

ABORTION PREVALENCE AND SOCIO-DEMOGRAPHIC DIFFERENTIALS

AYESHA HUMAYUN*, NAHEED H. SHEIKH** AND MAIMOONA ASHRAF***

*Department of Community Health Science, FMH College of Medicine and Dentistry, Lahore

**Department of Community Medicine, A.I.M.C., Lahore

***Department of Obst. and Gynae. L. G. H., Lahore

This study was performed to estimate the prevalence of abortions and to evaluate its association with the socio-demographic factors in an urban slum. The data was collected based on recall obstetric history from 186 females through systematic random sampling from 01.04.2001 to 30.06.2001. It was found that the abortion rate was 419.35/1000 women of reproductive age group. Abortion ratio was 109.39/1000 live births. There was strong association of induced abortion with non-Muslim family, working of female and illiteracy of husband. On the other hand gravidity 5 or above (increasing gravidity) was statistically associated with total abortions. It was concluded that there is an unmet need for controlling unwanted pregnancies and promoting birth spacing among Pakistani women. Some important social and demographic factors determine the abortion behavior in Pakistan.

Key words: Abortion Prevalence, Induced abortion and socio-demographic factors.

INTRODUCTION

Abortion is the expulsion of product of conception before 20th week of gestation or if the weight is 500 grams or less¹.

Abortions are categorized as spontaneous and induced. Induced are illegally induced or therapeutically induced. The WHO classification scheme is based on the following criteria:

Certainly induced abortion: when a woman herself provides this information, or when such information is provided by a health worker or a relative (in the case of the dying woman), or when there is evidence of trauma or a foreign body in the genital tract. *Probably induced abortion:* when a woman has signs of abortion accompanied by sepsis or peritonitis, and she states that the pregnancy was unplanned (she was either using contraception during the cycle of conception or she was not using contraception because of reasons other than desired pregnancy). *Possibly induced abortion:* if only one of the "probably" induced conditions listed above is present. *Spontaneous abortion:* If none of the conditions listed above is present or if a woman states that the pregnancy was planned and desired.

These criteria may be considered too strict in some settings, and might in fact underestimate the number of induced abortions. More detailed clinical evaluation taking into account fever and the extent of the pelvic infection can be used to

shift many of the "probable" and "possible" into the "certainly" induced category; however, absolute accuracy is not necessary here².

Abortion is one of the direct causes of maternal deaths e.g hemorrhages, 21.0%, hypertensive diseases, 18.6%, sepsis, 13.3%, abortions, 11.0% and others, 36.1%³.

In developing countries, 5 out of 10 leading causes of Disability Adjusted Life Years (DALY's) are related to reproductive health, including the consequences of unsafe abortion and chlamydia. Almost all of this loss to healthy life is avoidable. Unsafe abortion is a procedure of terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both⁴. Morbidity and mortality due to unsafe abortion continue to pose a serious global threat to women's health and lives. It is estimated that worldwide, every year, almost 20 million unsafe abortions take place and 80,000 women die from complications following unsafe abortion⁵.

Unsafe abortion is entirely preventable. Yet, it remains a significant cause of maternal morbidity and mortality in much of the developing world. Estimates based on figures for the year 2000 indicate that 19 million unsafe abortions take place each year, that is, approximately one in ten pregnancies end in an unsafe abortion, giving a

ratio of one unsafe abortion to about seven live births. Almost all unsafe abortions take place in developing countries. Worldwide an estimated 68,000 women die as a consequence of unsafe abortion. The risk of death in developing countries is estimated at 1 in 270 unsafe abortion procedures.⁶

As a signatory to International Conference of Population and Development (ICPD) in 1994, Pakistan accepts the deceleration of reproduction and sexual health as a right for both men and women⁷. In a study conducted in Bangladesh, the incidence of abortion was higher among women who had six or more births or who became pregnant fewer than 12 months after the previous pregnancy⁸. From a study conducted in Canada, as a part of Canadian perinatal surveillance system, we found that twenty percent of abortions, in 1995, were obtained by females less than 20 years of age; 52% by women 20-29; 26% by women 30-39 and all others by women 40 years and older. Over half (54%) of women who obtained an abortion had a previous delivery; a third of these women had a previous abortion⁹.

A study in Nepal was conducted in women admitted to hospitals with abortion-related complications. Thirty-six percent of the women were between 25 and 29 years of age, and 43% had two living children. Forty percent had more than a high school education, 91% were from Kathmandu of these 48% practiced contraception. The primary motivation for seeking abortion in 34% women was due to the desire for no more children. Women residing in urban areas who never had an induced abortion tended to be younger, of lower parity and more educated than those in rural areas¹⁰.

"National study on unwanted pregnancy and post-abortion complications in Pakistan" in 2004, its aim was to achieve a better understanding of the magnitude of and underlying reasons for unwanted pregnancies and induced abortions in Pakistan. The study estimated the national abortion rate at 29 per 1,000 women of reproductive age, implying that a sizeable proportion of Pakistani women have abortions. Older married women with several children account for the large majority of unwanted pregnancies. About 890,000 unsafe induced abortions occur annually. In addition, about 200,000 women suffer from post abortion complications in Pakistan each year¹¹. The community under study was socioeconomically mixed type of peri-urban population. People living in such areas constitute 60% of all urban population in Pakistan and the number is on rise. People living in peri-urban areas are legal settlers

but they are living in un-sanitary housing and environmental conditions¹².

This study was conducted in a socio-economically mixed type of community within the limits of Lahore. This community comprises of brick, mud, mix and tent houses. It is almost 1 km from Jinnah Hospital Lahore (a tertiary care teaching hospital). The community is deprived of many basic needs. Total population is 5554 and 930 families were residing in that community. There is one dispensary being operated by Jinnah Hospital and a Family Planning Center under the Prime Minister Program of Pakistan.

METHODS

It was a descriptive cross-sectional epidemiological study, aimed to evaluate the prevalence of different categories of abortion in a defined selected slum area and to find out its association with socio-demographic factors. Study was conducted in the urban slum Shah-Di-Khoi adjacent to Allama Iqbal Medical College and Jinnah hospital Lahore, Pakistan. Out of 930 women residing in the defined study area, representative sample of 186 was drawn through systematic random sampling. Every 5th woman was interviewed and structured questionnaire was filled, based on recall obstetric history. Data was collected through house-to-house survey regarding social factors, demographics and abortions. The results were entered and compiled in SPSS (Statistical Package of Social Sciences version 10). Systematic random sampling was carried out and a representative sample of married females of reproductive age group (15 – 45) was drawn. *Inclusion criteria:* All the married ever-gravid females of reproductive age group (15- 45 years) were included in the study. *Exclusion criteria:* All unmarried, abortion due to rape and infertile non-gravid married females were excluded from the study. (*3 females were found infertile, therefore, next were interviewed*).

Universe of the study:

A total of 930 married ever-gravid females of reproductive age group (15-45 years) residing in that area were the universe of the study.

Sample size:

Sample size of 186 was calculated by a software package, Epi-Info version 6.1. All the 930 married females of reproductive age group were numbered and then systematic random sampling was done. Every 5th married ever-gravid woman was approached and samples of 186 females were drawn.

We carried out a Pilot study, and necessary alterations done in the questionnaire. The survey was carried out in the selected community from 01.04.2001 to 30.06.2001. Closed-ended structured questionnaires were filled during house-to-house survey. The related information regarding abortions, based on recall obstetric history was collected and entered in the questionnaire. Abortions conducted during the survey period were also included (up to 30.06.2001). A total of 186 females were interviewed. About 30-40 minutes were required to fill one questionnaire, as abortion is a sensitive issue to explore.

Operational definitions:

Abortion is a termination of pregnancy before the foetus becomes viable i.e. capable of living independently; this has been fixed administratively at 28 weeks of gestation.

Abortion rate is number of abortions per 1000 ever-pregnant women of reproductive age [15-45].

Abortion ratio is number of abortions per 1000 live births.

Unsafe abortion is that which was conducted by untrained or inadequately trained person without having kit with her.

Socio-demographic factors: In this study these factors were:

Age: three groups were made, 15-25 years, 26-35 years and 36-45 years.

Religion: Muslims and non-Muslims.

Education: Illiterate one who cannot read or write in local language, Literate who can read and write in local language, Under Matric and Matric and post Matric.

Income: Cut off point for income per capita per month was taken Rupees 1200. [Less than \$1 a day]

Working of females: Non-working and working females were taken as two groups.

Gravidity: Cut off point was Gravida 5.

RESULTS

Impact of socio-economic factors on abortion rates and ratios (both spontaneous and induced) were calculated in the selected urban slum area of Lahore. Statistical analysis was performed to find out any significant association between socio-demographic differentials and abortion. In this per-urban slum of 5554 inhabitants, 930 married ever gravid reproductive age group (15-49) females were residing. A total of 186 females were

interviewed and it was observed that they had a total of 801 pregnancies (4.3 pregnancies per women) and 25 respondents were pregnant at the time of visit (pregnancy rate 13.4%). Out of these pregnancies 723 were delivered (713 were live and 10 were stillbirths) and 78 pregnancies terminated as abortion among 55 females (1.4 abortions per women of reproductive age group).

In 78 abortions, 60 (76.9%) were spontaneous and 18 (23%) were induced unsafe abortions, which, they ever had during their reproductive span. The abortion rate was 419.35 / 1000 women of reproductive age group. Abortion ratio was 109.39 / 1000 live births. Induced abortion ratio was 25.24 / 1000 live births and induced abortion rate was recorded as 96.77 /1000 women of reproductive age group.

A total of 62 (33.33%) women out of 186 belonging to the age group 15-25 years, 19 (30%) respondents experienced 29(37%) abortions ,out of which 25 (86%) spontaneous and 4 (14%) induced. There were 77 (41.39%) women from the age group 26-35 years out of which 22 (29%) respondents experienced 31 (38.46%) abortions in which 21 (67.7%) were spontaneous and 10 (32.2%) were induced. There were 47 (25.2%) females in the age group of 36-45years. Fourteen females (29.7%) had 18 (23%) abortions, out of which 14 spontaneous (77.7%) and 4(22.2%) were induced

The association of age groups with abortions was non significant. In case of total abortions, [Chi-square=2.79, d.f = 2, P = 0.05], while in induced abortions [Chi - square = 0.05, d.f = 2, P = 0.05].

There were 90 (48.3%) respondents Gravid-5 and above and they experienced 54 (69.2%) abortions, 15 (27.7%) were induced illegally and 34 (61.76%) were spontaneous. There were 96 (51.6%) respondents who were Gravid-4 and below, and they experienced 24 (30%) abortions, 3 (12.5%) were induced and 21 (88.4%) were spontaneous. The association of increasing gravidity on total abortions (spontaneous & induced) was very significant [Chi-square=5.61, d.f= 1, P=0.05]. The impact of gravidity on induced abortion was not statistically significant. [Chi-square=2.12, d.f=1, P=0.05].

Among 186 females, 117 (62.9%) were illiterate, and experienced maximum number of abortions i.e. 45 (57.6%). Out of 186 females 93 (50%) women had illiterate husbands, and they underwent 41 (52.5%) abortions. The results of total abortions and literacy of couple were not significant. But in case of induced abortions and literacy of husband, chi-square was 7.35, the result

was significant whereas it is not significant in case of females.

Association of family income with abortion was analysed. Family income of 163 (87.6%) respondents was less than Rs. 1200 per capita per month. Chi-square test was not significant in case of total abortions as well as induced abortions.

In this community majority of respondents [139 (74.7%)] were non-working and they

experienced 51(65.3%) abortions and 6 (11.7%) were induced. 47 (25.2%) females were working and they experienced 27 (34.6%) abortions and 12 (44%) were induced. Chi-square was not significant in case of working females and abortion, but [chi-square=10.5 with P=0.05] was significant in case of induced abortions and working females.

Table 1: Abortions among respondents according to their gravidity.

	Number of respondents experienced abortions	Number of abortions	Spontaneous abortions	Induced abortions
Gravid-1	2 (3.6)	2 (2.56)	2 (3.3)	0
Gravid-2	5 (9)	6 (7.69)	6 (10)	0
Gravid-3	8 (14.5)	9 (11.5)	7(11.6)	2(11.1)
Gravid-4	6 (10.6)	7 (8.9)	6 (10)	1 (5.5)
Gravid-5	14 (25.4)	19 (24.3)	17 (28.3)	2(11.1)
Gravid-6 or above	20 (36.36)	35 (44.8)	22 (36.6)	13 (72.2)
Total	55 (100)	78 (100)	60	18 (100)

(figures in parentheses are percentages)

Table 2: Abortion and their relation with respondent's occupations.

	Number of respondents experienced abortion	Number of abortions	Spontaneous abortions	Induced abortions
House wife	37 (67.2)	51 (65.3)	45 (75)	6 (33.3)
Housemaid	9(16.36)	12 (15.36)	6 (10)	6 (33.3)
Self-employed	7 (12.7)	12 (15.36)	8 (13.3)	4 (22.2)
Office worker	2 (3.6)	3 (3.8)	1 (1.6)	2 (11.1)
Total	55 (100)	78	60	18

(figures in parentheses are percentages)

Table-3: Impact of religon on induced abortions.

Religion	Experienced induced abortion	Not experienced induced abortion	Total
Muslims	10	54	64
Christians/ others	8	6	14
Total	18	60	78

chi-square = 11.01 with 1 degree of freedom and 0.05 probability

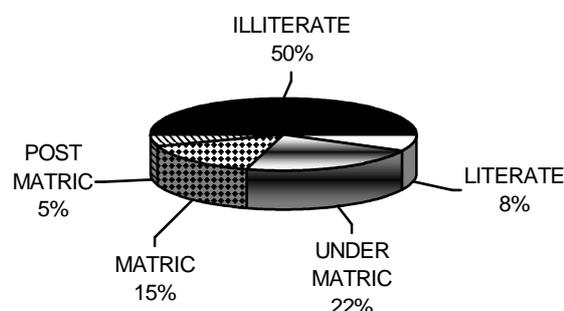


Figure 1: Percentage distribution of educational

A total of 144 (77.2%) respondents were Muslims and they experienced a total of 64 (82%) abortions, of these 10 (15.6%) were induced. Forty two (22.5%) Christians respondents experienced a total of 14 (17.9%) abortions, of these 8 (57.1%) were induced. Chi-square was non-significant in case of religion and total abortions. On the other hand induced abortions were had significant association in case of Christians [Chi-square =11.01 with P=0.05]. The spontaneous abortion rates are noted to be high as compared to the induced abortions, in Muslim respondents.

DISCUSSION

This is a cross-sectional or prevalence study which helps us to assess the burden of abortions in our community. The association of socio- demographic factors with Induced abortions is statistically significant in case of Non-Muslim families, working female and illiteracy of husband. Increasing gravidity is statistically associated with total abortions. On the other hand income and education of couple (except illiterate husband facing significantly high induced abortions) have no impact on abortion rates and ratios'. Similar findings regarding these variables were found in a study carried out in Ukraine to assess the differences in social and demographic characteristics between women undergoing an induced abortion and antenatal care attendants in the Ukraine. This was a hospital-based unmatched case control study. A higher risk for an induced abortion was found among women with a history of previous induced abortion(s). Neither income nor educational level was identified as a risk factor for pregnancy termination¹³.

To address the huge burden of abortions in our society we have to improve access to contraceptive methods (prevent unwanted pregnancy) and provide quality post-abortion care (that includes comprehensive counselling, access to contraception and family planning to prevent future unwanted pregnancies or to practice birth spacing, and access to reproductive and other health services).

As a **conclusion** a significant number of women practice contraception, induced abortion is also used, primarily to control family size and for birth spacing. Increased promotion and use of contraceptive methods are needed to decrease the number of abortions, especially those that are high-risk and unsafe. Where contraception is inaccessible or of poor quality, many women will seek to terminate unintended pregnancies, despite restrictive laws and lack of adequate abortion services. Prevention of unplanned pregnancies

must therefore be the highest priority, followed by improving the quality of abortion services and of post-abortion care.

Every pregnancy interrupted by abortion requires that the procedure be carried out by the appropriate technique under safe, sterile conditions, by trained, competent professionals in order to protect the health and future fertility of the patient. Abortions will be chosen whether they are legal or illegal. When abortion was illegal in this country, it was brought about by dangerous, self-induced methods often by untrained, practitioners under clandestine, un-sterilized conditions with no follow-up care. Many women suffered reproductive tract damage, infection, bleeding, permanent sterility, or death¹⁴.

REFERENCES

1. Khan RL. *Abortions*: In Textbook of Gynecology. Medical Publications, Lahore. 3rds ed. 2000:123
2. Belsey M. *World Health Organization*: Studies differentiating between spontaneous and induced abortions: In Methodological issues in abortion research. New York: The Population Council, 1989. Cited by; World Health Organization. Induced abortion. Report of WHO Scientific Group. WHO Technical Series No. 623. Geneva: World Health
3. Women's Health in Pakistan. Fact Sheets prepared for Pakistan National Forum on Women's health. 3-5, Nov.1997: 16
4. Ibid. 21
5. Essential Elements of Postabortion Care: An Expanded and Updated Model 1 Postabortion Care Consortium, July 2002
6. Unsafe abortion - Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000 - 4th edition
http://www.who.int/reproductive-health/publications/unsafe_abortion_estimates_04/index.html
7. Belsey M. *World Health Organization*: Studies differentiating between spontaneous and induced abortions: In Methodological issues in abortion research. New York: The Population Council, 1989. Cited by; World Health Organization. Induced abortion. Report of WHO Scientific Group. WHO Technical Series No. 623. Geneva: World Health
8. Mizanur Rahman and Jeroen van Ginneken, Induced Abortion in Matlab, Bangladesh: Trends And Determinants By M. Kapil Ahmed, International Family Planning Perspectives, 1998, 24(3),128-132
<http://www.agi-usa.org/pubs/journals/2412898.html>
9. Statistics Canada. Births & Deaths, 1995, Catalog 84-210-XPB. Induced Abortion. In: Canadian Perinatal surveillance 1998.
http://www.phac-aspc.gc.ca/rhs-ssg/about_e.html
Last Updated: 2004-03-11

10. Shyam Thapa and Saraswati M. Padhye, Induced Abortion in Urban Nepal *International Family Planning Perspectives*, 2001, 27(3):144-147 & 151
<http://www.agi-usa.org/pubs/journals/2714401.html>
11. Reproductive health, Postabortion Care, Research on Unwanted Pregnancies and Postabortion Complications in Pakistan "National Study on Unwanted Pregnancy and Postabortion Complications in Pakistan" on 8 October 2004.
<http://www.populationcouncil.net/rhfp/PakResearchUnwantedPreg.html>
12. UNICEF, Socio-economic Situation in: Situation analysis of children and women in Pakistan.1988: 17
13. Mogilevkina I; Hellberg D; Nordstrom ML; Odland V. Factors associated with pregnancy termination in Ukrainian women. *Acta Obstet Gynecol Scand* 2000 Dec; 79 (12): 1126-31 (ISSN: 0001-6349)
14. American Medical Women Association, Position Statement on abortion and access to comprehensive reproductive Health Services.
<http://www.amwadoc.org/index.cfm?objectid=0A5FBB23-D567-0B25-530D43B3A7BA6627>