

Factors Influences the Screening and Counseling on Sexually Transmitted Infections among Adults in Maiduguri Metropolis of Borno State, North-Eastern, Nigeria

Suleiman Said Buba*, Habu Haruna and Amina Kaidal

Department of Public Health, University of Maiduguri, Borno State, North-Eastern, Nigeria

*Corresponding author: Suleiman Said Buba, Department of Public Health, University of Maiduguri, Borno State, North-Eastern, Nigeria, Tel: +2348063941212; E-mail: suleimansbub9@gmail.com

Received date: December 04, 2021; Accepted date: December 19, 2021; Published date: December 26, 2021

Citation: Buba SS, Haruna H, Kaidal A (2021) Factors Influences the Screening and Counseling on Sexually Transmitted Infections among Adults in Maiduguri Metropolis of Borno State, North-Eastern, Nigeria. *Med Mycol Open Access* Vol. 7 No. 6: 8

Abstract

This study was aimed at determining the factors that influences the screening for sexually transmitted diseases among adults in Maiduguri metropolis of Borno State North-Eastern, Nigeria. In order to achieve this objective, one research objectives and one research question was formulated and three null hypotheses were tested. The theoretical frame work used for this study was theory of Reason and Action developed by Martin Fish-Being & Ajzen Icek. The Theory of Reason and Action (TRA), suggest that behavior is determined by individual's intentions, attitude and belief to perform the behavior. Related literature was reviewed under the following sub-headings: Concept of sexually transmitted infections, Causative Agents and Adults' Knowledge of Screening for Sexually Transmitted Infections. Survey research design was used for this study. The populations for this study was made up of ten thousand and-ten (10,010), INEC, 2019, and five hundred (500) respondents were sampled for the study using simple random sampling. Data were collected using questionnaire on factors influencing the screening for sexually transmitted diseases among adult in Maiduguri metropolis . Five hundred respondents were sampled for this study and analyzed using descriptive statistics of frequency count and percentages to describe the demographic characteristics of the respondents and to answer research questions. While, inferential statistics of Chi-square test was used to test the research hypotheses at 0.05 alpha level of significant. The result of the findings revealed that screening for sexually transmitted infections among adult in Maiduguri metropolis, had greatly influenced by different factors. Some respondents believed that screening for sexually transmitted infections is against their religious beliefs. Also the result of the findings revealed statistically that Factors influencing the screening for sexually infections in Maiduguri metropolis among adult of different educational background did not differ significantly ($p > 0.05$). While, Factors influencing the screening for sexually transmitted infections between male and female in Maiduguri metropolis differed significantly ($p < 0.05$). and Factors influencing the screening for sexually transmitted infections in Maiduguri metropolis among adult of different ethnic background did not differ significantly ($p > 0.05$). It was concluded that several factors had influenced the behaviors of adult towards the screening for sexually transmitted

infections in Maiduguri metropolis. For example some respondents believed that screening for sexually transmitted infections is against their cultural and religious beliefs. Furthermore, some respondents' shows concerns about stigma, social isolation and discrimination from the society as factor deterred them from accepting the screening for sexually transmitted infection, while some respondents show their concerns about health care workers attitudes, lack of confidentiality and accuracy of the screening result as a factor militating them from going to sexually transmitted infections. It was also found some that respondents strongly agreed that lack of knowledge and support from their family and friends hindered them from accepting the screening for sexually transmitted infections like hepatitis B virus, human papilloma virus and HIV/AIDS. It was recommended that Government should embark on sensitizations workshops and public enlightenment campaigns to educate the general population of young adult on the sexually transmitted diseases and the importance of regular screening for sexually transmitted diseases. A well-organized health education campaigns and media (TV, radio and internet) are needed to improve public perceptions and understanding about sexually transmitted infections. Massive educational campaign that involves all stakeholders of society, including health care workers and community members, should be undertaking to make society more tolerant when it comes to issues of sexually transmitted diseases.

Keywords: Chlamydia; Syphilis; Trichomoniasis; Maiduguri metropolis

Introduction

STDs have become worldwide phenomena and poses a substantial threat to public health in both developed and the developing nations of the world in which Nigeria is among. WHO estimated that 20% of persons living with HIV/AIDS are in their 20s and one out of twenty adolescents contract an STI each year. Each year, there are an estimated 376 million new infections with 1 of 4 sexually transmitted infections: chlamydia, gonorrhoea, syphilis and trichomoniasis. Nearly more than seven of these sexually transmitted diseases are epidemic proportion in Nigeria. These are HIV, HBV, HPV, Genital herpes, syphilis, gonorrhoea, and trichomoniasis. The greatest incidence of STDs in

Nigeria is more prevalent in the populations of young adult ages between (15 to 35); this age group is least likely to seek counseling and guidance on preventive strategies, treatment and control, sexuality health education and reproductive health. Increased sexual urged by young adult and multiple sexual partners make these important sexually transmitted diseases particularly more difficult to prevent and control [1-5].

Knowledge of STI and their complications is important for adequate prevention and treatment, as people who do not know the symptoms may fail to recognize their need and so may not seek help. Knowledge of other STIs apart from HIV/AIDS is low in the developing world. In any effective preventive protocol, social acceptability is important. It has been observed that campaigns and health awareness for uncommon types of STDs have always been neglected by policy makers and more importantly, literatures on the awareness of STIs in Maiduguri Borno State, North-eastern Nigeria, are quite scanty if any. Hence, this study attempt to these gaps, in order to disclose any difficulties that policymakers may encounter in conducting compulsory or voluntary prevention strategies on sexually transmitted infections. It is against this background that this study was conducted to determine the level of knowledge of adolescents on sexually transmitted infections, and their willingness to attend screening in Maiduguri Metropolis of Borno State, North-eastern Nigeria.

Statement of the problem

Despite considerable efforts to identify simple interventions that can reduce risky sexual behaviour, behaviour change remains a complex challenge. STIs have a profound impact on sexual and reproductive health worldwide. More than 1 million STIs are acquired every day. In 2016, WHO estimated 376 million new infections with 1 of 4 STIs: chlamydia (127 million), gonorrhoea (87 million), syphilis (6.3 million) and trichomoniasis (156 million). More than 500 million people are living with genital HSV (herpes) infection and an estimated 300 million women have an HPV infection, the primary cause of cervical cancer. An estimated 240 million people are living with chronic hepatitis B globally. Both HPV and hepatitis B infections are preventable with vaccination.

People seeking screening and treatment for STIs face numerous problems. These include limited resources, stigmatization, poor quality of services, and little or no follow-up of sexual partners. In many countries, STI services are provided separately and not available in primary health care, family planning and other routine health services [6].

In many settings, services are often unable to provide screening for asymptomatic infections, lacking trained personnel, laboratory capacity and adequate supplies of appropriate medicines. The reason for lack of acceptability for premarital screening and counseling services may be due to lack of knowledge and psychological and social barriers; and people fear learning that they are infected with a disease that is fatal and stigmatizing. However, to avoid being part of this statistic, the best solution is to get pre and post screening counseling in it due time. Because it forms the gateway to it prevention, care, treatment, support interventions, and a vital component for the

expansion of access to comprehensive care for People living with sexually transmitted infections [7].

Objectives of the Study

The objective of this study was to Determine the factors influencing the screening for sexually transmitted infections among adult in Maiduguri metropolis of Borno State, North-Eastern Nigeria.

Research Questions

The following research question was formulated to guide the conduct of this study:

What is the factor influences the screening for sexually transmitted infections among adult in Maiduguri metropolis of Borno State, North-Eastern Nigeria.?

Hypotheses

The following research hypothesis was formulated to predict the study:

Ho1: there is no significant differences in the factor influences the screening for sexually transmitted infections among adult in Maiduguri metropolis of Borno State, North-Eastern Nigeria.

Significance of the Study

The rationale for this study is to have the proper understanding of the factors influencing the screening for sexually transmitted infections among adult in Maiduguri metropolis. The result of this study would of significant help the government, non- governmental organizations, healthcare workers, religious institutions, researchers and the student of public health.

Scope of the Study

This study was delimited to (adults' males and females) in Maiduguri Metropolis. The study was also covered (12) twelve settlements of the (6) six Wards, namely: Bulabulin, Bolori, Fagoli, Mairi, Maimusari and Fezzan Ward of Maiduguri metropolis of Borno State, North-eastern Nigeria.

Operational definition of terms

The following terms was operationally defined:

Factors: an element that lead or influences the screening for sexually transmitted infections among adults in Maiduguri Metropolis of Borno State, North-Eastern Nigeria. Screening: a medical assessment or test done by a doctor or laboratory scientist, at a laboratory or hospital to rule out any abnormalities.

Sexually Transmitted Infections: a diseases or infections that can be transmitted during sexual intercourse.

Literature Review

Concept of sexually transmitted diseases

Sexually transmitted infections (STIs) are those diseases that are contracted mainly through sexual intercourse. They include curable ones like gonorrhea, syphilis, and chlamydia infection as well as incurable but modifiable ones like HIV, herpes simplex, human papilloma virus (HPV), and hepatitis B infections. STIs are spread predominantly by sexual contact, including vaginal, anal and oral sex. Some STIs can also be spread through non-sexual means such as blood or blood products. Many STIs including syphilis, hepatitis B, HIV, chlamydia, gonorrhea, herpes, and HPV can also be transmitted from mother to child during pregnancy and childbirth. More than 1 million sexually transmitted infections (STIs) are acquired every day worldwide [8-13].

Prevalence of sexually transmitted infected

Sexually Transmitted Infections (STIs) are a growing health problem worldwide. STIs have a profound impact on sexual and reproductive health worldwide. More than 1 million STIs are acquired every day. In 2016, WHO estimated 376 million new infections with 1 of 4 STIs: chlamydia (127 million), gonorrhoea (87 million), syphilis (6.3 million) and trichomoniasis (156 million). More than 500 million people are living with genital HSV (herpes) infection and an estimated 300 million women have an HPV infection, the primary cause of cervical cancer. An estimated 240 million people are living with chronic hepatitis B globally. However, both HPV and HBV infections are preventable with vaccination yet it still affecting a significant portion of the young adult population and may be transmitted from mother to her developing fetus (unborn) through umbilical cord, during child birth (vertical transmission) or to a newborn child through breast feeding in case of human immunodeficiency virus (HIV) and hepatitis B (HBV).

Causative agent of sexually transmitted infection

More than 50% different pathogenic micro-organisms are known to be transmitted through sexual contact. Eight of these pathogens are linked to the greatest incidence of sexually transmitted disease. Of these eight infections, four are caused by bacteria and are currently curable: syphilis, gonorrhea, chlamydia and trichomoniasis. The other four are viral infections which are completely incurable: hepatitis B, herpes simplex virus (HSV or herpes), HIV, and human papillomavirus (HPV). Complication or disorder due to the incurable viral infections can be reduced or modified through treatment and it can be prevented with vaccination for (e.g. HBV and HPV) vaccines [14].

Methodology

Research design

The research design used for this study was descriptive Survey method. According to Thomas and Nelson survey design seeks to determine the present practice or opinions of a specified population on some phenomena. Njodi and Bwala explained

that descriptive survey is used to gather data at a particular point in time with the intention of describing the existing conditions and identifying standard against which existing condition can be compared. According to Corner and Norman purpose of survey research design is to describe systematically the facts, qualities or characteristics of a given population, event or area of interest concerning the problem under investigation. Therefore, survey design is appropriate for this study as it seeks to determine the factors influencing the screening for sexually transmitted infections among adults in Maiduguri Metropolis of Borno State North-eastern, Nigeria.

Population and sample

The target population for this study was comprised of both males and females respondents in the selected six Ward of Maiduguri Metropolis. Stratified sampling was used for this study to select both males and females respondents. Stratified sampling is the sampling techniques where different groups within a population are used as a sample. Multi-stage sampling technique was employed to select the sample at different phases, phase one: simple random sampling technique was employed to select fifteen wards of Maiduguri Metropolis, phase two: six wards were selected from the fifteen wards of Maiduguri Metropolis using simple random sampling technique. Phase three: two settlements from each Ward were selected, using simple random sampling technique, making twelve settlements from the six selected wards. Thus the sample respondents were 500 male and female from selected settlement of the six wards namely: Bolori, Bulabulin, Maimusari, Gwange I, Mairi, Fezzan and Fogoli wards of Maiduguri Metropolis of Borno State, North-eastern, Nigeria [15].

Convenient sampling technique was employed for this study to select the sample of (500) five hundred males and females respondents using simple random sampling technique. Convenient sampling technique is a form of non-probability sampling procedure in which the researcher chooses a number of respondents or those elements he can easily reach or those that are readily available at the time of study. Sample size for this study was determined by taking the 5% of the population in each selected twelve settlement of Maiduguri metropolis. According to Altunışık, Coşkun, Bayraktaroğlu & Yıldırım sample size between 30 and 500 at 5% confidence level is generally sufficient for many researchers [16,17].

Summary of findings

The following were the summary of findings:

Screening for sexually transmitted diseases among adults in Maiduguri metropolis had influenced by different factors. Some respondents believed that screening for sexually transmitted infections is against their religious beliefs. Factors influenced the screening for sexually transmitted infections in Maiduguri metropolis among adults of different educational background did not differ significantly ($p > 0.05$). Factors influenced the screening for sexually transmitted infections between male and female in Maiduguri metropolis differed significantly ($p < 0.05$).

Factors influenced the screening for sexually transmitted infections in Maiduguri metropolis among adult of different ethnic background did not differ significantly ($p>0.05$).

Discussion

On the Factors influencing the screening for sexually transmitted infections, it was found that screening for sexually transmitted diseases among adults in Maiduguri metropolis had influenced by several factors. The utilization of screening for sexually transmitted disease is disappointingly low due to some factors such as psychological, social, religious and cultural barriers; and people fear learning that they are infected with a disease that is fatal and stigmatizing [18-20].

Some respondents agreed (42.0%) that fear of stigma and discrimination as a factor militating them from accepting the screening for sexually transmitted diseases like hepatitis B virus and Human immunodeficiency virus. While, (33.8%) of the respondents' shows concern about the Fear of social isolation. The finding of this study is in agreement with a recommendation made by Cotler on acceptability of premarital screening among University students in Saudi Arabia opined that stigmatizing attitude found in their studies was highest when the statement was related to the concept of contagion. Moreover, (64.0%) of the respondents shows concerned on their religion towards the screening for sexually transmitted diseases. This finding is in line with the study conducted by Abd their finding revealed that religion and culture is the major barrier to premarital screening. It is also in with finding of El-Hazim who revealed that some strong religious belief and cultural norms influence against premarital screening. Experiences from some Islamic countries indicate that the way in which some peoples misinterpret their religion, create a significant obstacle to the screening and counseling in Muslims communities.

However, (41.0%) of the respondents emphasized on the Lack of confidentiality as their militating factor for the screening on sexually transmitted diseases. While, (62.0%) of the respondents strongly agreed that Lack of accuracy of the result discourages them from going to screening for sexually transmitted diseases. The finding of this study is in agreement with a study conducted by El-Hazim who opined that the factors militating against screening are: stigma and discrimination, fear of accuracy of the result, socio-cultural content and finally lack of trust and confidentiality. While, (60.0%), of the respondents strongly agreed that Lack of access to screening facility deterred them from going to screening for sexually transmitted diseases. and 130(26.0%) of the respondents are concerned about attitude of health care workers during the screening for sexually transmitted diseases. This finding is in line with the finding of a study carried out by Ross, opined that the clients' health problems are communicated to others by the service providers which will lead to social stigma within the society which in turn make the client hide some problems or at times refuse to attend services.

While, (26.0%), of the respondents emphasized on Lack of support from their family as militating factor and (60%), of the respondents strongly agreed that Lack of knowledge is their own barrier against screening for sexually transmitted diseases. This

study is in line with the study carried out by Al Suliman revealed that illiterate peoples lack knowledge to take care of themselves, especially women who got married in their tender age. And Lin opined that peoples especially couples who were less educated were less likely to participate in screening. This finding is in line with the finding of a study carried out by Babalola and Fattusi their finding revealed that education is the only individual level variables that is consistently a significant predictor of utilizations of medical services, especially reproductive health care services. It is also in line with a result of a study carried out by Schmidt according to him 'sufficient planning' in the educational area before the first blood sample is drawn can avoid failures of the screening program.

It was found that adult in Maiduguri metropolis had strong beliefs on the factors influencing the screening for sexually transmitted diseases. This may be due to the level of education of the respondents, as the majority of the respondents are secondary School Certificate holders, followed by primary School leavers. The knowledge of sexually transmitted infections exhibited by adults in Maiduguri metropolis of Borno State, north eastern Nigeria, is in agreement with the finding of Schmidt according to him 'sufficient planning' in the educational area before the first blood sample is drawn can avoid failures of the screening program. It is also in line with the study carried out by Babalola and Fattusi revealed that education is the only individual level variables that is consistently a significant predictor of utilizations of medical services, especially reproductive health care services.

There was no significant difference on the factors influencing the screening for sexually transmitted diseases among adult in Maiduguri metropolis of Borno state North Eastern, Nigeria. This could be due to the level of their education, as majority of the respondents are primary and secondary school leavers. In this study participant who can read and write have Diploma or degree and have adequate knowledge than those who had only Islamic knowledge (can read and write only in Arabic). This is in line with Dissonance reduction theory by Carlsmith and Festinger states that when the components of an attitude (belief and behavior) are at odds, an individual may adjust one to match the other. Positive attitude towards the screening can be formed through learning and can be changed as a function of experience. The finding of this study is also in agreement with a recommendation of Joe who opined that negative attitude towards screening can be changed through persuasion and knowledge [21-23].

There was a significant difference on the factors influencing the screening for sexually transmitted diseases between adults male and female in Maiduguri metropolis of Borno state North Eastern, Nigeria. This could be due to fear of stigmatization, discrimination and social isolation from the society. The finding of this study is also in agreement with a study conducted by Misiri with an aim of the study to determine the factors influencing the screening before marriage. Result of his finding shows that out of 3,092 participants, 23.3%, lived in urban and 76.7% in rural areas showed willingness to accept the screening was positively associated with increased age, urban residence and wishes to keep one on testing result

confidential. Conclusion shows that not all population groups have an equal likelihood of acceptance of screening for sexually transmitted infections due to their demographic characteristics. Public health intervention on screening and counseling for sexually transmitted infections should be tailored specifically for each population group. The finding of this study is also in agreement with a recommendation made by Cotler on acceptability of premarital screening among University students in Saudi Arabia opined that stigmatizing attitude found in their studies was highest when the statement was related to the concept of contagion.

There was no significant difference on the factors influencing the screening for sexually transmitted diseases among adult based on ethnicity in Maiduguri metropolis of Borno state North Eastern, Nigeria. This could be due to the fact that different ethnicity/cultural groups in the study area (Maiduguri metropolis), had similar beliefs about sexually transmitted infections. Iliyasu opined that both culture and individual attitudes have a role in the success of the screening.

Summary

This study was aimed at determining the factors that influence the screening for sexually transmitted diseases among adults in Maiduguri metropolis of Borno State North-Eastern, Nigeria. In order to achieve this objective, one research objective and one research question was formulated and three null hypotheses were tested. The theoretical framework used for this study was theory of Reason and Action developed by Martin Fish-Being & Ajzen Icek. The Theory of Reason and Action (TRA), suggest that behavior is determined by individual's intentions, attitude and belief to perform the behavior. Related literature was reviewed under the following sub-headings: Concept of sexually transmitted infections, Causative Agents and Adults' Knowledge of Screening for Sexually Transmitted Infections.

Survey research design was used for this study. The populations for this study was made up of ten thousand and ten (10,010), INEC, 2019, and five hundred (500) respondents were sampled for the study using simple random sampling. Data were collected using questionnaire on factors influencing the screening for sexually transmitted diseases among adult in Maiduguri metropolis. Five hundred respondents were sampled for this study and analyzed using descriptive statistics of frequency count and percentages to describe the demographic characteristics of the respondents and to answer research questions. While, inferential statistics of Chi-square test was used to test the research hypotheses at 0.05 alpha level of significance. The result of the findings revealed that screening for sexually transmitted infections among adult in Maiduguri metropolis, had greatly influenced by different factors. Some respondents believed that screening for sexually transmitted infections is against their religious beliefs.

Also the result of the findings revealed statistically that Factors influencing the screening for sexually infections in Maiduguri metropolis among adult of different educational background did not differ significantly ($p>0.05$). While, Factors

influencing the screening for sexually transmitted infections between male and female in Maiduguri metropolis differed significantly ($p<0.05$). and Factors influencing the screening for sexually transmitted infections in Maiduguri metropolis among adult of different ethnic background did not differ significantly ($p>0.05$).

It was concluded that several factors had influenced the behaviors of adult towards the screening for sexually transmitted infections in Maiduguri metropolis. For example Some respondents believed that screening for sexually transmitted infections is against their cultural and religious beliefs.

Furthermore, some respondents' shows concerns about stigma, social isolation and discrimination from the society as factor deterred them from accepting the screening for sexually transmitted infection, while some respondents show their concerns about health care workers attitudes, lack of confidentiality and accuracy of the screening result as a factor militating them from going to sexually transmitted infections. It was also found some that respondents strongly agreed that lack of knowledge and support from their family and friends hindered them from accepting the screening for sexually transmitted infections like hepatitis B virus, human papilloma virus and HIV/AIDS.

It was recommended that Government should embark on sensitizations workshops and public enlightenment campaigns to educate the general population of young adult on the sexually transmitted diseases and the importance of regular screening for sexually transmitted diseases. A well-organized health education campaigns and media (TV, radio and internet) are needed to improve public perceptions and understanding about sexually transmitted infections. Massive educational campaign that involves all stakeholders of society, including health care workers and community members, should be undertaking to make society more tolerant when it comes to issues of sexually transmitted diseases.

Conclusion

Based on the findings of this study, It was concluded that several factors had influenced the behaviors of adult towards the screening for sexually transmitted infections in Maiduguri metropolis. For example Some respondents believed that screening for sexually transmitted infections is against their cultural and religious beliefs.

Furthermore, some respondents' shows concerns about stigma, social isolation and discrimination from the society as factor deterred them from accepting the screening for sexually transmitted infection, while some respondents show their concerns about health care workers attitudes, lack of confidentiality and accuracy of the screening result as a factor militating them from going to sexually transmitted infections. It was also found some that respondents strongly agreed that lack of knowledge and support from their family and friends hindered them from accepting the screening for sexually transmitted infections like hepatitis B virus, human papilloma virus and HIV/AIDS.

Recommendations

Based on the findings of this study, the following recommendations were made:

Government should embark on sensitizations workshops and public enlightenment campaigns to educate the general population of young adult on the sexually transmitted diseases and the importance of regular screening for sexually transmitted diseases. A well-organized health education campaigns and media (TV, radio and internet) are needed to improve public perceptions and understanding about sexually transmitted infections. Massive educational campaign that involves all stakeholders of society, including health care workers and community members, should be undertaking to make society more tolerant when it comes to issues of sexually transmitted diseases.

References

- World Health Organization. The global strategy for women's, children's and adolescents' health, 2016-2030.
- Abd Al Azeem ST, Elsayed ET, El Sherbiny NA (2011) Promotion of knowledge and attitude towards premarital care: An interventional study among medical student in Fayoum University. *J Public Health Epidemiol* 3: 121-8.
- Adegun P, Solomon O, Adegoke S, Ade-Ojo I, Fape MO (2013) Knowledge of sexually transmitted Infections among patients attending outpatient clinics at University Teaching Hospital, Ado-Ekiti, Nigeria. *J Public Health Epidemiol* 5:110-4.
- Al-Aama JY, Al-Nabulsi BK, Alyousef MA, Asiri NA, Al-Blewi SM (2008) Knowledge regarding the national premarital screening program among university students in western Saudi Arabia. *Saudi Med J* 29: 1649-53.
- Al Sulaiman A, Suliman A, Al Mishari M, Al Sawadi A, Owaidah TM (2008) Knowledge and attitude toward the hemoglobinopathies premarital screening program in Saudi Arabia: Population-based survey. *Hemoglobin* 32: 531-8.
- Aliyu AA, Dahiru T, Ladan AM, Shehu AU, Abubakar AA, et al. (2013) Knowledge, sources of information, and risk factors for sexually transmitted infections among secondary school youth in Zaria, Northern Nigeria. *J Med Trop* 15: 102.
- Amu EO, Adegun PT (2015) Awareness and knowledge of sexually transmitted infections among secondary school adolescents in Ado Ekiti, South Western Nigeria. *J Sex Transm Dis*.
- Anwar M, Sulaiman SA, Ahmadi K, Khan TM (2010) Awareness of school students on sexually transmitted infections (STIs) and their sexual behavior: A cross-sectional study conducted in Pulau Pinang, Malaysia. *BMC public health* 10:1-6.
- Awang H, Wong LP, Jani R, Low WY (2014) Knowledge of sexually transmitted diseases and sexual behaviours among Malaysian male youths. *J Biosoc Sci*. 46: 214-24.
- Babalola S, Fatusi A (2009) Determinants of use of maternal health services in Nigeria-looking beyond individual and household factors. *BMC pregnancy and childbirth* 9: 1-3.
- Egan LC, Santos LR, Bloom P (2007) The origins of cognitive dissonance: Evidence from children and monkeys. *Psychol Sci* 18: 978-83.
- Cotler SJ, Cotler S, Xie H, Luc BJ, Layden TJ, et al. (2012) Characterizing hepatitis B Stigma in Chinese Immigrants. *J Viral Hepatitis* 19: 147-152.
- Dam L, Cheng A, Tran P, Wong SS, Hershov R, et al. (2016) Hepatitis B Stigma and Knowledge Among Vietnamese in Ho Chi Minh City and Chicago. *Can Gastroenterol Hepatol* 2016: 1910292.
- El-Hazmi MM (2004) Prevalence of HBV, HCV, HIV-1/ 2 and HTLV-I/II Infections Among Blood Donors in Teaching Hospitals in the Central Region of Saudi Arabia. *Saudi Med J* 25:26-33.
- Zhang D, Pan H, Cui B, Law F, Farrar J, et al. (2013) Sexual behaviors and awareness of sexually transmitted infections among Chinese university students. *J Infect Dev Ctries* 7: 966-74.
- Cotler SJ, Cotler S, Xie H, Luc BJ, Layden TJ, et al. (2012) Characterizing hepatitis B stigma in Chinese immigrants. *J Viral Hepatitis* 19: 147-52.
- Festinger L (1957) A Theory of Cognitive Dissonance.
- Hingson RW, Strunin L, Berlin BM, Heeren T (1990) Beliefs about aids use of alcohol and drugs and unprotective sex among Massachusetts adolescents. *Am J Public Health* 80: 95-99.
- Mirza A, Ghani A, Pal A, Sami A, Hannan S, et al. (2013) Thalassemia and premarital screening: Potential for implementation of a screening program among young people in Pakistan. *Hemoglobin* 37: 160-70.
- Lyss SB, Kamb ML, Peterman TA, Moran JS, Newman DR, et al. (2003) Chlamydia trachomatis among patients infected with and treated for Neisseria gonorrhoeae in sexually transmitted disease clinics in the United States. *Ann Intern Med* 139: 178-85.
- Nsuami JM, Sanders LS, Taylor SN (2010) Knowledge of sexually transmitted infections among high school students. *Am J Health Educ* 41: 206-17.
- Rosenstock IM (1974) Historical origins of the health belief model. *Health Educ Monogr* 2: 328-35.
- Olasode OA (2007) Sexual behaviour in adolescents and young people attending a sexually transmitted disease clinic, Ile Ife, Nigeria. *Indian J Sex Transm Dis AIDS* 28: 83.