ORIGINAL ARTICLE

Determinants of Grand Multiparity

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ABSTRACT

OBJECTIVES: To determine the reasons for grand multiparity
STUDY DESIGN: Descriptive study
SETTING: Department of Obstetrics and Gynecology, Sir Ganga Ram Hospital Lahore from July to December 2011.
METHODOLOGY: 100 patients who presented in their fifth pregnancy and onwards after twentieth week of gestation were included. Data was collected from selected cases using proforma questionnaire. Statistical analysis was done using software SPSS version 14.
RESULTS: Results showed 96% were grand multipara and 6% were great grand multipara. Only 12% women had planned conception. Mean age was 31.40 $\pm$ 4.32 years and mean duration of marriage was 12.71 $\pm$ 3.8 years. In 33.3% great grand multipara duration of marriage was 20 years or more. Results showed that 55% wives and 38% husbands were illiterate and 94% living below poverty line. Causative factors identified were teen age marriage in 66%, husband pressure for male child in 43% and for female child in 7%, mother in law pressure for male child 21%, bad obstetric history in 6%, second marriage of female partner in 2%, religious factor in 12% cases. Study show 89% women have some Knowledge of contraceptive methods and only 39% ever practiced any of the contraceptive methods. Other factors were contraceptive failure in 10%, inaccessibility to family planning services in 5% and 11% had one or more induced miscarriage.
CONCLUSION: Teen age marriage, social pressure to have male child and non-usage of effective contraceptive methods are the major factors responsible for grand multiparity. Illiteracy and poverty are other contributing factors.
KEY WORDS: grandmultiparity, great grandmultiparity, multiparity

INTRODUCTION

Parity is the number of births both live born infant and still births of at least 20 weeks gestation that a woman experiences. A study by Solomons in 1934 suggested that multiparity increased the risk of pregnancy complications and first introduced the term “grand multiparity”. The International Federation of Gynaecology and Obstetrics defined grand multiparity as delivery of fifth to ninth infant where as women who are undergoing their 10th or more delivery are considered to be great grand multipara.[1,2]

Factors associated with high parity include age of woman, duration of marriage, age at marriage, social pressure to conceive with in first year of marriage and more often to conceive a male child. Illiteracy, lack of wide spread availability of birth control methods and inaccessibility to family planning services are all contributing factors. Bad obstetric history and second marriage of female partner are also contributing factors.[3]

Complications associated with grand multiparity are malpresentation, macrosomia, dysfunctional labour, antepartum haemorrhage, postpartum haemorrhage, ruptured uterus and medical disorders. Incidence of miscarriages both spontaneous and induced due to unwanted pregnancy is increased in high parity women. All these contribute to fetomaternal morbidity and mortality.[4-9]

This study will help to determine the factors which are associated with grand multiparity in our society. Identification will help to address those factors to reduce fertility rate and thus to avoid associated complication leading to fetomaternal morbidity and mortality in our population.

Methodology

This study was conducted in the Department of Obstetrics and Gynecology of Sir Ganga Ram Hospital from July to December 2011. Patients presented in their fifth pregnancy and onwards

after twentieth week of gestation were included and all patients below 20 weeks of gestation were excluded from the study.

Hundred patients who fulfilled the inclusion criteria presenting through outpatient department were included in the study. Data was collected after an informed consent. A detailed history of Patients was taken and information collected on especially designed proforma (attached).

Data analysis was computer based. Data entry sheet was designed in computer software SPSS version 14 and analyzed. Variables of interest include age, parity, years of marriage, education status of couple, per capita income and different reasons for grand multiparity etc. Quantitative variables such as age, parity, years of marriage, age at marriage, per capita income were analyzed using simple descriptive statistics like mean and standard deviation. Qualitative variables such as education status of couples, social pressure for a male or female child, knowledge about different methods of contraception and source of knowledge were calculated using frequency and percentage. Chi square analysis was used. P value of ≤ 0.05 was taken to be statistically significant.

PROFORMA
Determinants of grand multiparity
Name: Age: Married for:
Education status of: wife: Husband: Parity:
Income per capita: Reg. No. Date:

Factors for which she conceived this time		**YES**	**NO**
Husband pressure	For male child		
	For female child		
Mother in law pressure	For male child		
	For female child		
Bad obstetric History	No alive baby		
	One alive baby		
	Unplanned		
	Contraceptive failure		
Knowledge about contraception	Withdrawal		
	Condom		
	Pills		
	Injectable		
	IUCD		
	Bilateral tubal ligation		
	Emergency contraception		
Source of knowledge	Friend		
	Relative		
	Doctor		
	LHV		
	TV		
	Radio		
	Newspaper		
Ever practiced any of above contraceptive method			
No access to family planning services			
Religious factor			
Second marriage of female partner			
Any induced miscarriage			

RESULTS

During the study period, out of 100 patients 94 (94%) were grand multipara and 6(6%) were great grand multipara. only 12 (12%) women had planned conception, 78 (78%) had unplanned

conception and in 10 (10%) it was as a result of contraceptive failure.

The age, parity, duration of marriage, age at marriage and per capita income is shown in table I. Maximum age group (37%) was between 26 to 36 years. Teen age marriages were in 66% cases. Duration of marriage was 10 years in 40% but among great grand multipara 33.3% was married for 20 or more than 20 years. Among study population 94% were below poverty line that is 1 dollar per day. Only 3% have per capita income more than 2 dollars per day. Education status of male and female partner is shown in figure I.

In study group, 89% women had some knowledge about one or more methods of contraception. Study results showed that 38% women have heard about withdrawal, 78% about condom, 72% about oral contraceptive pills, 28% about injectable contraceptives, 52% about intrauterine contraceptive device, 81% about bilateral tubal ligation and only 2% about emergency contraception. Source of knowledge was relatives and friends in 35%, Lady Health visitors in 28%, doctors in 24% and mass media in 13%.

Table I: VARIABLES

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Chi Square	P value
Age (Years)	100	18.00	22.00	40.00	31.4000	4.32750	54.700	0.0001
Parity (Numbers)	100	6.00	5.00	11.00	6.1800	1.51344	104.400	0.0001
Married for (Years)	100	15.00	7.00	22.00	12.7100	3.85938	66.400	0.0001
Age at marriage (Years)	100	14.00	12.00	26.00	18.4900	3.02346	65.760	0.0001
Income per capita (Rupee)	100	6205.13	461.53	6666.66	1403.2668	1016.23329	60.580	0.006

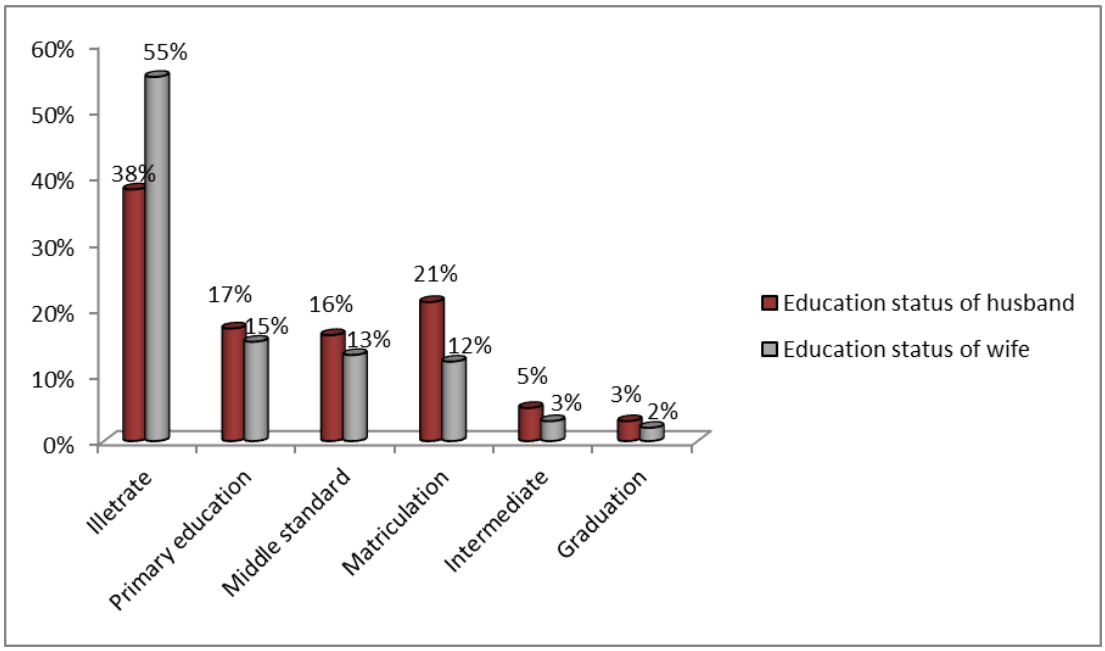

Figure I: Education status of couples

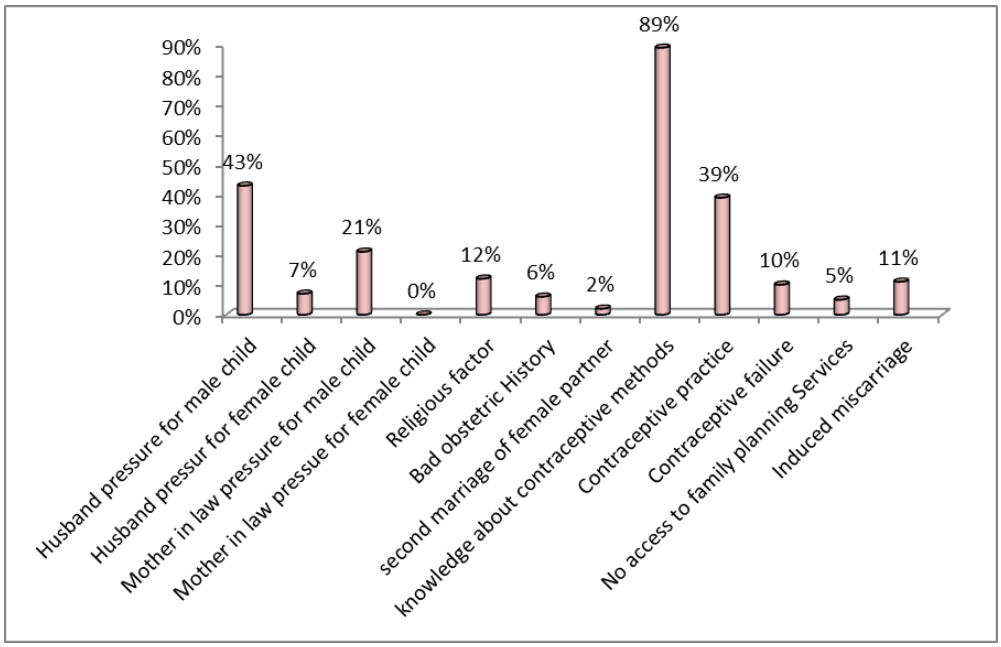

Figure II: Factors determining Multiparity

DISCUSSION

Population of Pakistan is approximately 180million making it world's 6th most populous country. Population growth rate now stands at 1.6%. It is expected that by 2030 Pakistan will overtake Indonesia as the largest Muslim country in the world.[10]

The study was conducted to assess the factors responsible for grand multiparity. The study results showed that teen age marriages (66%) and desire for male issue are the major contributing factors. In great grand multipara 33.3% women were married for 20 years or more, so the duration of marriage is directly related to grand multiparity. This can be addressed by discouraging early marriages, early childbearing and improving contraceptive practices. In young females family planning is crucial for birth spacing.[11]

According to the latest report of World Bank Pakistan is placed among the 43 countries exposed to poverty risks. According to international poverty line 22.6% population in Pakistan is living below extreme poverty line and 60.3% has income per capita less than 2 US dollars per day.[12] Poverty and high parity are inter-related as poor people have less access to education and family planning methods and they may perceive children as source of their income.[13, 14]

Illiteracy is the root cause. Education exposes women to information to improve their own health and health of their family. Couples who have lack of knowledge about family planning methods had significantly high parity. Domestic empowerment on the use of any contraceptive method is 4.5 times more among the educated females as compare to illiterate females in Cholistan, Pakistan.[15]

Social pressure to conceive a baby within first year of marriage and later pressure to have one or pairing of male child need to be addressed. The concept of discrimination among sons and daughters should be discouraged. Mass media can play an important role to create awareness regarding women rights and opinion about size of their family.[16]

In Islam contraception is mainly addressed in context of marriage and family. The Holy Quran does not make any explicit statement about use of contraception but contains statement encouraging procreation.[17]

Results showed that 89% women have some knowledge about one or more of the contraceptive methods but only 39% ever practiced any of the contraceptive method. Pakistan has the lowest contraceptive prevalence not only in South Asia but among major Muslim countries.[16] This poor practice is contributing to multiparity and increased fertility rate. Overall contraceptive failure rate was 10% that can be due to insufficient knowledge, inefficient use, poor compliance, fear of side

effects, use of less effective traditional methods, ill-trained and ill-equipped staff. Only 5% females have no access to family planning services so the need is to increase awareness and change the attitude of couples towards family planning methods.

A national study on abortion incidence showed that an estimated 890,000 pregnancies are ending in abortion in Pakistan annually. 29 of every 1000 Pakistani women of reproductive age seek to terminate their pregnancy. Induced miscarriage is practiced as a contraceptive method in high proportion of females which is associated with high morbidity and mortality and this practice should be discouraged.[18]

A study conducted by Nasir JA et al showed that 64% married men had no awareness of contraceptive use and 42% have desire for more children.[19] In our society male partner has a dominant role in decision making process especially in family planning so awareness should be created among couples to change their attitude towards large family size, more male children and contraceptive practices.

Under the proposed Maternal, Newborn and Child Health program, efforts should be made to increase contraceptive prevalence rate to 55% by 2015 from 34% in 1990.[20]To fulfill the target counseling and promotion of contraceptive services should be provided at the door step. Major source of knowledge is relatives and friends and need to increase awareness and accuracy of contraceptive use by involving well trained health professionals and mass media on grass root level.

CONCLUSION

Teen age marriage, social pressure to have male child and non-usage of effective contraceptive methods are the major factors responsible for grand multiparity. It highlights the importance of involving mother-in-law and husband in family planning behavior change campaigns.

Illiteracy and poverty are other contributing factors. Education of females should be encouraged because it not only creates awareness but also empowers women and enhances overall well-being of the family.

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