

Self-Concept and Locus of Control as Correlates of Reproductive Health Knowledge of Students in Nigerian Universities

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Abstract: The prevalent changing values and norms have made promiscuous sexual attitude to reach alarming dimension, irrespective of the persistent propaganda on sexually transmitted disease and Acquired Immune Deficiency Syndrome (AIDS) scourge. Consequently, this study attempts to investigate the relationship between Locus of control, self-concept and the reproductive health knowledge of students in tertiary Institutions. The study is essentially a correlational study, which employed the use of questionnaire in sampling the reproductive health knowledge of 1500 students from 6 Nigerian Universities. Three null hypothesis were formulated to guide the investigation. The analysis of data revealed that 2 hypotheses were accepted while one was rejected leading to the findings that: self-concept and locus of control are not correlate of students' reproductive health knowledge. There is a significant relationship in the self-concept of students and their reproductive health knowledge. Students reproductive health knowledge is not significantly related to their locus of control. Given the above findings, the study recommends a provision of adequate reproductive health knowledge through the incorporation of sex education in the school curriculum as well as the re-education of parents and older adults in the society about the new trends and their responsibilities in their children's sexual development.

Key words: Self-concept, locus of control, reproductive, health knowledge, Nigerian universities, AIDS

INTRODUCTION

The incidence of prostitution and all forms of promiscuous behaviour associated with students of Tertiary Institutions in Nigeria is an indication that Reproductive Health knowledge of undergraduates will require scientific investigation. Consequently school administrators, professional counselors, concerned citizens, governmental agencies as well as international organizations and indeed research practitioners have always shown concern on the antecedent socio-public health problems associated with undergraduate Reproductive Health knowledge.

In this regard the trend of research on Reproductive Health knowledge has always tilted towards fertility awareness, safe child birth, family planning and knowledge of sexually transmitted infections and possible ways of increasing life expectancy and reducing mortality without actually revealing the degree of Reproductive health knowledge of individuals.

In 1987, various groups like Planned Parenthood Organization and pathfinder international formed the safe Motherhood Initiative to reduce maternal mortality. The initiative incorporates adequate primary health care and family planning, comprehensive prenatal care, help of

delivery personnel for all women in childbirth and effective access to maternity hospital services for women with high-rate of pregnancies and for women in dire emergencies. Many of these problems of maternal mortality are social and/or cultural. Family planning programmes strive to prevent unwanted pregnancies, help achieve birth spacing and help couples limit family size so as to reduce maternal mortality.

Obando (1995) opined that the concept of reproductive health, therefore, is closely tied to reproductive rights as a state of general physical, mental and social well being, not merely the absence of diseases of the reproductive system. This also means the right to a satisfactory sex-life and the right to choose whether or not to procreate. Ideally reproductive health services must include family planning information and services, prenatal, obstetrical and post-partum care, information and education on responsible parenthood, prevention and treatment of infertility and infections of the reproductive tract and of sexually transmittable infections. In other to make a proper exposition on reproductive health, it becomes imperative for an explicit explanation of each area of reproductive health.

Reproductive health could also be seen as the ability to regulate and control fertility (family planning and

fertility) for all women to have a safe pregnancy and childbirth and for the newborn to experience a healthy infancy and freedom from Sexually Transmitted Infections (STIs).

Some aspects of reproductive health, such as infertility, family planning and safe motherhood are regarded as only women's problems. Reproductive health, women's health and maternal and child health have also been equated thereby neglecting women as individuals (Graham, 1993).

Socio-psychological factors or variables are essentially factors or variables, which are personal or organismic to individuals such as the individuals' self-concept, locus of control home background, religious affiliation as well as his level of social adjustment. These factors are known to influence behaviour and more importantly learning outcomes. The acquisition of the basic knowledge of reproductive health is important in understanding the processes of human reproduction, sexually transmitted infections, the use of contraceptives and other information relating to human health and procreation. The basic knowledge of the individual in the area of reproductive health is obviously determined by a number of factors. This study sets out to investigate self-concept and locus of control variables as correlates of reproductive health knowledge of students. This study also focused on the knowledge of sexually transmitted infections, fertility awareness, contraception and unwanted pregnancy of students in tertiary institutions in Delta State.

The review so far has not uncovered the factors affecting Reproductive Health knowledge, hence this study tends to uncover the Reproductive Health knowledge of students in Tertiary Institutions.

In a study on the correlates of sexual activities and condom use among secondary school students (Magnani and Seiber, 2001) reported that high self-esteem appears to be a protective factor against early sexual activity among girls but for boys their findings on the effect of self-esteem were misused. These findings are informative with regard to some challenges facing models and programmes aimed at improving reproductive health knowledge.

Several researches have been designed to examine the issue of whether or not individuals will attribute responsibility or success and failure outcomes in a manner consistent with their locus of control orientation. The concept of internal versus external control of reinforcement stemmed from the social learning theory introduced by Rotter which refers to the disposition to perceive one's reinforcement as contingent on one's efforts or to factors beyond one's control. Externally

controlled persons believe that their reinforcements are controlled by outside agents-luck, chance, fate, powerful others. Those who believe that they have some control over their reinforcement are considered to be internally controlled. The theory provides a useful means of measuring individual difference in the extent to which reinforcement is viewed as a consequence of one's own behaviour or otherwise.

Results from previous studies suggest that there exists dependable relationship between self-concept and other dimensions of human behaviour (Hurlock, 1974; Adedipe, 1986; Ekpenyong, 1989). Hurlock (1974) for instance, contends that there exists a reciprocal relationship between self-concept and academic achievement of students. To this extent, a student who perceives himself highly wants to learn and usually succeeds. The success serves as reinforcement thereby strengthening his desire to learn and engage in more complex and challenging tasks.

Psychologists generally categorize the individual's self-concept into two, viz: Negative and positive self-concept. Furthermore, there are two basic characteristic type of negative self-concept. One is that the person's view of himself is markedly disorganized, that is he has no sense of stable integrated self. This condition is a sign of maladjustment in adults but is very common among adolescents whose self-concept according to Erickson (1965) often become temporarily disorganized as a result of making the transition from childhood roles to expected adult roles (in adolescence). Second, is the self-concept that is too stable and rigidly organized and inflexible. This could be as a result of a strict upbringing that lacked love and the opportunity to create a self-image that allows for derivation from strict laws and expectations, which his mind considers respectable. In terms of positive self-concept, this is the acceptable of self. A person with a positive self-concept can understand and accept a large number of divergent information without any of them posing a threat. Many factors contribute to the development of self-concept. Overall, it is related to the scope of experience one accumulates within oneself.

Lefcourt ascertained that locus of control has been found to be an effective predictor of a wide variety of behaviour. Among the many relationships uncovered are the findings, which suggests that an internal and external control orientation may be important determinants of learning outcomes. Eggleston (1999) surveyed a total of 490 girls, 455 boys measuring 4 specific variables relating to reproductive health. These were knowledge of reproductive health, attitude about sexual behaviour, attitude about family planning and attitude towards pregnancy. Some findings arising from the study shows

that male students are more favourably disposed in their attitude towards knowledge of reproduction with 77.7% as against 52.5% of their female counterparts.

Similarly Speizer, Mullen and Amagee reported that women 57.5% disapprove positive attitude towards sexual and reproductive behaviour as against 70.1% of male that approve positive attitude towards sexual and reproductive behaviour. Several theoretical and empirical studies have investigated attitudes towards reproductive health knowledge.

Many studies indicate that young people are poorly informed about basic sexual and reproductive health topics as reproductive physiology, contraception and Human Immuno-deficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) (Agyei and Epema, 1992). The evidence indicates a widespread need for information for all kinds of young people-married and unmarried, male and female, rich and poor, sexually active and inactive. When they were surveyed many parents and young people alike reported that they would prefer parents to be the main source of adolescents information about sexuality and reproductive health (Castilo, 1993). However, studies also indicates that parents, in fact do not talk to their children because they feel confused, ill-informed or embarrassed about these topics. When most young people are asked the source of their information about sex they-often cite their friends or the media as their most important source (McCauley and Salter, 1995).

The lack of education and family planning services lead to increased rates of unwanted pregnancy at tremendous social, economic and emotional costs. It seems abundantly clear that teenage pregnancy results from reasons not readily discernable by parents and other interested and concerned adults, nor is it the result of the lack of availability of adequate birth control devices. Rather there is a combination of factors which teenagers lack in preparation for sexual intimacy. Some of the reasons so many teenagers are becoming pregnant is that many do not want to assume any responsibility for birth control. Others are simply ignorant about the whole process of reproduction and do not associate sex with pregnancy and so without adequate information about the body, especially in the reproductive area, teenage pregnancies will continue to rise and the epidemic of unwed teenage mothers will grow to ever alarming proportions. The above mentioned factors shows that the role of ignorance of sound knowledge of sexual functioning and reproduction and adequate birth control information's is a major contributing force to unplanned for pregnancies of teenagers. Lastly parents and educators alike, who are reluctant to inform teenagers about the facts of life regarding sex and all its

ramifications play a silent role in the increasing numbers of teenage pregnancy.

In a study on the influence of adolescent sexuality in Nigeria and Kenya, a survey data was collected from both countries and they provide some important insights, but they too left many questions unanswered. In their 1982 study of 1800 youth aged 14-25 in Ibadan. Nichols (1987) found that 31% of secondary school males and 15% of non-student males could correctly identify a woman's fertile period. Likewise 22% of secondary school females and 48% of non-students could identify the fertile period. For male secondary students the main source of information on sexuality was literature 49% followed by friends. The majority of male non-students received information from home or friends. For both groups of youth-students and non-students-the fewer number cited the classroom as their source of information (Nichols, 1987).

Similarly, a study in Kenya (Ajayi, 1991) found that 68% of more than 300 youths aged 12-19 surveyed had received some information on sexuality with school, friends and a same sex relative being the main sources of information, respectively. Among non-students, the chief source of information was friends, with female non-students receiving slightly more information from same sex relatives. Among the youths who were in school, more than 40% said they received information about sexuality at school.

In both surveys, the gap between those who had received information and those who could correctly identify a woman's fertile period leaves question about the quality of the information received. What is also missing is a better understanding of how information flows among peers, which might provide insights for service providers. The time is therefore ripe for counsellors, educators, parents and community organization to start a dialogue on this sensitive and very serious problem.

It is against this background that an empirical study of self-concept and locus of control has correlates of Reproductive Health knowledge of students in Nigerian Universities is attempted.

Statement of the problem: A close look at the socio-public health problems of our contemporary society such as prostitution, promiscuity, pre and extra marital relationship increased rate of Sexually Transmitted Infections (STIs) and indiscriminate use of contraceptives as well as unwanted pregnancies and criminal abortions, will indicate that the provision of knowledge of reproductive health among students in tertiary institutions is timely and appropriate. It is obvious that

Nigerian students and indeed youths are more vulnerable to STIs in form of gonorrhoea, syphilis, chlamydia herpes simplex and AIDS; as well as unwanted pregnancy.

These observations imply that these sets of persons may have limited knowledge of reproductive health and this will affect their attitude towards reproductive health.

This study therefore attempts to investigate the reproductive health knowledge of students and more importantly the self-concept and locus of control variable that are likely to influence this knowledge. Therefore, the statement of the problem in this study in an interrogative form is: What is the relationship between self-concept, locus of control and students knowledge of reproductive health? The investigation into the above problem will be guided by the following research questions.

Research questions:

- Is there any significant relationship between students' locus of control, self-concept and their reproductive health knowledge?
- Is there any significant relationship between students' self-concept and their reproductive health knowledge?
- Is there any significant relationship between students' locus of control and their reproductive health knowledge?

Hypothesis:

- There is no significant relationship between students' locus of control, self-concept and their reproductive health knowledge.
- There is no significant relationship between student self-concept and their reproductive health knowledge.
- There is no significant relationship between student locus of control and their reproductive health knowledge.

MATERIALS AND METHODS

This is a correlational study that determined the relationship between self-concept, locus of control and students' knowledge of reproductive health. The population for the study consisted of all undergraduates in all Nigerian Universities from where 750 males and females were sampled randomly from the 6 universities selected from the 6 geo-political zones in Nigeria West Africa.

A questionnaire method of data collection was employed. Consequently, a questionnaire titled

Reproductive Health knowledge Questionnaire (RHQ) was constructed and validated. The instrument provided information on the respondent's bio-data and measures their locus of control, self-concept and achievement in reproductive health knowledge. The reliability of the instrument was established using the test-re-test technique which yielded a reliability index of 0.88, an indication of high consistency and stability. The constructed instrument with high content validity and reliability co-efficient of 0.88 was administered to sampled undergraduates in their various Universities before the end of first semester 2006/2007 academic session that lasted from September 2006 to March 2007.

The data collected from the responses of 1,500 subjects were collated and analyzed on the basis of the independent as well as dependent variables in the study used in testing each hypothesis and to provide answers to the corresponding questions raised. Consequently, the results of the analysis were presented in the Table 1 and 2.

- The profile of students performances.
- Correlation analysis of the variables.

Profile of students performance: The performance of students in the various sub-sections of the questionnaire are analysed in Table 1.

From the Table 1 the mean value of locus of control variable for the males was 22.77, self-concept variable 21.92 and achievement test variable 42.19 while the standard deviation values were 3.29 for locus of control variable 3.89 for self-concept variable and 14.97 for the achievement test variable. Consequently the mean value for locus of control variable for females was 22.50, self-concept variable 21.60 and achievement test variable 53.60, while the standard deviation values were 5.52 for locus of control variable, 4.24 for self-concept variable and 16.03 for the achievement test variable. Finally the achievement test score of 48.03% for the entire population average indicates a low level of students reproductive health knowledge. However, female tertiary institution students with a mean score of 53.60% appear to be more knowledgeable on reproductive health than their male counter parts with a mean score of 42.195.

Correlation analysis of the variables: The relationship between the dependent and the independent variables in the study were analyzed; using correlation matrix as presented in Table 1.

As shown in Table 2 there are evidences of correlation between the dependent variable of reproductive health knowledge and the independent variables of locus of control and self-concept.

Table 1: Profile of students' performances in various sub-sections of the test

Variables	Male-x	SD	Female-x	SD
Locus of control scale	22.77	3.29	22.50	5.52
Self concepts scale	21.92	3.89	21.60	4.24
Reproductive health knowledge achievement test	42.19	14.97	53.60	16.03

Table 2: Correlation matrix of reproductive health knowledge, locus of control and self-concept variable

	Test	Locus of control	Self concept
Test	1.000	0.26	0.88
Locus of control	0.26	1.000	0.315
Self concept	0.88	0.315	1.000

RESULTS

The results of the study are presented for the purpose of clarity based on each of the null hypotheses formulated in the study. In testing each hypothesis, the hypothesis was restated and an appropriate test of significance was employed at 0.05 level of significance. The result of the test was presented in a summary table with an appropriate title.

H₁: It was hypothesized that there is no significant relationship between students locus of control, self-concept and their reproductive health knowledge. In testing the above hypotheses the relationship between the variables of locus of control, self-concept and students reproductive health knowledge were determined. Consequently, the relationship between the independent variables and the dependent variables of reproductive health knowledge were estimated through multiple regression analysis. The result is presented in Table 3.

The result of the analysis shows that the regression co-efficient of 0.21 for locus of control and 0.31 for self-concept were not significant at 0.05. This implies that the null hypothesis is accepted. This was because the calculated F value of 10.45 is lower than F critical of 17.50. Consequently, there is no significant relationship between students self-concept, locus of control and their reproductive health knowledge. However, the research question about possible relationship was answered in affirmation. This is because the (r) value was 0.12 which indicated a relationship but the relationship is not significant.

H₂: It was hypothesized that there is no significant relationship between students self-concept and their reproductive health knowledge. To test the above hypothesis the Pearson correlation coefficient (r) was employed to determine the relationship between the variable of self-concept and reproductive health

Table 3: Regression analysis showing students' self-concept and locus of control as correlate of reproductive health knowledge

Analysis of variance					
	df	Sum of squares	Main square	F	
Regression	2	5084.80	2542.40	10.45	
Residual	1497	364318.85	243.37		
Variables in the Equation					
Variable	B	SEB	r	R ²	R ² (adj)
Locus of control	0.21	0.09	0.12	0.01	0.01
Self concept	0.31	0.10			

Significant at 0.05

Table 4: Summary table of pearson correlation coefficient r showing the relationship between students self-concept and their reproductive health knowledge

Variables	\bar{X}	SD	N	r	r-crit
Self-concept	21.84	4.16			
Reproductive health knowledge	48.03	15.70	1500	0.88	0.50

knowledge at 0.05 level of significance on the paired scores of 1500 students, the result is presented in Table 4.

The data presented in Table 4 indicates that there is a significant relationship between the variable of self-concept and reproductive health knowledge as the mean score 21.84 and standard deviation of 4.16 represents the self-concept variable and the reproductive health variable had a mean of 48.03 and a standard deviation 15.70. This is because Pearson correlation co-efficient (r) of 0.88 is an indication of high positive correlation or relationship.

Consequently, the null hypothesis of no significant relationship between student self-concept and their reproductive health knowledge is rejected. This implies that there is a significant relationship between students' self-concept and their reproductive health knowledge.

H₃: Hypothesis three states that there is no significant relationship between students locus of control and reproductive health knowledge.

Pearson correlation co-efficient (r) was employed to determine the relationship between the 1,500 paired scores of students locus of control and their reproductive health knowledge. The test was performed at 0.05 level of significance. The result is presented in Table 5.

The information on Table 5 above indicates there is no significant relationship between students locus of control and their reproductive health knowledge as the locus of control variable had a mean score of 22.72 with a standard deviation of 4.67 while the reproductive health knowledge variable had a mean score of 48.03 and a standard deviation of 15.70. This is because of the level

Table 5: Summary table of pearson correlation coefficient (r) showing the relationship between students locus of control and their reproductive health knowledge

Variables	\bar{X}	SD	N	r	r-crit
Locus of control	22.72	4.67			
Reproductive health knowledge	48.03	15.70	1500	0.26	0.50

of reliability between locus of control and reproductive health knowledge as indicated by the calculated Pearson (r) of 0.26.

Consequently, the null hypothesis of no significant relationship between students locus of control and their reproductive health knowledge was accepted. This implies that there is no significant relationship between student's locus of control and their reproductive health knowledge

DISCUSSION

Based on the data analyzed, the following findings were obtained:

- There is no significant relationship between students' self concept, locus of control and their reproductive health knowledge.
- The reproductive health knowledge of students is a correlate of their self-concept.
- The locus of control of students is not significantly related to their reproductive health knowledge.

The findings of hypothesis one reveals that there is no significant relationship between locus of control, self-concept control and knowledge. The finding indicates that students reproductive health knowledge are not determined by their self-concept and locus of control. This finding clearly specifies the knowledge of students on reproductive issues. The findings agree with the investigations of Eggleston *et al.* (1999) on reproductive health knowledge and behaviour of adolescents which reveals that reproductive health knowledge and behaviour of adolescent are not significantly sharpened by socio-cultural norms.

In this regard, this present study has affirmed that reproductive health knowledge of students in tertiary institutions is not related to their socio-psychological factors. In their study Eggleston *et al.* (1999) identified adolescent reproductive health knowledge, family planning and pregnancy as against attitude towards premarital sexual relationship, reading of pornographic magazines, deviant sexual behaviours and relationship with the opposite sex as identified in this present study.

The finding of this study confirms Serlo and Aavarinne that investigated reproductive health knowledge of University students with respect to HIV/AIDS in Finland. In their study Serlo and Aavarinne, revealed very significantly that knowledge in reproductive health does not affect attitude.

Other studies whose findings are being verified in this study on reproductive health knowledge of Nigerian young adults and adolescents include.

In another study on reproductive health knowledge Oronsaye and Odiase examined behaviour relating to abortion and contraception among secondary school girls. Their findings that reproductive health knowledge of abortion and contraception is not related to socio-psychological factors is significantly confirmed in this study.

This study reveals in hypothesis two that there is a significant relationship between the self-concept of students and their reproductive health knowledge. In other words there is a significant finding that the self-concept of students as manifested in their personal consciousness to a great extent influences their knowledge of reproductive health.

In this study students self-concept towards reproductive health knowledge are manifested in their sexual control ability, engagement in sexual relationship with the opposite sex, engagement in premarital sexual relationship, familiarity with reproductive health information, detest for venereal diseases as well as engagement in deviant sexual behaviour. The study revealed a positive self-concept towards reproductive health knowledge while at the same time maintaining a very low knowledge of reproductive health. There is, however, a differential self-concept towards reproductive health on the basis of gender. The study reveals that male students are generally more positive in their self-concept towards reproductive health as against their female counterparts. This finding indicates that female students have a lukewarm attitude towards reproductive health knowledge.

The findings of hypothesis three depicts that there is no significant relationship between students locus of control and their reproductive health knowledge.

The study specifically reveals a very low level of locus of control among students. The items that constitute the students locus of control scale includes interactions with parents and teachers on reproductive health matters, campaign by various agencies or government, instructions on sex education as well as materials on reproductive health. The study reveals categorically that most religion forbids excessive discussion on reproductive health issues.

The finding reported in this study on the relationship between locus of control and reproductive health knowledge correlates with the findings in the study by Kiragu and Zabin (1993) which reported that premarital sexual activities among school age adolescents identified weak religious commitment as correlate of premarital activities. Similarly, Thorton and Camburn correlate the findings of this present study to the extent that their findings revealed that adolescents from strong religious background are not likely to be more sexually active than their peers from less religious environment.

Several researchers such as Rotter and Lefcourt, have all shown in their various investigations that locus of reinforcement affects the success and failure of the individuals achievement. The study under investigation clearly reveals that students locus of control is not significantly related with their reproductive health knowledge.

CONCLUSION

Based on the findings it was concluded that the reproductive health Knowledge of undergraduate students' is not determined by their self-concept, locus of control and other social-psychological factors. As a result of this the study recommends that:

- Counsellors and teachers should make reproductive health knowledge available to students' in tertiary institutions through the provision of sex education.
- Activities of Government agencies and Non-Governmental Organizations (NGOS) should be directed towards the provision of relevant information relating to the individuals reproductive health knowledge.
- Awareness programmes should be encouraged which will aim at highlighting the consequences of sexual promiscuity.
- There should be complete sanitization of moral laxity and other social vices of students in tertiary institutions.

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