INTERNATIONAL JOURNAL OF



Journal Homepage: - <u>www.journalijar.com</u> **TFRNATIONAL JOLIRNAL**

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

AL OF (IJAR) 5653

Article DOI: 10.21474/IJAR01/5653 **DOI URL:** http://dx.doi.org/10.21474/IJAR01/5653

RESEARCH ARTICLE

FACTORS ASSOCIATED WITH CONTRACEPTIVES UTILIZATION AMONG STUDENTS OF MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY.

Eldah Ochieng` Oburenyi, Prof. Charles Mutai and Mr. John Arudo.

- 1. Health Services Department Masinde Muliro University of Science and Technology.
- 2. School of Public Health, Biomedical Sciences & Technology Masinde Muliro University of Science and Technology.
- 3. Department of Clinical Nursing and Health Informatics Masinde Muliro University of Science and Technology.

Manuscript Info

Manusovint Uistow

Manuscript History

Received: 18 August 2017 Final Accepted: 20 September 2017 Published: October 2017

Key words:-

contraceptives, health facilities, contraceptives methods, media, sexual behavior.

Abstract

Sexual behavior among the youth has become a significant factor in the society because of the problems associated with unwanted pregnancies and sexual transmitted infection. This article examined the extent of contraceptive utilization, among the undergraduate students in public universities. The factors considered included socio-demographic distribution of respondents, socio-demographic predictors of contraceptive utilization, contraceptive knowledge and uptake and sources of information on contraceptives services. The data used in analysis was based on stratified probability sample of 453 respondents interviewed in 2017 from Masinde Muliro University of Science and Technology. Qualitative and qualitative data was analyzed using descriptive statistics. The study revealed that contraceptive prevalence rate among the undergraduate students was high and majority of the users sought the services from government health facilities. Also the knowledge of contraceptive methods among the undergraduate students was high and Electronic media was found to be the most popular source of contraceptive information. The article recommends the expansion of distribution channels, adequate use of information network's that provide a fundamental link between contraceptive awareness and utilization.

......

 $Copy\ Right,\ IJAR,\ 2017,.\ All\ rights\ reserved.$

Introduction:-

Previous studies show that there are 1.8 billion young people worldwide and nearly 90 percent of these live in developing countries (Kayongo, 2013). One fourth of world population is between age 10 and 24 years while a third of the total population of sub Saharan Africa is aged between 10-24 years (Tessema & Bayu, 2013). The age between 15 and 24 years is where a large number of university students lie. Some studies have shown that this is the age group that begins to actively explore their sexuality (Kayongo, 2013).

According to the world youth population many girls aged 15 to 19 years were pregnant or had already given birth. This was cited in Zimbabwe, Senegal, and Colombia, where more than one in five teenagers from rural areas was affected. In Zimbabwe, Senegal, Colombia, and Peru, more than one-quarter of teens in this age group from the poorest 20 percent of households had begun childbearing. In Peru, the rate of early childbearing was nearly six times

greater. The Ministry of State for Planning, National Development and Vision 2030 of the Republic of Kenya (KNBS 2010), reported that youth (15 – 35 years) accounted for 38 percent of the total population in Kenya. The age of University undergraduate students happen to fall in this group. Previous studies indicate that Complications after unsafe abortion caused 13 per cent of maternal deaths (Nduvi, 2015).

Just like other students in institutions of higher learning, university students in Kenya engage in self-destructive behaviours that lead to sexual transmitted infections (STIs) or human immunodeficiency virus (HIV) and unwanted pregnancies (Kiptoo et al, 2013). To mitigate the dangers that come with unprotected sex, public clinics, hospitals and University clinics offer for free a variety of contraception methods. There is also the availability of the legal termination of pregnancy (TOP) services in Kenya (Fornos, 2016). However, unplanned pregnancies remain a problem among university students in Kenya. According to Kayongo (2013), young people do not realize that reproductive choices concerning family planning have a significant impact on their health, schooling and employment prospects, as well as their overall transition to adulthood.

In Universities in Kenya, pregnancy has continued to be a serious challenge among students, most of who are in the age bracket of between 18 and 24. Majority of sexually active youth are not using contraception, only 5 percent nationally use the most effective type (kananu 2014). This predisposes them to a wide range of reproductive health problems, including sexually transmitted infections like HIV/AIDS, teenage pregnancy, unsafe abortion practices and school dropout among others. Queries are therefore raised on utilization of contraceptives among University students in Kenya and how they could be protected from a wide range of reproductive health problems.

This article seeks to determine the extent of contraceptive utilization among undergraduate students at MMUST. It is anticipated that the knowledge gained from this study will contribute to the existing body of knowledge in the area of family planning among the youths in Kenya. The findings will form a basis for policy formulation as well serve as a point of reference and stimulate more research in the field of reproductive health in Kenya.

Literature Review:-

Factors Determining Contraceptive Utilization:

Various studies have demonstrated that social- demographic, contraceptive knowledge and sources of information can determine the utilization of contraceptives.

Socio- Demographic Factors:-

Socio demographic factors such as age, gender, education, parental status and religion play a very critical role in determining contraceptive utilization. For instance studies by Karl, P and Pengpid S (2016) and Siegel DM. et al., 1999) regarding contraceptive non-use and associated factors among university students in 22 countries found that age and religion affiliation were not associated with the use of contraceptive. While a study by Musiime, K.E. and Mugisha, J.F. (2015) found that among the sexual active youths who had both parents alive, 67% had used contraceptives the last time they had sex while among Orphans, only 39% had used contraceptives the last time they had sex.

Regarding the type of school attended Musiime, K.E. and Mugisha, J.F. (2015) revealed that 63% of students from Students of Uganda Martyrs University who had attended mixed schools had used contraceptives the last time they had sex compared to 52 % from single set school. Further the study revealed that students from mixed schools are more likely to use condoms than those from single set schools. Regarding gender, the study also found that male students were 2.5 times more likely to use condoms than female students [OR=2.49. CI=1.95-4.15].

Contraceptive Knowledge and Utilization:-

Previous studies have shown that knowledge of contraceptive is likely to determine contraceptive choice and therefore utilization. A study by Hoque, M.E. et al. (2013) on the awareness and practices of contraceptive use among university students in Botswana found that male and female students had 'good awareness regarding contraceptives' as more than half of them (58.6% and 59.1%) for both males and females respectively scored nine or above. The males and the females also had almost 'similar awareness' as their mean scores were 8.79 and 8.72, respectively. A similar study by Nsubuga, H. et al. (2016) reported knowledge of contraceptives was nearly universal (99.6%) and the most commonly known modern methods were pills (86.7%) and male condoms (88.4%), followed by injectables (50.3%), IUDs (35%) and implants (26.7%), female condom (22.1%), while withdrawal (34.2%) was the most commonly mentioned traditional methods. Interestingly, a study by Oyedokun, A.

O. (2007) found no association between the level of awareness and contraceptive use. The awareness level was 'good but' there is still a need to investigate, if this 'awareness results' can be acceptable for use, since literature generally agrees that better 'awareness' about contraception, increases the chances of better contraceptive practices.

Further findings by the Central Statistics Office (2006) indicate that although respondents had wide knowledge of various contraceptive methods, 93.3% of the sexually active participants used condoms. While among the university students in Ethiopia the contraceptive method mostly used was the pill, followed by the injection Tamire and Enqueselassie (2007), Somba et al., (2014) found the most popular method of contraception used were condoms, withdrawal and periodic abstinence. However the majority of the respondents in the study had knowledge of contraception, but we found that the utilization of contraception is still low. It is therefore evident from the findings of the previous studies that there exist a disparity between knowledge and contraceptive utilization.

Sources of Information and Contraceptive Utilization:-

Findings from previous studies have provided evidence of a link between sources of information and contraceptive utilization. The information relates to availability of various methods of contraceptive, side effect of these methods and accessibility of the contraceptives. According to Oguntona et al., (2013) the electronic media ranked next to peer group as the leading sources of information on contraception among undergraduates in Lagos, Nigeria. Manda (2008), in a study of access to and use of reproductive health information by university students in Tanzania, found that the students had access to several sources of sexual and reproductive health information, but actual use was concentrated on radio, television and friends. However a study by Bankole and Onasote (2015) show that the respondents strongly preferred physicians/health workers (mean 4.62) and parents (mean 4.54), university lectures (4.11), the Internet/websites (mean 4.06), chemists/ patent medicine vendors (mean 3.78), newspapers/ magazines (3.72), television (mean 3.71), friends (mean 3.64) and radio (mean 3.62). The library was placed in the 11th position, third from the bottom in terms of preference.

A study done in Nigeria established strategies to increase contraceptive use to be; taking into consideration the quality, quantity, and variety of methods available, and to building capacity for effective service delivery (Adeniran et al., 2005). According to Ayada et al., (1994) the major source of contraception in all Sub-Saharan African countries is Government which was found to be, supplying all forms of modern contraceptives. The study further established that in all Latin American countries except Mexico, majority of married contraceptive users got their supply from private sector. The study also demonstrated that; differentials by place of residence were that those living in urban areas utilize private sector as opposed to those in rural.

In their study, Lindberg, C. et al. (2006), and Anochie and Ikpeme (2003) indicated that close to half of the boys and girls identified mass media channels and friends as sources of useful information on contraceptives. Similarly, the result of a study by Iyoke (2014) showed that receiving information from health personnel, media, or workshops (odds ratio 9.54, 95% confidence interval 3.5–26.3), health science-related course of study (odds ratio 3.5, 95% confidence interval 1.3–9.6), and previous sexual exposure prior to university admission (odds ratio 3.48, 95% confidence interval 1.5–8.0) all increased the likelihood of adherence to modern contraceptives, while age group, year of study, and Christian denomination had no significant predictive effect. These results are supported by the findings from a study by Olubank et al., (2016) which indicate that the most common sources of information regarding contraception were friends, television (both public- and private-owned), and health facilities. Similar finding was reported in a study in Botswana, but it is in contrast to a study done in Nigeria which indicated hospital or clinics to be the most common source of information on contraceptives (Hoque et al., 2013). The most common sources of information about contraception were friends/peers (44.8%), television, and health facilities (40.3%). Most (93.8%) of the respondents were aware of the types of contraceptives. Condoms and pills were the most commonly heard of contraceptive methods (78.0% and 60.4%, respectively) (Sweya, et al., 2016):

Methodology:-

This study employed a descriptive survey design to determine the extent of contraceptive utilization among undergraduate students at MMUST. The universe of the study comprised undergraduate students at the main campus who were in there first, second, third and fourth year of study. Sample size for the survey was determined using Fischer formula at a standard error margin of 5%, a confidence level of 95%, and a 22% response distribution, a sample size of 453 was derived. The population was stratified by the year of study to reflect the distribution of undergraduate at the university to participate in the study. Undergraduate students studying from campuses and

learning centers outside the main campus were excluded from the study. The research was conducted between January and May 2017.

Primary and secondary data was collected through the questionnaires, in-depth interviews and document analysis. The selection of these tools was informed by the nature of the data to be collected, time available as well as the objective of the study. The respondents were asked about their social demographic factors that included age, sex and marital status. Other items included the uptake of family planning, religion, family status and, nature and type of school attended. To inquire about factors associated with uptake, respondents were asked questions on awareness of contraceptives, sources of information regarding contraceptives and source of contraceptives used.

To estimate the reliability of the instrument, a pilot survey involving sixty (60) undergraduate students was carried out at MMUST, Cronbach alpha was then established from the responses using statistical package for social science (SPSS). The Cronbach's alpha was 0.822 hence reliability was considered to be good. The 60 undergraduate students who participated in the pilot survey were not included in the main study. The researcher also determined the content validity of the questionnaires as a way of ensuring that the data collected using the instrument represent adequately the domain of the variables measured. Thus assistance was sought from the researcher's supervisors and other research experts from the School of Nursing and Midwifery of Masinde Muliro University of Science and Technology to assess the relevance of the content in the research tools against the objectives of the study. Their suggestions were then used to improve the clarity of the items on the questionnaires used in this study. Data from the completed questionnaires was analyzed using Statistical Package for Social Science (SPSS) to provide frequencies, means and percentages to describe the population.

Results:-

Extent of Contraceptive Utilization:-

The extent of contraceptive utilization among the undergraduate students was assessed by looking at four key indicators namely: socio-demographic characteristics and contraceptive prevalence, contraceptive knowledge and utilization, sources of information on contraceptives utilization, and sources of contraceptives and utilization.

Socio-Demographic Characteristic and Contraceptives Prevalence:-

The analysis of socio-demographic characteristics and contraceptives prevalence was based on eight items where the respondents were asked to indicate 'yes' or 'no'. As illustrated in table 4.2, the result of the study revealed that contraceptive prevalence rate among the undergraduate students was 62.7%. Majority (65.6%) were respondents in their second year of study and those in fourth (64.6%), first (61.7%) and third (61.5%) year of study. The study also sought to find out the male and female students respondents who reported the use of contraceptives. The study found that 63.5% of male respondents used contraceptives during sexual intercourse compared to 61.8% of female respondents. At the same time 36.5 % of male respondents and 38.2% of female respondents reported non-use of contraceptives.

Among respondents aged less than 20 years, majority (67.0%) reported that they used contraceptives compared to 33.0% who indicated that they had not used contraceptives. On the other hand, 58.7 % of respondents above 20 years said that they had used contraceptives while 41.3% reported in the negative. The findings of the study further revealed that majority (67.2%) of respondents who left high school below or when they were 18 years old had used contraceptives compared to 32.8% who indicated they had not used contraceptives. On the other hand, 52.3% of those who left high school when they were above 18 years reported the use of contraceptives as opposed to 47.7% who responded to the contrary.

Regarding the type of high school attended and the use of contraceptives, 63.1% of the respondents from public schools indicated that they had used contraceptives and 36.9% reported in the negative. Similarly, 62.1% of those who attended privately owned schools had used contraceptives compared to 37.9% said that they had not used contraceptives. Further, 62.5% of respondents who attended religion sponsored schools had used contraceptives and 37.5% had not. Likewise, 63.9% of those who attended schools not sponsored by any religion used contraceptives as opposed to 36.1% who reported non-use.

On the nature of school attended and contraceptive usage, the study found that majority (65.9%) of those who attended mixed school used contraceptives while 34.1% reported the contrary. On the other hand, 59.5% of

respondents who attended single set schools used contraceptives and 40.5% reported non-use. The study further found that majority (63.9%) of Protestants had used contraceptives while only 36.1 % reported to the contrary. Similarly, 60.1% of the Catholics pointed out that they had used contraceptive while 39.9% had not. Among the Muslims, the results show that 55.6% had used contraceptives and 44.4% pointed out to the contrary.

Table 4.1:- Socio-Demographic Characteristics of Respondents and Contraceptive Prevalence

Variable Category		Frequency [N=453 (N/%)]	Contraceptive Prevalence	
		, ,,,	Yes N (%)	No N (%)
Year of Study	First Year	115 (25.4)	71 (61.7)	44 (38.3)
	Second Year	163 (36.0)	107 (65.6)	56 (34.4)
	Third Year	100(22.1)	62 (61.5)	38 (38.5)
	Fourth Year	65 (14.3)	42 (64.6)	23 (35.4)
	Fifth Year	10 (2.2)	2 (20.0)	8 (80.0)
Gender	Male	225(49.6)	143 (63.5)	82 (36.5)
	Female	228(50.4)	141 (61.8)	87 (38.2)
Age	20 or below	218(48.1)	146 (67.0)	72 (33.0)
	above 20	235(51.9)	138 (58.7)	97 (41.3)
Age Left High School	18 or Less	304(67.1)	204 (67.2)	100 (32.8)
	More than 18	149(32.9)	78 (52.3)	71 (47.7)
Type of school	Public	387(85.4)	244 (63.1)	143 (36.9)
	Private	66(14.6)	41 (62.1)	25 (37.9)
Religion affiliation of	Affiliated	381(84.1)	238 (62.5)	143 (37.5)
School	Not affiliated	72(15.9)	46 (63.9)	26 (36.1)
Nature of School	Mixed	238(50.3)	157 (65.9)	81 (34.1)
	Single Set	215(49.7)	128 (59.5)	87 (40.5)
Religion	Catholic	158(34.9)	95 (60.1)	63 (39.9)
	Protestants	252(55.6)	161 (63.9)	91 (36.1)
	Muslim	18 (4.0)	10 (55.6)	8 (44.4)
	Others	25 (5.5)	18 (72.0)	7 (28.0)
Status of parents	Mother alive	386 (85.2)	241 (62.4)	145 (37.6)
	Not alive	67 (14.8)	41 (61.2)	26 (38.8)
	Father alive	357 (78.8)	234 (65.5)	123 (34.5)
	Not alive	96 (21.2)	56 (58.3)	40 (41.7)
	Stay with both parents	275 (60.7)	178 (64.7)	97 (35.3)
	Stay with Single parent	178 (39.3)	103 (57.9)	75 (42.1)

Source: Primary Survey Data

Further, mother being alive [.081], father being alive [0.20] and staying with both or single parent [0.28] was found not to be significantly associated with contraceptives utilization.

Contraceptive Knowledge and Utilization:-

An analysis was done to ascertain whether respondents had the knowledge of contraceptive methods and utilization. As indicated in figure 4.1, an overwhelming majority indicated that they had knowledge of condoms (96%), pills (92.7%) and withdrawal method (89.9%). Others included periodic abstinence (94.5%) and injectables contraceptive method (86.1%). On the other hand, 26.3% and 27.9% pointed out that they had knowledge of male sterilization and female sterilization respectively. The study further revealed that 29.1% of the respondents had knowledge of implant, 31.1 % IUD and an insignificant 17.9% had knowledge of foams method.

Regarding utilization of various methods of contraceptives, majority (75.6%) of the respondents indicated that they preferred condoms followed by pills (15.1%), injectables (3.1%), withdrawal (3.5%) and abstinence (2.7%). The results further show that respondents reported non-use of male or female sterilization, IUD, foams or implant methods of contraceptives. Despite high levels of knowledge on pills, injectables, withdrawal and abstinence, fewer

students had used those methods. Overall the study found that there exist a disparity between the knowledge on contraceptives and utilization.

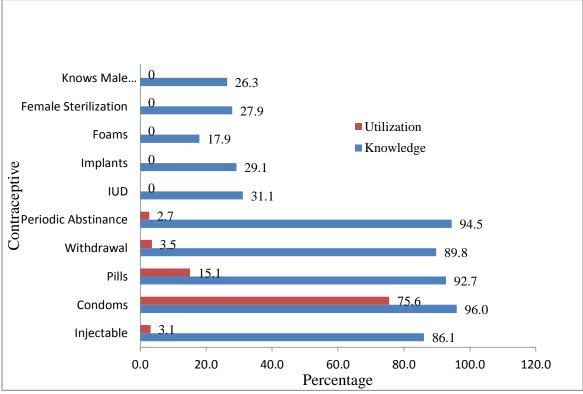


Figure 4.1:- Contraceptive Knowledge and utilization: Source: Primary Survey Data

Sources of Information and Contraceptive Utilization:-

The study also sought to determine the main sources of information regarding contraceptives for respondents who had utilized contraceptives. Table 4.3 shows that majority (40.1%) obtained information from electronic media (Radio=15.8% and Television=24.3%) while 31.7% got the information from health practitioners. Similarly, 22.6% of the respondents received the information from print media (Newspapers=9.9% and Magazines=12.7%), and a paltry 7.3% got the information from community based health and extension workers. These show that electronic media is the most preferred form of source of information by respondents who had used contraceptives.

Table 4.2:- Sources of Information on Contraceptive and Utilization

Source	Contraceptive Utilization	
	Frequency (N)	Percentage (%)
Radio	45	15.8
Television	69	24.3
Newspaper	28	9.9
Magazine	36	12.7
Health practitioners	90	31.7
Community based health workers	16	5.6

Source: Primary Survey Data

Sources of Contraceptives and Utilization:-

Further the study wanted to determine the sources of contraceptives for respondent who reported that they had used contraceptives. The findings in table 4.4 show that of respondents who reported having used contraceptives, majority (25.4%) had obtained the services from government facilities followed by drug stores (23.9%) and MMUST health services (13.0%). On the other hand, 15.8%, 12.0 % and 9.9 % indicated that they had obtained contraceptives from other service providers, peers and private health facilities respectively. Government facilities appear to be the most preferred source of contraceptives.

Table 4.3:- Sources of Contraceptives and Utilization

Source	Contraceptive Utilization	`
	Frequency (N)	Percentage (%)
Government health facility	72	25.4
Private health facility	28	9.9
Peers	34	12.0
Drug store	68	23.9
MMUST health services	37	13.0
Others	45	15.8

Source: Primary Survey Data

Discussion:-

This study aimed at determining the extent of contraceptive utilization among the undergraduate students at MMUST. The results demonstrate that contraceptive prevalence among the undergraduate students was high. These findings are comparable to studies on contraceptive non-use among university students by Karl, P and Pengip, S (2015) which found the overall rate of contraceptive to be high. The findings of this study show that the contraceptive prevalence was remarkable among students in the first, second and third year of study. Also, the utilization was found to be high among male and female students, and those who were less than 20 years old. These results are in consistent with the findings from a study done in Dar es Salaam among university students (Somba, M.J., et al., 2014). However, these findings are in contrast to a study done in Tanzania which indicated that less than half of the respondents had ever used any of the contraceptive methods (Sway, M.N., et. al. 2016). These differences can perhaps be attributed to the effort being done by various public and private institution and organizations in sensitizing the youth about risk sexual behavior and significance of family planning. It may also be due to effort by the government and non-governmental organization in combating HIV/AIDS and other sexually transmitted disease. Further, the study revealed a high utilization of contraceptives among respondents who left high school when they were 18 years old or below and those who attended both public and private schools. Likewise, utilization was high among and those who attended school sponsored by religion and those who attended non religion affiliated schools. The results also suggest that students who had attended mixed school and single set school had high contraceptive utilization. The above result were interpreted to mean that majority of undergraduate students at MMUST were using contraceptives and this may be attributed to adequate knowledge or awareness of the consequences of risky sexual behavior. These findings are supported in a study by Musiime and Mugisha (2015) which indicates that students who had attended single-set schools were more likely to use condoms than those of mixed schools.

The findings of this study further demonstrate that majority of undergraduate students had knowledge of common contraceptive methods namely condoms, pills, withdrawal abstinence and injectables. However, a small percentage was familiar with sterilization, implant and IUD methods of contraceptives. This is in agreement with a study by Bankole, and Onasote (2015) which found male and female sterilization to be the least known contraceptive methods. These findings are also in agreement with a study by Oye Adeniran et al., (2006) which also found that these were the least known contraceptive methods among the young people in Nigeria.

Further the result of the study indicate that condoms were highly preferred than all other methods of contraceptive. This is consistent with evidence from previous studies show that condom is the most commonly used method, of the (Hoque, et al., 2013), Central Statistics Office, 2006). However, these findings are contrary to the findings of a study in Ethiopia among the female university students which reported that the contraceptive method mostly used was the pill, followed by the injection (Tamire & Enqueselassie, 2007). These differences may be due to difference in the target populations for the two studies.

Interestingly, there seem to be a huge disparity between contraceptive awareness and usage yet awareness is expected to trigger usage. The low uptake of other methods could be probably due to easy access to condoms, cost involved or complications or side effects associated with those other methods or need for privacy. In general, there existed a huge disparity between knowledge and use of contraceptive methods. These findings are also in agreement with previous studies which demonstrate this disparity. For instance a survey on Uganda demographic and health reported that there was almost universal awareness of contraceptives methods, however the use remains low (International M, 2007). Although a study by Nsubuga, et al., (2016) concurs that knowledge of contraceptive

methods and sexual reproductive health was nearly universal, a previous study by Oyadokun (2007) demonstrates that there is no association between the level of contraceptive awareness and uptake. Evidence from a study by Hoque (2013) on awareness and practices of contraceptive use among university students in Botswana suggest that there was no significant association between the awareness level and the use of contraceptives hence supports the findings of this study.

Related to the above, the study revealed that electronic media (Radio and Television) electronic media was the most popular source of information regarding contraceptive services. This was followed by health professional, print media and community based health and extension. On the contrary, Hoque (2013) found that the main source of information received regarding contraceptive use was the school or the health facility followed by television and radio. Another study done in Nigeria indicated that hospital or clinics were the main source of contraceptive information (Oyedokun, 2007). Also, Somba, et al., (2014) found the main source of contraceptive to be friends, radio and schools respectively. This difference may be perhaps due to differences in institutional policies and the extent of accessibility to print and electronic media in the countries where these studies were conducted. Also the time lapse between the studies may course the differences. Nevertheless, the result demonstrates the importance of the media, peers and health professional in knowledge dissemination regarding contraceptive utilization.

In addition, the study demonstrated that government facilities and drug stores were the main sources of contraceptives. However, a few of those who participated in the study indicated that they obtained contraceptives from drug stores, university health facilities peers and community based health workers. This is evident that government facilities remains source of contraceptives for undergraduate students and this could result into enhanced uptake of contraceptives. The preference of government facilities may perhaps be attributed to free access of contraceptive in government facilities. Also the accessibility of government facility may be an important factor when it comes to obtaining contraceptives. These results are consistent with results of the previous studies which show government facilities as a main source of contraceptives. For example, a previous study by Nsubuga, et al., (2016) found the commonest sources of contraceptives to be government hospitals, and clinics. This is also supported by a previous study in Botswana (Hoque, et al., 2013) which found that both male and female university students preferred to access contraceptives from government clinics and hospitals, but not the university clinic. This result is also in agreement with a previous study by Somba, et al., (2014) where it was reported that health workers, pharmacy and shops were the common sources of modern contraceptive methods.

Conclusions:-

On the basis of these findings it is apparent that there is high level of contraceptive prevalence among the undergraduate students at MMUST. The prevalence was more less the same across gender, age, and type of school attended, religion and the year of study of the respondents. Among the demographic factors, the status of parents had no association with contraceptive utilization. This shows that the presence or the absence of one's parent has no major bearing on sexual behavior of respondents. Respondents had a high knowledge of modern contraceptive method however; condoms were the most preferred methods. Interestingly, the use of other methods that are commonly used by the female gender, for instance oral pills, was very low. The implication of this kind of scenario therefore is that sex is still a male dominated activity and the scarcity of female condoms could be worsening the matter. Besides, it is also clear that there exist a disparity between knowledge and contraceptive utilization hence an indication that there is no association between the level of contraceptive awareness and uptake

The study also concluded that electronic media (Radio and Television) was the most popular and preferred source of information regarding contraceptive services compared to health professional, print media and community based health and extension. On the other hand, government facilities and drug stores were the main sources of contraceptives. This makes it more convenient for university students to access information and contraceptives at affordable rates. It is therefore apparent that contraceptive prevalence among the university student was relatively high and there is need to upscale the usage. This can be achieved through enhancement of the involvement of parents, peers, partners and the university community. Expansion of the distribution channels to improve accessibility and use of various information channels that provide a fundamental link between contraceptive awareness, access and utilization.

References:-

- Adeniran, A. U. Oladokum, Odeyemi. E. (2005). Sources of Contraceptive Commodities for Users in Nigeria. PLOS Med, e366.
- 2. Anochie, I. and Ikpeme, E. (2003). 'The Knowledge, Attitude and Use of Contraception amongst Secondary School Girls in Port Harcourt', Nigerian Journal of Medicine 12940, 217–220.
- 3. Ayada, W. and McNIFF. (1994). Sources of Contraceptive Methods. Demographic and Health Survey comparative studies No. 11.
- 4. Bankole, O.M. and Onasote, A.O. (2016): Awareness and Sources of Contraception Information among Female University Students in Nigeria. Journal of Information Development 1-11
- 5. Central Statistics Office (2006) Family Planning by Method, Gaborone, Botswana. http://www.cso.gov.bw (Accessed 10 March 2017)
- 6. Hoque, M.E., Ntsipe, T. and Mokgatle-Nthabu, M. (2013). Awareness and Practices of Contraceptive Use among University Students in Botswana, SAHARA-J: Journal of Social Aspects of HIV/AIDS10 (2) 83-88.
- International, M. (2006). Uganda Demographic and Health Survey: Calverton Maryland, USA: UBOS and Macro International Inc., 2007.
- 8. Iyoke, C.A., Ezugwu, F.O., Lawani, O.L., Ugwu, G.O., Ajah, L.O. and Mba, S.G. (2014): Peer-driven contraceptive choices and preferences for contraceptive methods among students of tertiary educational institutions in Enugu, Nigeria; Patient Prefer Adherence Vol. 8 1043-1050
- 9. Karl, P. and Pengip, S. (2015). Contraceptive Non-Use and Associated Factors among University Students in 22 Countries, African Health Science 15(4): 1056–1064.
- 10. Kayongo, S. B. (2013). Uptake Of Modern Contraception Among Youths (15-24) At Community Level In Busia District, Uganda. http://www.musphcdc.ac.ug/files/pdf/ accessed on 15/12/2016
- 11. Kiptoo, M., Brooks, J., Lihana, R.W. Sandstrom, P., Ng'ang'a, Z., Kinyua, J., Lagat, N.,
- 12. Okoth, F., and Songok, E.M. (2013): HIV-1 Drug Resistance-Associated Mutations among Hiv-1 Infected Drug-Naïve Antenatal Clinic Attendees in Rural Kenya. BMC Infectious Diseases volume 13:517 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4228423/
- KNBS and ICF Macro. (2010). Kenya Demographic Health Survey 2008-09. Calverton, Maryland: KNBS &ICF Macro.
- 14. Lindberg, C., Lewis-Spruill, C. and Crownover, R. (2006). Barriers to Sexual and Reproductive Health Care: Urban Male Adolescents Speak Out; Comprehensive Paediatric Nursing 29, 73–88.
- 15. Manda, P. (2008). Gender Analysis of Sexual and Reproductive Health Information Access and Use: A Study of University Student Communities in Tanzania. University of Dar es Salaam Library Journal 10 (1 and 2).
- 16. Musiime, K.E. and Mugisha, J.F. (2015): Factors Associated with Sexual Behavior among Students of Uganda Martyrs University. International Journal of Public Health Research. Vol. 3, No. 1, 2015, pp. 1-9.
- 17. Nduvi, O. C. (2015). Influence Of Free Maternity Healthcare Programme On Maternal Mortality Rate In Kenya: A Case Of Kenyatta National Hospital. Nairobi.
- 18. Nsubuga, H., Sekandi, J.N., Sempeeera, H., and Makumbi F.E. (2016). Contraceptive Use, Knowledge, Attitude, Perceptions and Sexual Behavior among Female University Students in Uganda: a Cross-Sectional Survey, http://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-016-0286-6; accessed on 21/12/2016
- 19. Olubanke M Bankole, O.M. and Onasote, A.O (2016). Awareness and sources of contraception information among female university students in Nigeria Article Information Volume: 33 issue: 2, page(s): 199-209 http://journals.sagepub.com/doi/pdf/10.1177/0266666916652185 (Accessed on 4 mayb2016)
- 20. Oguntona, T., Adedeji, O.O and Odusanya, O.O. (2013). The Knowledge Attitude and Practice of Contraceptives by Undergraduates in Lagos Nigeria. Journal of Biology, Agriculture and Healthcare 3(12): 61–66.
- 21. Oye-Adeniran, B.A., Adewole, I.F., Umoh A.V, Oladodun, A., Gbadegesin, A., Ekanem E.E. and Mahmoud, P. (2006): Community-Based Study of Contraceptive Behaviour In Nigeria. African Journal of Reproductive Health 10(2): 90–104.
- 22. Oyedokun A. O. (2007) Determinants of Contraceptive Usage: Lessons from Women in Osun State, Nigeria. Journal of Humanities and Social Sciences. 1(2):1–14
- 23. Sweya, M. N., Msuya, S.E., Mahande, M.J., Manongi, R (2016): Contraceptive Knowledge, Sexual Behavior, and Factors Associated With Contraceptive Use among Female Undergraduate University Students in Kilimanjaro Region in Tanzania: Adolescent Health, Medicine and Therapeutics Vol: 7, 109-115.

- 24. Somba M.J, Mbonile, M., Obure, J., and Mahande, M.J. (2014). Sexual Behavior, Contraceptive Knowledge and Use among Female Undergraduates' Students of Muhimbili and Dar es Salaam Universities, Tanzania: A Cross-Sectional Study. BMC Women's Health; 14(1):94.
- 25. Tessema, M., and Bayu, N.,(2015) Knowledge, Attitude and Practice on Emergency Contraception and Associated Factors among Female Students of Debre-Markos University, Debre-Markos Town, East Gojam Zone, North West Ethiopia, 2013 Global Journal of Medical Research: E Gynecology and Obstetrics Volume 15 Issue 1 https://medicalresearchjournal.org/index.php/GJMR/article/download/889/799/ accessed on 30/1/2017
- 26. Tamire, W. and Enqueselassie, F. (2007): Knowledge, Attitude, and Practice on Emergency Contraceptive among the Female University Students in Addis Ababa, Ethiopia. Ethiopia Journal of Health Development, 21(2), 111–116.
- 27. Werner Fornos, W. (2016): Abortion in Kenya East Africa Centre for Law and Justice: eaclj.org/about-us/7-fida-and-kclf-landscaped-comparison.html accessed on 26/4/2017.