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WHY RESORT TO ILLEGAL ABORTION IN ZAMBIA? FINDINGS OF A COMMUNITY-BASED STUDY IN WESTERN PROVINCE

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Abstract—This article presents part of the findings of a community-based study on the causes and effects of unplanned pregnancies in four districts of Western Province, Zambia. The study broke the silence around abortion in Western Province and revealed that induced abortion poses a public health problem. Using innovative methodology of recording and analyzing histories of deaths from induced abortion, the abortion mortality ratio was calculated for the study districts. Findings reveal an extremely high induced abortion mortality ratio of 120 induced abortion-related deaths per 100 000 live births. More than half the deaths were of schoolgirls. Although abortion in Zambia is legal on medical and social grounds, most women in Western Province resort to illegal abortions because legal abortion services are inaccessible and unacceptable. The main reasons women resort to abortion is for fear of being expelled from school, their unwillingness to reveal a secret relationship, to protect the health of their previous baby and common knowledge that postpartum sexual taboos have been transgressed. An inventory was made of abortion methods, taboos and abortion-providers. The article describes how health staff were involved throughout the study, and shows how recommendations were made by involving all parties concerned. © 1998 Elsevier Science Ltd. All rights reserved

Key words—unwanted pregnancy, induced abortion, illegal abortion, abortion mortality ratio, Zambia

INTRODUCTION AND STUDY OBJECTIVES

A safely-induced, legal abortion does not carry much risk for a woman's health. Illegal and unsafe abortions do: they may lead to complications such as severe hemorrhage, sepsis, chronic pelvic inflammatory diseases, ectopic pregnancies, secondary infertility and also to death. Abortion in Zambia is legal on social and medical grounds under the 1972 *Termination of Pregnancy Act*. However, the high number of hospital admissions due to abortion complications and the many school drop-outs attributed to pregnancy (estimated at a quarter of all secondary school girls), suggested that unwanted

pregnancies and illegally-induced abortions might be at issue in Western Province*.

Zambia has one of the most liberal abortion laws in sub-Saharan Africa (Henshaw, 1990)†. Several factors, however, explain the limited access to legal abortion. The *Abortion Act* specifies that abortion must be performed in a hospital and that three physicians, including a specialist, must sign the consent form. These conditions render hospital abortion services inaccessible to the majority of women who live far from them. The Lewanika General Hospital is the only hospital in Western Province legally permitted to provide abortion services. Moreover, the abortion fee in Lewanika hospital is exorbitant: 50 000 Kwacha (US\$ 60). This fee exceeds the monthly salary of an average model government worker. Finally, legal abortion services are often not available because many physicians do not perform abortion for religious and ethical reasons.

Quantitative and qualitative data on the incidence, morbidity and mortality of induced abortions are scarce in Western Province, as in most of the developing world. Barreto *et al.* (1992), after reviewing the published research on induced abortion, state:

The paucity of available information extends to all aspects of induced abortion. In most developing countries, the consequences for women's health, the social and cultural

*The question was brought up by maternal health staff during the 1993 provincial maternal health study days. Organized bi-annually by the provincial medical office, it is during these days that national, provincial, district and extension maternal health staff from the Ministry of Health and non-governmental organizations discuss safe motherhood issues in the province. Participants did not present any figures on abortion complications or unwanted pregnancies, but reported that they suspected most abortion complications were due to illegally-induced abortions because of severe sepsis and substances found in the vagina and/or uterus.

†The only other African countries where abortion is legal for non-medical reasons, *e.g.* social and socio-medical reasons and/or on request are Burundi, Togo and Tunisia (Henshaw, 1990).

context within which induced abortions are performed and even the levels and characteristics of women resorting to abortion are unknown... The neglect of induced abortion research extends to methodological issues (Barreto *et al.*, 1992).

In Zambia, where some studies have been done on abortion, most data is from hospital records; that is, from women seeking abortion in hospitals or who come to hospital with complications from induced abortion. Records from the University Teaching Hospital (UTH) in Lusaka show that 15% of all maternal deaths there result from illegally-induced abortion. Records indicate that in 1988, for every legally-performed abortion, 25 incomplete abortions (the majority induced) are treated (Bradley *et al.*, 1991). The induced abortion mortality ratio (IAMR) is defined as the number of induced abortion-related deaths per 100 000 live births. Hospital-based studies for Zambia show an IAMR of between 4 and 20 (World Health Organization, 1993).

However, the weakness of hospital-based studies is that not all abortions are performed there or hospitals may be used only if complications arise. There is most certainly under-reporting of abortion-related mortality. A 1994 community-based study in Western Province found that most maternal care, including deliveries, takes place in the communities and not in health institutions (Faber and Koster-Oyekan, 1994). Another community-based study on maternal mortality in Mongu District revealed a maternal mortality ratio of 889 per 100 000 live births, much higher than the official 500. Clearly, many maternal deaths occur in the community (Kufuna *et al.*, 1993). In these two studies, no data were collected on deaths resulting from induced abortion. Detailed information on induced abortion is scarce because of its sensitive nature. In her article, Macwan'gi rightly refers to abortion as a "silent" problem. Women who suffer from abortion-related problems are "invisible" compared to women with other social and health problems. The stigma of abortion dictates the secrecy of the procedure. Moreover, in Zambia, as in most African countries, socio-cultural factors forbid the open discussion of sexuality, including abortion. Therefore, abortion-related issues remain undiscussed (Macwan'gi, 1993).

*The research team consisted of: Victoria Mwashekabo, family health nurse, Mongu District; Zilo H. Moyo, enrolled midwife, Lewanika Hospital; Anne Uyterwaal, medical officer, Senanga District; Rose Lubinda, provincial principal public health nurse, Mongu; Winy Koster-Oyekan, provincial medical sociologist, Mongu. At the beginning of the study, the very motivated Lilian Wamunyima, provincial family health nurse, Mongu was with us. She passed away in July 1994 when data collection had just begun. May her soul rest in peace.

†For detailed study findings, see Koster-Oyekan, 1995.

The initiative for a study on family planning (FP), unwanted pregnancy and induced abortion was taken during the provincial maternal health study days of August 1993*. The main objective was to determine the factors influencing the high incidence and negative outcomes of unwanted pregnancies in Western Province in order to improve the situation and break the silence. Specific study objectives were to (1) identify the factors influencing FP utilization, (2) explore the circumstances leading to unwanted pregnancies and making women resort to induced abortion, (3) identify the abortion-related taboos, (4) identify the abortion-providers, (5) identify abortion methods, and (6) determine mortality caused by induced abortion. This article presents part of the findings of the study†.

RESEARCH SETTING AND METHODOLOGY

The study area

The study took place in four of the six districts of Western Province: Senanga, Kaoma, Kalabo and Sesheke. Western Province is rural with a low population density of five people per square kilometer, compared to nine for Zambia as a whole. The 1995 provincial population estimate was 682 523.

Western Province is the home of the Lozi tribe who still form the majority of the population. Other major tribes are Mbunda, Luwale and Tonga. Most people live with their extended families in small scattered villages of 20 to 100 people. Sometimes, a few of these villages may constitute a community.

About 90% of the population are farmers who grow maize, cassava, millet and sorghum. They also keep cattle. Since most of the soil is sandy and infertile, food has to be imported; only cattle are exported. Public transport is limited to a few asphalted roads. A scattered population, poor communications and inadequate transport make it difficult to provide adequate social services, including health care, to everyone in the province.

Data collection techniques and sample

Nineteen provincial and district maternal health staff collected data from July 1994 to February 1995. This was done in three ways:

- (1) Secondary schoolgirls completed a self-administered questionnaire,
- (2) Women were interviewed in their homes with a structured questionnaire,
- (3) Focus group discussions were conducted with women, men, schoolgirls and schoolboys.

Ad 1: Self-administered questionnaires were chosen as the best methodology for schoolgirls who

write in English and because they would feel less shy than when discussing these issues in an interview. Huntington *et al.* (1993) and Barreto *et al.* (1992) have also indicated the potential of gathering information on abortion through self-administered questionnaires when respondents are literate. The sample comprised all girls enrolled in (a) six secondary schools (b) of which four are boarding schools and two are day-schools. A total of 1273 girls, aged between 12 and 22 years, completed the self-administered questionnaire adequately*. Members of the research team explained the reasons for the study, and encouraged them to take part. Confidentiality was assured: names, addresses, and schools were not required, and teachers were not allowed to be present.

Ad 2: In town compounds and rural communities, a total of 803 women were interviewed in their homes. Town compounds were randomly selected, whereas rural communities were selected with stratified procedures: some rural communities were selected close to a rural health center and others more than ten kilometers away†. A quota was established for each sample area and women were selected conveniently: that is, women were interviewed if they were at home at the time of the visit.

Ad 3: After a preliminary analysis of the quantitative results‡, focus group discussions (FGD) were conducted in each district, with schoolgirls (5 FGD), schoolboys (6 FGD), women (8 FGD) and men (7 FGD). FGDs averaged 12 participants, but ranged from 9 to 18 participants. In the FGDs, the study findings were presented and participants were asked to comment. Solutions to the problems presented were also explored§.

Methodological considerations

A common problem in community studies on abortion is the identification of cases. Reporting errors, both unintentional and intentional, are inevitable. Accidents may occur when a woman tries to "terminate" a pregnancy, when she is not pregnant, or where a woman experiences a spontaneous abortion after an unsuccessful abortion attempt.

*About 75 questionnaires were disqualified because students had either not understood the questions or had not been serious in completing it.

†Due to financial constraints, rural areas had to be chosen conveniently, *e.g.* the data collectors had to travel with regular outreach teams.

‡Data analysis was done with the EPI-INFO program.

§Some of the points expanded upon during FGD were: the difference between regular and casual partners, how do taboos on abortion differ from post-partum taboos, parents reaction to a daughter coming home pregnant, the teachings in traditional initiation ceremonies, by whom would pupils like to be taught about sexuality.

Unintentional reporting errors cannot be avoided in a sociological study such as this. Intentional error, where respondents lie or refuse to disclose the fact they have had an abortion, is more common (Barreto *et al.*, 1992). In this study, an effort was made to reduce intentional reporting error. To ensure reliable answers on sensitive issues, care was taken in selecting and preparing interviewers. Data collectors were exclusively female, ranging in age from 26 to 42 years, and well-informed of the study objectives and the importance of creating a conducive environment for the interview. Moreover, they were taught specific techniques, such as how to assure privacy and anonymity and to build rapport. Interviews were conducted in the local languages. Great attention was paid to the order and wording of the questionnaire. For example, less sensitive, more general questions were asked first, followed by filter questions related to unwanted pregnancies and how they were dealt with, while questions related to personal experience with abortion were left to the end. Huntington *et al.* (1993) also found that asking about "wantedness" was less charged and elicited more responses than direct abortion-related questions.

Information on induced abortion

Both the self-administered survey and personal interviews elicited accounts of respondents' own experiences with abortion and those of other women. This is the "snowball" method of data collection; Barreto notes that data collected this way are difficult to interpret, because the denominator, the population base, is difficult to describe (Barreto *et al.*, 1992). However, the denominator is known here, suggesting that an indication of the induced abortion mortality ratio in the four study districts is possible. In the histories of women who aborted, the respondents were requested to be specific about the year, place, and abortion method; whether the woman was single or married, or attended school; and about specific circumstances of the abortion: what happened, whether the abortion was successful, if there were complications, and whether the woman died. Histories without a date and place were not included in the analysis. Since it was expected that different respondents would report on the same women, it became necessary to match the different "cases". This was done by computer analysis by comparing the following features in the histories: date, place, marital status, schooling status, abortion method, outcome of abortion (*i.e.* died or not). For further analysis, only the different "cases" of women who died were used. In calculating the induced abortion mortality ratio, only cases from the last five-year period were considered. The analysis was done separately for cases reported by schoolgirls (who reported on abortion histories of

schoolgirls only) and those by women. If the findings are reliable, one would expect consensus on the schoolgirl mortality rate; that is, for the four districts, women and schoolgirls should report similar numbers of schoolgirls who have died following an induced abortion.

INDUCED ABORTION MORTALITY

Twelve percent of schoolgirls ($n = 154^*$) and 69% of women ($n = 545$) reported knowing one or more women who had died after an induced abortion. Histories were of women throughout Zambia. After comparing the histories in order to identify the "unique" cases of induced abortion deaths, it was determined that 83 cases had been reported by schoolgirls and 298 cases by women. Cases reported by schoolgirls date to 1983, while cases reported by community women date to 1970. Of the 298 cases, 171 (57%) were schoolgirls, 111 (37%) single, out-of-school women, and 16 (5%) were married.

Schoolgirl reports of abortion-related deaths revealed two peaks in grades 9 and 12, in the run-up to important exams. Concerning the person performing the abortion, it was reported that 81% of schoolgirls who died tried to carry out the abortion on their own whereas 19% were assisted.

Amongst women who reported abortion-related deaths about half (51%) were caused by an overdose of modern medicine, usually chloroquine, with relatively more schoolgirls than other women taking an overdose. Table 1 shows the abortion methods used, as reported by the women.

Out-of-school women used more traditional methods (for a description of methods, see below) while schoolgirls used more modern medicines. "Other" abortion methods included the drinking of soap and various brands of detergents.

Schoolgirls reported a total of 60 deaths among their own between 1990 and 1993 in the four study districts, an annual average of 15. From January to July 1994, 11 cases were reported. During the same period, women reported 107 deaths, an annual average of 27. More than half (57) were schoolgirls, 42 single and out-of-school, and 8 were married. From January to July 1994, 22 cases had already been reported, almost equalling the annual average of previous years. A comparison of the number of schoolgirl deaths reported by schoolgirls and women reveals little difference and underscores the reliability of the data[†]. The fact that the figures for

Table 1. Abortion methods used by women who died of induced abortion, by schooling status ($N = 217^a$)

Abortion method	Number of cases ^b by schooling status		Total
	schoolgirls	out-of-school women	
Modern medicines	81 (68%)	40 (41%)	121 (56%)
Drink traditional herbs	24 (20%)	33 (34%)	57 (26%)
Insert traditional roots	8 (7%)	15 (15%)	23 (10%)
Others	5 (4%)	5 (5%)	10 (5%)
Combination	2 (2%)	4 (4%)	6 (3%)
Total	120 (100%) ^c	97 (100%) ^c	217 (100%)

^aOf the 298 reported cases of death from abortion, 91 were not explicit with regard to the method used.

^bWomen who died from induced abortion as reported by community women.

^c%ages do not total 100% due to rounding off.

the first seven months of 1994 are almost equal to the annual figures for previous years may be due to the fact that respondents have a better memory of more recent deaths. Alternatively, abortion-related deaths may be on the rise. Either way the situation is alarming.

These figures can be used to estimate the induced abortion mortality ratio (IAMR) in the four study districts where the total population was 469 318 in 1993 and the total number of live births was estimated at 22 527 (birthrate 4.8%), according to Ministry of Health Western Province, 1993 statistics. This gives a 1993 IAMR of 120 deaths per 100 000 live births. This is much higher than the official Zambian hospital statistics of between 4 and 20, and higher than the regional Southern Africa figure of 36, as reported by WHO. It is, in fact, higher than any regional figure in the world — the highest being 104 for West Africa (World Health Organization, 1993).

In the study area, there are on average 15 abortion-related deaths among schoolgirls each year. Since there are about 1500 secondary schoolgirls in the area, our data suggest that 1 in a 100 schoolgirls die from abortion-related complications.

SEXUALITY OF SCHOOLGIRLS

Sexual contacts

A girl should be a virgin at marriage according to the social norms of the tribes in Western Province. This study revealed the opposite: more than half the secondary schoolgirls reported sexual contact. From grades 10 to 12, 58% of the girls had had sex. As a rule, their sexual partners were not schoolboys but workers, teachers, businessmen and drivers who could provide money, transport or high marks in school. Most contacts were regular. The girls' definition of "regular" was that contact lasted a long time or that they were "serious" (e.g. discussed marriage). One-fifth of sexually-active girls had casual partners as well; these were defined as one-night stands, for pleasure or money. In the

*"n" refers to a part of the total population (of schoolgirls, of sexually-active schoolgirls, of community women or of community women who have been pregnant). The total population is referred to as "N".

†Computer-assisted content analysis cannot be done, because schoolgirls reported on the school they were in and not the "place" of residence, as the women did. It should be noted that children generally attend schools in their province of residence.

FGDs schoolgirls said men would give them anything in exchange for sexual favors. Schoolboys in FGDs complained that men with money took away their potential girlfriends. Schoolgirls find themselves in various dependency relationships: they depend on their parents financially, for food and lodging they depend on school and the Ministry of Education, for their marks they depend on their teachers (and themselves), for their social well-being they are dependent on their peers, and sometimes they depend on their sexual partners for extras or other necessities. The situation in boarding schools is very difficult. The food is poor and students have little or no pocket money to supplement their poor diet or buy a soft drink, soap, make-up or other small items. Boarders lack the protection of their extended family and they must depend on their peer group and teachers for any social contact. The boarding schools tend to be far from the market and town center. Men in cars were observed waiting in cars at the end of classes when they would offer schoolgirls a lift to wherever they were going. Men exploit the schoolgirls' vulnerable situation. In exchange for sex they provide money, food and transport. Van den Borne (1991), in an anthropological study of Ghanaian schoolgirls, described similar dependency relationships. She drew similar conclusions: schoolgirls may resort to risky behavior (sex, unprotected sex, abortion) to satisfy the people they feel dependent on (Van den Borne, 1991).

Sexual knowledge

Girls said they were ill-informed about sexuality. What they did know, they said they had learned from peers and biology lessons. Schools have no formal "sexual awareness" program. Traditionally, parents do not discuss sex with their children, as this would be considered insulting. Only 5% of girls had learned about sex from their mothers.

Sex education for girls also takes place at traditional initiation ceremonies beginning with menstruation. These ceremonies, which last about a month, confine the girl to a house with an older woman. The ceremony takes place during holidays for schoolgirls. The older woman teaches the girl about sex, including how to please her future husband and never to be afraid of a man regardless of how "big" he is. Nothing is taught about HIV/AIDS and other sexually-transmitted infections, nor is anything taught about preventing pregnancy.

*One of the resolutions of the February 1995 maternal health study days was that health staff should no longer cooperate with schools in conducting pregnancy tests. This screening goes against medical ethics which dictates confidentiality of medical information.

†In the interviews, women who had left school because of a pregnancy were asked whether they had been expelled or whether they had decided on their own to leave school. Schoolgirls were asked in FGDs what they do when they get pregnant.

Ceremonies like these are still common in Western Province. Girls said in FGDs that these lessons made them want to put what they learned into practice. Although schoolgirls said they were aware of contraceptive methods, they felt they did not know enough and had many questions and misconceptions. An older female relative, like an aunt or grandmother, could be asked for clarification, but most girls lived far from them. They expressed the desire for sex education in school, preferably given by someone from the Ministry of Health or by a female teacher who understands them.

Use of contraceptives

More schoolgirls than women in the community use contraceptives. Thirty-one percent of sexually-active schoolgirls ($N = 652$) reported that they *always* use contraceptives compared to 14% of women ($N = 801$). The condom is the most common method; 43% of sexually-active schoolgirls said they had used condoms (only 2% of the women reported using condoms now and 4% reported ever having used them). Two-thirds of the schoolgirls were given condoms by their partner, who got them from the chemist, the clinic or a shop. Since many of the partners are married, their relationship must be kept secret. Pregnancy would reveal the relationship. Our finding that contraceptives are used more in secret liaisons confirms what Bleek (1976) found in his anthropological study of a Ghanaian lineage in the seventies. Girls reported that staff in health institutions do not give contraceptives to schoolgirls, and they are too shy to ask for them because people will talk about them using contraceptives.

Pregnancy

Pregnancy is a serious problem for schoolgirls, who are then forced to leave school. Moreover they have to face the anger of their parents, because with their pregnancy they bring shame to their family. At the time of the study, 7% ($n = 87$) of schoolgirls had been pregnant at least once and 3% of schoolgirls had a baby at home. The pregnancy rate varied between five and 15% depending on the school. These rates underestimate the total number of schoolgirl pregnancies because most of them will have left school already for good. The women's questionnaire revealed that 29% of those who left school before finishing grade 12 did so because they became pregnant. These figures coincide with what one headmaster had guessed: that about 1 in 4 schoolgirls who started grade 8 left before grade 12 because of pregnancy. Although there are no regulations, it is customary to expel pregnant girls who are then prevented from continuing their education. Schools request the help of health staff to carry out regular pregnancy tests*. Most girls leave school as soon as they find out, rather than waiting to be expelled†. Some transfer to other schools after giv-

ing birth, if they have the support of their parents, if they know the headmaster, or if no questions are asked. Private schools accept girls with babies. In one private school, 10% of the girls were mothers.

Induced abortion

Schoolgirl pregnancies are usually unwanted. Only two of the pregnant girls ($N = 87$) said they wanted the baby. Of the 648 sexually-active schoolgirls, 55 (nine percent) reported to have attempted at least one abortion (46 attempted one abortion, seven girls twice and two girls three times*). There was no significant difference between religions in the incidence of attempted abortion. There was, however, a difference between schools, suggesting the possibility of peer influence on the decision to abort. Girls often decide to terminate pregnancy before being discovered and being expelled; often their partners and friends encouraged them. Another important reason for terminating a pregnancy was the anticipated harsh attitude of parents. As sexuality is rarely discussed at home, it is difficult for them to talk about pregnancy. Once informed, however, parents usually advised the girl to keep the baby. In FGDs, both men and women said they would be upset initially if their daughter came home pregnant, but that they would accept the baby into their home.

The 55 girls who had had at least one abortion, reported a total of 59 attempted abortions (missing values = 7). Table 2 shows who assisted abortions.

About two-thirds of abortions were assisted. Only one-tenth of abortions were performed by a hospital doctor who operated or injected†. Almost 1 in 4 abortions was carried out in private clinics of which there are few in Western Province. Physicians are supposedly in charge of these clinics, but they are mostly run by an assistant who is not a medical doctor. These "doctors" usually gave injections for abortion and two performed a manual removal. Other abortion-providers included women who specialize in traditional abortion methods, health workers, traditional birth attendants, traditional healers and friends. If the girl's parents and/or partner were involved in the decision, they usually took the girl to a hospital, health worker or doctor in a private clinic, where services are generally more expensive. When girls decided on their own or were influenced by friends, they were more likely to go to a traditional healer or an abortion specialist or to use brand-name medications. Of the girls who were assisted, 56% received an injection, while 24% took chloroquine. Sixteen percent drank herbs, 16% had sticks inserted and 12% had herbs

*One cannot conclude from this that more schoolgirls terminated a pregnancy than gave birth, since girls with a baby had already left school.

†Respondents did not know *what* was injected and researchers were unable to verify with physicians.

Table 2. Abortion-providers used by schoolgirls

Abortion-provider	Cases	
	number	%
Self	19	32
"Doctor" in a private clinic	13	22
Doctor in a hospital	6	10
Abortion specialist	6	10
Health worker	6	10
Traditional birth attendant	3	5
Traditional healer	3	5
Friend	3	5
Total	59	100 ^a

^a%ages do not total 100% due to rounding off.

inserted. Some of the providers combined methods, *e.g.* they would insert sticks and give herbal teas, or combine chloroquine with herbal infusions.

About one-third of schoolgirls attempted abortion alone. Many tried a combination of methods. More than half (53%) used chloroquine, 42% drank herbal teas, 17% inserted sticks and 11% inserted herbs into the vagina. Table 3 summarizes the methods used for the 56 reported abortions (missing values = 6). Since more than one method may have been used for one abortion, percentages — calculated over the total number of abortions ($N = 56$) — do not total 100%.

One-quarter of attempted abortions were not successful, resulting in childbirth. None of the girls who used *only* chloroquine aborted, while all girls who had an injection or an operation aborted. Three-quarters of the girls who attempted abortion alone were not successful, while only one-tenth of the assisted girls did not succeed. Nine girls reported complications after successfully aborting, mostly severe abdominal pain and bleeding. Five of them went to a health institution with the complications.

COMMUNITY WOMEN

Unwanted pregnancy

Of the 803 women interviewed, 752 had been pregnant. They were asked whether they had ever

Table 3. Self-reported methods used for attempted abortions ($N = 56$) by schoolgirls

Abortion method	Cases	
	number	%
Injection	20	36
Chloroquine	19	34
Drink herbs	14	25
Insert sticks	9	16
Insert herbs	7	13
Operation	4	7
Manual removal	4	7
Others	4	7
Total	56 ^a	100 ^a

^aTotals do not add up to 56 in number and 100% because more than one method could have been used for one attempted abortion.

had a pregnancy “they were not ready for at the time they found themselves pregnant” — the study definition of unwanted pregnancy. More than one-third ($n = 273$) of the women answered affirmatively. This is not surprising considering the low utilization of family planning — only 14% of the women used modern contraceptives*.

Reasons why pregnancies were unwanted differed between married and unmarried women. For unmarried women the main reasons were, in order of frequency cited: (1) desire to continue their education, (2) desire to get married before giving birth, (3) no support from the father of the baby and (4) being too young to have a child. Traditionally, in Western Province there is a bride-price. A woman with a child would fetch a lower bride-price and is referred to as “cheap second-hand”. The main reason married women were not ready to have another child was because the previous one was still very young. Women feared the latter would suffer from “malili” — severe malnutrition which can be fatal. “Malili” is believed to be caused by breaking post-partum taboos on sexual abstinence and behavior by the husband and/or the wife (Faber and Koster-Oyekan, 1994). Traditionally, there was an abstinence period of two years†. Married women also feared ridicule; pregnancy meant they had broken the rule of abstinence. Other reasons married women gave, in order of frequency cited, were: (1) there was no support for the child, (2) the woman had suffered during a previous pregnancy or delivery, and (3) the father was not the husband. The above-mentioned reasons for unwanted pregnancies and induced abortions coincide with those collected by Bleek and Asante Darko in their 1973 anthropological study of an Akan lineage in Southern Ghana and by Renne in a Yoruba society study in

Nigeria (Bleek and Asante-Darko, 1987; Renne, 1996).

Induced abortion

Women who induce abortion are generally condemned in Western Province. Taboos on abortion (both induced and spontaneous) vary from one ethnic group to another. It is believed that women who have aborted should be isolated from others and that they should not eat, cook, share utensils, visit, shake hands or touch others for fear of causing chest problems and coughs (“shishako”) in others. This is why, traditionally, the woman who has aborted is housed in a separate hut on the outskirts of the village where an older woman cooks for her; this is seldom done today, however. After about two weeks, or when the bleeding stops, the woman must be cleansed by a traditional healer; she has to bathe in a herbal porridge, which she must also drink. This ritual cleansing has also been reported by Renne for the Yoruba of Nigeria. Cleansing is meant to expel the dirt and make the body and organs healthy again and thus capable of conceiving (Renne, 1996). Abortion-related taboos are similar to post-partum taboos, although after delivery the woman is allowed contact with her female friends (Faber and Koster-Oyekan, 1994).

Of all 280 unwanted pregnancies (a woman could have had more than one unwanted pregnancy), 85% were carried to term (accepted) and in 15% of cases, termination was attempted. One-third of the 85% said they had considered abortion. The reasons they did not, were, in order of frequency mentioned; (1) fear of complications and death, (2) abortion is a sin in the eyes of God or a taboo, (3) pregnancy was discovered too late for an abortion and (4) fear of aborting what might be her only child.

Six percent ($n = 44$) of the 752 women who had been pregnant reported an attempted abortion. Forty-two women did so once, two women twice. Table 4 shows who assisted the women with 36 abortions. (Missing values = 10)

Two-thirds of the women who attempted abortion did so alone, while the remainder were assisted.

Table 4. Abortion-providers used by community women

Abortion method	Cases	
	number	%
Self	23	63
“Doctor” in a private clinic	4	11
Friend	4	11
Doctor in a hospital	1	3
Clinical officer	1	3
Traditional birth attendant	1	3
Grandfather	1	3
Woman specialized in abortion	1	3
Total	36	100

*Some of the study findings on FP were: Women were generally positive about spacing children and/or limiting the number. Main reasons for not using FP were not knowing where to go or how to ask and the fear of side-effects. The attitude of men with regard to FP also proved to be an important influencing factor. Thirty-two percent of the wives of men who had a positive attitude towards FP, used modern contraceptives, as opposed to only seven percent of wives whose husbands were negative. Other factors influencing use were a higher level of education of the woman and proximity to a health institution.

†The study on community maternal health in Western Province found that postpartum taboos varied between groups, areas and individuals. Some said the taboo should last until the umbilical cord has fallen off and the woman has stopped bleeding, others say not before the baby is 5–8 months old, or until the baby starts walking. Babies must be bathed in medicine before the husband and the wife can resume intercourse. When intercourse does resume, the husband must release his sperm outside the vagina to prevent it from mixing with the mother’s milk, in order to prevent “malili” (Faber and Koster-Oyekan, 1994).

Table 5. Self-reported methods for attempted abortions by community women

Abortion method	Cases	
	number	%
Drink herbs	11	32
Insert sticks	5	15
Injections	3	9
Chloroquine	2	6
Operation	1	3
Combination of methods	12	35
Total	34	100

Abortion-providers were "doctors" in private clinics, friends, community providers and health workers. Only one woman had had an abortion performed by a doctor in the hospital. Less than one-third of these women knew they had a right to a legal abortion in a hospital. Women who knew of their rights said the hospital staff would gossip and this is why they did not go to the hospital for abortion. Another reason for not going to the hospital was economic.

Table 5 shows the abortion methods women reported to have attempted.

Women used more traditional methods than schoolgirls. Traditional methods included soaking or boiling roots or herbs from common leaves and shrubs in water and drinking the "tea". Herbs included "mufofo", "mwinda", "katima", "mululwe". Another type of traditional abortion method was to insert certain roots and sticks into the vagina to pierce the cervix; examples include the stem of the cassava tree, and roots of "namyati" and "muhwahwa". Women also took substances such as soda with hot water, charcoal, ashes, and "Surf" or other brands of washing powder. Modern medicines such as ampicillin, panadol and chloroquine were taken in overdose.

Privacy and secrecy are key motivations for the provider and method chosen by women. Women enjoy more privacy if they attempt it alone by taking patent medicines or traditional herbs meant for other ailments or by going to a traditional healer or midwife rather than to a hospital.

Of the 36 attempted abortions, 19 succeeded. Those who took only chloroquine did not succeed. Of the traditional methods, inserting a stick proved to be the most successful. Injections always terminated the pregnancy. Of the 23 women who performed the abortion alone, only 8 succeeded (35%) whereas of the 13 assisted women, 11 succeeded (85%); the two who were not successful were helped by a friend and drank herbal teas. Information on complications is scant because not all questionnaires were completed. Just over half (57%) of the 21 women who reported said they had experienced complications after attempting abortion. Complications result mainly from drinking herbs and inserting sticks. There were no reports of com-

plications in the case of injections only. Half the complications were caused by substances remaining in the vagina and heavy bleeding, the rest referred to severe abdominal pains and bleeding. Three-quarters of the women who had complications ($N = 12$) said they went to hospital, one went back to the private clinic where she had had her abortion performed, and one sought no medical aid.

Awareness of abortion providers and methods

Women who had never attempted abortion were asked whether they knew who performed them and/or if they were aware of abortion methods. Of the 263 respondents (36%) who knew of abortion-providers, only 8% mentioned hospital doctors, 4% nurses, and 2% clinical officers. The abortion-providers most mentioned were elderly village women who specialize in abortion (46%), traditional healers (22%) and doctors in private clinics (8%). Fifty-eight percent of the women said they knew of abortion methods, both traditional and modern. Most traditional herbs and roots are easily found, whereas some are more scarce and grow in unknown places. These must be bought from herbalists. The majority of herbs are not used exclusively for abortion, but are used for general abdominal ailments. Chloroquine was the best known abortion method mentioned (202 women).

DISCUSSION AND RECOMMENDATIONS

Induced abortion is a public health problem

The major contribution of this study is to disclose the public health problem of illegally-induced abortion. Although Zambia has a liberal abortion law, legal abortion services are not accessible to most women in Western Province. Only one hospital in the whole of the province is able to provide legal abortion services, and this depends on staff willingness. Moreover, women resort to illegal abortion for privacy and financial reasons.

The situation is particularly alarming among schoolgirls; other studies confirm that unmarried schoolgirls are the most likely candidates for and/or to undergo abortion (Renne, 1996; Bleek and Asante-Darko, 1987; Van den Borne, 1991). Abortion mortality figures for the four study districts estimated that one percent of secondary schoolgirls died of induced abortion complications.

The present community-based study resulted in an estimated IAMR of 120 per 100 000 live births; this is much higher than hospital-based studies give for Zambia (World Health Organization, 1993). While it is possible that the situation in Western Province may differ from the rest of Zambia, community studies are likely to be more accurate than hospital-based studies, especially for areas where most maternal care takes place in the communities. The IAMR should be added to the maternal mor-

tality ratio (MMR) to get the total MMR, because abortion-related deaths are not usually reported as maternal deaths.

The danger of chloroquine

The use of chloroquine to abort appears to be on the increase, especially among schoolgirls. It also appears to cause most abortion-related deaths. Of the schoolgirls who aborted and survived, 34% reported using chloroquine. In contrast, 68% of schoolgirls who died, and 45% of women who died, used modern medicines, mostly chloroquine (see Table 1). Mpangile *et al.* (1993), in their Tanzanian study also report a similar situation. The status of chloroquine as an abortifacient is ambiguous. It is debatable whether chloroquine is taken as an abortifacient or as means of committing suicide. Generally, people say chloroquine is ingested as an abortifacient. Yet, none of the schoolgirls or women who induced abortion with only chloroquine succeeded. During FGDs, schoolgirls said that girls who take chloroquine are desperate and do not care if they die and they consider the ingestion of chloroquine more a means of committing suicide than of abortion. There is evidence of suicide by chloroquine in people who are not pregnant. It is a powerful and dangerous drug; it is cheap and can be bought across the counter. In March 1995, there was an epidemic in one of the districts of Western Province of people who died from a chloroquine overdose. Six people died in one week. Some were pregnant, others not. Following this epidemic and given the results of this study, the District Health Services immediately launched a campaign warning of the dangers of chloroquine.

Utilization of study findings for action

It is a tragedy that so many years after Bleek's study in Ghana, which revealed the same reasons for induced abortion, the problems have still not been addressed. Researchers must strive to make "matter of life and death" study results more widely known and, together with the parties concerned, translate recommendations into action. The involvement of everyone — both partners, health staff, parents, teachers, students and churches — in the different stages of this research has led to increased awareness and motivation for action.

Recommendations for action

The research results were presented in the various FGDs and in discussions with teachers during which participants were asked for comments and solutions. During the February 1995 provincial ma-

ternal health study days, maternal health staff from district, provincial and national levels discussed our findings and made recommendations for action. Below is a list of their main discussions and recommendations:

(a) Prevention through contraception

Prevention should be the main approach. Women of child-bearing age should practice birth control if they do not want to become pregnant: through abstinence, by using the rhythm method, by *properly* breastfeeding, or by using contraceptives. Health staff should *reach out* with services to both married *and* unmarried couples and not wait until they request family planning. Pupils should be given contraceptives on demand, after counselling. Respect for medical ethics should prevent health staff from providing information on their patients to third parties (*e.g.* parents or teachers).

(b) Public awareness campaign

A public awareness campaign should make people aware of the high incidence of schoolgirl deaths from induced abortion. Study findings should be made known and discussions initiated in local courts, schools, ministries and churches. Men should be made to reflect on the harm they cause schoolgirls, and a stiffer penalty should be imposed by local courts on men who leave schoolgirls pregnant. Teachers who have sex with pupils should be barred from teaching.

(c) Pregnancy should not terminate education

Girls should be allowed to continue education after giving birth, so that the main reason for abortion is removed.

(d) Sex education for young people

Young people should have a better sex education. Parents, teachers and health staff in school must provide their children with more information which would enable them to make a more informed decision. Initiation ceremonies should address the problems. Parents must question the tradition of not discussing sex with their children. As a high official in Western Province said in a meeting in the presence of many department heads:

We have a choice: We can retain our customs and traditions of not talking to our children and spouses about sexuality and see our children dropping out of school because of pregnancy or loose our beloved ones to AIDS and abortions. Or, as I recommend, we can do away with those traditions, communicate with our spouses and children, prevent those problems from happening and keep them alive. I want all of you to spread this message to the workers in your departments*.

(e) Access to abortion services

If prevention fails, then affordable, confidential, safe and legal abortion services should be available to safeguard women from dangerous, illegal abortions: (1) Abortion legislation should be adapted to local circumstances, *e.g.* the condition that three doctors must sign the abortion papers should be waived in areas where there is just one doctor per

*Taken by the author from a speech by the Permanent Secretary of Western Province, at the launching of a booklet on family planning and AIDS, 1994.

hospital, allowing nurse-midwives and clinical officers to sign. (2) Legal abortion-providers should be encouraged to act as medical professionals and assist women seeking abortion. (3) Health staff should be reminded of the medical ethics of patient confidentiality. (4) People should be made aware of their rights and available services. (5) Like all maternal health services, abortion should be free.

Other, more innovative, actions could also be initiated. For examples:

(1) Strategies for youth: young people should be mobilized and discussions among them held in schools, churches, youth groups in villages, etc.

(2) The development of innovative ways of providing contraceptives to young people.

(3) Research should be carried out on the use of non-hormonal contraceptives which are more acceptable to schoolgirls (and their parents), such as spermicides.

(4) Within the medical services, the use of manual vacuum aspiration should be discussed as a safe, inexpensive method for early abortion, which could be carried out by nurses.

CONCLUSION

The major contribution of this study has been to break the silence surrounding abortion in Western Province. Until now the problem of unsafe abortions had been buried and ignored by the public health sector. By involving local maternal health staff in the recognition and analysis of the problem they became motivated and developed their own way to deal with the problems. It is hoped that the findings of this study will prompt other districts, provinces and countries to initiate discussions and consider abortion a major public health problem. With a fuller understanding of the issues at stake with regard to unwanted pregnancy and induced abortion, people in the community and health professionals will be better equipped to deal with the problem, rather than simply condemning women as immoral or holding their silence.

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