



Middle East Journal of Nursing



FEBRUARY 2008

VOLUME 2 ISSUE 1

ISSN 1834-8742

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Editorial

2 **Chief Editor - A. Abyad**

Original Contribution & Clinical Investigation

3 **Basic Characteristics and Their Impacts on Family size Preferences in Rajshahi District, Bangladesh**
Md. Ismail Tareque, Lecturer, Md. Mostafizur Rahman, Assistant Professor, Towfiqua Mahfuza Islam, M. Phil Fellow

10 **Pregnancy Wastage among Married Women in Rural Rajshahi, Bangladesh**
Md. Mahfuzar Rahman, Research Fellow, Md. Atikur Rahman Khan, Assistant Professor, Md. Nazrul Islam Mondal, Assistant Professor

14 **Harassment Pattern of the Sex Workers in Bangladesh: A Situational Analysis of Three Brothels**
Mahmudul Hasan, Muhammad Liakat Ali, J.A.M Shoquillur Rahman, and M. Zulfiqar Ali Islam

Review Articles

23 **The Counterfeit Medicines**
Safaa Bahjat

Community Nursing

26 **Down syndrome parents worries about their children in Iran**
Sahel Hemmati, MD; Nasrin Amiri, MD; Asghar Dadkhah, PhD.

30 **Safe Sex Education Among Youths In Iran - Time to Act!**
Kianoush Dehghani, MD, MPH

FROM THE EDITOR



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This issue of the journal has papers ranging from issues related to diet, maternal and child health to dental prostheses. Özenoglu A, Ugurlu S, Caglar E, et al searched for the effect of a fibre rich dietary product on blood lipids and some mineral levels used as a part of dietary treatment of obese adult women.

The authors compared 2 women in the study group and 13 in the control group. The finding supported the conclusion that fibre rich, fat, sugar and salt free dietary products can be useful for the dietary treatment of not only obesity but also dislipidaemia and insulin resistant states.

A paper from Turkey studied 500 pregnant women's preference for place and type of delivery. The aim of this study is to define the socio-demographic traits, birth forms and the prenatal-antenatal care rates of women who preferred Zubeyde Hanim Maternity Hospital. The paper stressed that pregnancy and birth are periods during which women require a health centre most. Women's age, education level and socio-economic factors play an important role in preference of these health centres.

A paper from Jordan attempted to determine the prevalence of the type of denture fracture in three Military Hospitals in Jordan. Questionnaires were distributed to three different prosthetic laboratories in three dental departments in the Royal Medical Services. Results obtained showed that 45 % of repairs carried out were due to detached or debonded teeth. 30 % were repairs to midline fracture. The remaining 25 % were other types of fractures. In conclusion, the commonest type of fractures encountered were debonding / fracture of denture teeth in both complete and partial dentures followed by midline fracture of complete dentures. More upper complete and partial dentures were repaired than the lowers.

A correlational study was carried out in Iran to examine the impact of prayer on the spiritual well-being of 360 cancer patients undergoing chemotherapy who were referrals to Oncology ward of Cancer Centers of Iran and Tehran Medical Sciences Universities. The study revealed that significant relationship exists between spiritual well being with prayer practice, prayer experience and attitude toward prayer respectively.

A paper from Bangladesh discussed Human Rights of Accused Women in Criminal Justice in Bangladesh. Laws are made with the intention to reduce women-related crime and our main aim of this study is to give vent to the inhuman condition where the accused women are found to be victims of cruel and heartless treatments in the jails. Motamedi SH and Dadkhah A discussed the social and family factors effect on committing suicide among university students in Iran. The authors utilising a total of 100 students attempt to investigate the relationship between social and family factors and the idea of committing suicide among university students in Iran. The paper concluded that singles were more inclined to commit suicide than the married ones. Divorce, failure in education, age, and being female increase the risk.

BASIC CHARACTERISTICS AND THEIR IMPACTS ON FAMILY SIZE PREFERENCES IN RAJSHAHI DISTRICT, BANGLADESH

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Key words: Socio-economic characteristics, demographic characteristics, sanitation & household characteristics and family size preference.

ABSTRACT

This article is based on the study of basic characteristics and their impacts on desired family size using data from a survey of 4500 ever-married women of which 2250 women were in urban areas and 2250 women in rural areas of Rajshahi district. The study shows that the rural respondents are less educated than the urban counterparts. Husbands seem to be better educated than the wives in all areas. Most of the respondents are housewives in all areas and only 3.4 percent of respondents are service holders, in total Rajshahi but 46.1 percent of husband's occupations in urban areas is service. Urban women are more conscious about their freedom than rural counterparts. Mean age at marriage of the respondents is 16.35 years in total Rajshahi and in all areas there is a strong son preference. Husbands are found as main income earners and decision-makers of a family. This study also reveals that women desire higher family size with increasing number of living sons in rural Rajshahi.

Introduction

Bangladesh is still largely impoverished and agricultural; infant mortality is still high, and education levels among women of reproductive age remain low. The total fertility rate (TFR) has declined from over 6.3 children per woman of reproductive age in the early 1970's to 3.0 children per woman in 2004 (Mitra and Associates, 2005), which is a decline of about 50% over a 30-year period. The issue of whether desired family size or actual fertility falls first is yet to be resolved. In Costa Rica, fertility preferences appeared to change very little either before or during the decade when fertility itself was falling dramatically (Stycos, 1984). In the Republic of Korea (Cho et al., 1982), Thailand (Knodel et al., 1982) and Taiwan Province of China (Sun et al., 1978), desired family sizes fell only after the fertility transition was under way. Yet more work is needed to continue to decrease fertility rates.

Fertility decision-making is the central focus of many theories of fertility. Micro-economic theories of fertility, like those of (Becker, 1960) and (Easterlin, 1978), assume that reproductive behaviour is a response to underlying preferences for children and the constraints on having them imposed by external factors. It is therefore assumed that fertility decisions are made (Bulatao, 1984). Family size desires or preferences are one of the three major perceptual or attitudinal elements that constitute the immediate decision content of

fertility. The other elements include values and disvalues of children, and the perceptions of and reactions to regulation methods.

Preferences for family size or for sex of a child reflect the values attributed to children within a given cultural setting as well as individual considerations: such preferences indicate the demand for children (UN, 1987). In traditional societies, family size preferences are found to be greater than actual fertility, but in developing countries the family size preferences are lower than actual fertility; in developed countries the two are similar (Ware, 1974). Although demographers have been successful in identifying direct determinants of actual fertility (Bongaarts, 1978), they have not yet been able to identify direct determinants of family size preferences. Moreover, socio-economic differentials of actual fertility have long been known, but socio-economic differentials of family size preferences were almost unknown until recently.

Family size preferences can take many forms. Within the context of a particular number of total children desired, parents may desire at least one child of each sex, a minimum number of children of a particular sex, or approximately equal numbers of sons and daughters. Thus, couples may continue childbearing beyond their desired family size in order to achieve a favorable number or distributions of sons and daughters. Therefore, some questions may be raised that are: What are the socio-

economic and demographic correlates of such desires? Does actual family size influence the desired family size reported by women? Does the sex composition of a woman's living children influence her desire for another child? and so on. This study attempts to address each of these questions and to identify the demographic and socio-economic factors that are more influential to family size preferences.

Method and Materials

The data of this study were collected under the project of UNFPA entitled "Strengthening the Department of Population Science and Human Resource Development" from 4500 ever married women aged 12 to 49 years of which 2250 women in rural areas and the remaining in urban areas of Rajshahi district during the period 20th June, 2004 to 1st July, 2004.

In any situation where a multivariate problem is encountered, the method of analysis should proceed from simple to complex in an orderly manner (Srinivasan, 1979). As to the above statement we start with simple cross-tabular analysis, which is based on the imposition of simplifying pattern or structure relating socio-economic, demographic & sanitation and household conditions. Finally, the effects of socio-economic and demographic factors on family size preferences are examined by multiple regression analysis.

Variables included in the analysis

Table 1 presents a detailed description of the variables. It has been assumed that the selected independent variables affect family size preferences.

Basic Characteristics

Socio-economic characteristics: The socio-economic conditions of the people create differentials in the level of fertility. Table 2 presents the percentage distribution of selected socio-economic variables of the study population.

From table 2 we observed that there is a considerable difference between rural and urban areas for all selected variables. The majority

of the respondents fall in no formal education group in rural areas than in urban areas and access to higher education is really shaky. It may be due to cultural norms and religious values that discourage female education. This trend is reversed in secondary and higher education groups in urban areas as compared to the rural areas. That means respondents in rural areas are less educated than urban areas. Husband's education is also an important variable. Generally it is likely that higher educated people belong to higher economic class. This study shows that husbands are seem to be better educated than their wives in all areas. And also urban husbands are more educated than their rural counterparts.

The occupation of the respondent (wife) and husband may be a reasonable indicator of broad socio-economic status. In our study the main occupation of the respondent is housekeeping. The main occupation of the husband in rural areas is agriculture (66.5%) whereas in urban areas service is the main occupation (46.1%).

The occupation and higher education may be the reasons for the higher monthly family income. We observed that the highest respondents falls in 1600-3000 Tk. monthly income group in all areas and also the second highest in urban areas fall in 6000+ Tk.. We also observed that urban area's monthly average family income is nearly double of that of rural. Since in urban areas the living and other costs are higher the urban people have to earn more than rural people. The study also reveals that the overwhelming majority of the respondents were Muslim.

Having a bank account, any property and daily expenditure of the family to the respondents are also the important factors indicating the status of women. These indicate the economic freedom of the wife in the family and society. We observed that the respondents in urban areas are more conscious about their bank account and property and enjoy more freedom than the rural respondents.

Demographic Characteristics

The family size preference and

fertility are not only affected by socio-economic factors but also by the demographic, sanitation and household factors. The frequency and percentage distribution of selected demographic characteristics are presented in table 3 and discussed below:

In table 3, the highest participants fall in the under 25 age group in total and rural but the highest percent in the urban group falls in the 35+ year age group. The large percentage 97.5 in total, 97.6 in rural and 97.3 in urban were married. Mean age at marriage differed by one year in rural areas as compared to the urban areas. It may be the result of educational, social and religious values. The urban respondents are older and had higher number of live births than the rural women. The reasons may be that the respondents who had no children in rural areas were 227 and in urban areas the number is 143.

The distribution by sex of the child indicated that the respondents had a higher number of male children than female children in all areas. It may indicate that both rural and urban areas had strong son preference. The distribution relating to birth order indicates that the numbers in first and second order are very high than other orders in all areas. It is also observed that respondents had a large number of children in the third, fourth and fifth order in urban areas than in the rural areas. These had an effect on the higher number of live births in urban than rural areas. Table 3 also shows that the reasons of having more than two children are mostly the familial and religious causes.

Sanitation & household characteristics

Table 4 shows the percentage distribution of the sanitation and household characteristics. These characteristics are also socio-economic and an important indicator of health conditions of the respondent and children.

Source of drinking water is an influential indicator in the variation of infant and child mortality, and various diseases such as diarrhoea, dysentery etc. are spread by water. Our study shows that people used mainly tube

Table 1 Description of variables and their measurement

Dependent Variable	Measurement	
Total Desired Number of Children	Single Number	
Independent Variable	Measurement	
Number of Living Children	Single Number	
Number of Living Sons	Single Number	
Age of the Respondents	Single Year	
Marital Duration	Single Year	
Wife's Level of Education	Single Year	
Husband's Level of Education	Single Year	
Husband's Occupation	Dummy	1 = Agriculture 2 = Service 3 = Business 4 = Labour 5 = Others
Taking Family Planning by Consultation	Dummy	1 = With husband 2 = With Mother-in-law 3 = With Mother 4 = With health-worker 5 = With Others
Religion	Dummy	1 = Islam 2 = Hindu 3 = Christian
Income	Log income	

Table 2 Percentage distribution by selected socio-economic characteristics

Background Characteristics	Percentage (N = 4500 for Total and 2250 for Rural and 2250 for Urban)					
	Respondent's Percentage			Husband's Percentage		
Education	Rural	Urban	Total	Rural	Urban	Total
No formal education	30.4	19.2	24.7	35.3	15.5	25.4
Primary	38.4	19.7	29.1	31.4	17.7	24.6
Secondary	27.5	36.7	32.2	23.1	24.3	23.6
Higher	3.7	24.4	14.0	10.2	42.5	26.3
Occupation						
Housewife	95.5	92.8	94.2	--	--	--
Farmer	--	--	--	66.5	0.8	33.6
Service	1.9	4.8	3.4	8.4	46.1	27.2
Business	0.7	0.8	0.8	15.3	26.8	21.1
Labour	1.8	1.3	1.6	8.0	23.9	15.9
Others	0.1	0.2	0.2	1.0	1.6	1.3
Missing System	--	--	--	0.8	0.9	0.8
	Rural	Urban	Total			
Monthly Income of the Family (Tk.)						
≤ 1500		17.6	6.3			11.9
1600-3000		48.9	33.9			41.4
3100-6000		27.5	28.1			27.8
6000+		6.0	31.7			18.8
Average Monthly Income		3169 Tk.	5776 Tk.			4472 Tk.
Religion of the Respondents						
Muslim		97.7	97.9			97.8
Hindu		2.3	2.0			2.1
Christian		--	0.1			0.05
Having Bank Account in Respondent's Name						
No		94.4	75.6			85.0
Yes		5.5	24.3			14.9
Missing System		0.1	0.1			--
Having Any Property in Respondent's Name						
No		94.6	80.7			87.6
Partial		4.9	15.4			10.2
Total		0.5	3.9			2.2
Having Daily Expenditure of the Family to the Respondent						
No		82.9	67.4			75.2
Yes		17.1	32.6			24.8

Note: Tk. = Taka (Currency of Bangladesh)

Table 3: Frequency and percentage distribution by selected demographic characteristics

Background Characteristics	Percentage (N = 4500 for Total and 2250 for Rural and 2250 for Urban)		
	Rural	Urban	Total
Age of the Respondent			
Under25	40.4	27.8	34.1
25-29	14.6	13.4	14.0
30-34	17.8	21.0	19.4
35+	27.2	37.7	32.4
Marital Status of the Respondent			
Married	97.6	97.3	97.5
Divorce	0.8	0.5	0.6
Separation	0.3	0.4	0.4
Widowhood	1.2	1.8	1.5
Mean Age of the Respondent (in years)	28.72	31.44	30.08
Mean Age At Marriage of the Respondent (in years)	15.81	16.89	16.35
	Numbers and Percentage		
Respondents Who Have No Children	227 (10.1)	143(6.4)	370(8.2)
Sex of the Child			
Male	1689	1815	3504
Female	1447	1698	3145
Mean Number of Live Births	2.00	2.39	2.20
Child is Alive			
No	164	350	514
Yes	2972	3163	6135
Birth Order			
1	637 (28.3)	525 (23.2)	1162 (25.8)
2	736 (32.7)	710 (31.6)	1446 (32.1)
3	376 (16.7)	426 (18.9)	802 (17.8)
4	165 (7.3)	239 (10.6)	404 (9.0)
5	73 (3.2)	106 (4.7)	179 (4.0)
6	23 (1.0)	53 (2.4)	76 (1.7)
7+	13 (0.6)	48 (2.2)	61 (1.4)
	Percentage		
Reasons of Taking More Than Two Children			
Religious	7.9	15.3	11.6
Family	17.5	26.1	21.8
Economical	3.2	2.9	3.0
Social	3.8	2.3	3.0
Missing System	67.6	53.4	60.6

Note: Parenthesis indicate the percentage

Table 4: Percentage distribution by selected sanitation & household characteristics

Background Characteristics	Percentage (N = 4500 for Total and 2250 for Rural and 2250 for Urban)		
	Rural	Urban	Total
Source of Drinking Water			
Tube well	99.4	92.0	95.7
Tap	--	7.7	3.9
Ponds	0.3	--	0.1
Others	0.3	0.3	0.3
Types of Toilet			
Sanitary	32.7	48.0	40.4
Pucca	10.6	42.4	26.5
Kancha	50.6	9.2	29.9
Hanging	1.4	0.1	0.8
Open	4.5	0.2	2.4
Others	0.1	--	0.1
Condition of Houses			
Pucca	5.8	50.0	27.9
Kancha	77.1	12.0	44.6
Half Pucca	11.2	34.9	23.1
Tin	5.7	2.9	4.3
Others	0.2	0.2	0.2
Access To			
Television	24.7	78.4	51.5
Radio	33.7	29.8	31.8
Electricity	56.7	91.6	74.2
Household Head			
Male	98.4	98.1	98.3
Female	1.6	1.9	1.9

wells as their source of drinking water and no one in rural areas used tap facilities. Better sanitary facilities reduce mortality. The better sanitation is a primary health care practice, which can easily be achieved without much financial involvement. Children who use well latrines are assumed to have lower mortality levels than children who do not use them. Table 4 shows that urban areas are more sanitized than rural areas.

Table 4 also shows the distribution of respondents by condition of houses, which may indicate that the respondents of urban areas are richer than the rural respondents with better dwelling opportunities. Electricity is an index of modernization. A household having electricity is, in general, indicator of higher socio-economic status. In total Rajshahi district 26 percent were deprived of electricity. Only 8 percent of respondents had no electricity in urban areas but in rural areas 43 percent had no electricity in their household. So, urban areas are more modernized. TV and Radio are at present the powerful media. These play a very strong role for mass media broadcasting some programs concerning public health awareness. If even an illiterate person watches these health-based programs, it is considered that he will realize the importance of the role of health and cleanliness. The data provides that electronic media such as TV and Radio were accessible to 51.5 and 31.8 percent people in total Rajshahi district. In our societies the husband is the main income earner and decision maker of a family. Only a few families were headed by females in both areas.

Sanitation & household characteristics

Table 4 shows the percentage distribution of the sanitation and household characteristics. These characteristics are also socio-economic and an important indicator of health conditions of the respondent and children.

Source of drinking water is an influential indicator in the variation of infant and child mortality, and various diseases such as diarrhoea, dysentery etc. are spread by water. Our study

shows that people used mainly tube wells as their source of drinking water and no one in rural areas used tap facilities. Better sanitary facilities reduce mortality. The better sanitation is a primary health care practice, which can easily be achieved without much financial involvement. Children who use well latrines are assumed to have lower mortality levels than children who do not use them. Table 4 shows that urban areas are more sanitized than rural areas.

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Empirical results and discussion of multiple regression analysis

Table 5 provides some insights into major factors affecting desired family size in all areas. In order to refine our knowledge about the above relationships, multiple regression analysis is applied to investigate which variables affect desired family size as well as the significance of the effects produced in all areas.

Among all the independent variables in total areas five had a significant

effect while four in urban and two in rural areas had significant effects on desired family size. Number of living children is statistically positively significant in all areas. So, we may say that as the number of living children increases, the desired family size increases in all areas.

Number of living sons had no significant effect in total and urban areas but it was positively significant in rural areas. That means, rural women desired a higher family size with an increasing number of living sons.

Age is positively significant with desired family size in urban and total Rajshahi but not in rural areas. So, desired family size increases with the increase in age of the respondents in urban and total areas. Marital duration is also an important factor to influence desired family size. It is statistically negatively significant in urban areas. So, in urban areas, desired family size decreases with increase in marital duration.

Educational level of respondent affect the desired family size in all areas with a negative impact, that is, higher educated desires for lower family size in all cases. But education level of the husband affected positively significant in only total Rajshahi.

Occupation of the husband bears a significant positive effect in total Rajshahi district. Further, acceptance of family planning shows negative effect in all areas. That may be an indication of family size reduction through taking family planning by consultation.

Religion also shows a positive significant effect on desired family size in total and urban areas while it had no significant effect in rural areas. Income was also the independent variable, which did not affect desired family size significantly in all areas. Thus, it is quite clear that religious beliefs play a role in desiring a family size, but family income plays no role in this regard.

Table 5: Results of the multiple regression analysis in prediction of desired family size

Explanatory Variables	Urban			Rural			Total		
	USC		STC	USC		STC	USC		STC
	B	STE	Beta	B	STE	Beta	B	STE	Beta
Number of Living Children	9.004 E-02	0.015	0.224***	4.050 E-02	0.008	0.184***	6.913 E-02	0.008	0.208***
Number of Living Sons	-1.35 E-02	0.014	-0.027	1.837 E-02	0.008	0.064**	1.350 E-03	0.009	0.003
Age	1.586 E-02	0.004	0.243***	4.049 E-04	0.003	0.012	7.844 E-03	0.002	0.149***
Marital Duration	-7.27 E-03	0.004	-0.119*	-1.08 E-03	0.003	-0.032	-3.19 E-03	0.003	-0.063
Educational Level of Respondent	-2.61 E-02	0.017	-0.056	-7.34 E-03	0.010	-0.026	-8.34 E-03	0.010	-0.022
Educational Level of Husband	-1.142 E-02	0.017	0.026	2.627 E-03	0.008	0.011	-2.019 E-02	0.009	0.060**
Occupation of the Husband	-1.40 E-02	0.016	-0.026	2.135 E-04	0.005	0.001	-1.922 E-02	0.005	0.057***
Taking FP by Consultation	-2.73 E-03	0.010	-0.006	4.107 E-05	0.004	-0.001	-4.93 E-03	0.005	-0.016
Religion	0.351	0.085	0.095***	1.409 E-02	0.039	0.008	0.156	0.045	0.056***
Income	-2.08 E-02	0.052	-0.013	1.314 E-02	0.027	0.013	2.824 E-02	0.028	0.021
Constant	1.352	0.199	--	1.860	0.098	--	1.403	0.100	--
R2	0.109			0.049			0.088		

Notes: USC = Unstandardized Coefficients, STE = Standard Error, STC = Standardized Coefficients, FP = Family Planning, R2 = Coefficient of Determination, B = Multiple Regression Coefficient. Level of significance: *** p<0.01; **p<0.05; *p<0.10.

CONCLUSION AND SOME RECOMMENDATIONS

This study has revealed that substantial variability in responses concerning socioeconomic, demographic & sanitation and household variables exists among women of Rajshahi district. The main findings can be concluded as follows:

(i) By cross-tabular analysis we observe that most of the respondents are housewives and are less educated than their husbands. Rural women are less educated than their urban counterparts. And also rural women are less conscious about their freedom in the family than urban counterparts.

(ii) Most respondents are married and the average age of the respondents is 30.08 years in total Rajshahi district. The mean age at marriage of the respondents is 16.35 years and mean number of live births is 2.20 in total Rajshahi while 8.20 percent of respondents have no children and 25.8 percent is one parity and 32.1 percent is second parity women. And the respondents said that they have more than two children, mainly due to familial causes.

(iii) Most of the respondents drink tube well water. The urban areas are more sanitized than rural areas. The study also shows that only 8 percent respondents of urban areas are

deprived of electricity while in rural areas this percentage is 43.

(iv) The multiple regression analysis shows that the number of living children is the most important determinant in total Rajshahi district as well as in its urban and in rural areas. The number of living sons is also an important determinant in rural areas but not in urban and total Rajshahi district.

To minimize the potential short run fertility stimulating effects of socio-economic development, policy makers must create and promote conditions that encourage couples to desire small family size. Yet, changing family size norms is not likely to occur without more specific attention to the factors affecting these norms. Thus, emphasis should be placed on relevant policies that aim at altering the traditional social structure through promoting female education, raising age at marriage, creating increasing employment opportunities for women which compete with increasing childbearing, spreading family planning knowledge and improving contraceptive accessibility.

ACKNOWLEDGEMENT

The authors would like to thank UNFPA for providing financial support to carry out the research project from which this paper has been prepared.

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PREGNANCY WASTAGE AMONG MARRIED WOMEN IN RURAL RAJSHAHI, BANGLADESH

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Key words: Pregnancy wastage, Reproductive knowledge, Logistic regression analysis.

ABSTRACT

The aim of this paper is to identify the impact of some selected variables on the extent of pregnancy wastage in rural areas of Rajshahi district, Bangladesh through the well known statistical tools like logistic regression model. The information from 750 mothers within the reproductive span (15-49 years) was collected through purposive sampling technique. The study showed that the proportion of pregnancy wastage to live births in two extreme age groups (below 20 and above 40) is tremendously ruthless whereas in other age groups, this is relatively compassionate. About half of the respondents (50.4%) of the study areas had medium reproductive knowledge while the reproductive knowledge average is 0.45. The logistic regression analysis shows that family planning, reproductive knowledge rating and number of living children have highly significant (statistically) effect on pregnancy wastage among ever-married women of rural areas whereas the respondent's education shows less significant effect.

Introduction:

Pregnancy wastage can be classified as intra-uterine foetal death, abortion, and menstrual regulation (Jeffcoate, 1975; and Shaw, Soutter and Stanton 2003). According to Sir Norman Jeffcoate (1975), "pregnancy is the state of female, which is produced due to the implantation of the fertilized ovum in the uterine endometrium and ultimately giving rise to a foetus; and pregnancy wastage is the loss of product of conception normally or therapeutically". In an average, duration of pregnancy accepted 280 days from the first day of last menstruation.

Every year about eight million women suffer from pregnancy related complications and over half a million die. About 99% of these are in developing countries (WHO, 2004). Most of these deaths can be averted even where resources are limited. The poor reproductive health of women, in third world countries, is an outcome of the general neglect of health and nutrition in childhood and adolescence, which affects their future well being (De Silva, 1998). Using the information from 2967 mothers from Rajshahi District within the reproductive span (15-49 years), Khan et al. (2007), found that the proportion of pregnancy wastage to live births in two ages of reproductive years is tremendously 'dodgy' whereas in other age groups, between 20 and 35, these are comparatively benign. Further, 6717 births were studied

to investigate the flow of caesarian deliveries over the ages. They also found that 359 caesarian deliveries against 6,358 natural (vaginal) deliveries.

Ardebili, et al., (1987) studied the reproductive behavior of 1525 pregnant women at the time of pregnancy termination in relation to maternal age, education, prenatal care and number of previous pregnancies. The results showed that the frequency of maternal attendance at prenatal care centers was significantly related to maternal education and that total pregnancies per woman is inversely correlated with maternal education. Again, the highest percentage of abortion was observed in (15-19) age group and the highest number of natural deliveries was observed in the age group (20-29). In 2002, Meharunnisa studied on 2104 gynaecological patients, and out of them 240 cases were of abortion i.e. 11.4% was the prevalence of abortion. Most cases of abortion occurred in women between the age groups of 26-35 years. The commonest type of abortion was incomplete i.e. 30.4%. Prevalence of repeated abortions was 29.1%. Most of these abortions occurred at 8-12 weeks of gestation i.e. 50.8%. Apparent causes for the abortion were most commonly the metabolic diseases i.e. 29.5% and the least common causes were the uterine malformations i.e. 8.2%.

Abortion is the commonest complication of the pregnancy, and is responsible for the maximum number

of pregnancy wastages (Rana et al., 1990). In Bangladesh, the law prohibits induced abortion except when a woman's life is endangered by her pregnancy. Nearly half of admissions to gynecology units of major hospitals in Bangladesh involve abortion-related complications (Measham, 1981). Risk factors for pregnancy wastage in Bangladesh have not been studied very extensively. This is in part because of the lack of reliable data. It is difficult to obtain information on abortion from clients, and service statistics are highly inaccurate.

Nonetheless, in this article, the main aim and objective is to identify the impact of some selected variables on the extent of pregnancy wastage in rural Rajshahi by logistic regression analysis.

Data and Methods

In the present research, the data were collected from 750 women of reproductive ages (15-49 years) who lived in rural areas of Rajshahi district, Bangladesh. We select Baksimoi Union of Mohonpur thana as a representative part of rural Rajshahi. The respondents were directly contracted and the desired information was collected successfully using a pre-designed questionnaire through a purposive sampling technique.

Various alternative statistical tools exist for analyzing the effect of various background characteristics on pregnancy wastage over time. In this study, the logistic regression model is used to analysis the data because this model is being used in many different areas and has become the standard method of analyzing model in which the dependency of a binary response variable is being tested on a number of explanatory variables. The logistic regression model is a curvilinear response function and this function assures that the probability of occurrence of an event is always between 0 and 1. Hence the dependent variable used in the logistic regression model is as follows.

$Y=1$, if the women had at least one pregnancy wastage during their life and

$=0$, otherwise.

Results and Discussion

To know the age specific flow of pregnancy wastage, the proportions of pregnancy wastage to mothers and to live births have been computed. The computed values have been incorporated in Table 1 and to divulge the age specific flow of pregnancy wastage, age specific line graph has been constructed (Figure 1).

The study showed that the number of pregnancy wastages in the age group 25-29 is 10 which is highest among the women. The second highest is the women who are of the age group 40-44. This usually happens in most rural areas of Bangladesh because women of age group 25-29 are desired for more children than the women of age below 29 and due to the lack of proper awareness about the adverse effect of pregnancy among the older ages women, pregnancy wastage occurs in age group 40-44. But the proportion of pregnancy wastage to mothers is very higher in the age group 40-44 than any other previous age groups (Figure 1). At the same time, the proportion of pregnancy wastage to live births is high in the age group 15-19. Thereafter, this proportion is slowly decreasing (considering the smoothed pattern) over the ages but it again very rapidly increases after the age group 35-39 (Figure 1).

Reproductive knowledge rating is a system in which the respondents are scored (this rating ranges between 0 and 1) uniformly on the basis of some variables related to reproductive health. More than 50% (50.4%) of all females (750) have reproductive knowledge scored in the group (0.4-0.6) whereas the reproductive knowledge average is 0.45 (Table 2). So, from the study, it is clear that the reproductive knowledge of the respondents, living in the study areas, is not so good. However, fairly saying, about half of the respondents bearing medium reproductive knowledge.

Table 3 showed the logistic regression estimate of odds ratios for the effects of selected background characteristics of ever-married women of reproductive ages on pregnancy wastage. Odds ratios are shown in place of regression co-efficient for the easy interpretation of results.

A statistically significant odds ratio below 1.00 means a negative effect while a statistically significant odds ratio above 1.00 means a positive effect on the independent variable.

The regression coefficient of women corresponding to their mean age at marriage is calculated. Since the legal age at marriage in Bangladesh is 18 years for women, therefore, the age at marriage above 18 years is considered as reference category. The odds ratio for women whose age at marriage is <18 years is 2.532. This indicates that the women of age at marriage <18 years have 2.532 times more likely to have higher pregnancy wastage than that of the reference category.

Considering the women who did not practice family planning, as a reference category, the regression coefficient corresponding to women who practiced family planning has been computed and the results are statistically significant. The result indicates that the women, who currently used family planning, have 0.116 times less pregnancy wastage than those women who did not use (reference category).

In case of educational qualifications of the respondents, the regression coefficient has been computed by considering the literate women as a reference category and the result is negative in sign and also showed the significant effect on pregnancy wastage. The odds ratio corresponding to the illiterate women is 1.891. It indicates that the illiterate women have 1.891 times higher pregnancy wastage than the literate women. This happens as because the illiterate women of the study area are less aware about the adverse effect of pregnancy wastage on their reproductive health.

As about half of the women of the study area have medium reproductive knowledge, so, the women who had average reproductive knowledge were considered in this study as a reference category. The result showed that the women, whose reproductive knowledge is average, have 0.072 times less pregnancy wastage than the women whose reproductive knowledge below the average (reference category).

The couples are encouraged for 2 live children in Bangladesh during their life, therefore, considering the women having >2 children as a reference category, the regression coefficient is computed and the result showed statistically significant effect on pregnancy wastage. The odds ratio corresponding to women having children 2 is 0.093. This result clearly indicates that the women who had less than or equal to two children, have 0.093 times less pregnancy wastage than those women of the reference category (who had more than two children).

CONCLUSION AND RECOMMENDATIONS

Risk of pregnancy wastage changes with age. Increased age decreases the risk of pregnancy wastage. However, in the extreme age groups pregnancy wastages are observed substantially larger. The logistic regression analysis shows the statistically significant effect of the selected variables except age at marriage on pregnancy wastage.

Therefore, the effective policies and recommendations are needed to

create the awareness among mothers living not only in the study areas but also other areas of Bangladesh.

i. Early marriage (before 18 years) and teenage motherhood is a bleak reality behind the scrape of female health hazards in Bangladesh. The women should be aware of safe motherhood (no birth before 25 years) that may be helpful to overcome the pregnancy related deficiencies as well as to control the population growth to a large extent.

ii. The knowledge of women relating to reproductive health should be increased through education, information and communication campaigns among rural areas so that the pregnancy wastage situation cannot be evaded easily.

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Table 1: Age Specific Pregnancy Wastage to Mothers and to Live Births.

Age group	No. of mothers	Total live birth	Total no. of pregnancy wastages	Proportion of pregnancy wastage to mothers	Proportion of pregnancy Wastage to live births
15-19	93	48	2	0.0215	0.0417
20-24	167	193	5	0.0299	0.0260
25-29	175	326	10	0.0571	0.0307
30-34	147	353	5	0.0340	0.0142
35-39	96	263	4	0.0417	0.0152
40-44	61	184	7	0.1148	0.0473
45-49	11	36	-	-	-

Table 2: Respondents by their Reproductive Knowledge Rating Groups.

Reproductive knowledge rating groups	Number of respondents	Percentage	Average reproductive knowledge
0.0-0.2	83	11.1	
0.2-0.4	164	20.9	
0.4-0.6	378	50.4	0.45
0.6-0.8	70	9.3	
0.8-1.0	55	7.3	
Total	750	100.0	

Figure 1: Age specific flow of pregnancy wastage to mothers and to live births.

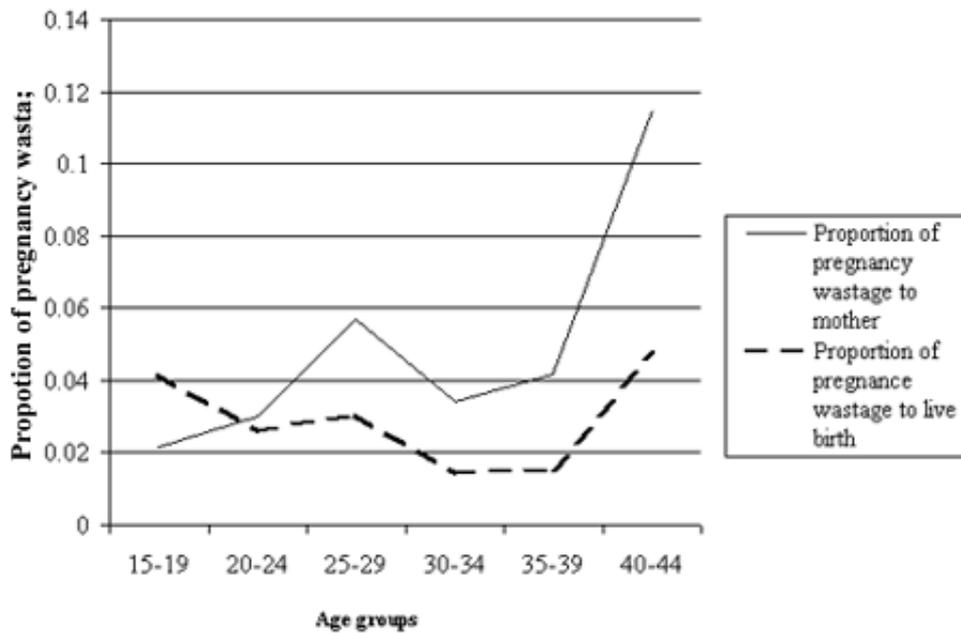


Table 3: Logistic Regression Estimates of the Odds Ratio Predicting that Rural Women had Pregnancy Wastages by Some Background Characteristics.

Background characteristics	Coefficient (β)	S. E. of estimates	Odds ratio $Exp(\beta)$
Age at marriage:			
<18 years	0.929	0.215	2.532
18+ years (Ref.)	-	-	1.000
Family planning:			
No (Ref.)	-	-	1.000
Yes	-2.158	0.526	0.116***
Respondent's education:			
Illiterate	0.637	0.623	1.891*
Literate (Ref.)	-	-	1.000
Reproductive knowledge rating:			
< Average (Ref.)	-	-	1.000
\geq Average	-2.627	0.299	0.072***
Number of live children:			
> 2 (Ref.)	-	-	1.000
\leq 2	-2.380	0.348	0.093***

Note: (Ref.)= Reference category
 ***, **, and * indicate $p < 0.001$ (highly significant), $p < 0.01$ (significant) and $p < 0.05$ (less significant) respectively.

HARASSMENT PATTERN OF SEX WORKERS IN BANGLADESH : A SITUATIONAL ANALYSIS OF THREE BROTHELS

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Key words: Harassment, Commercial Sex Worker, Brothel, and Sardarn.

INTRODUCTION

Prostitution is defined as the sale of sexual services. It's a practice of engaging in sexual activity for compensation - normally money or its equivalent (other forms of property). Prostitution has become a high stakes business, with huge profits for brothel keepers, pimps, procurers, recruitment agencies, airline companies, hotels, travel groups, marriage bureaus, and many others. The trading of women and an increasing number of girls is carried out and mediated in many direct and indirect approaches, and is oftentimes glamorized by including language that makes such practices acceptable. One no longer uses the word prostitute, but instead uses "sex worker," "entertainer," "guest relations officer," or "cultural dancer." An organized international lobby is working very hard to make prostitution a part of the categories of work for women that should have adequate legal and labor protection (Dios 1999).

With more than half its population living below the poverty line, Bangladesh remains one of the poorest countries in the world. As in other countries, poverty, low social status, and lack of opportunities for education and employment have forced many women to become sex workers. In 1991 the national census of Bangladesh categorized them as beggars and vagrants under the subheading of "miscellaneous"

(BBS 1991). According to the non-governmental organizations, over 150,000 women are involved in prostitution in Bangladesh while government statistics acknowledge only 9,000. The social status of sex workers in Bengali society is considered so low, that they are not allowed to wear shoes or sandals outside the brothel. Even death fails to end their misery. Regardless if a prostitute is Hindu, Muslim or Christian, the community people observe funeral rite for her. When sex workers die in Daulatdia, a brothel near Padma River, their bodies are just thrown in the river (MJIFDP 2000).

Prostitution in Bangladesh is shrouded in mystery. The law treats the woman as a victim, and the pimps and clients face a possibility of a death sentence. Thus, the law is beautiful, but when it comes to implementation, the women are picked up for soliciting, which is a penal offence enacted during the days of the British colonial period in 1860 (Huda 1999).

A little and/or no research has been conducted regarding harassment of the sex workers in three established brothels and some other recognized places in Bangladesh that may show a significant circumstance that has never been seen before. Therefore, our aim is to investigate the present scenario of harassment of the sex workers in Bangladesh and quality improvement ways for the natural life they usually expect.

Statement of the Problem

Prostitution is the oldest profession, and the existence of selling female sex for the gratification of males is also one of the oldest vices in society. Some have related it to the functional needs of the society, which is served by the females. However, such explanations hide the totality of the phenomenon that demands further insight into the history of prostitution. Among the reasons behind the beginning and sustaining of the profession, the subordination and weaker position of women in the socioeconomic structure of society can be assumed as most significant (Hossain, Habib and Imam 2004). The practices, which are going on worldwide, is nothing but illicit sex or prostitution that is a serious threat to civilized society. Though it is a neglected profession it is continuing almost all over the societies of the world. It is too hard to get actual information when this profession started in Bangladesh. In the Indian subcontinent, commercial sex started during the regime of Mughal. The sex workers were given a fixed place for doing such job and adopted a tax for this profession. It got a special demand to extend business activities. Here in British colonial times, it got recognition as a profession in the business centre. Therefore it considered that the recognized prostitution in Bangladesh started between a hundred and fifty to two hundred years ago (Islam 1994).

In this subcontinent prostitution was recorded in public and personal records. Khan and Arefeen (1989) mentioned about Report of the Census of Bengal, 1901, Census of India, 1911, the works of Joarder (1986), personal diary of Dewan Raja, etc. Khan and Arefeen (1989) found the inclusion of prostitutes as 'unskilled labour, not agricultural' or 'indefinite and disreputable' or in the miscellaneous column. After the prostitution of India, the Government of Pakistan continued the decennial census but avoided the conclusion of prostitutes. But over time it was increased in many towns or nearby places of patitalaya (brothel) in erstwhile East Pakistan and Bangladesh. Among them, the brothels of Narayanganj, Chittagonj, Iswardi, Daulatdia, Tangail, Natore, etc., were relatively well known. Attempt of eviction of these small and big brothels began in the late seventies, without planned rehabilitation or following any socially secured policy. As a result the prostitution spread into larger areas and took varied means. Most recently, some intervention programmes, mostly by non-government organizations, started working for protecting their human rights and preventing them from contracting contagious diseases (Hossain, Habib and Imam 2004).

The registered brothels of Bangladesh are- Tangail, Mymensingh, Daulatdia (Rajbari), Jessore (two brothels), Bagherhat, Baniasanta (Mongla), Faidpur, Jamalpur and Khulna. The biggest brothel is located at Daulatdia. In spite of these, there are a few dozen of polli (small brothels) formed in some cities. Potnitala (Naogaon), Joypurhat, Bogra, Sayedpur, and some slums of Dhaka city are mentionable (Tahmina and Moral 2000).

In our Bangladesh society, we observe that four types of harassment are frequently faced by the sex workers and those are physical torture, sexual and financial exploitation, and psychological persecution. Hossain, Habib, and Imam (2004) showed that apart from encountering physical torture of a diverse nature, sex workers are often forced to offer money to police, mastans and the like, often offering them free sexual service. In focus group discussions

the sex workers claimed that some NGO workers handle their bank account, since many prostitutes are not informed whether they are allowed to open an account in any recognized bank, but a few years/days after they flew away taking their whole savings. On the other hand, few reporters/journalists (some of them are not reporters but introduce themselves as a reporter) collect sex workers' insightful information and blackmail them to take undue privilege. We also uncover though the clients come to the sex workers whenever they feel like it but their (clients) attitude is too ill to them (sex workers). This harassment occurs mostly by police, mastan (muscleman), dalal (pimp), sardarni (leader of the prostitutes), political leaders, and some other persons (e.g., NGO workers, reporters/journalists etc.) of the society.

Conceptual Classification

Harassment

The meaning of harassment varies from place to place. It is not possible to define by a single sentence. Many distinguished persons defined this by using their own ideas. Our intention is to uncover the behaviour by different levels of people toward the sex workers. Here we have noticed levels of harassments defined as- physical torture, sexual and financial exploitation, and psychological persecution.

Commercial Sex Worker

Prostitute is a Latin word that is sometimes used instead of commercial sex worker. It is used in Bangladeshi society given named as- Bornita, Magi, Bashini, Bala, Jenana, Jounokormy, Gonika, Bessha, Ghupshi, Call-girl, Nishi Konna, Parar Maye, Khanki, Naughty, Chenal, Barobonita. We have defined commercial sex workers (female) as those who sell sex for money. The term sex worker is considered in this paper as those women who sell sex for money in our society.

Brothel

Brothel is defined here as a government recognized place where women are allowed to sell sex for earning money. Therefore the place where the sex workers continue

the sex trade is known as brothel. Generally the time of sex business is fixed from 9.00 am to 4.00 pm but it continues all the time of day and night. Almost all of the brothels have a government recognized beer shop.

Sardarni

Sardarni means senior prostitute. The senior prostitute who controls a group of junior sex workers is named as sardarni. They have good power which they exercise over junior prostitutes. Sardarni practices her power throughout dalal (pimp), mastan (muscleman), political leader, police, blacker etc.

METHODOLOGY

We have collected data from the prostitutes of three established brothels of Jamalpur, Mymensingh, and Tangail of Bangladesh. Among 800 sex workers, 120 were interviewed. The rest of the sex workers declined to be interviewed. The interviewing was conducted using a prescheduled questionnaire. Some popular statistical tools have been used to analyze our collected data. We have constructed frequency tables to cite the frequency distribution of several variables. Contingency analysis has been performed to investigate the association among qualitative variables. For contingency analysis we have tested the following null hypothesis:

H0: There is no association between the variables.

H1 : H0 is not true.

All contingency tables have been prepared on the basis of classification of variables. From each contingency table, examination of association between the components and the various segments of the components have been made by computing chi-square test statistics of the form-

$$\chi^2 = \sum_i \sum_j \frac{O_{ij}^2}{E_{ij}} - N \sim \chi_{(r-1)(c-1)}^2$$

Where O_{ij} and E_{ij} are the observed and expected frequency of (i,j)th cell, respectively.

The earlier discussion of univariate and bivariate data shows percent

distribution of the variables. But these analyses failed to identify interaction effects of a group of categorical or dummy variables. So, it required using the logistic regression as well. The logistic regression model can be used not only to identify risk factors but also to predict the probability of success. The model is now widely used in research work to access the influence of various socio-economic and demographic characteristics for

controlling the effect of other variables on the likelihood of the occurrence of the event of interest. Logistic regression analysis is similar to a linear regression model where the dependent variable is a dichotomous one, coded as 1 (event occurring) and 0 (event does not occurring), the dependent variables can be interval level or categorical; if categorical, they should be dummy or indicator coded.

Let Y_i is a dichotomous dependent

$$\Pr(P_i) = \Pr(Y_i = 1) = \frac{e^{\beta_0 + \sum_{i=1}^6 \beta_i X_{ij}}}{1 + e^{\beta_0 + \sum_{i=1}^6 \beta_i X_{ij}}} \dots \dots \dots (1)$$

Or equivalently,

$$1 - \Pr(P_i) = \Pr(Y_i = 0) = \frac{1}{1 + e^{\beta_0 + \sum_{i=1}^6 \beta_i X_{ij}}} \dots \dots \dots (2)$$

Where β_0 is the intercept term and β_i 's are the regression coefficients. The logarithm of the ratio of P_i and $1 - P_i$ which is called logit of turns out to be a simple linear function of X_{ij} .

We define, $Logit (P_i) = Log_e \frac{P_i}{1 - P_i} = \sum_{j=0}^6 \beta_j X_{ij} = \beta_0 + \sum_{j=1}^6 \beta_j X_{ij} \dots \dots \dots (3)$

The logit is the logarithm of the odds of success, that is, the logarithm ratio of the probability of success to the probability of failure. The logistic model can be rewritten in terms of the odds of an event occurring. First, P_i as increases, so does and second, log it P_i varies over the whole real line, whereas P_i is bounded only between 0 and 1. If P_i is less than 0.5, log it P_i is negative; and if P_i is greater than 0.5, log it P_i is positive. The equation can be written in terms of odds as:

The exponential rise to the power is the factor by which the odds change when j th independent variables increase by one unit. If β_j is positive factor will be greater than 1, which means that the odds are increased; if β_j is negative factor will be less than 1, which means that the odds are decreased. And when β_j is 0, the factor equal to 1, which leaves the odds unchanged. An odds ratio is greater than 1.00 suggests as increased likelihood of the event occurring while an odds ratio is less than 1.00

indicates a decreased likelihood of the event occurring. The category with the relative odds of 1.00 represents the reference category for those categorical variables.

Socioeconomic Profile of the Sex Workers

The sex workers socioeconomic profile is associated with several characteristics. Information about socioeconomic profile is needed in understanding the component of behavioural research on sexual networks and to investigate the problem from a holistic point of view. A socioeconomic profile provides important insights about a community upon which future preventive interventions may be formulated and undertaken as well.

Individual socio-economic profile of the respondents will allow us to get a detailed idea about their age, education, marital status, age at first marriage, whether given dowry, registration of marriage, number

variable (whether the sex workers were harassed) and the independent variables X_{i1} , X_{i2} , X_{i3} , X_{i4} , X_{i5} , X_{i6} , (educational qualification, harassment by police, having sex during menses, whether clients likes to use a condom, social sentiment towards them, and whether they face problems going outside the home, respectively).

Then the model becomes of the forms:

Data on demographic and socioeconomic characteristics illustrates that though 30 percent of the respondents engaged in sex for money at age 25-31, 20.8 percent of respondents are at less than 18 years of age. Only 26.7 percent of sex workers are educated (primary to higher). However, 42.5 percent of respondents are illiterate and 30.8 percent respondents can sign only (Table 1). We find that age has an association with working days per week as if age increases their demand for sex decreases day by day (See Table 1). So, they are used to more sex for earning enough. Educational qualifications had no association (See Table 3) with contraceptive use as use of contraceptives mostly depends on clients' preference rather than the

prostitutes'. Though some prostitutes are aware of risk factors during sex but usually fail to impose their ideas since the clients may not be interested to have sex with her. On the other hand, educational qualification has an association with working days per week (See Table 3). Education can be a control as to what amount of time she should perform sex, a week.

Only 35.8 percent of sex workers are married and 64.2 percent sex workers have different marital status such as unmarried, divorced, widowed and separated. The sex workers married at different ages- below 18 years (92.6%), and 18 years and over (7.4%). The sex workers report that a considerable majority of them (70.4%) were the victim of dowry and another proportion of them (58%) had not registered their marriage and were thus cheated easily by their husbands (See Table 1).

72.6 percent of respondents have children, two or less than two. 21.1 percent and 6.3 percent of sex workers have 3-4 and 4+ children respectively. Again, 35.5 percent respondents live with their children, 46.1 percent report though they stay away from them they care for them and 18.4 percent says they have no relation with their children (Table 1). On the other hand, only 29.9 percent respondents replied that their children go to school, though it was not identified whether their children were old enough for school. It should be noted that all of the children have fundamental rights of compulsory primary education (Table 1).

We have collected some information about residential pattern of the sex-workers. Out of 120 respondents 42.5 percent expressed that their household type is rented house, 40.0 percent of them have their own house and 17.5 percent of them have no house of their own. More than 56 percent of respondents claimed their household type is tin shed. The rest of them have different types of dwelling houses and those are half building (22.2%), concrete house (10.1%), made of mud (2.0%), and polythene or bamboo slips (9.1%). Also they (38%) have the facility of electricity. 26 percent and 22 percent respondents have T.V /CD/ tape-recorder/ radio, and electricity/ T.V/ C.D /tape recorder/

radio/ chair-table/ cot respectively (Table 1). In focus group discussion we found an alarming situation that they have to spend more than 8 to 10 times higher amount of money for the above facilities than other Bangladeshi nationals.

Reasons for Involvement in Prostitution

We have collected data carefully looking at causes of involving in this profession. A high proportion of sex workers (42.5%) came to the sexual profession due to poverty. On the other hand, the rest of them came to the profession due to cheating (11.7%), raping (10.0%), afflicting (5.0%), bearing inheritance and other causes (16.7%) respectively (Table 1). It is a matter of regress that 75.0 percent of sex workers involved are less than 18 years of age where 34.2 percent sex workers comprise age less than 14 years of age. The UNICEF estimated that there were 10,000 child prostitutes working in the country (Ahmed 2006), but other estimates placed the figure as high as 29,000 (Ahmed 2006). The minimum age requirement of 18 for legal prostitution commonly was ignored by authorities and circumvented by false statements of age. Procurers of minors rarely were prosecuted, and large numbers of child prostitutes worked in brothels (Ahmed 2006). On the other hand a report shows that 65 percent of 135 surveyed women and girls in brothels in Bangladesh were between age 11 and 13; 33 percent were between age 13 and 15 (Firoze and Ali 2006). However 37.5 percent said that they are included in this occupation less than 5 years. 25.8 percent sex workers do sex from 5-10 years and only 5 percent doing sex over 20 years (Table 1). In focus group discussions we observed that sex workers could continue their profession 5 to 6 years only in their life time, because they do sex more frequently than those of others. Unhealthy and insufficient food intake, impact of open weather, physical or mental torture (harassment) etc. are also the reasons of such short duration of sexual life.

Sources of Contact with the Clients

Sexual business mostly depends

on the sources they are using for contacting with the clients. 69.2 percent of the respondents communicate directly by themselves and 20.8 percent of them by dalal (pimp) and sardarni (senior prostitute); also specifically, 5.0% communicate by mobile phone or custodian of rented house/hotel manager (Table 1).

Types of Clients

All levels of people do sex with the sex workers either in a brothel or in hotel or even in any type of street based places. The rickshaw pullers and day laborers cover 36.7 percent of clients for the commercial sex-workers in Bangladesh. The second largest group is students where their participation is 23.3 percent (Table 2). The peak number of sex-workers do sex with 2-4 persons a day whose percentage is 55.8. On the other hand, 29.2 percent do sex with 5 to 6 persons per day. In contingency analysis (Table 3), it reveals that types of clients have association with amount of money as if clients are VIP level people, they pay a good amount more than a rickshaw puller.

Income from Sex

The comparative study of working lifetime, according to income reveals that 55.8% prostitutes sell sex by Tk. less than 50 (equivalent to US \$ 0.74 @ Tk. 68.00) and 30.8 percent by Tk. 50-100 (equivalent to US \$ 0.74-1.48 @ Tk. 68.00). Only 1.7 percent earns Tk. more than 300 (equivalent to US \$ 4.41 @ Tk. 68.00) per single performance. 69.2 percent of respondents do sex daily per week in spite of their continuing menstruation and 24.2 percent sex workers do sex 4-6 days per week. On the other hand, 42.5 percent of sex-workers said that their monthly income is less than Tk.4000 (equivalent to US \$ 58.82 @ Tk. 68.00), 25.0 percent earns Tk. 4000-6000 (equivalent to US \$ 58.82-88.24 @ Tk. 68.00), and 17.5 percent earns Tk. over 8000 (equivalent to US \$ 117.65 @ Tk. 68.00) only (Table 2). Their overall income in a sense is good comparing with other Bangladeshi females. It is one of the reasons that a large group refused to be free from such a profession once they are involved.

From contingency analysis (Table

3) we found that monthly income has no association with modern facilities as well as with household condition. It is because although they earn a minimum amount, they are under a circle of people who control their income.

Methods of Contraception and Sexual Diseases

The sex workers frequently try to use contraceptives. Hence the physical problem mostly depends on sex during menses. Working days per week have no association with sexual diseases (Table 3). Not only do sexual diseases solely depend upon working days per week but also with various factors as proper health care, food intake, environment etc.

17.6 percent sex-workers suffer from Gonorrhoea, 26.4 percent from Syphilis, 30.8 percent from skin disease and other respondents suffering from one or more than one disease. In the case of contraception, 5.5 percent use permanent methods and the rest of them use the pill (23.6%), condom (42.7%), injection (11.8%) and other methods respectively. The rate of condom use among sex worker is about 86.7 percent and among clients is about 13.3 percent (Table 2). We failed to know whether they are suffering from HIV/AIDS though many of them are performing sex without a condom, because they dislike testing their blood for social stigma and discrimination if it is proved positive. In contingency analysis (Table 3) we observe that sex during menses time no association with physical problem. It is a contradiction! Usually most of them are suffering from several diseases.

Awareness of Risk Factors

HIV/AIDS is not just a health threat in our society but also a social, economical, development and ethical threat. We observe that 70 percent of respondents are not aware of HIV/AIDS risk during sex. 43.9 percent respondents have been aware of such risk factors by NGOs (non-governmental organizations), 40.3 percent were aware by TV/Radio, and 9.2 percent were aware by other sources. On the other hand 29.2 percent and 33.3 percent prostitutes are addicted to smoking and wine

(domestic or foreign) respectively and 37.5 percent prostitutes addicted with variety of items such as ganja (marijuana), heroin, injection etc. (Table 2).

Patterns of Harassment to the Sex Workers

Harassment is a common phenomenon to the sex workers. Different levels of people harass them. 16.7 percent sex workers were harassed by police. Distinctly 21.9 percent alleged that they were harassed by dalal (pimp) and senior sardarni (prostitutes). A few percentages claimed that mastan (muscleman), political leaders and other persons, afflict them also. 39.1 percent sex-workers accuse society that does not show normal behavior toward them whereas 15.6 percent complain of bitterness toward them, 6.3 percent complain of reviling approaches toward them. A remarkable opinion of the sex-workers regarding whether they are interested in rehabilitation shows that 68.3 percent wish to come back into the normal life (Table 2).

The logistic regression analysis indicates that educational status is an important factor for harassment of the sex workers. The estimated regression coefficient for literate workers is -3.485 and its odds ratio is 0.031, which means that literate workers have negatively significant (at 1% level of significance) impact on harassment of the sex workers and also literate workers have 96.9 percent lower risk than illiterate workers for harassment. It is because naturally literate workers deserve more motivation to manage any level of people in any circumstances. Though the law-enforcing agency (police) has a negatively significant effect it has only 5.1 percent direct harassment involvement (arrest) to the sex workers. Our empirical data also shows that the sex workers are not only harassed by police but also by mastans (muscleman), dalal (pimp), sardarni, political leaders etc. Sex during menses also has a negative impact on harassment of the sex workers.

The result of logistic regression about the role of condom use is an

important factor for assessing the harassment pattern. The estimated regression coefficient those who are interested to use condom is 1.266 and its odds ratio is 3.548 implies that clients using a condom have a positively significant impact (at 10% level of significance) on the harassment pattern and it also has 3.548 times higher risk than those who are not interested to use a condom. This is of course a contradictory result. It can happen as the client using a condom is not getting sufficient sexual gratification. Therefore these types of client are inclined to humiliate the sex workers. Our result also indicates that the workers who go outside their homes have a highly positively significant (at 1% level of significance) impact that means they usually face 49.700 times higher problems than those who don't.

Social attitude towards the sex workers is also an important determinant in doing different types of harassment to the sex workers. The estimated regression coefficient for good, bad, and very bad as social sentiment are -2.365, -1.239, and 0.564 respectively and its odds ratios are 0.094, 0.290, and 1.759 respectively which implies that good sentiment has a negatively significant effect on sex workers and also bad social sentiment has a negative impact on workers but very bad social sentiment have a positive impact on that type of worker. Overall good, and bad sentimental people shows 90.6 percent and 71 percent lower harassment attitude but very ill tempered people show 75.9 percent higher harassment attitude towards the sex workers than reference category. Though some people have a good sentiment towards sex workers but they show a little harassment attitude (9.4%) and bad sentimental people shows 19.6 percent higher (29% towards workers) harassment attitude than good-tempered people.

CONCLUSION

This is an empirical study that attempts to explore the extent and nature of socioeconomic background, sexual risk behavior, reasons for involvement, and patterns of harassment of the sex workers of three

established brothels in Bangladesh. Here poverty and adverse social situations e.g., cheating, raping, afflicting, bearing inheritance, late marriage, early widowhood/separation, attraction to the better life, urbanization and industrialization, familial conflict etc., motivated and drive them to enter into this humiliating job. A large number of sex workers' ages are not up to the mark of legal limit. The rickshaw pullers and day labourers cover the great majority of their clients while the lion's share of their earnings mostly depends on the payment given by the VIP clients. In fact their earnings are below a dollar per act of sex. The young sex workers are more attractive to and preferred by the clients. Also the young sex workers are more capable of performing sex frequently for more income.

Our study showed that a huge number of sex workers are illiterate and though some are literate but their level is from primary to its nearest only. But education has a significant impact on the overall status of the sex workers even it helps controlling how long she should engage in sex a week. Education is also the pre-requisite of enough income.

The present study found that a number of local and national level NGOs are lively in constructing awareness and knowledge through sponsorship operation among the sex workers and undertaking necessary measures and strategies for the prevention of STIs and HIV/AIDS. But the majority of the sex workers are not aware of HIV/AIDS risk during sex. They don't commonly use condoms or their clients also. Therefore they are suffering from many diseases.

This study uncovered the nature of violence/harassment they regularly face from their matching part and also from other peoples of the society. The following types of harassment are frequently faced by the sex workers are - physical torture, sexual and financial exploitation, and psychological persecution. Away from each occurrence of physical torture of varied nature, sex workers are habitually forced to offer money to police, mastans and the like, often offering them free sexual services. This harassment occurs mostly

by police, mastan (muscleman), dalal (pimp), sardarni (leader of the prostitutes), political leaders, and some other related persons e.g., NGO workers, reporters/journalists etc., of the society.

Policy Measures

The findings and discussions stated above consist of few intervention policy measures considered in the future development programme for the sex workers. The government and non-government organizations may formulate and undertake the following intervention strategies for the sex workers in Bangladesh:

- a) The commercial sex workers along with the community people should be thoroughly oriented both about the health and social hazards induced by sex profession;
- b) Sex workers need to be aware of the whole impacts for this profession they may face later through mass media like- News papers, Radio/TV, GO/NGO programmes, short-film showing programmes etc.;
- c) The community people need to be aware of the consequences of unsafe sex if they engage once;
- d) Government should take a long term plan to rescue them from this shameful job in our society;
- e) Vocational education and health care services need to be imposed among the sex workers so that once they can enter a new life if desired;
- f) It needs an immediate action program for free and forced medical checkup regularly to know whether they are carrying HIV/AIDS; and
- g) Government should take necessary action so that none can harass them now and then.

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Table 1: Background Characteristics of Sex-workers in Bangladesh

Background Characteristics	Percent	Background Characteristics	Percent
1. Age		10. Ownership of the Residence	
<18	20.8	Rent a house	42.5
19-24	24.2	Native house	40.0
25-31	30.0	Refugee	17.5
32-37	11.7	11. House Types	
38 and over	13.3	Made of mud	2.0
2. Educational Status		Brick-built	10.1
Illiterate	42.5	Half building	22.2
Can sign only	30.8	Tin shed	56.6
Primary	10.0	Polythene/Bamboo slips	9.1
Junior secondary	5.0	12. Modern Facilities	
Secondary	6.7	Electricity	38.0
Higher secondary and above	5.0	TV/CD/Tape recorder/Radio	26.0
3. Marital Status		Electricity, TV/CD/Tape recorder/Radio	22.0
Married	35.8	Electricity, TV/CD/Tape recorder/Radio/Chair/Cot	12.0
Unmarried	32.5	Others	2.0
Divorced	20.0	13. Reasons of Involvement	
Widowed	6.7	Poverty	42.5
Separated	5.7	By cheating	14.2
4. Age at First Marriage		By afflicting	10.0
<14	43.2	By raped	11.7
15-17	49.4	Inheritance	5.0
18 and above	7.4	Other	16.7
5. Whether Given Dowry		14. Involvement Age	
Yes	70.4	<14	34.2
No	29.6	14-17	40.8
6. Marriage Registration		18-25	23.3
Yes	42.0	25 and above	1.7
No	58.0	15. Duration of Involvement	
7. Number of Children		<5	37.5
	72.6	5-10	25.8
3-4	21.1	11-15	25.0
4 and above	6.3	16-20	6.7
8. Living Status		20 and above	5.0
Children are living with mother	35.5	15. Communication with Client	
Outside with mother's caring	46.1	Direct	69.2
Separated	18.4	Mobile contact	5.0
9. Children Schooling		By Sardarni	10.8
Yes	29.9	By Dalal (Pimp)	10.0
No	70.1	By custodian/hotel manager	5.0

Table 2: Background Characteristics of Sex-workers in Bangladesh (Continued from Table 1)

Background Characteristics	Percent	Background Characteristics	Percent
16. Types of Client		23. Suffering Diseases	
Rickshaw-puller/ day worker	36.7	Gonorrhea	17.6
Vehicle man	8.3	Syphilis	26.4
Businessmen	18.3	Skin disease	30.8
Police/Army	5.0	Gonorrhea, Syphilis	4.4
Student	23.3	Syphilis, Skin disease	3.3
Other	8.3	Gonorrhea, Syphilis, skin disease	4.4
17. Number of Client		Others	13.2
<2	11.7	24. HIV/AIDS Awareness	
2-4	55.8	Yes	30

5-6	29.2	No	70
6 and above	3.3	25. Awareness Media	
18. Amount of Money (Per Act)		NGO	43.9
<50 TK.	55.8	TV/Radio	40.3
50-100 TK.	30.8	Newspaper	7.3
100-300 TK.	11.7	Other	9.2
300 and above	1.7	26. Types of Addiction	
19. Working Days (Per Week)		Smoking	29.2
0-3	6.7	Ganja/Heroin	6.3
4-6	24.2	Wine	33.3
Daily	69.2	Smoking, Ganja/Heroin	2.1
20. Monthly Income (TK.)		Smoking, Injection	4.2
<4000	42.5	Smoking, Wine	8.3
4000-6000	25.0	All Items	8.3
6000-8000	15.0	Others	8.3
8000 and above	17.5	27. Harasser to the Sex-workers	
21. Contraceptive Methods Used		Police	16.7
Permanent	5.5	Muscle-man	8.3
Pill	23.6	Dalal	21.9
Condom	42.7	Sardarni	21.9
Injection	16.4	Political leader	8.8
Other	11.8	Other	12.5
22. Interested of Using Condom		28. Social Attitudes	
Sex-worker	86.7	Not usual	39.1
Client	13.3	Reviling	15.6
		Bitter approaches	6.3
		Other	39.1
		29. Interested for Rehabilitation	
		Yes	68.3
		No	31.7

Table 3: Results of Contingency Analysis

Attribute	Hypothesis	Order of contingency table	Degrees of freedom	χ^2 -value (cal)	χ^2 -value from table (=0.05)	Result	Comment
Monthly income and modern facility	No association	4	12	18.77	21.03	Insignificant	Not associated
Household condition and monthly income	No association	5	12	14.89	21.03	Insignificant	Not associated
Types of client and amount of money	No association	7	18	39.59	28.87	Significant	Associated
Working days per week and age of respondents	No association	3	8	17.60	15.51	Significant	Associated
Sex during menses time and suffering from physical problem	No association	2	1	0.86	3.84	Insignificant	Not associated
Educational qualification and contraceptive uses	No association	6	5	6.93	11.07	Insignificant	Not associated
Sexual diseases and working days per week	No association	73	12	11.86	21.03	Insignificant	Not associated
Educational qualification and working days per week	No Association	6	10	90.07	18.31	Significant	Associated

Table 4: Logistic regression estimates for the effect of social characteristics on the sex workers of whether they were harassed as the dependent variable.

Social Characteristics (Independent variables)	Coefficient (β)	S.E. of estimates (β)	Wald	df	Significant (β)	Exp (β) or Odds ratio	95.0% C.I. for EXP(β)	
							Lower	Upper
Education Illiterate (r.c.)	....	....	....	....	....	1.000	....	....
Literate	-3.485	1.132	9.479	1	.002*	.031	.003	.282
Police								
No (r.c.)	....	....	....	....	....	1.000	....	....
Yes	-2.985	.961	9.639	1	.002*	.051	.008	.333
Sex during menses								
No (r.c.)	....	....	....	....	....	1.000	....	....
Yes	-1.266	.838	2.282	1	.131	.282	.055	1.458
Clients like to use condom								
No (r.c.)	....	....	....	....	....	1.000	....	....
Yes	1.266	.838	2.282	1	.101***	3.548	.686	18.347
Social sentiment								
Usual (r.c.)	....	....	....	....	....	1.000	....	....
Good	-2.365	1.328	3.173	1	.075***	.094	.007	1.268
Bad	-1.239	1.007	1.513	1	.219	.290	.040	2.086
Very bad	.564	.985	.328	1	.567	1.759	.255	12.127
Trouble for outside going								
No (r.c.)	....	....	....	....	....	1.000	....	....
Yes	3.906	1.314	8.842	1	.003*	49.700	3.787	652.321
Constant	5.805	1.520	14.586	1	.000*	332.084	....	....

*Significant at α **Significant at α ***Significant at α

Note: r.c. means reference category.

THE COUNTERFEIT MEDICINES A SILENT EPIDEMIC

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ABSTRACT

Counterfeit medicines range from products containing no active ingredients to those containing highly toxic substances. They can harm patients by failing to treat serious conditions; can provoke drug resistance and in some cases kill. The latest estimates elaborated by WHO, show that more than 30% of medicines in some areas in Latin America, South East Asia, and Sub-Saharan Africa are counterfeit. In emerging economies, the proportion is estimated at 10% but in many of the former Soviet Union republics it can be as high as 20%. In wealthy countries, with strong regulatory mechanisms, counterfeit medicines account for less than 1% of the market value, but 50% of illegal internet sales are counterfeit.

The legal systems of most countries do not consider the counterfeiting of medicines a more serious crime than counterfeiting luxury items such as handbags or watches. Their laws are devised and designed mainly to protect trademarks rather than people's health. In some industrialized countries, counterfeiting t-shirts receives a harsher punishment than counterfeiting medicines. Some Internet pharmacies are completely legal operations, set up to offer clients convenience and savings. They require patient prescriptions and deliver medications from government licensed facilities. Other Internet pharmacies operate illegally, selling medications without prescriptions and using unapproved or counterfeit products. These rogue Internet pharmacies are operated internationally; they have no registered business address and sell products that have unknown or unclear origin.

INTRODUCTION

Over the past decade, the massive public health problem of counterfeit and substandard drugs has increasingly become apparent, causing a significant morbidity and mortality and reducing the effectiveness of healthcare in the developing world. There are few accurate estimates of the scale of the problem. Published estimates of the global prevalence of counterfeit drugs range from 1% to 50%. Since the pharmaceutical industries produce billions of tablets each year, even 1% of the global production would affect millions of people. Various countries use different definitions of counterfeit drugs. One of the most widely used is that of the W.H.O. where the emphasis is on the intent to deceive.

A counterfeit drug: is one which is deliberately and fraudulently mislabeled with respect to identity, source, or both. Counterfeiting can apply to both branded and generic products and counterfeit products could include products with the correct ingredients or with the wrong ingredients, with out active ingredients, with insufficient active ingredients, or with fake packaging.

Substandard drugs are genuine drug products that do not meet quality specifications set for them. If a drug, upon laboratory testing in accordance with the specifications it claims to comply with, fails to meet the specifications, then it is classified as a substandard drug.

Counterfeit and substandard medicines have a long history. In the first century in Greece, Dioscorides first classified drugs by their therapeutic use, warned of the dangers of adulterated drugs, and advised on their detection. Herbal medicines have a long history of being adulterated; for example the use of congeners to adulterate Valeriana officinalis root, used for treating cholera and red clay to adulterate the foul smelling Ferula ass-foetida, which was hung around the neck to ward off infections. Since the discovery of potent anti-infectives there have been periodic crises in their quality. In the 17th

century, the adulteration of Peruvian Cinchona bark, the first treatment of ague (malaria), with other astringent barks and aloes (assumed huge dimensions). This adulteration was precipitated by huge demands for the bark from Europe, where malaria was still endemic. In the UK, and USA in the mid-19th century, the widespread adulteration of medicine, especially quinine, prompted the first regulation of the trade in medicines, codes of practice of pharmacists and guides on the detection of counterfeit drugs. Counterfeit drugs were first addressed at an international health meeting only 20 years ago and the World Health Assembly adopted a resolution against counterfeit and substandard pharmaceuticals in 1988.

Numerous factors encourage counterfeiting drugs, apart from criminal greed. The relatively high cost of genuine medicines together with their desirability and shortage, gives the counterfeiters an economic incentive, facilitated by lack of legislation and enforcement and light penalties. There is often inadequate liaison between police, customs, and drug regulatory authorities. Lack of knowledge of counterfeits, and appropriate preventive measures, together with poor dissemination of information among health workers and the public, make their detection difficult. In the tropics many patients obtain medicines from untrained vendors without prescription, in inadequate courses, and without information. The lack of financial and human resources available to many drug regulatory authorities often makes effective recognition of poor quality drugs and actions impossible. Only 20% of WHO member states have well developed drug regulations and 30% have either no drug regulation or a capacity that hardly functions. Corruption is also an integral factor difficult to police, especially when the authorities are involved; for example, the staff of one drug regulatory authority were found to have taken bribes to pass spurious drugs for sale and drug inspectors were reported to charge wholesalers US\$65 per month to allow their illegal businesses to continue. Complex

trade arrangements, without proper documentation, facilitate trade in counterfeits across porous borders, resulting in a low risk, high profit venture for counterfeiters.

The consequences of counterfeit and substandard anti-infectives:

Morbidity and mortality

If medicines containing little or no active ingredients whether counterfeit or substandard are used for the treatment of common diseases with a high untreated mortality - e.g. falciparum malaria, pneumonia, meningitis, typhoid and tuberculosis, then morbidity and mortality must increase.

Adverse effects

Counterfeit and substandard medicines could also cause adverse effects through excessive dose, or due to the presence of potentially toxic ingredients or pathogen contaminants. Although such catastrophic results as the childhood deaths associated with the consumption of paracetamol syrup have not been reported for anti-infectives, potentially dangerous unexpected pharmaceuticals have been found in counterfeits, for example, counterfeit halofantrine syrup contains a sulphonamide and some counterfeit artesunate contains artemisinin, chloramphenicol, erythromycin, paracetamol, metronidazole and metamizole. Patients could be allergic to these drugs, or might experience adverse effects, which would be clinically very confusing, since the physicians would be unaware of the true active ingredients. The substitution of aspirin for chloroquine could contribute to acidosis in children presenting with severe malaria. Pathogens have been found in liquid formulations; substandard gentamicin eye drops in Mauritius were contaminated with gentamicin-resistant *Pseudomonas aeruginosa* and led to severe eye infections.

Economics

The financial consequences of counterfeit medicines for the companies producing the genuine product can be enormous. It has been

estimated that the fake medicines market is worth some US\$35-44 billion per year. Money is lost because the health care system, patients and their families must bear the costs of increased suffering and sometimes death. Spurious apparent resistance and unusual toxicities compound the public-health toll.

Loss of confidence

Loss of faith in genuine medicines is inevitable in areas where drug quality is perceived as being poor and results in a loss of confidence in the health care system and the drug regulatory authorities if action is inadequate. Health practitioners then also lose confidence in the medications that they rely upon.

Drug resistance

Anti-infective medicines that contain sub-therapeutic amounts of the active ingredients increase the risk of selecting and spreading of resistance. For diseases that are treated with combination therapy e.g. falciparum malaria, tuberculosis and HIV -poor quality drugs risk the spread of resistance due to both the poor quality and the "unprotected" co-drugs.

Chemical characterization of counterfeit medicines

Content and dissolution properties

The ability to investigate the contents of counterfeit or substandard pharmaceuticals is a critical component of monitoring of the drug supply by drug regulatory authorities. Chemical analysis methods such as high performance liquid chromatography (HPLC) and gas chromatography coupled with optical, electrochemical or mass spectrometric detectors have been the mainstays of the pharmaceutical analysis.

Inexpensive rapid tests

The quickest and cheapest way to detect counterfeit drug is to compare the printing, embossing, shape, odour, taste, and consistency of a suspected sample with the genuine product. In the 1840s, tablets were often adulterated with clay in Europe and the USA. An ingenious rapid test used, was to place the medicine

on a shovel in a fire. Only 2% dry matter was left of the genuine tablet whereas the fake left 29% dry matter. Thin-layer chromatography (TLC) is a specific, sensitive and inexpensive technique.

Colourimetry identifies particular ingredients by making use of colour changes produced by chemical reactions or complexions between the active ingredients and a specific reagent. Quantitative measurements of active ingredient concentration as a function of colour intensity can then be made with a simple handheld photometer. Characteristic physical, chemical, and chemical properties e.g. weight, density, refractive index viscosity, osmolarity, PH, crystal morphology and solubility-can be also used to identify counterfeits. Microbiological technologies have also been used. For example, an antimicrobial activity assay of different ofloxacin preparations in Pakistan against three ofloxacin-sensitive reference bacterial species, showed that three injectable and one tablet brand had reduced or no antimicrobial activity.

Interventions:

1. There is clearly no single solution to the problem of counterfeit medicines, but much more can be done now to control this enormous yet neglected problem that affects particularly the poorest, most vulnerable people.
2. Urgent support is needed for the 30% of the world's countries that have no drug regulation or a capacity that hardly functions.
3. Good quality anti-infective medicines, with distinctive markers of quality assurance, should be readily available and inexpensive or free, to undercut the counterfeiters.
4. It should become a legal requirement to report any substandard or counterfeit drugs to the respective national drug regulatory authority, which in turn should report to the WHO. WHO should develop a centralized database that drug regulatory authorities and medical practitioners can consult for local current detailed information.
5. Monitoring for counterfeit drugs and

substandard medicines should be an intrinsic part of disease surveillance programs.

6. Severe penalties commensurate with the severity of the crime are required for those who knowingly manufacture counterfeit medicines. Police and custom authorities should be mandated to regard counterfeit medicines with the same gravity accorded to narcotic production and distribution.

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DOWN SYNDROME PARENTS' WORRIES ABOUT THEIR CHILDREN IN IRAN

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Key words: Down syndrome children, parents worries, Iranian culture.

ABSTRACT

How children get on with life is one main source of worry – especially if the children have particular difficulties. Some children's physical or mental disabilities mean that extra provision will always have to be made for them.

Down syndrome (DS) is a condition in which extra genetic material causes delays in the way a child develops, and often leads to mental retardation. It affects 1 in every 800 babies born. Down syndrome is a person with recognizable physical characteristics and limited intellectual functioning due to an extra chromosome 21. (Parker, 2005). The most common chromosomal abnormality with an extra chromosome 21. (Stray – Gunderson; 1995).

In Iranian culture, the family is the most significant element of Iranian culture and society. They rely on family connection for influence, power and security. (Jalali; 2006). Iranian society encountered fundamental changes in traditional structure in the last century. Values, attitudes and human development must be evaluated. (Jahangiri & coworkers; 2006).

The aim of this study is finding out the kind of worries in parents with Down syndrome children and also ranking the importance of worries in Iranian cultures.

INTRODUCTION

All parents worry about their children - it is natural. How children get on at school is one main source of worry - especially if your child is unhappy or has particular difficulties. Parents everywhere worry about their children but exceptional children have a difference. (Parker, 2005). Only a third of Down syndrome parents have excellent resources with clear and consistent information related to support of their child. (Eavosloc.H, Lained B and Dickson, 1996). Parents also worry about how they can meet the challenge posed by a child with special needs. There is a great deal of work involved in raising any child with a disability, and raising a child with Down syndrome is no different. (Gunderson, 1995). Early interventions have the opportunity to be a resource and support for parents beyond their particular discipline to the families of the infants and young children with whom they work. (Roizen, 2003)

Although children with Down syndrome can be just as healthy as any other children, they can also have special medical problems. (Gunderson, 1995). A Down syndrome child still is not fully accepted by parents and society and several factors such as the cultural level and economic status of the family, social mores and religious beliefs must be considered. (Latini, 2002). One of the most important problems in Down syndrome is the communication problem. It is detected that regular teaching of reading, helps them have better speaking ability. (Buckley, 1995). Most with Down syndrome can live healthy lives with a healthy lifestyle. (Mcguire, 2000)

Child birth will bring changes in

the parents' life (Gunderson 1995). It also can change roles. In the developmental field several aspects are important; they are skills in social, motor, language and intellectual domains. All of the parents like their children to pass them very well (Kaplan, 2003). Down syndrome has physical characteristics that are detectable from birth, therefore from the first days parents are worried about them. What is wrong? Why us? What is the cause for worries? And what has imbalanced their life? At first parents are in shock, a strong, almost warm feeling envelops every body in this situation. (Gunderson, 1995)

Lack of acceptance starts when the nature of the condition is disclosed to the parents, and continues through the entire life of the individual (Latini, 2002). However, in 1964 Drillien and Wilkinson observed that an early and full explanation of the disease seems to make it easier for the parents to accept the diagnosis (Drillien, 1964). The majority of Down syndrome parents seem to prefer being told as soon as possible, with both parents present, in order to promote acceptance of their child into the family and community. (Sharp, 1992)

In a study by Eavosl (1996) regarding information about caregivers of Down syndrome, only a third of them realized; they had excellent resources with clear and consistent information regarding support of their child. (Eavosl, 1996). Some Down syndrome parents realized that past pathology in the family is more important than having a child with Down syndrome. (Bower, 1998)

What about Iran and Iranian parents? The family is the most

significant element of Iranian culture and society.. (Jalali; 2006) - Values, attitudes and human development must be evaluated. (Jahangiri: 2006) What about Iranian Down Syndrome parents? Are they different from other countries? What worries Iranian parents the most? In how many ways do Iranian parents get information about their Down syndrome children? When Down syndrome is detected in the early minutes of the birth, what is early intervention in Iran? What about social and supporting system for parents and their children? Do parents like them and are they comfortable with them?

In this research we will study the kind of worries parents with Down syndrome children have and also ranking the importance of worries in Iranian cultures.

METHOD

Participants: TThey were childrem

withDownSyndromewhoaremembers of the Iranian Down syndrome Society, or studying in exceptional schools. They are 61 persons (31 girls and 30 boys). Their ages are between 3 - 18 years. At first there were 127 persons but in several stages, they drop out for non cooperation.

Tools: We designed questionairres for three stages, and examined them. At first, we requested of parents to determine five of their major problems about their Down syndrome's child, then rating them from 1 - 20.

In another stage, we invited 25 rehabilitation experts who were especially working with Down syndrome children. They were speech therapists, and occupational psychiatrists. All of them were invited to a work shop for two days. In additiona some of Down syndrome's parents were there, too.

In twodays,theydiscussedthemajor problems in Iranian Down syndrome

children. At last a questionnaire with 36 items was devised. They scored it with the family's knowledge and education. Their scores were based on need for education: a little education, without education, well educated.

Then the same families participated again. They scored and wrote their problems in based 36 items. (1 - 20)

Unfortunately at this stage from 127 families, only 61 of them cooperated.

Process: After a workshop questionnaire with 36 items was valid with; adult psychiatrist, child psychiatrist and rehabilitation psychologist.

Rates were: 0 - 5 were equaled to without education, 5 - 10 were equaled to a little education and 15 - 20 were equaled to well educate. These information were given to special software statically, analysis was performed with SPSS.

Findings:

Table 1. Categorization of four groups

No.	Age group
1	3 – 7 ages
2	7 – 11 ages
3	11- 14 ages
4	14 – 17 ages

In Table (2) parents' ideas about their children's problems were shown.

Table 2. Parents' ideas about Down syndrome problems in each group

No	Age Group	Main Problem
1	3 – 7 years	Physical problems
2	7 – 14 years	Communication, speech
3	11 – 14 years	Speech, behavioural
4	14 – 18 years	Social, behavioural

In Table (3) the specialists viewpoint of down syndrome problems are registered. All of above problems had high rates. (19 – 20)

Table 3. Specialists' ideas about Down syndrome problems

Problem	Average Rate	Standard Deviation
1 - physical	19.83	2.51
2 – behavioural	19.81	2.4
3 – social	19.76	2.73
4 – education	19.12	2.03
5 – caring	19.01	2.63
6 – communication	19.78	3.17
7 – financial	19.54	3.22

The scores of worries and difficulties are in Table – 4:

Table 4. Scoring of Down syndrome problems

Problem	Score
Caring , support	20
Vague future	
Communication ,	19.87
Speech	
Physical	19.87
Un employment	19.85
Dependency	
Behavior	19.75

Analysis of information showed that 23% of families didn't know the rehabilitation center and its work, and only 10% had enough information; the others knew little.

Unfortunately only two of the children had been referred to the rehabilitation clinic in pediatrics. Most parents had not been given enough information and support from their pediatricians or gynaecologists.

In a supportive system, social security and employment are shown: 96% of parents are worried about their children after themselves because there isn't any structural supportive system for Down syndrome children. 66% of families had insurance for therapy, 34% didn't have it. 41% of families can cover their Down syndrome expenses, 28% have difficulties. 38% can cover educational expenses, the other can't cover them well cover. 85% of families want to have enough information about their children. They need up-to-date information.

59% of parents were worried about their Down syndrome children in marriage.

Families stated: 75% of their Down syndrome children have good relationships with other members of the family. 76% have no difficulties in primary self care.

Families stated that 69% of their Down syndrome children have done their school work, 74% of them haven't any major problems with the children's school. Young Down syndrome children have difficulties in social communications, about 56%.

Birth of Down syndrome children, and its effects were studied in a few sentences: Limitation in familial association. Going publicly with their special child. Feeling inferiority for bearing the special child.

51% of families' have no feelings of inferiority, they bring all of their children to familial parties. 96% of parents fewel their special child is nice and lovely. 97% of Iranian families don't like institutes. They usually never have thought about it.

Parents believe their Down syndrome children, with special education, can live very well. They can live independent or semi dependent with a well supportive system. Only in 10% of births of Down syndrome is their marital conflicts.

DISCUSSION

In our research the most problems in Iranian Down syndrome families have been determined.

At the birth most of them have physical problems that are major worries of their families, especially in the first years. Parents in this situation often are perplexed and worried for their child's health. In the past research showed although, Down syndrome is determined from birth (Roizen, 2003) most Down syndrome children have a high frequency of birth defects. (Latini, 2002)

Treatment and follow up for the medical concerns is expensive, and when families do not have health insurance, they must pay much for them. It is a major problem for families without health insurance. In several countries depending on the specific program in each area and the child's needs, health programs start from birth on especial insurance. (Gunderson, 1995)

We detected unfortunately that explanation of the condition by professionals is very poor. Most families need a complete knowledge of the expression patterns of trisomy 21. Parents are told, there isn't a structural program and organizations for referral. In the past reports showed that health professional must tell the family about the special needs appropriately' from the first days

(Sharp, 1992). In several countries from the delivery room. parents were referred to the correct organization and programs. (Gunderson, 1995)

In our research parents believed their children have the capacity for a better life and with organized education they can work in the community and enjoy their life, although initially parents have some worries about their Down children (Gunderson, 1995). But in the years after it Down syndrome parents believed their children had capacities especially in some fields. (Nadel, 1995)

One of the biggest worries for parents of Down syndrome children is communication and speech difficulties. They need a correct and continuous program. We showed that from preschool to adolescence they need specific attention. Today there is much researches on communication problems, and the results are useful for parents and professionals (Kumin, 2003). All of them emphasized early intervention for communication problems. (Greenspan, 1998)

The behavioural and psychological difficulties can shown in school and puberty years. Most do not have major problems with their parents, but social acceptance and their view are important in behavioral disturbance. In the past research pointed at difficulties in making a specific diagnosis in Down syndrome (Pary, 1993). Social opportunities can help them for sense of self -esteem, wellbeing and happiness. (Mcquire, 2000)

Another parental worry, was concern about social security and appropriate support for Down syndrome children, especially after the parents have died. Now in the world there are special programs and legal rights for Down syndrome persons (Gunderson, 1995), that must be delivered in our country, too.

Special education needs involve time and cost. Many parents have difficulty with these aspect, so that pre- school, school and rehabilitation programs need time and costs to be coverd, ifnot developmental delay may ensue. (Cohn, 2002)

With all of problems and the many worries of Down syndromes parents,

96% of them love their child and never want to leave them or leave them in an institute. Research in other countries detected the same love for Down syndrome children and parents enjoy living with them. This is a basic rule in their parents. (Gundersen, 1995- Latini, 2002)

In summary it was shown that although distinct physical characteristics are in Down syndrome children, generally they are more similar to the average person in the community than they are different. With special education for parents, by preparing a structural program for families and professionals many of difficulties may be solved spontaneously. Early intervention must be noticed, special insurance is needed to decrease parents worries. Communicational problems, adjusting and behavioral difficulties, absence of appropriate social security are other Down syndrome parents' worries that need to be corrected by appropriate rights and legal.

It is important that society develops attitudes that will permit people with Down syndrome to participate in community life and to be accepted.

RESULTS:

In our research, that is detected:

Education given to the Down syndrome children's parents from birth, and developing Down syndrome organizations and specific clinics is essential. Books, pamphlets and other information must be prepared for professionals and caregivers.

Down syndrome with some of disabilities is accepted in their families, but appropriate support, social security and legal rights must be especially noticed. If they have especial health program and support, social has humanizing rights.

Poor communication, UN clear future, no vocation is the other parents worries. Appropriate vocation and socializing is necessary for them.

When accorded their rights and treated with dignity, a person with Down syndrome will, in turn, provides society with a most valuable humanizing influence.

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SAFE SEX EDUCATION AMONG YOUTHS IN IRAN - TIME TO ACT!

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As an Iranian-Canadian physician living outside Iran, I often wondered in the era of HIV/AIDS epidemic, how does the Islamic Republic educate the public about the deadly virus and promote harm reduction strategies such as safe sex among youths? In a country where almost seventy percent of the population is under the age of 30, HIV/AIDS prevalence is progressively rising, according to both official and unofficial national reports. During a recent trip to Iran, I witnessed an "AIDS advocacy" billboard on a busy street in the capital city of Tehran. The billboard, almost covered by two large neighboring trees, depicted a red ribbon and a hand holding a candle on a black background, reading: "Let us make an agreement to know more about AIDS, and let us remain faithful to our agreement". The billboard was funded by several national and international organizations, yet nonetheless perplexing. What message did the poster aspire to communicate, to which target population, and for what end-effect? The message was uninformative and non-instrumental, not even a mention of a "hot-line" or help/referral center.

In fact, in a country governed by Islamic fundamentalists, where homosexuality is illegal and sex outside marriage is sinful, HIV education is challenging. The Director of the Iranian Center for Disease Control (CDC) was quoted in the *New York Times* in 2002: "Pre-marital sex is inappropriate and un-Islamic. So we can't say things to teenagers like, 'Use a condom' ". In practice, HIV/AIDS advocacy and educational materials produced mainly by state-run agencies and a limited number of non-governmental organizations (NGO's) are under tight scrutiny by state officials to ensure "Islamic decency". For long, government officials and religious leaders have been reluctant to acknowledge that AIDS is a public health problem in Iran. Especially during the initial phase of the epidemic, many officials propagated the false sense that HIV infection is a punishment for the

"corrupted" Western lifestyle, and that Islamic faith creates a "cultural immunity" against the epidemic.

The rapid rise in the prevalence of HIV/AIDS in Iran has alarmed state officials and disappointed those who sought comfort in the mirage of "Islamic immunity". According to UNAIDS reports, the estimated number of persons with HIV in Iran increased to 66,000 in 2005. Anecdotal reports from national and international experts suggest that the official estimates of persons with HIV in Iran are highly underestimated. Moreover, based on UNAIDS reports and the available data from the Iranian CDC, sexual contact is the second most common route of HIV transmission after injection drug use. Along with the increase in the prevalence of HIV, as indicated by Mohebbi in an article in the journal of "Sexually Transmitted Infections" (2005), the prevalence of other sexually transmitted infections (STI's), often resistant to standard therapies, has also grown in Iran.

Moreover, as the head of the Iranian Cultural and Artistic Affairs reported to the BBC news in 2000, sex work and illicit drug use have been steadily on the rise among youths. In a country with a predominantly young population, youths are now considered to be among the high-risk groups for HIV infection. Ironically, the survey on knowledge and attitudes of Tehran's high-school students about HIV/AIDS reported by Tavooosi et al. (2004) in *BioMed Central (BMC) Public Health*, came short of asking questions about safe sex or condoms. The survey indicated that 94% of the students wanted to know more about HIV/AIDS. Another survey quoted by the *Economist* (2005) suggested that less than 10% of 15-24 year olds in Iran had an "accurate knowledge" of HIV/AIDS. Considering the available evidence for the clear risk of Iranian youths for HIV infection, it is imperative that the policy makers prioritize HIV/AIDS risk communication in this vulnerable target population.

Fortunately, warnings by academics and health care workers regarding

the prevalence of HIV/AIDS, along with the increasing concern of state officials, have resulted in acknowledgement of the importance of HIV/AIDS prevention strategies for injection drug users in Iran. In fact, the government has recently allowed the practice of harm reduction strategies such as clean needle distribution amongst injection drug users, in order to reduce HIV transmission. The change in policy with respect to harm reduction measures in injection drug users, was achieved through the efforts of different parties including public health experts, advocacy groups and concerned politicians, with the support of religious leaders who are responsible for interpreting Islamic laws as mandated by the ever-evolving societal needs.

Learning from national and international experiences about a lethal virus that feeds on ignorance, stigmatization and enforced silence, it's time to define clearly "safe sex" for Iranian youths as an effective and an evidence-based harm reduction strategy against HIV transmission. Of course, talking about safe sex mandates clear articulation of the word "condom" or the local term "kaput", without any restrictions. With the support of caring politicians and religious leaders, public health educators in Iran have the crucial task of mainstreaming safe sex practice and condom use, in order to slow the propagation of HIV amongst youths who choose to become sexually active, and those who have no choice but to become sexually active.

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