree, weight stigma may contribute to negative psychosocial (self-esteem, depression, body dissatisfaction, interpersonal relationships, suicidal behaviours), academic, and physical health (eating behaviours and physical activity, cardiovascular health) outcomes.

Psychosocial Consequences

Self-esteem

Studies show that excess weight in children predicts future low self-esteem (Davison & Birch, 2004; Strauss, 2000; Tiggemann, 2005). Also, overweight children whose self-esteem decreases over a 4-year period may be at greater risk of unhealthy behaviours, including smoking and alcohol use, than are overweight children whose self-esteem does not decrease (Strauss, 2000). Research among adolescents found that weight-based teasing was associated with poorer self-esteem among both female and male adolescents (Eisenberg, Neumark-Sztainer & Story, 2003), and that obese children who were most vulnerable to low self-esteem were those who believed that they were responsible for being overweight.

Depression

Like self-esteem, research has tended to show that obese children do not differ in levels of depression compared with those of average weight peers (Brewis, 2003; Eisenberg et al., 2003) but that clinical samples of obese children display higher levels of depression than those of average-

weight control children (Erermis, Cetin, Tamar, Bukusoglu, Akdeniz & Gokson, 2004). One study found that childhood depression predicted development of obesity at 1-year follow-up (Goodman & Whitaker, 2002), Eisenberg et al. (2003) examined weight-based teasing in 4,746 adolescents and found that weight-based teasing was related to increased likelihood of depression, regardless of sex or ethnicity. Carr, Friedman and Jaffe (2007) examined the relationship between obesity and emotional well-being and realised that more 40% of obese individuals with a BMI of 40 kg/m^2 reported being mistreated due to their weight, and this was significantly associated with impaired mood.

Body dissatisfaction.

Body dissatisfaction has been found to be higher in overweight and obese children than in average-weight peers, and this seems particularly true for overweight girls (Wardle & Cooke, 2005). Studies show greater body dissatisfaction among children and adolescents with a higher BMI (Pesa, Syre & Jones, 2000; Strauss & Pollack, 2003). The following findings have also been recorded: Body dissatisfaction may have important implications for self-esteem in obese children (Pesa et al., 2000); Weight teasing is related to body dissatisfaction among boys and girls, regardless of ethnicity and weight category (Eisenberg et al., 2003); Appearance-based teasing from parents and siblings is a significant predictor of body dissatisfaction among middle school girls even after BMI is controlled for (Keery, Boutelle, van den Berg & Thompson, 2005).

Interpersonal relationships

The formation of social relationships is especially salient during the adolescent stage. Negative attitudes about obesity by peers may adversely influence social relationships for overweight children. Puhl and Latner (2007) have documented that obese children are liked less and rejected more often by peers than are average-weight students. In a large-scale investigation of social peer networks among more than 90,118 adolescents

(ages 13-18 years) from the National Longitudinal Study of Adolescent health, Strauss and Pollack (2003) indicated that overweight adolescents were more likely to be socially isolated and were less likely to be nominated by their peers as friends than were average-weight students and that as BMI increased in students, they received fewer friendship nominations.

Dating relationships may also be affected by weight bias in adolescence. Pearce et al (as cited in Puhl & Latner, 2007) contends that obese adolescents are less likely to have ever dated and are more dissatisfied with their dating status compared with average-weight peers. Making reference to Pierce and Waddle's (1997) study of 9-11 year olds, Puhl and Latner (2007) reiterated that overweight children believed that their excess weight impedes their social interactions with peers, and 69% believed that if they lost weight they would have more friends.

Suicidal behaviours.

One of the most alarming consequences of obesity in youths may be the increased risk of suicidal behaviours. Studies have demonstrated that obese adolescents are more likely to endorse suicidal ideation and attempts than are average-weight peers (Falkner, Neumark-Sztainer, Story, Jeffery, Beuhring & Resnick, 2001). For instance, in their study of 9,943 adolescents, Falkner and colleagues demonstrated that obese girls were 1.7 times more likely to report a suicide attempt in the previous year than were thinner peers, even after controlling for grade level and race. Similarly, Neumark-Sztainer et al. (2002) found that 51% of girls who were victims of weight-based teasing from peers and family members had thought about committing suicide compared with 25% of those who had not been teased. Among boys, 13% reported attempting suicide compared with 4% who were not teased.

Academic Consequences

Research on possible differences in cognitive and academic abilities has indicated mixed findings. An investigation of 6-13-year-old children in China reported lower IQ scores in severely obese children relative to

average-weight control children (Li, as cited in Puhl & Latner, 2007). In Thailand, a study of 2,252 students found a lower grade point average in overweight youths in 7th-9th grades, but found no differences in younger children in the 3rd-6th grades (Mo-suwan, Lebel, Puetpaiboon, & Junjana, 1999). The United States study of over 11,000 children found that in kindergarten and 1st grade, overweight children had lower mathematics and reading test scores. Datar et al. (as cited in Puhl & Latner, 2007) thus suggested that obesity may be only a marker, but not a cause, of poor academic achievement.

On the other hand, academic problems may lead to obesity. A 10-year Danish prospective study of 987 3rd graders showed that learning difficulties, below-average scholastic proficiency, and special education needs increased the risk of obesity at ages 20-21 years (Lissau & Sorensen, as cited in Puhl & Latner, 2007). Puhl and Latner maintain, it is possible that neither obesity nor cognitive abilities vary as a function of the other variable but both co-vary as a result from a third unknown factor, such as genetics. Compared with their average-weight counterparts, obese students are more likely to consider themselves as below-average, obese girls are less likely to expect themselves to finish college, and obese boys are more likely to expect themselves to quit school (Falkner et al., 2001).

Physical Health Consequences

Eating behaviours and physical activity

Overweight adolescents who experienced frequent weight-related teasing are more likely than non-overweight youths to engage in disordered eating behaviours such as binge eating and chronic dieting (Neumark-Sztainer et al., 2002). The authors contend that compared with non-overweight girls, overweight girls are more than twice as likely to report vomiting and unhealthy use of diet pills or laxatives. Jackson, Grilo and Masheb (2000) made studies in childhood weight-related teasing and have associated it with the development of frequent binge eating and bulimia

nervosa later in life. A prospective study of 143 adolescent girls suggested that weight-reducing efforts seem to predict and may cause higher stress levels in the future. Findings with adults suggest a relationship between stress and binge eating (Gluck, 2006) and between stress and eating disturbances more generally.

Weight-based victimisation may also have negative consequences for physical activity levels in overweight youths. Recent work demonstrated that peer victimisation toward overweight youths was negatively related to physical activity (Storch, Milsom, DeBraganza, Lewin, Geffken & Silverstein, 2006). The authors concluded that overweight youths may attempt to avoid physical activities if victimisation frequently occurs. This parallels other research that weight criticism during physical activities was related to negative attitudes toward sports and lower levels of physical activity, and that negative comments by teachers about their athletic abilities lead to avoidance of PE classes (Bauer et al., 2004).

Cardiovascular health

A recent study by Matthews, Salomon, Kenyon and Zhou (2005) on whether perceptions of unfair treatment due to physical appearance were related to elevated ambulatory blood pressure among 217 Black and White adolescents revealed that, adolescents who reported unfair treatment because of their weight and physical appearance had elevated ambulatory blood pressure, even after typical determinants of blood pressure, including BMI, sex, race, physical activity, posture, consumption, and mood, were controlled for. It could be that bias experienced by obese individuals creates a vicious cycle in which exposure to and internalisation of stigma increases cortisol and metabolic abnormalities, which in turn further increases abdominal fat and perpetuates obesity, leading to additional stigma.

Coping Strategies

Coping strategies are the array of policies recommended for the management of the condition. Strategies recommended for prevention of childhood overweight, such as changes in television viewing, in the consumption of sweet beverages and fast food, and in parental feeding practices (Dolan & Faith, 2007), focus on definable and observable positive behaviour changes. Coping strategies are needed to enable the victims have a feel of belongingness and relief them of the stresses they go through. The following have thus been suggested:

1. Individually focused approaches of blaming the victim should be avoided as this may increase levels of guilt, humiliation, and hopelessness among victims and their significant others (Puhl & Latner, 2007).
2. Parents should neither ignore nor condone bullying and teasing of their child at school, irrespective of their hope that teasing can motivate their wards to lose weight (Puhl & Latner, 2007).
3. Parents should accompany their wards to see health professionals and monitor the interactions between the two (Puhl & Latner, 2007).
4. Since strong parental connectedness have been found to lead to higher levels of psychosocial well-being, positive family relationships should be established by all parents in support of each other (Magness, 2010).
5. Physical activity and healthy eating habits should be encouraged among the Ghanaian population, especially the urban dwellers since they are the most vulnerable (Lartey, 2005: Luna, 2011: Magness, 2010).
6. School educators need training to increase their understanding of the aetiology of obesity, strategies to address weight teasing, skills to meet needs of overweight students, and awareness of their own

biases (Neumark-Sztainer et al., 2002).

7. Health professionals should come to terms with their own biases, develop empathy, and work to address the needs and concerns of obese patients (Obesity, Bias & Stigmatisation, 2010).
8. Health professionals should offer concrete advice to patients on healthy living practices, e.g., exercise regularly, take home food etc., rather than simply saying, "You need to lose weight" (Obesity, Bias & Stigmatisation, 2010).
9. Friendly and supportive health care environment and facilities should be provided at the health institutions for use by all patients. Mention is made of patient gowns, armless chairs in waiting rooms, differently sized medical equipment and a host of others (Obesity, Bias & Stigmatisation, 2010).
10. Governments should design nutrition-related policies and campaigns unique to the individual communities and see to their enforcement and compliance.
11. Walking and cycling should be encouraged as the dominant method of transportation irrespective of status. Also, the overreliance on technology at home and offices as regards the use of remote control devices to switch on or change operations of television sets, fans, air conditioners, hi-fi systems and so on, should be discouraged and individuals rather encouraged to operate them manually (Lartey, 2005).
12. The government should tighten its import laws on meat (fatty) into the country and encourage backyard gardening and the use of home grown fruits and vegetables (Lartey, 2005).

Conclusion

The stigma attached to obesity by playmates, parents, educators, and others, is pervasive and often unrelenting. The sobering findings in the text have painted a picture of the struggles that individuals with excess weight go through. Unfortunately, however, obese individuals are left on their own to confront and cope with the ongoing injustice which in the long run, could heighten their fears of an equitable life and psychological well-being, in all domains or settings of living. It is however, our conviction that despite the explicit, but uncertain understanding of the causes of obesity, solutions remain with the individual. This notwithstanding, it is plausible that coping strategies used to deal with stigmatising experiences contribute to the psychological well-being of the victims and must be upheld by all to integrate the overweight into all fabrics of life successfully.

Recommendations

In light of the immense burden of obesity on health care systems and also on the individual's quality of life, the following recommendations have been suggested;

1. Stigma-reduction interventions should focus on educating students at all levels of the educational system, and the general public about size acceptance and help challenge negative attitudes.
2. Also, prevention programs with information campaigns might have a high potential in increasing awareness about stigmatization.
3. Further, there should be an urgent need for modification of prejudice among the general public and the adoption of effective coping strategies for the individuals themselves, thus easing effects of perceived weight discrimination.
4. Individuals should seek social support from others who are struggling with weight stigma, or from friends and family members who are supportive.

5. Individuals should participate in the activities of public groups to protest against weight stigmatization to create public awareness.

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