

Awareness on the availability of legal safe abortions among female adolescents attending secondary school in Ndola district, Zambia**Trevor Halwiindi*, David Mulenga, Seter Siziya***School of Medicine Copperbelt University, Ndola Campus, Zambia***ABSTRACT**

Background: Illegal unsafe induced abortion is a public health problem in Zambia. Statistics reveal an extremely high induced abortion mortality ratio of 120 induced abortion-related deaths per 100 000 live births and more than half of these deaths are among schoolgirls. Although abortion in Zambia is legal on medical and social grounds, most women in Zambia resort to illegal abortions because legal abortion services are inaccessible, unacceptable and for others, lack of knowledge of the provision of such facilities at health institutions. This study sought to determine the level of awareness of the legality of clinical abortions among the schoolgirls. **Method:** The design was a cross-sectional study. A total of 367 pupils were randomly selected from grade 10 to grade 12 classes available for each school. SPSS for windows version 16 was used to enter and analyze data. The Chi squared test was used to determine associations between categorical variables. Cut off point for statistical significance was set at 5%. **Results:** A response rate of 94.3% (346/367) was achieved. Overall 301 (87.0%) out of 346 participants were not aware of the provisions of the law on termination of pregnancy. Most of the participants reported knowing people who aborted by wrong methods and done by untrained people 320 (92.5%), in wrong places 292 (84.4%) and yet most (82.1%) of them were aware of complications and negative attitudes to its legalization. **Conclusion:** This study demonstrated that most female adolescents were not aware of the provisions of the law on termination of pregnancy. Hence, the need for health education on the provisions of the law and making the service accessible for schoolgirls.

Key words: Female adolescents, Illegal abortions, Knowledge, Maternal mortality, Termination of Pregnancy, Ndola district, Zambia.

Introduction

Abortion is a sensitive topic to discuss politically and socially. Generally persons who undergo illegal abortion are surrounded by secrecy, shame and misconceptions, which can lead them to report late for medical attention, thus, resulting in negative health and social consequences [1,2]. Women may undergo an unsafe abortion if they are not aware of the existence of services that provide safe abortion [3,4]. Nevertheless, even with full knowledge of the law on termination of pregnancy, some women may still undergo an unsafe abortion [5]. Lack of knowledge of the law on safe abortion, negative community attitudes and stigma may be barriers to accessing reproductive health services for safe abortion. The goal of the World Health

Organization on Millennium Development Goal number 5 was to reduce the ratio of maternal mortality to 162/100,000 by 2015 [6]. The maternal mortality ratio in Zambia was estimated at 398 maternal deaths per 100,000 live births in 2014 [7], and 30% of these deaths were thought to be due to unsafe abortion [8]. The five major causes of maternal mortality include hemorrhage, hypertensive disorders, obstructed labor, sepsis and complications of unsafe abortion. Most cases of abortion are for persons in the 15-19 years age group, and mostly school going female adolescents. This can be reduced partly through reproductive health education and accessibility of legal abortion as provided by law. There is very little that has been done in Zambia to assess awareness levels among the public, let alone adolescent girls, on legal provisions for abortion, except for a similar study on the knowledge of such provisions among health practitioners in Lusaka district, Zambia [9]. The number of school-going adolescents that fall pregnant has been on the

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rise[10], thus assessment of the knowledge of the provisions of the law for safer means of abortion among adolescents within Ndola district may help to take measures that may reduce the rate of maternal mortality as permitted within confinements of the Zambian constitution by the Termination of Pregnancy Act of 1972[11]. Under the Act, abortion is permitted on grounds of protecting the woman's life and physical and mental health, permitted on socioeconomic grounds, such as a woman's economic resources, her age, marital status and number of children [11]. Regardless of the availability of the services to provide safe abortions, illegal abortions still occur. The objectives of the study were to establish the causes, awareness of complications of illegal unsafe abortions, methods commonly used, assess attitudes towards abortions and awareness levels on the availability of legal safe abortions as provided by the Zambian law among female adolescents attending secondary schools in Ndola district, Zambia.

Materials and Method

Study area

The study area was the Secondary Schools within Ndola district, Zambia.

Study population

The study population comprised female adolescents attending schools within Ndola district.

Study Design

The design that was used is a cross-sectional study.

Inclusion criteria and Exclusion criteria

This study included females that came from various locations within Ndola district that attended secondary education in selected schools within the district. Females that did not attend secondary school education in various selected schools at the time of the survey were not sampled.

Determination of Study Sample Size and Sampling

The sample size was determined using a statistical program, StatCalc, in Epi Info version 7.1.3.3. The total population of the study area was 8452 female pupils of the sampled schools, and the sample size that was calculated at 95% level of confidence was 367. The sample size for each school was proportional to its population size. Pupils were randomly selected from grades 10 to 12 classes available for each school.

Research instrument, measurements and data collection

A standardized questionnaire was developed from questionnaires that have been used in similar studies that dealt with abortion and legal awareness levels. The questionnaire was divided into three parts as follows: Part 1, socio-demographic characteristics of the participants; Part 2, participants' knowledge on abortion cases; and Part 3, awareness on the legality of safe abortions in Zambia.

Data entry method and analysis

Data entry and analysis was done using SPSS windows version 16.0. Frequencies were conducted on levels of awareness, attitude, access of abortion facilities and people allowed by law to carry out abortions, places where abortions are done and knowledge of complications. The Chi squared test was used to determine associations between categorical variables. Cut off point for statistical significance was set at 5%.

Results

This study was targeted to have 367 respondents as determined sample size and thus 367 questionnaires were distributed, but data entry and analysis was based on 346 (94.3%) respondents. There was no significant association between age and knowledge of law on termination of pregnancy ($p=0.121$) as shown in table 1. Denomination was significantly associated with knowledge on law on termination of pregnancy ($p=0.016$). United church of Zambia 7/50 (14.0%) and Jehovah's Witness 10/42 (23.8%) had higher knowledge compared to other religions as shown in table 2. Those who were knowledgeable of the law on termination of pregnancy were 43 (13.0%) out of 346. The commonest cause for seeking abortion was boyfriend refusing to take responsibility (36.0%), seconded by fear of parents' reaction (30.3%) and the least being fear of expulsion from school (6.4%) as shown in table 3. Table 4 shows places where abortions were done. Most abortions were done at home (61.3%) and only 15.6% of the abortions were done in the hospital. Most of the abortions were assisted and done by grandmothers (48.6%), while only 7.5% were done by doctors (Table 5). Of the many methods known to have been used for aborting, drugs were reported commonly used (51.7%), followed by herbs (37.9%) as shown in table 6. Of the 346 respondents (Table 7), death (39.6%) was reported to be the commonest complication of abortion, seconded by loss of fertility (32.9%). Most (82.1%) of the respondents were against legalizing abortion and making its services accessible.

Table 1: Association of age with awareness of provisions of the law frequencies

Age	Total	Yes	No	Knowledge in age group	p value
14-15	64 (18.6%)	4 (8.9%)	60 (20.1%)	4/64 (6.3%)	0.121
16	120 (34.9%)	22 (48.9%)	98 (32.8%)	22/120 (18.3%)	
17	88 (25.6%)	11 (24.4%)	77 (25.8%)	11/88 (12.5%)	
18-23	72 (20.9%)	8 (17.8%)	64 (21.4%)	8/72 (11.1%)	
Total	344 (100%)	45 (100%)	299 (100%)		

Table 2: Association of denomination with awareness of the law

Denomination	Total	Yes	No	Knowledge per religion	p value
Catholic	82 (24.8%)	8 (20.0%)	74 (25.4%)	8/82 (9.8%)	0.016
Seventh Day Adventist	44 (13.3%)	4 (10.0%)	40 (13.7%)	4/44 (9.1%)	
Pentecostal	75 (22.7%)	3 (7.5%)	72 (24.7%)	3/75 (4.0%)	
United church of Zambia	50 (15.1%)	7 (17.5%)	43 (14.8%)	7/50 (14.0%)	
Jehovah's Witness	42 (12.7%)	10 (25.0%)	32 (11.0%)	10/42 (23.8%)	
Others	38 (11.5%)	8 (20.0%)	30 (10.3%)	8/20 (40.0%)	
Total	331 (100%)	40 (100%)	291 (100%)		

Table 3: Common causes of abortions

	Frequency
Secret relationships	66 (19.1%)
Boyfriend refuses responsibility	126 (36.0%)
Fear of expulsion from school	22 (6.4%)
Afraid of parents	105 (30.3%)
Others	27 (7.8%)
Total	346 (100%)

Table 4: Places where abortions were done

	Frequency
Home	212 (61.3%)
Bush	18 (5.2%)
Village	18 (5.2%)
Clinic	30 (8.7%)
Hospital	54 (15.6%)
Other	14 (4.0%)
Total	346 (100%)

Table 5: People who assisted to abort

	Frequency
Grandmother	168 (48.6%)
Mother	25 (7.2%)
Aunty	9 (2.6%)
A woman in the community	50 (14.5%)
Nurse	17 (4.9%)
Clinic officer	1 (0.3%)

Laboratory attendant	4 (1.2%)
Doctor	26 (7.5%)
Other	46 (13.3%)
Total	346 (100%)

Table 6: Substances or methods used for abortion

	Frequency
Herbs	131 (37.9%)
Roots	21 (6.1%)
Drugs	179 (51.7%)
Others	15 (4.3%)
Total	346 (100%)

Table 7: Complications of abortion

	Frequency
Prolonged bleeding	90 (26.0%)
Loss of fertility	114 (32.9%)
Death	137 (39.6%)
Others	5 (1.4%)
Total	346 (100%)

Discussion

Abortion is a sensitive topic and is not freely discussed among various groups of people in communities, including schoolgirls. Therefore, even with a data collection tool that assures confidentiality, individuals would shy away from giving responses [9]. This study to the best of our knowledge is the first to be done in Ndola district among female adolescents attending secondary schools, except for similar studies which focused on health workers' knowledge on termination of pregnancy [9], observations on abortions in Zambia [12] and unsafe induced abortions among adolescent girls in Lusaka [13]. The findings in this study show very low knowledge of the legal status of abortion among female adolescents attending secondary schools in Ndola district, and high levels of conservative attitudes and awareness of the complications of abortions. There was low level of knowledge with only 13.0% of respondents in the current study being knowledgeable. This prevalence is lower than the one reported in a similar study in Lusaka of 23% [14] and much lower than the ones reported in studies in South Africa (32%) [15], Mexico (45%) [16] and Ethiopia (48%) [17]. In the current study, 23.8% of the participants from Jehovah's Witness and 14.8% from the United Church of Zambia were aware of the provisions of the law, though their doctrines are strongly against abortion. In a similar study done on health workers in Lusaka, 57.7% of the participants belonging to the United Church of Zambia

and 66.7% belonging to the Jehovah's Witness were aware [9] but there was no suggestion of this knowledge. Unplanned pregnancies are a serious problem for schoolgirls that has greatly contributed many cases of abortions among adolescents who feared to be forced to leave school. Moreover, they have to face the anger of their parents, because with their pregnancy they bring shame to their family. A study done in Western province, Zambia reported that 7% of schoolgirls had been pregnant at least once and 4% had aborted [12]. For this study, 6.4% of the participants reported that abortions occurred because of fear of expulsion from school. Thus, unplanned pregnancies among adolescents might result to illegal unsafe abortions. Most abortions were done at home (61.3%) and not meeting the standards set by the World Health Organization, even if the procedure was safe because of anticipated complications which may not be managed in such settings. The University Teaching Hospital in Lusaka reported to have had admitted only 8.0% cases of legal abortions [14], partly because of lack of knowledge and inaccessibility. In this study, most of the abortions were reported to have been done by grandmothers (48.6%), while only 7.5% were done by doctors. By law, three obstetricians are to assist in abortions and all three must consent to the request or one in special cases and two types of certificates A and B are given, respectively [11]. Most of the people were aware of the complications due to abortion with death

having the highest frequency as noted by 39.6% of the respondents in the current study. The greatest contributor to maternal mortality is unsafe abortion (30%) as observed by the World Health Organization [8,18]. Methods that were commonly used as means of abortion in some studies were inserting liquid substances or hard objects directly via the vaginal (46.9%), placing drugs in the vagina (13.6%), taking tablets orally (11.6%), putting strong pressure on the abdomen against the uterus inside (11.0%) [19]. The findings of wrong methods or wrong drugs are consistent with the current study findings showing wrong drugs and concoctions (51.7%) and seconded by herbs (37.9%). The majority (82.1%) of the respondents were strongly against legalization of abortion because they lacked knowledge that it has been legal since 1972 [11] and declined to make it accessible. This shows the negative attitude people have towards the service. This is consistent with a study done among health workers in Lusaka district in which only 31% of them strongly supported the service and that they would provide it. This shows the stigma that surrounds the service and why it is partially accessible. The decision to support or decline to support legalization of abortion was based on denomination [9]. Various reasons were advanced in this study, with advocates stating that it would save women's lives and it is a woman's right in reproductive health. Meanwhile, others stated that even if it isn't legalized or made accessible, women would still abort in any case and have serious complications; those who are defiled or raped can be assisted not to live with a child they did not want or whose father is not known; others argued it would reduce unsafe abortions and complication, and also give chance for female adolescents to complete school. Those who declined to have it legalized or made accessible advanced the following: Zambia is a Christian nation and it is a sin to abort because it's taking away life; it is criminal to make it accessible for those who do not know that the law provides for such under the act of Termination of Pregnancy [11]; meanwhile, others said it is murder, the unborn child has right to life; some said making it accessible or legalizing abortion can lead to it being abused; it could promote promiscuity, immorality; and increase rates of human immune deficiency virus infection and other sexually transmitted disease. The other study on attitude indicated that those who had knowledge were still conservative with regards to legalization and accessibility [20].

Limitations

It was difficult to ensure that all responses were given because the questionnaire was self-administered. It was also difficult to have respondents fill in the questionnaire in one sitting as was intended because the respondents were in class at the time the questionnaire was administered and lessons were on going. This could have allowed the participants to consult especially on the knowledge section. The subject was sensitive. Some participants that were selected refused to participate and others could not have responded honestly, thus, introducing bias to the study findings. They might have thought that information could be taken to the administrators of the schools as some teachers were asked to administer the questionnaires even though confidentiality was assured, as no names were to be provided. The level of confidence would have not been taken serious by the pupils who thought teachers could still tell their handwriting. Despite the aforementioned limitations, we believe that the magnitude of bias that might have been introduced could be very small, partly because of the high response rate that the study achieved.

Conclusion

This study demonstrated that most female adolescents were not aware of the provisions of the law on termination of pregnancy. Hence, the need for health education on the provisions of the law and making the service accessible in order to reduce maternal mortality due to unsafe illegal abortion.

Recommendations

The following recommendations are made: (1) The adolescents in Ndola district should be sensitized about the Zambian abortion law and its provisions, (2) An awareness campaign on sexual and reproductive health rights should be launched among the schoolgirls and (3) Services of safe abortions must be provided and easily accessible at health institutions.

Authors' contribution

TH contributed to the design of the study, coordinated the study, and supervised data collection, analysis and interpretation of results. SS and DM supervised and monitored the entire research and contributed to the drafting and preparation of the manuscript.

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TH is a fifth year medical student; DM is a lecturer in public health and SS is a professor of medical biostatistics

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