



International Journal of Sciences: Basic and Applied Research (IJSBAR)

ISSN 2307-4531
(Print & Online)

<http://gssrr.org/index.php?journal=JournalOfBasicAndApplied>



Burden of Reproductive Health Illiteracy in Eritrea

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Abstract

Reproductive health (RH) is state of physical, mental, and social well-being in all matters relating to the reproductive system, at all stages of life. In East Africa including Eritrea, adolescents comprise more than a quarter of the population. The region holds the highest rates of sexually transmitted diseases, HIV, unwanted pregnancy and unsafe abortion with its complications. Young girls carry the highest burden of reproductive health problems due to their risk taking behavior, lack of knowledge, peer pressure, physiologic immaturity and low socioeconomic status. The purpose of this study is to assess the burden of reproductive health illiteracy on adolescent high school girls in Eritrea. Descriptive cross-sectional study is conducted between February and March 2013. Qualitative data was also collected using FGD and individual interview. Three high Schools, located in the central highlands of Eritrea were purposively selected, for their homogeneity and proximity to a health centre. Thirty female students from each school were randomly selected for the survey. The central highland is one of the four distinct topographic regions in Eritrea containing 50-60% of the nation's population. The schools: are public secondary schools serving several villages in their catchment.

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Data was collected using a predesigned, pretested questionnaire emphasizing on reproductive health knowledge, attitude and practice. Students in public schools are homogeneous, thus 30 female students were randomly selected from each school for the survey. Purposively selected 75 persons participated in the Focus Group Discussion and individual interview. Data were checked for completeness on site, coded, entered in to a computer, cleaned and analyzed using SPSS, proportions were used to present data. The qualitative data was analysed through coding describing and deriving themes. The results shows that ninety female students in grade nine participated in the study. Mean age was 16 ± 1.5 years, 75% lived with both parents and majority (68%) of participants' mothers have very low educational level. Parents (62%) are mentioned as primary source of reproductive health information. The volunteers' knowledge on, female reproductive system, sexually transmitted infection and family planning was (36%; 22%; 36%) respectively. Reproductive health practice and attitude were (13%, and 56%) respectively. The individual (100% of them) and FGD (80%) participants stated though "heterosexual relationships, unsafe sex and unplanned pregnancy are rampant in Eritrea; young girls lack the knowledge and skills to protect themselves". More Direct quotations are incorporated in the results. In the conclusion we can say that the majority of the students lack the knowledge and good attitude towards reproductive health. Moreover young girls never used the available health services. Most importantly the FGD and individual interview participants expressed their concerns on the challenges young girls are facing due to their lack of knowledge and skills. Therefore the efficacy of school based peer reproductive health education should be tested so that it can be a stepping stone for a bigger scale national intervention.

Keywords: Knowledge; attitude; practice; reproductive health; Eritrea

1. Introduction

Adolescent population in Eritrea accounts for 28% of the total population. Little is known about the illiteracy of adolescent reproductive health (ARH) on adolescent girls in the country. Adolescence is the age between 10-19 years [1]. It is a period of rapid physiological, emotional, social and psychological changes marked by increased exposure and experimentation. Among the commonly experimented are, use of tobacco products, alcohol, drugs, and early sexual activities [2]. This is further compounded, by influences of the western media which are steadily eroding the traditional norms and values that governed and regulated sexual practices within Sub-Saharan African societies [3]. Young girls who have inadequate information about reproductive health (RH) and limited or no access to RH services are initiating early sexual intercourse which increases unplanned pregnancy and its complication [4]. Governments are not committed to the pledges of ICPD 1994 to create supportive environment, provide reproductive health education and services to adolescents [1,5,6,7,8].

Information related to ARH in Eritrea is very scarce. The Eritrean National Sexual and Reproductive Health (SRH) strategic plan document states, adolescent reproductive health is incorporated within the national primary health care system [9]. Nevertheless throughout the document the main focus is reduction of maternal mortality, and the focus on adolescent reproductive health is negligible. Moreover the national health data is not disaggregated by age; categorized under five and over five years, which makes finding adolescent related health information impossible [10]. A study that assessed the health needs of adolescents in Eritrea reported that they lack comprehensive knowledge on Human Immunodeficiency Virus (HIV) and only 17% knew the ovulation

period that is critical to pregnancy prevention [11]. Thus as Sub-Sahara Africa countries share common, economic, political, cultural and traditional practices the available data in the region is expected to reflect ARH of all countries in that region.

Adolescents in SSA may have awareness on HIV, but lack in-depth knowledge on sexually transmitted diseases (STIs), HIV and pregnancy prevention [12]. For instance studies indicate in Nigeria and Eritrea, adolescents lack comprehensive knowledge on HIV, more than 50% of the students lack adequate knowledge on STI, HIV infection transmission and prevention, human reproductive physiology [2,11,13]. Moreover family planning use in SSA range from 4% in Eritrea to mean of 26% and the unmet need remains 27 to 40% [10,14]. In this region in spite of their lack of RH knowledge and skills adolescent girls practice early unsafe sexual intercourse.

Early unsafe sexual practice escalates the prevalence of STI, HIV, teenage unplanned pregnancy, unsafe abortion and its consequences. For instance, in Ethiopia Woliata Sodo University 62% of students started their first sexual intercourse in High school, Uganda, by age 14, 46% adolescents have initiated sex [12,15,16]. Thus unwanted pregnancy that often leads to unsafe abortions is affecting teenagers in SSA as young as 12 years of age causing 13% of maternal deaths [17].

East Africa holds the highest prevalence of unplanned pregnancy, unsafe abortion, HIV and STIs among adolescents in the world. Forty percent (40%) of world's unsafe abortions among adolescents are in East Africa [18]. In this region young girls suffer from complications of unsafe sex and unplanned pregnancy, for instance, abortion causes 50% of postpartum septic complication in Eritrea, 13,000 annual girl school dropouts in Kenya, 18% of maternal death in Malawi [19,20,21,22]. It is painful that young girls of the region are suffering from a preventable burden of RH illiteracy.

Thus this study assessed the RH knowledge, practice, attitude, health service use of adolescent girls and the RH burden they face in selected high schools in Eritrean central highlands. Methods used were descriptive cross-sectional study design, collected qualitative and quantitative data that was analysed using SPSS software.

The findings revealed, young girls in Eritrea, lack RH knowledge and skills and challenges they face include, rape, unplanned pregnancies and its complications, and unplanned marriage to legitimize illegal pregnancy.

2. Methods and Procedures

2.1 Purpose

The purpose of this study is to assess the burden of Reproductive Health illiteracy on adolescent high school girls in Eritrea

2.2 Research design

Descriptive cross-sectional study design. Focus group discussion (FGD) and in-depth interviews were conducted to generate qualitative data that enabled the researcher to have deeper understanding of the problem understudy.

2.3 Study area

Three high Schools that are located in the central highlands of Eritrea were purposively selected, for their homogeneity and proximity to a health centre

The central high land is one of the four distinct topographic regions in Eritrea mainly 2000 meters above sea level. This region is relatively cool, with flat lands, relatively fertile and a milder climate that makes it a center of rain-fed agriculture with annual rainfall of 450mm to 600mm. It contains several of the bigger cities including Asmara the capital city. About 80% of the people live on farming. The central highlands are the most densely populated part of the country holding 50-60% of the population. The population of the Central Highlands is predominately Tigrigna and share common traditional and cultural practices. 70% of 10-14 years old children attend school [23].

The schools: each target secondary school serves one sub-zone that has several villages in its catchment. The target schools are public school having the same curriculum, similar qualification of teachers who follow guidelines of the Ministry of Education and having homogenous students. Student girls in these schools walk long distance, use cycle, some rent houses near the school living alone or in groups. There are four levels in Secondary schools that include, grades nine, ten, eleven and twelve.

2.4 Data collection tools and methods

Data was collected using self developed pretested questionnaire that is assessed for its comprehensiveness, clarity and structure. The questionnaire was logically organized around participants' demographic background and reproductive health thematic headings, namely, Knowledge, attitude, and practice. Qualitative data were collected through focus group discussion (FGD) and interviews with knowledgeable individuals. A broad, predesigned question format was used to guide the FGDs and individual interviews.

Ninety (n=90) students, 30 female students from each school were randomly selected for the survey. In addition in each school, three FGD with purposively selected participants was conducted. Two student groups (one male, and one female) composed of 12 students in each group, and third group was composed of teachers and parents.

In-depth interview was done with the Ministry of health RH managers, school directors, knowledgeable women and youth. The FGD and individual interviews enabled to capture latent information which the questionnaires did not capture.

2.5 Data analysis

The data collected via questionnaires were checked for completeness on site. Date was coded, entered to a computer, cleaned and analyzed using SPSS version 16. The qualitative data was transcribed around thematic areas. Direct quotations have also been taken to underscore important points, perceptions or problems. Findings are presented in summary tables and are supplemented with information from the qualitative study.

Ethical Consideration: Permission was secured from the Board of higher education Eritrea, Ministries of Education and Health in Eritrea. The Study participants were asked for their written consent after explaining the objective of the study and participation was voluntary.

3. Results

The results are discussed under thematic areas of the questionnaire, namely demographic characteristics of the respondents and their parents, RH knowledge, attitudes and practice, Findings from the qualitative data are also presented to supplement the findings from the quantitative survey. However the FGD and individual responses should hold equal weight, because it is deeply discussed.

Demographic characteristics of the respondents and their parents.

Mean age of study participants was 16 years \pm 1.5 as shown in table 2. Majority (75%) lived with both parents and 68% of participants' mothers have very low educational level. The FGD and individual interview study participants are heterogeneous as reflected in table 1.

Table 1. Characteristic and sample size of individual interview and FGD participants (n=75)

Study participants	Size	Method	Place of interview
National RH program officials	1M*, 2 F*	Interview	Interviewee's office
Heads of Health Centres	1 M, 1 F	>>	>>
Youth and women's representatives	1 M & 1 F	>>	>>
Three male student FGDs (group of 10)	30 F	FGD	Target school
Three female student FGDs (group of 10)	30 M	>>	>>
One mixed Teachers and parents (12)	12 F & M	>>	>>

Table 2: Socio demographic characteristics of the study participants (n-90)

Age in years	percent
14-15	37.6
16-17	40.9

18-19	21.6
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Religion

Moslem	4.3
Orthodox	75.7
Catholic	20.4

Father's education level

Illiterate	4.5
Read and write	23.6
Grade 1-5	22.5
Grade 6-8	25.8
Grade 9-12	15.7
Higher education	7.9

Mother's education

Illiterate	13.2
Read and write	20.9
Grade 1-5	34.1
Grade 6-8	18.7
Grade 9-12	13.2
Higher education	

With whom do you live

With both parents	74.7
With mother only	17.6
With relatives and other	7.7

Knowledge

As shown in table 3, 36% knew reproductive system physiology, 22 % of them new about STI and HIV. Only 13% knew STIs other than HIV and 36% knew about Family planning.

Source of information: Parents (mothers) are mentioned as the main source of RH information (62%) followed by teachers (26%) and health professionls (22.8%).

Most (80%) of FDGs and 100% individual interviews participants said: *"Female students lack RH knowledge, skills and confidence to protect themselves from rape, unplanned and unprotected sexual intercourses"*

One of the heads of health centers, expressed his concern stating *“In our health center in the first six months of the year 2012 alone, there were 6 suicide attempts due to unplanned (illegal) pregnancies and this reflects, young girls are ignorant about practice of safe sex ”*.

One female FGD discussant, shared her personal traumatic experience as a result of illegal unplanned pregnancy saying, *“I am a living example of the burden of unplanned pregnancy. I got pregnant from my teacher when I was in grade seven. My mother refused that I get married to him and she told me to move out of our home. Now I am living alone, going to school and taking care of my child”*.

About 50% of the female student FGD participants brought many similar examples of unwanted pregnancies from what they have heard and personal witness stating, *“many girls are having unplanned premarital pregnancy and getting married to avoid social isolation”*

Representatives of the women’s (one) and youth associations (one) expressed their deep concerns stating, *“These days the behavior of both young boys and girls has changed. They engage in unprotected early sexual intercourse that results in unplanned pregnancy and forced marriage. Above all young girls do not know how to prevent unplanned pregnancy”*.

Table 3: Proportion of Reproductive health Knowledge (n=90)

Responses	Percent (%)
Female reproductive system	
Mentioned at least one female reproductive organs	4
Mentioned at least one female reproductive glands.	0
Age at which menarche starts in years	86
Average days of menstrual cycle	71
Knew Days in the menstrual cycle pregnancy occurs	17.3
Overall	36%
Sexually transmitted Infection (STI)	
Mentioned at least one STI other than HIV	13%
Mentioned at least one Sign and symptom of STIs	2%
Mentioned at least one mode of transmission of STIs	29%
Abstinence as best prevention method of STIs	43%
Overall	22%
Family planning Knowledge	
Mentioned at least one place where to find contraceptives?	72%

Mentioned at least one method of family planning method	36%
Mentioned emergency contraceptives in times of rape	0%
Overall	36%

Attitude and Practice

As reflected in table 4, the RH practice and attitude of adolescent girls is very poor. Students barely (5%) visit RH services for any kind of advice or services. Their risk perception of acquiring STI and HIV is poor (25%). Majority of them don't accept a girl to have a boy friend and use any type of contraceptive. Premarital sexual intercourse is unacceptable by about 90%. However majority of survey participant and all individual and FGD participants said adolescent girls need reproductive health services and information as early as possible.

Table 4. Respondents Reproductive Health (RH) Practice and attitude (n=90)

Responses	Percent
Practice:	
Use of Reproductive Health service/advice	4
Ever got any kind reproductive health education	12
Have a boy friend	4
Attitude:	
View on the need of RH services to adolescents	91
Perception of self being at risk STI or HIV infection	25
Accept a girl to have a boy friend	38
Accept Use of contraceptive by unmarried girl	40
Premarital sexual intercourse is unacceptable	88

4. Discussion

Adolescence is a period of the secondary sexual characteristics that attract the sexes to each other and pubertal changes occur two years earlier in girls causing increased libido [24]. Rapid physical growth and bodily changes is embarrassing to a teenager that affects his emotions and decision making which needs appropriate education and guidance [14]. Because biological and social contexts exert powerful influences, adolescents are more likely to engage in risk-taking behaviors. It is also a public health challenge that adolescents are not fully capable of understanding complex concepts, or the relationship between behavior and consequences [24]. Due to adolescent larger population size and vulnerability, ARH has been identified as a priority policy and programmatic issue since ICPD 1994[7]. Yet little or none is done to help them make informed decisions in their lives especially in developing countries [6]. Thus, they are left by themselves to face the challenges without reliable source of RH information and supportive environment. This study assessed the burden of RH illiteracy on adolescent high school girls in Eritrea. As discussed below, the study found out adolescents lack

correct RH knowledge, and their attitudes toward RH is poor, to its worst they never used the available health services for any RH purpose and are exposed to multiple risks.

Majority of study participants (n= 90) are homogenous in age and other personal and family demographic variables with mean age of 16 ± 1.5 years as shown in table 1. Though this study is not national representative it has significant value for national inference as students in grade are nationally homogeneous [25]. Majority of participant's mothers' educational level is below primary level that is consistent with the national figures that most of the women in Eritrea have very low educational level [22]. The FGD and Individual interview participants are heterogeneous in age and educational back ground with the exception of the students. As detailed in tables 3 and 4 the reproductive health knowledge, practice and attitude of the study participants is unacceptably low

The respondents' knowledge on human reproductive system physiology is very low for instance less than a fifth knew events that occur in the menstrual cycle (ovulation period) similar to studies from Eritrea [11,23] and Nigeria [27] Knowledge on events that occur in the menstrual cycle is critical to pregnancy prevention and use of family planning.

Moreover in this study respondents have very low or no knowledge about types of contraceptives, emergency contraception, other STIs apart from HIV, modes of HIV transmission and prevention as shown in table 3. Consistent with this study it is reported over three quarters of the girls in East Africa and Nigeria have lack comprehensive knowledge about HIV [13,27]. National reports also reflected majority of women in Eritrea (65%) are never exposed to any family planning messages and lack comprehensive knowledge on STI and HIV [23].

Evidence has proved knowledge and health behavior are strongly associated. For instance The knowledge, attitudes, practices model (KAP) asserted "*a person's knowledge will prompt a behavior change, obstacle to acting "responsibly" and rationally is ignorance "correcting" this lack of knowledge will bring: change in knowledge change in attitudes/beliefs change in behavior*" [28].

Health service utilization and RH knowledge also have a significant positive association [29]. In this study all survey participants and the student FGD discussants reported they have never used health services for any RH purposes reflecting their RH illiteracy. The main reasons for none use of RH services mentioned were "shyness, never new unmarried girl can use RH services and afraid of social stigma". More over it is reported in East Africa use of family planning is as low as 4% in Eritrea to mean of 26% and the unmet need remain very high [9,14].

Their attitude especially toward risk perception of contracting STIs, use of contraceptive by unmarried girls is poor. Despite their poor attitudes toward RH the FGD and Individual interviews reflected, heterosexual relationships, unplanned pregnancy among adolescents is rampant. This is contradicting views that reflect conservatism, denying the reality. However it is also promising that almost all study participants agreed, adolescents need urgent provision of RH information and services.

Indeed the Eritrean Government as WHO member state, UNICEF and UNFPA partner is a signatory for all international commitments to address ARH. Regardless of its commitments little has been done on ARH. The unit of Adolescent health is newly established within the family and community health under the Department of Public Health at the Ministry of Health (MoH). Moreover the national health statistics is not disaggregated by age and doesn't reflect health needs of the youth [30]. As no RH information is provided in schools. Thus adolescents are left alone to fetch RH information from inappropriate source getting incorrect information.

Indeed in this study, participants' main source of information are their mother who are illiterate or have very low education, who are possibly the source of misinformation full of misconceptions as shown in other studies [12,31,32,33,34,35,36]. Adolescent girls in developing countries are pulled between traditionally accepted behaviours and the influence of western cultures and their real sexual feelings and practices remain hidden [34]. For example in this study and studies from North-Eastern Nigerian and Ghana found that most of the respondents didn't accept premarital sexual relations, feeling that doesn't reflect the reality [29, 37].

In highland societies of Eritrea, pregnancy before formal marriage is considered disgrace to the whole family. In this study about 75% of FGD discussants explained unplanned pregnancy is rampant and those girls who face this problem are inclined to take various measures: unsafe (illegal) abortion, suicide, migration to distant places, etc. Those who leave home to avoid humiliation and ridicule as a result of illegal pregnancy will have to sustain themselves and the child, and they are often forced to take cheap jobs.

It is promising that young girls are eager to be equipped with RH knowledge and skills and all FGD and individual discussants support their need. Above all the MoHE has put ARH as a policy and programmatic priority issue. In addition the WHO, UNFPA, and UNICEF have renewed their commitments to help governments make RH services universally accessible by 2015 [6]. This study also yielded valuable information that there is a mutual understanding between MoHE officials, school teachers, parents and students that adolescents need to be equipped correct RH information and skills. Therefore school are the best avenue in Eritrea to educate adolescents about RH using peer education strategy.

5. Conclusion

Adolescent girls in Su-Sahara Eritrea have very low knowledge and poor attitudes toward RH, and almost never used available RH services. Moreover, in spite of their low RH knowledge and skills heterosexual relationships, unsafe sexual practice and unplanned pregnancy is rampant. Therefore this heralds an urgent need of RH education to equip adolescent girls with knowledge and skills and enable them protect themselves. Thus schools are the best avenue to teach adolescents about reproductive health using peer education strategy.

6. Recommendation

- Peer reproductive health education should be pilot tested.
- MoH and its partners should focus on adolescent RH and design relevant and acceptable educational programs.

7. Limitation of the study

The selection of the study target school was purposive sampling that limits to generalize the results.

Acknowledgment

The Board of higher Education of Eritrea has funded the project. The study is done to assess the magnitude of reproductive health knowledge illiteracy as a prerequisite to the formulate the statement of the problem of the Ph.D research paper of the primary author of this research (Ghidey)

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