

# THE INTERNATIONAL JOURNAL OF SCIENCE & TECHNOLEDGE

## Healthcare Expectations of Students Seeking Services at the Moi University Health Centre in Kenya

**Joachim K. Rotich**

Nursing Officer, Moi University, Eldoret, Kenya

### **Abstract:**

*Health system responsiveness has received great attention from policy makers, managers and researchers owing to its link to client satisfaction and overall improvement of health. Given that most populations in developing countries, Kenya included, are youthful, it is important to find out if the youth in higher learning institutions are offered health services they deserve. The empirical study was, therefore, conducted to investigate the youth's healthcare needs and expectations, and how the university health services respond to them. Across-sectional survey involving the mixed methods was deployed, using WHO questionnaire, key informant interviews, and focus group discussions. Sample size was determined using Yamane's formula. Respondents were identified by stratified random sampling for clients, and both purposive and snow balling for providers. Quantitative data was analysed using principal component analysis whereby relevant components were extracted, then linear regression analysis was used to assess the relationship between scores and the extracted components. Qualitative data was transcribed, cleaned and coded, and the emergent themes presented to enhance the WHO domains resultant components. Data analysis yielded six components in rank (quality of basic amenities, prompt attention, rights, dignity and confidentiality) which explained 64.871% of total variances on youths' expectations of the system against 71.057% of the total variances on providers' five components (confidentiality, quality of basic amenities, social support networks, autonomy and rights). Focus group discussions and key informant interviews further expounded and emphasized on the relevant areas, showing varied expectation levels. Based on these findings, it is recommended that the authorities should realign health services provision to reciprocate the needs and expectations of the students.*

**Keywords:** Healthcare expectations, students, services, Moi University Health Centre, Kenya

### **1. Introduction**

Youth-friendly healthcare services cover promotive, preventive, curative and rehabilitative aspects of health that are aimed at meeting the dynamic health needs of the youth (Ministry of Health [MoH], 2005b). The concept begun in Sweden and has developed over time to incorporate other service areas that address the holistic nature of health. In Kenya, youth-friendly services begun with the 1994 ICPD plan of action that appealed to governments to ensure accessibility of reproductive health services by the youth. Similar concerns rose from the National Population Policy for Sustainable Development, the Children's Act of 2001 and the National Reproductive Health Strategy of 1997-2010. It was further enhanced by relevant concerns that arose in international conventions, conferences and instruments such as the Millennium Development Goals, among others. All these have emphasized a strong basis for government commitment to developing youth-responsive health systems and process.

The Moi University Health Centre is an institutional health facility that offers primary care to staff and students of the University. The bulk of clients seeking services at this facility are the students, most of whom fall within the youth cohort. This calls for tailored services to meet the needs of the youth, and for the healthcare systems to be responsive to those needs. However, various literatures have generally identified disparities between client expectations and service provision. An Australian survey on youth friendly services in primary care (Haller, Sanci, Patton & Sawyer, 2007) has identified disharmony between the clients' expectations and service receipt. This has serious implications on healthcare, which means that any future research should inform policy for improving youth's primary care (Haller *et al.*, 2007). A WHO (2000) report further indicates that responsiveness is not a measure of how a health system responds to health needs, measured in outcomes, but of how the system performs in relation to non-health aspects, thereby meeting the expectations of how clients should be treated by providers and the environment.

#### *1.1. Global Conception of Youth Health Programmes*

Youth-friendly health services first began in Sweden as a response to increasing number of unwanted pregnancies and abortions noted among the youth. They then spread to the entire Europe through works of an advocacy group – the Young Decision-Makers and the partnership of Inter European Parliamentary Forum on Population and Development (IEPPFD). From there, these services have gained the interest of world authorities. The 1995 panel of experts convened by three UN agencies (WHO, UNICEF and UNFPA) heralded a

change in the practices of health systems. From that point onwards, the approach to delivery of healthcare services to adolescents began to follow certain protocols deemed to yield greater reception. This possibly marked the beginning of responsiveness towards service provision.

Responsiveness in this case was to be achieved through implementation of actions recommended through a three-level framework developed for adoption when rolling out health programmes (WHO, 1997). This development was guided by a basic rights approach to service delivery as articulated in various conventions, stimulated, strengthened and supported by national laws, policies and programmes aimed at improving the health of adolescents (WHO, 1997). The international Planned Parenthood Federation (IPPF) and its partners similarly recognized young people's sexual rights, needs and responsibilities, and have recently in collaboration with other partners brought their efforts together with the Adolescent Health Department of the World Health Organisation in reviewing strategies of preventing too early pregnancies and making pregnancies safer (WHO, 1997, 2011). These early developments of responsiveness mainly centered on sexual and reproductive health.

Other challenges, particularly experienced on the later stages of adolescent youth which include high levels of psychosocial risk factors, were uncovered by Costa Rica's National Adolescents Health Programme (PAIA) in 2000. Following this revelation, Costa Rica commenced programmes to train health workers in relevant counselling (WHO, 2002b). Alcohol and drug abuse have also been identified as common problems by several studies (WHO, 2002b; MoH, 2005). These problems are widespread, dangerous and disruptive (Ross & Dejong, 2008). These, among other, studies inform the paradigm shift into a completely inclusive policy that has developed over time to incorporate the service areas that address the holistic nature of youth health.

The youth are characterized by relatively high influence from peers, which can result in lifelong behaviour change, including alcohol and drug abuse, all of which bear commensurate health effects (WHO, 2002a; MoH, 2005). Reproductive health is an important area that attracts an equally high attention considering its effects on the overall physical, social, and psychological well-being of young individuals. Arguably, an estimated 1.7 million adolescents (both young men and women) succumb to premature death annually due to illnesses that are usually preventable or treatable, emanating from pregnancy related complications, accidents and violence (Tegegn *et al.*, 2008). Numerous researches have shown that peer pressure result in engagement of regrettable events such as drugs and alcohol abuse, irresponsible sexual activity and even violence that is mostly sex-related (Khalaf *et al.*, 2010; WHO, 2002).

Upon entry to the university, young people are embraced by exceedingly overwhelming freedom that demands of them to make major decisions on their own. Major challenges that accompany this freedom are those touching on sexuality, considering the degree of influence as portrayed by this freedom and their vulnerability (Ejembi & Otu, 2004). It is further noted disadvantaged youth are more prone to sexual exploitation for financial support and favours (MoH, 2005).

### 1.2. Statement of the Problem

The World Health Organisations' (2000) report broke new grounds in defining health system goals and performance measures. The Global Consultative Meeting of 2001 stressed the need for relevant actions to fulfil the health needs of adolescents by offering tailored healthcare services. This emphasizes the need for health systems to be responsive to client needs and expectations. It also strengthens an earlier call to implement youth-friendly policies and services (WHO, 2002).

Kenya, in line with the above, released national guidelines on youth-friendly healthcare service provision in 2005, alongside identifying the models of such service delivery (MOH, 2005). Consequently, all levels of healthcare are expected to implement this commitment. However, facilities that are termed youth-friendly remain few. This is indicated by surveys done by the KSPA which reflect a 2% decrease from 12% in 2004 to 10% in 2010 (KNBS & ICF Macro, 2010). In Uasin Gishu County, this reduction was 5% (GoK, 2014). This low and the downward trend in such a commitment points to serious gaps on the availability and the reality of youth-friendly services, compounded by political sensitivity and socio-cultural biases (Erulkar, Onoka & Phiri, 2005). Previous studies have further found that youth friendly services greatly value confidentiality, shorter waiting time, have friendly staff, and are low in cost. Some characteristics of youth friendly services intertwine with those of responsiveness.

University students, most of whom fall within the youth cohort, often complain about the services they receive, yet the service charter displayed at the University Health Centre has not indicated any commitment to directly address youth concerns. This overshadows any associated gains or benefits, hence making this empirical study inevitable. While some literature exists on how young people respond to primary care, little is known on how the youth in higher learning institutions behave when seeking healthcare and whether or not the services offered meet their expectations. This baseline knowledge is important for highlighting ways in which primary care can become more responsive to the needs and expectations of youth.

## 2. Materials and Methods

The study was conducted at the Moi University's main campus clinic. The University is located in the Uasin Gishu County of Kenya. The main campus clinic is located in the precincts of the University's main campus, that is approximately 40 kilometres south of Eldoret town. The clinic was chosen as it is an institutional health unit that offers 24-hour healthcare services to both the staff and student population. It operates as an out-patient facility with a 24-hour observation facility in which clients requiring close medication are observed. Patients that need intensive care of beyond 24 hours are referred to major hospitals in Eldoret town and transported using a University ambulance that is always on stand-by for such purposes. The services offered at the clinic meet the primary healthcare requirements for such facilities.

A mixed-methods descriptive cross-sectional survey was used to solicit information from the youthful university population cohort that fell within the range of 18 to 24 years of age and the healthcare providers in the facility. The target population for the study comprised all the undergraduate students in session who met the specific inclusion criteria. They numbered over 10,000. The criteria

included those who resided and attended classes at the Moi University's main campus and were deemed to seek healthcare services at the University clinic. Key informants included healthcare providers. They constituted those who offered direct services to the students at the clinics' service delivery points. The sample size was determined using the simplified formula proposed by Yamane in 1967 (as cited in Israel, 2009). This formula gives the sample size of any given study as the proportion of one added to the product of the population and squared level of precision as indicated below.

The study employed stratified random sampling and purposive sampling. Undergraduate students were stratified by year of study and school, from which the desired sample size was achieved. The strategy identified subgroups in the population and their proportions and selected from each sub group to form a sample. The technique suited the study because the target population was not uniform. The desirable sample size was selected randomly once the population had been stratified to give each student equal chances of being included in the study. Purposive sampling was used to select the first five key informants. One key informant was chosen from each section. The selected respondent was then asked to help identify other respondents from their sections through snowballing procedure. In this way, the desired sample of 48 key participants was achieved for this study. These were deemed to hold important information in relation to the research problem.

Primary data was collected from the undergraduate students and the University health centre staff of Moi University's main campus. This was done with the help of questionnaires and interviews in which students and key informants were required to provide information based on the questions asked regarding their views on responsiveness in the provision of youth friendly healthcare services at the University Health Centre. Secondary data was collected from various sources, including personal and institutional libraries, archives and information offices at the hospital and the internet.

Quantitative data from questionnaires for clients and providers were verified for accuracy and separately entered into the SPSS computer program version 17 for analysis. The data were then standardized prior to running tests. Assumptions considered prerequisites were confirmed for principal component analysis. This data reduction method was deployed to help the researcher to discover and summarise patterns of relationships to aid in analysis and description of the variables. All variables were measured in continuous level. The variables were then extracted into components using a principal axis method of analysis. The samples were deemed adequate for principal component analysis (Tabachnick & Fidel, 2001), although the key informants were fewer. There existed no significant outliers in the two data sets as evidenced by a standard deviation of less than 3 away from the mean. All the data, which constituted both five-pointed Likert type and four-pointed Likert type scales for clients and key informants, respectively, with their overall scales in a 0-10 rating scale, were standardized to avoid any incidences of multicollinearity.

Principal component analysis was considered appropriate for this analysis because it has the power to reduce the observed data into constructs that can be easily analysed and interpreted. Cronbach's alpha was then used to validate the items of each variable. A further analysis in multiple regression was ran to develop a model for predicting the criterion for the derived components. Qualitative data obtained from focus group discussions and key informant interviews were separately transcribed, cleaned and coded. This same procedure was subjected to the data obtained from the open-ended questions of the questionnaires. Themes were obtained in line with the responsiveness domains and their intensity was described.

### 3. Results

#### 3.1. Healthcare Expectations of Students Seeking Care

The study sought to establish the expectations of students in accessing healthcare services at the Moi University Health Centre. The students' experiences were illustrated in several aggregates as portrayed in the in the WHO domains of responsiveness, extracted through principal component analysis. All the WHO items were examined equally and only those giving component loads of 0.4 and above were deemed relevant and appropriate to be classified into the new component, therefore forming a new model of students' expectations, which the health system ought to be responsive to.

A regression using forward and stepwise procedure did not remove any variables just as in the default procedure, hence confirming the same predictors for the youth's expectations of the health system's responsiveness. Suffice it to say that the youth's healthcare expectations were predicted by the WHO model to 65.7% in the order of priority as delineated by the components shown below:

- i) The quality of basic amenities – ranging from the surrounding, furniture, ventilations, water, toilets, linen – and the overall maintenance of the facility structures.
- ii) Prompt attention was the second in the youth's expectations. Students have busy schedules of class and other related activities and they would appreciate being attended to faster to reduce interruptions to their academic work.
- iii) The students also felt that their autonomy played a role in their pursuit of healthcare.
- iv) The students' dignity featured notably hence met the criteria, though ranking fourth overall.
- v) Confidentiality was fifth in rank.
- vi) Access to services was last in the students' expectations.

The analysis identified the WHO model of responsiveness as a viable tool for determining the level of health system responsiveness for the youth seeking care at the Moi University Health Centre. However, the model needed to undergo some modification so that only one question/item was found to be inappropriate; and the order of priority in terms of healthcare needs, where the quality of amenities being topmost in their expectations as most respondents in the clients' FGDs held did not escape a mention.

### 3.1.1. Quality of Basic Amenities

The feature of quality covered a number of issues ranging from the road leading to the facility, the compound and the amenities around and within the facility. The respondents suggested that the road to the facility needs to be tarmacked to reduce dust during dry season flowing into the facility. This would also facilitate easy access by vehicles and ambulances to the facility. The roads that needed the most repairs in this case were those leading to the health facility from the student hostels, especially hostel K and C houses. The respondents also indicated that the waiting area at the Health Centre is so small and needs to be expanded and sufficiently furnished, as there was marked shortage of sitting benches in the facility. They indicated the need to improve the quality and number of furniture to assist those who have to queue outside as they wait for treatment. A television set should also be installed on the waiting rooms to keep clients busy while waiting for various services. It was further suggested that benches should be put in place under shades to provide resting places for those waiting for services. Waiting bays should also be provided with a Wi-Fi to help students to access the internet and do their assignments while waiting to be attended. One respondent made the following comment: “Other amenities, e.g. an aquarium should be provided to enhance healing, recreation and kill boredom when waiting to be attended” (Personal Communication, R8, FGD-6).

The respondents also said that the toilet facilities were few. Suggestions for expansion included digging of pit latrines to accommodate the increase in the student population. Provision of tap water taps was also mentioned to provide clean water to the clients and that water dispensers should be placed at strategic locations within the facility for use by clients. The study also established that the number of beds in the facility wards is less. The observation ward was only a single room without adequate partitioning materials. Clients of different gender were, therefore, forced to spend nights in the same room. The number of beds in the wards therefore ought to be increased.

### 3.1.2. Prompt Attention

The study established that in almost all the focus group discussions, the respondents held the view that the facility was accessible. They nonetheless reported some hitches, especially during the rainy season when the ambulance cannot access some hostels to pick clients from their halls of residences owing to muddy roads. This particularly affected those who resided in hostels K and C houses and those residing in rented rooms in the Talai Centre. Moreover, respondents pointed to the slow rate of response that was occasionally experienced while seeking services at the Health Centre. It was reported that sometimes the ambulance delayed to pick clients from their halls of residences. Even clients booked for special attention at the facility said they also waited long hours for them to be seen/attended to by the officers. They attributed this to doctors arriving late, taking longer hours to settle, or either basking in the sun or chatting with their colleagues outside their offices instead of attending to patients. This, they retorted, made their waiting time unreasonably longer.

### 3.1.3. Autonomy

Most of the respondents wished that their views be incorporated into their treatment plans, for which they said most health workers were not ready. They said that health workers should do all their best to understand their clients, avoid being pre-judgemental and instead pay closer attention to their complaints. As one respondent put it: “They diagnose even before you finish stating the complaints and hand you a prescription for medicine that then turn out to be Panadol and Piriton or painkillers only, and whenever you suggest, one is told he/she isn’t sick” (Personal Communication, R9, FGD-3).

Some respondents also said that the facility should ensure that only female health workers attend to female clients and male health workers for male clients. A few, however, said they did not mind being attended to by a health worker of any gender. Most female respondents said they would prefer to be attended to by male health workers. Their main explanation for this was that female health workers would easily understand them and their problems and thus could be trusted with confidential information.

### 3.1.4. Dignity

The respondents reported that on a number of instances, their dignity was not upheld to their expectations. They said that the staff members at the reception/records health centre were often rude to them. Sometimes, these workers forced patients to enter and search for their files among the huge heap. In most instances, the staff members conversed in vernacular which made it difficult for students from other linguistic backgrounds to converse with them. Occasionally, at the consultation room the clinician did not allow time for the client to express oneself and instead hurriedly handed out prescriptions. The respondents said nurses were often rude and shouted at clients. They also reported instances in which nurses sent them away unattended. Female students complained of harassment by health workers at the facility, especially when they tested positive for pregnancy and needed medical attention.

### 3.1.5. Confidentiality

Clients’ confidence is promoted by, among other things, how they and their records are handled. All the way from the reception area, the respondents reiterated the need to be assured of confidentiality of their records. They felt uncomfortable with their colleagues on work-study programme who often helped in retrieving and moving files. They suggested that unique identifiers should be used instead of names on the files to enhance easy access and retrieval of client records.

While some respondents said they were satisfied with the level of confidentiality, some felt that the health workers they consulted for treatment were not exhaustive in taking down their complaints. This made them lose confidence in the services offered at the health facility. One respondent cited a case in which a colleague was treated for injuries at the clinic and discharged, only for the condition to worsen the following day till the client was taken to the Moi Teaching and Referral Hospital (MTRH) where the patient was able to

receive 'proper' treatment. According to the respondent, the health workers at the Clinic would have detected the issue if they were keen enough. The respondents also suggested that health workers should improve on their public relations skills and exercise temperament as they dispensed their services. Some respondents reported that the health workers recklessly disclosed the confidential information of their clients. They cited a case in which, after consultation, the health worker came out and began to converse openly with a colleague about the patient in mother-tongue.

#### 3.1.6. Access

Many of the respondents experienced accessibility issues because the roads that the ambulance should take became impassable in the rainy season. The students also faced problems with the requirement that for any student to access services they must produce a valid university identification card. They reported that there were occasions in which one may have misplaced or lost their identification documents and were therefore denied services. One student lamented thus:

My friend was not treated as she didn't have a student identification card, or any document in its place. We were told to go to administration building to seek one, but we didn't find someone to assist us. Since my friend was in pain, we decided to go to town where we were treated. Can't there be a way of doing away with this identification requirement before accessing services? (Personal Communication, R5, FGD-2).

It also emerged that public relations ought to be enhanced to ensure responsiveness of services to clients. Students have no option and must always seek services at the Health Centre. The health workers at the reception area should be free for inquiries to be made, and at most times be more than one in a shift.

### **4. Discussion**

The study adduced a Moi University model that explained 64.87% of the total variance with six domains (meaning the WHO model lost one domain in this scenario). In this modified model, the variables of the lost domain were donated or lost to the six dominant domains. The model had 'quality of basic amenities' as the first priority in which the respondents spelled the kind of amenities they wished to enjoy in the facility. Incidentally, the percentage variance was closer to the Taiwanese study findings that gave 63.5% of the total variance.

The most significant findings on this group of clients was that their value was so much inclined to the facilities of the health system (basic amenities) ranging from the general outlook of the compound, the structures of the facility being the buildings and the general amenities within it. These included their rooms of residence of which they argued that they determined their well-being. It emerged that the most important expectation among the youth was to have good roads leading to the facility. They also wished to find the facilities very clean with comfortable chairs and of good quality, as opposed to the wooden benches. The clients further said they desired to have waiting rooms that are equipped with tools to keep them occupied while waiting for doctor's attention. The tools suggested included a TV set and an aquarium, and also Wi-Fi connectivity to help them browse the internet.

Secondly, the students expected the waiting time to be as short as possible. This is because, the University being a learning institution, the clients often had academic commitments they must attend to leaving little time for other activities. This means that every time students have to visit the Health Centre they forego their studies. They, therefore, expect that the appointment with clinic officers would take the least time possible. Clients, therefore, expressed a wish for healthcare procedures to take the least of their time possible. Unfortunately, this was not always the case. This was justified by, among other things, consultations and the need for multiple tests necessary in healthcare to confirm or rule out related conditions.

Third in the priority of clients' expectations was that their autonomy would be observed through every step of their care. These, according to the WHO model, are achieved through being given sufficient explanations on the nature of treatment, alternative treatment opinions, being allowed to make decisions after discussing with the health worker regarding the type of treatment and also for them to fully enjoy their right to refuse treatment. This aspect also involved the right to choose a health provider for oneself and to get a second opinion on treatment preferences as well as the ability to get specialized treatment when necessary. It, therefore, meant that clients expected to enjoy the freedom to choose entirely every aspect of healthcare designed to respond to their needs. This is the only way that clients expected to experience the most of the health system's responsiveness.

Just like the autonomy domain of the WHO model, the autonomy domain in this study incorporated and borrowed all the constructs of the choice of care provider, except the case of 'ease of reaching the health facility' which in this case might not have posed a serious challenge considering the facility is located within an institution. Reaching the facility was also aided by the availability of an ambulance which could collect clients from their rooms in emergency cases. The fourth legitimate expectation of the clientele was their dignity being safeguarded by the system. This could be achieved by being given proper welcome to the Health Centre and being treated with genuine concern instead of being shouted at. The clients said that the respect they deserve should be accorded them at every step of the healthcare procedures. They also expected that their privacy would be guaranteed.

Confidentiality was also noted as among the expectations of clients, although it never seemed to receive the same high attention as the others. This meant that the clients expected the information shared by healthcare providers to be maintained. The clients probably based this on the understanding that the health workers were properly trained to safeguard their records. An important adjunct to this was the mention of the issue of ethics by the key informants which had also been mentioned by respondents in FGD-3. The last in the categories of clients' expectations was the concept of access. This did not seem to attract much attention among the clientele. This was attributed to the fact that matters relating to access have at least been addressed by primarily establishing a health facility within the campus, equipping it with an ambulance that is available on emergency call.

## 5. Conclusion

Priorities of the different populations determine their needs and the expectations they hold about a health system across changing time. The young people who participated in this study mostly required the primary care delivered within the shortest time possible to allow them to attend to their academic programmes. They abhorred wasting much time in the health facility. Their desires were captured in a responsiveness model derived in this study that defines the healthcare desires of a youthful environment. Mostly, the model is inclined to hotel facilities that ought to be very attractive and comfortable, aspects that in essence are almost impossible to attain.

## 6. Recommendations

Delivery of responsive healthcare services calls for concerted efforts of both the providers and clients. This will help harmonise expectations with available services against existing policy provisions. Therefore, the University health services should be tailored to respond to the needs and expectations of students who form the bulk of its clients. The Ministry of Health should consider developing guidelines for successful delivery of healthcare services in institutions of higher learning.

## 7. References

- i. Ejembi, C. L., & Out, A. (2004). Sexual Behaviour, Contraceptive Practice and Reproductive Health Outcomes among Nigerian University Students. *Journal of Community Medicine and Primary Health Care*, 16(2), 8-16.
- ii. Erulkar, A. S., Onoka, C. J., & Phiri, A. (2005). What is Youth-Friendly? Adolescents' Preferences for Reproductive Health Services in Kenya and Zimbabwe. *African Journal of Reproductive Health*, 9(5), 51-58.
- iii. Government of Kenya (GoK) (2014). Service availability and readiness assessment mapping (SARAM). KNBS.
- iv. Haller, M. D., Sanci, L. A., Patton, G. C., & Sawyer, S. M. (2007). Toward Youth Friendly Services: A Survey of Young People in Primary Care. *Society of General Internal Medicine*, 22, 775-781.
- v. Israel, G. D. (2009). Determining sample size. IFAS, University of Florida. PEOD 6. October.
- vi. Khalaf, I., Moghli, F. A., & Froelicher, E. S. (2010). Youth-friendly Reproductive health services in Jordan from the perspective of the youth: a descriptive qualitative study. *Scandinavian Journal of Caring Science*, 24, 321-331.
- vii. KNBS & ICF Macro (2010). Kenya Demographic and Health Survey - 2008/ 09. Calverton, Maryland: Kenya National Bureau of Statistics and ICF Macro.
- viii. Law Reform Commission (2001). Children's Act 2001. Retrieved from [http://www.lawreform.ie/\\_fileupload/RevisedActs/WithAnnotations/EN\\_ACT\\_2001\\_0024.PDF](http://www.lawreform.ie/_fileupload/RevisedActs/WithAnnotations/EN_ACT_2001_0024.PDF)
- ix. Ministry of Health [MoH] (2005b). National Guidelines for the Provision of Youth-Friendly Services. Nairobi: MoH.
- x. MoH (2005a). Reversing the trends: The National Health Sector Strategic Plan II: 2005-2010. Nairobi: Government Printers.
- xi. Ross, V., & Dejong, W. (2008). Alcohol and other Drug Abuse among First-year College Students. Massachusetts: The Higher Education Center for Alcohol and other Drug Abuse and Violence Prevention.
- xii. Tabachnick, B. G., & Fidell, L. S. (2001). *Using Multivariate Statistics* (4<sup>th</sup> ed.). New York: Harper Collins.
- xiii. Tegegn, A., Yazachew, M. & Gelaw, Y. (2008). Reproductive Health knowledge and Attitude among Adolescents: A community based study in Jimma Town, Southwest Ethiopia. *Ethiopian journal of Health Development*, 22(3).
- xiv. WHO (1997). Action for Adolescent Health: Towards a common agenda; Recommendations from a joint study group. Geneva: WHO.
- xv. WHO (2000). Health systems: Improving performance. Geneva: WHO.
- xvi. WHO (2002b). Adolescent friendly health services: an agenda for change. Geneva: WHO.
- xvii. WHO (2002a). Adolescent friendly health services: an impact model to evaluate their effectiveness and cost. Geneva: WHO.
- xviii. WHO (2011). WHO Guidelines on Preventing Early Pregnancy and Poor Reproductive Outcomes among Adolescents in Developing Countries. Geneva: WHO.