

# Preconceptional care of women at booking visit at De Soysa Maternity Hospital and Castle Street Hospital for Women

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## Abstract

**Objective** To study the preconceptional preparedness of women attending two antenatal clinics.

**Design** Cross-sectional descriptive study done in August and September 2001.

**Subjects and setting** Pregnant women attending the antenatal clinics De Soysa Maternity Hospital and Castle Street Hospital for Women for their booking visit.

**Material and methods** Pregnant women were randomly selected. Before collecting data the purpose of the study was explained and those who consented were recruited for the study. Data were collected on the basis of an interviewer administered questionnaire. Ethical approval was obtained from the Ethical Review Committee of the Faculty of Medicine, University of Colombo.

**Results** 225 pregnant women were recruited. 55% of them were between the ages of 18 and 30 years. 96% had achieved an educational level of above year five. 55% were in their first pregnancy and 2.75 were grand-multipara. 186 (82.7%) were housewives. 81% had a planned pregnancy.

Only 21% had received pre-pregnancy counselling, 52% of them from a specialist obstetrician, and 21% and 19% from a general practitioner and public health midwife. Only 15 (6.6%) had taken preconceptional folic acid supplementation, and all of them had a level of education of GCE (A/L) or above. 11 of those who took preconceptional folic acid were primipara. 159 (70.6%) had received rubella vaccination. Of those who did not take the vaccine, 44% knew about it but did not know its importance, and 38% did not know about its availability. 18% did not take it because of various myths that they believed in.

Preconceptional health knowledge regarding pregnancy was assessed by asking 10 questions and expressing it as a score out of 10. This score showed a positive correlation to the level of education of the woman. A majority received information from the print (81.7%) and electronic (72.4%) media. 50% received information from a public health midwife, and 36% from doctors.

**Conclusions** Preconceptional preparedness among our women is poor. However, rubella vaccination is relatively successful compared to other aspects of preconceptional preparedness.

## Introduction

Sri Lanka has been able to bring down maternal mortality rate to 3.5 per 10 000 hospital live births, the infant mortality rate to 16.3 per 1000 live births (1) and under 5 mortality rate to 19 per 1000 live births (2), principally because of an effective primary health care system. But we have not achieved the best we can in fetal morbidity and mortality, as shown by the high neonatal mortality rate of 12.9 per 1000 live births (1). Unfortunately, we do not have data of perinatal mortality rates that would be the best indicator of fetal morbidity. Pre-pregnancy counselling is not adequately stressed in this country. There is no organised program of counselling. The demand for such a program is also low due to lack of awareness among women of childbearing age. Vaccination against rubella is the main pre-pregnancy preparation, with a cumulative coverage of 102.8% in the 11 to 15 year age group and 42.4% among the 15 to 44 year age group (1). But knowledge on the use of folic acid, improvement in nutritional status and avoidance of exposure to hazards is lacking.

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We did this study to evaluate the preparedness of women of childbearing age for a pregnancy in an urban area of Sri Lanka.

Methods

Pregnant women attending the selected clinics for their booking visit were randomly chosen. Data were collected using an interviewer administered questionnaire. Reproductive health knowledge covering the areas on consanguinity, maternal age at conception, spacing, folic acid supplementation, vaccination against rubella and teratogenicity was evaluated by using 10 structured questions. A score was given out of ten.

Results

Two hundred and twenty five pregnant women were recruited, 79% of them were from the 18 to 35 year age group (Table 1). 81.8% had a minimum education of GCE (O/L) (Table 2) and less than 1% had never gone to school. 55.5% were primipara and 27% were in their second pregnancy. 2.7% were grand-multipara. 40% of the multiparous women gave a previous history of either spontaneous abortion or stillbirth. A majority (82.7%) were housewives, 44.5% had a monthly family income of Rs. 5 000 to 10 000, and 17% had a monthly family income of less than Rs. 5 000. 81.3% were planned pregnancies. Table 2 gives the relationship between planned pregnancies and their level of education. Unplanned pregnancies were common among the less educated women (below GCE O/L) and there was a statistical significance when compared with the more educated women ( $p<0.05$ ). Of the primipara, 84% were planned pregnancies and of the multipara only 78% were planned. Twenty one percent had received preconception counselling and more than 52% of them had consulted a specialist obstetrician. 21% and 19% received counselling from a general practitioner and public midwife respectively. Sadly, no one had gone to the Medical Officer of Health. 31% had gone for counselling because of subfertility and about one quarter due to a past history of spontaneous abortion. Other factors that made them obtain pre-pregnancy counselling were a medical illness they had, removal of an intrauterine contraception device or previous early neonatal death. About half of the women who received preconceptional care received advice on vaccination against rubella, but only about one third received information on folic acid intake. This shows that even some health workers had not advised them comprehensively. Nearly all women who did not receive pre-conceptional advice were not aware of such a facility. The rest knew about preconceptional counselling but the pregnancies were unplanned. Only 15 (6.7%) had taken folic acid preconceptionally and all them had a minimum level of education of GCE (A/L). Eleven (8.8%) of them were primipara. Rubella vaccination coverage was 70.7%. Of those who did not take the vaccine, 38% did not know about it, while others did not take it because they were not interested or for various wrong beliefs.

Table 2 shows the average score of reproductive health knowledge for each level of education. The average reproductive health score rose with the increase in level of

education. When viewed according to the occupation, nurses had the best average score of 9.7, and housewives had the lowest score of 5.8. Teachers and clerks obtained scores of 8.4 and 7.2. Preconceptional health knowledge was received from various sources. Media (print or electronic) was the commonest source (Table 3). Knowledge regarding pre-pregnancy preparation and the level of preparedness is poor among the women of childbearing age who attended antenatal clinics at tertiary care centres in an urban area of Sri Lanka. The coverage of vaccination against rubella was the only success story.

Table 1. Age distribution of the pregnant women

Age (years)	Frequency	%
< 18	2	(0.9)
18-23	43	(19.1)
24-29	80	(35.6)
30-35	55	(24.4)
> 35	45	(20.0)

Table 2. Level of maternal education compared with planning of pregnancy and the level of pregnancy related health knowledge

Level of education	Frequency %	Planning of pregnancy		Average score
		Planned	Unplanned	
None	2 (0.9)	1	1	0
< year 5	7 (3.1)	6	1	3.2
Year 5-9	32 (14.2)	18	14	2.7
GCE (O/L)	94 (41.8)	74	20	6.2
GCE (A/L)	77 (34.2)	71	6	7.2
Above GCE (A/L)	13 (5.8)	13	0	7.9

Table 3. Source of preconceptional health knowledge

Source	Frequency	%
Print media	184	(81.8)
Electronic media	163	(72.4)
Public health midwife	113	(50.2)
Relative	83	(36.9)
Doctor	81	(36.0)
Peers	78	(34.7)
Books	22	(9.8)
Special education programmes	6	(2.7)
Church classes	4	(1.8)

Discussion

With improvement of health services and reduction in infant and under 5 morbidity and mortality, more emphasis was directed to reducing perinatal morbidity and mortality. Genetic counselling, avoidance of exposure to teratogens such as smoking, alcohol, xrays, and use of preconceptional folic acid and vaccination against rubella



were some of the areas that required emphasis. However, most pregnancies were unplanned and even when they conceived, women did not know this till 6 to 8 weeks after conception. To make sure that women in the childbearing age start a successful pregnancy, they should have the knowledge about these, or at least know where they could get advice beforehand. Vaccination against rubella and folic acid supplementation are two programs that could be improved with minimum increase of resources.

Many studies have shown the relationship between pregnancy outcome and maternal blood folate, folate intake or hyperhomocysteinaemia (3). It reduces the risk of developing neural tube defects by almost three-quarters (4,5) and other congenital abnormalities such as heart defects and habitual abortions (3). Even in developed countries the folic acid intake was poor. In the USA in 1995 only 28% of childbearing age women took folic acid, but it increased to 34% in 2000 with the implementation of awareness programs (5). The US Food and Drugs Administration (FDA) authorised the addition of folic acid to enriched grain products in March 1996 and made it mandatory by January 1998 (6). Fortification does not replace the need for taking folic acid supplementation during preconception but would be a reasonable safety net in reducing the risk of neural tube defects in those who did not take folic acid preconceptionally (7).

It is quite evident that many women of childbearing age in Sri Lanka are not aware of the importance of getting prepared before embarking on a pregnancy, and the relevance of such preparation to reduce pregnancy related complications and ensure a successful pregnancy outcome. Therefore, it is important to increase awareness among them for being prepared for a pregnancy, and particularly about taking folic acid and vaccination against rubella. The starting point might be to highlight these in the school

curriculum. Information prepared in a form of a booklet would help in disseminating these messages. This could be achieved more effectively through the public health midwives at the time of registration of eligible families. Social marketing using mass media are essential in disseminating these messages effectively. As a number of pregnancies are unplanned, fortification of a frequently consumed food such as wheat flour would help to improve folic acid consumption.

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## Ethnicity and doctors in the UK

In medicine, as in other professions, however, even if there is a more diverse body of students, there remains in place a firm glass ceiling during career progression. In the UK, 35% of doctors are from an ethnic minority. Whereas they make up 65% of staff grade doctors, a lower paid position without career progression, only 20% of consultants are from ethnic minorities. In a report by the British Medical Association, 59% of a cohort of doctors believed that ethnicity was significant in career advancement. The percentage was 86% among doctors from ethnic minorities. Many doctors surveyed had reported discriminatory behaviour that is not considered acceptable in other work environments.

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