

## Research Article

# Reproductive Health Status of Women IT Employees in Chennai

Sivapriya KR<sup>1</sup>, Pankaj B Shah<sup>2</sup>, and Rama Ravi<sup>2\*</sup><sup>1</sup>Department of Community Medicine, Tagore Medical College and Hospital, India<sup>2</sup>Department of Community Medicine, Sri Ramachandra University, India

## \*Corresponding author

Rama Ravi, Department of Community Medicine, Sri Ramachandra University, India, Email: kundavaivallavarayan@gmail.com

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## Keywords

- Contraceptive practice
- Computer professionals
- Menstrual problems
- Reproductive Health

## Abstract

**Introduction:** Reproductive health of a woman has a bearing on her overall health and also has an impact on the family. Women enter into various occupations and flourish to reach competitive heights in their career. Women in IT industry are often unaware of the health hazards of the occupation. This study was done to assess the reproductive health status of women working in IT industry.

**Methodology:** This cross sectional study was carried out among 609 women working in IT industry. Data on their menstrual problems, contraceptive practices and other health problems were elicited. Ethical approval and informed consent was obtained prior to data collection. Data was analyzed using SPSS ver.16 for analyzing the statistical significance.

**Results:** Dysmenorrhea was present among 62.7% of the population. About 9.7% of the population underwent abortion. Condom was the most preferred contraceptive method. Polycystic ovarian disease was present among 5.4% of the participants.

**Conclusion:** IT industry is an organized sector and the welfare of its employees should be its primary concern. A well designed program for health promotion and prevention by way of wellness clinics may be implemented in the IT companies to ensure adequate health and safety of their employees.

## INTRODUCTION

Among the several industrial sectors, Information Technology (IT) industry has seen a sudden upsurge in their growth in the last two decades. The demand for IT professionals is on the rise and the job profile of an IT employee has been rewarding and lucrative enough to lure the several thousand graduates to get into the IT industry [1]. Both men and women equally compete for various positions and profiles in the IT industry.

For over centuries, women have been viewed as the fulcrum of the family, playing key roles in housekeeping and raising the children. It was taken for granted that women were incapable of performing any other role outside the house and they were devalued for any occupation. As women started moving out of these traditional barriers, there was a world of opportunities ahead of them. A sea of opportunities opened up in front of them (rephrase), and women have proved their mettle in every other field, competing equally and righteously with men. In India, urbanization and globalization had led to several economic crises, and women's contribution to the household's economy was deemed necessary. Reasonable education has become the

order of the day, and women were easily employed in a variety of industrial and business sectors [2].

Women often tend to multitask, and in most situations, they have a potential for neglecting their health for the sake of family and occupation. The effect of multitasking on the women's health is poorly understood. Despite the fact that women compete equally with men, the inherent nature of women's biology might not provide adequate support and strength during times of need. Several occupational hazards are specific for women, and special measures may be required to address these issues.

One of the key issues of women's health is the reproductive health. The economic security of the woman and her family is achieved only when her reproductive health is taken care of (A sound reproductive health gives the confidence in women to face the challenges of her physical and social life, thereby giving her the social and economic security. A woman who for instance has repeated abortions, is unable to take care of her family/ attend to her work, thereby is being deprived socially and economically). (How can you correlate the economics security with reproductive health?). Certain occupations are potential risk factors for reproductive health problems. It has been said

by the United States Supreme Court that 'the ability of women to participate equally in the economic and social life of a nation has been facilitated by their ability to control their reproductive lives'. Planned Parenthood of Se. Pa. v. Casey, 505 U.S. 833, 856 (1992) in a country like India, the labor laws seldom consider the welfare of women in mind. The availability and accessibility to reproductive health services is of primal importance to ensure the health and safety of women in employment.

A thorough insight into the reproductive health status among IT employees will lay the foundation for implementing women centric welfare services which will indirectly promote the health status (how can the reproductive health improve the family health?) of the family and thereby the nation.

## OBJECTIVES

To estimate the prevalence of reproductive health problems among the women IT employees

To assess the contraceptive practices of the women IT employees

## METHODOLOGY

### Study design

This cross sectional study was carried out among women IT professionals working in an IT company in Chennai, which is one of the key software hubs in India. The study was carried out for a period of six months.

### Study population

This study was carried out in an IT company in Chennai. There were 22 projects executed from the campus and only 4 projects had population of more than 1000 from which 1 project was selected by simple random sampling using table of random numbers. The random number taken from the table was 2. The project selected had 739 women among which 703 with minimum one year experience or more. All the 703 women were contacted and only 609 women gave consent for participation in the study. Reasons for not participating were busy work schedule and unwillingness. Pregnant and lactating women were not included in the study.

### Ethical approval and informed consent

Approval from the Institutional Ethics Committee was sought prior to the data collection. Due permissions were obtained from the IT company. Each participant was explained in detail about the study and informed consent was obtained prior to the data collection.

### Data collection

A structured interview schedule was used to collect data regarding reproductive health like menstrual history, premenstrual symptoms and questions related to reproductive tract infections. Information regarding contraceptive practices including number of children and use of emergency contraception and other health problems were also elicited (Table 4).

## OPERATIONAL DEFINITIONS

- a) Polymenorrhoea is considered when the subject has irregularly timed episodes of bleeding occurring at intervals of 21 days or less.
- b) Oligomenorrhoea is considered when the subject has irregularly timed episodes of bleeding occurring at intervals of more than 35 days.
- c) Menorrhagia is considered when the subject has regularly timed episodes of bleeding that are excessive in amount (>80ml) with duration (>5 days).
- d) Intermenstrual bleeding refers to bleeding that occurs between otherwise normal menstrual cycles.
- e) Dysmenorrheal means cramping pain accompanying menstruation.
- f) Premenstrual syndrome (PMS) refers to symptoms that occur between ovulation and the onset of menstruation [3].
- g) Leucorrhoea is considered when the subject has any vaginal discharge which is increased in amount and purulent.
- h) When the subject has thin, creamy vaginal discharge with itching and smell is considered as specific vaginitis trichomoniasis.
- i) When the subject has thick, curdy discharge with itching is considered as specific vaginitis- candidiasis. Leucorrhoea with lower abdominal pain, low backache, dysuria and dyspareunia is considered as pelvic inflammatory disease [4].

## DATA ANALYSIS

Data was entered and analyzed using SPSS version 16 software. Prevalence of reproductive problems was computed as percentages (Table 3).

## RESULTS

This study was done among 609 women IT professionals working in an IT company in Chennai. The mean age of the study participants was 24.9 years. The background characteristics of the study participants are given in Table 1,2.

## DISCUSSION

Today, women are participating almost in all the spheres of economic activity including IT profession. Balancing work and family tasks can put additional stress on women, who in many families still take primary responsibility. When family and work demands collide, the resulting stress can lead to physical health problems which also results in psychological problems such as burnout and depression. Exclusive studies related to health problems faced by women IT professionals are minimal; and in this study we have focused only on the IT women and the health problems faced by them during their professional life. (What do you mean by profession? Are reproductive problems specific to the profession?)

**Table 1:** Background characteristics of the study participants.

S. No	Background characteristics	No. of Women(n=609)	Percentage (%)
1.	<b>Age group in years</b>		
	21-25 yrs	331	54.4
	26-29 yrs	239	39.2
	29 yrs and above	39	6.4
2.	<b>Educational qualification</b>		
	Undergraduate	466	76.5
	Postgraduate	143	23.5
3.	<b>Type of family</b>		
	Nuclear	512	84.1
	Joint/Others	97	15.9
4	<b>Marital status</b>		
	Single	464	76.2
	Married	145	23.8
	Separated/divorce/ cohabiting/ widowhood	0	-

**Table 2:** Prevalence of menstrual problems among the study participants.

S. no.	Menstrual characteristics	No. of Women (n=609)	Prevalence (%)
1.	<b>Irregular cycles</b>		
	Oligomenorrhoea	67	11
	Polymenorrhoea	1	0.2
2.	<b>Dysmenorrhoea</b>	382	62.7
3.	<b>Change in menstrual cycle after joining IT profession</b>	63	10.3
4.	<b>Premenstrual symptoms (PMS)</b>		
	a. Lower abdominal pain	176	28.9
	b. Back pain	136	22.3
	c. Irritability	68	11.2
	d. Breast pain	64	10.5
	e. Fatigue	52	8.5
	f. Headache	50	8.2
	g. Nausea and vomiting	38	6.3
	h. Others	49	8.1

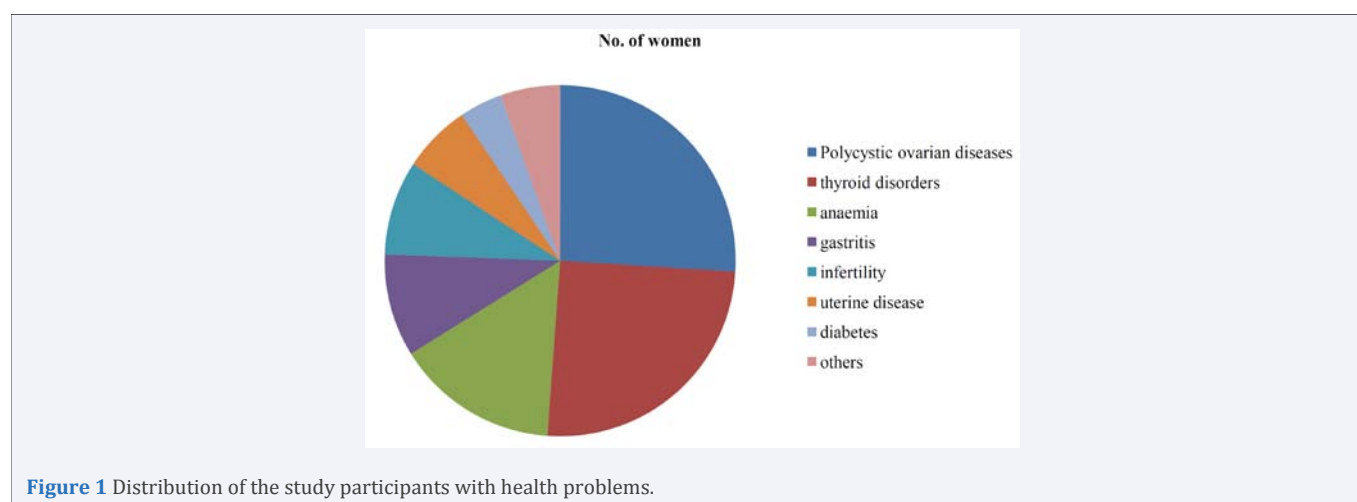
**Table 3:** Prevalence of Reproductive Tract Infections among the study participants.

S. no	Reproductive tract infections	No. of Women (n=609)	Prevalence (%)
1.	Symptoms of Reproductive tract infections (Any one)	59	9.7
a.	Vaginal Candidiasis	27	4.4
b.	Trichomoniasis	18	2.9
c.	Urinary tract infection	8	1.3
d.	Pelvic Inflammatory disease	6	1
e.	Dyspareunia	4	0.6
2.	Any Abnormal Vaginal discharge	44	7.2

**Table 4:** Contraceptive practices of the study participants.

S. no.	Contraceptive use	No. of married women (n=145)	Prevalence (%)
1.	<b>Any method</b>	80	55.2
2.	<b>Specific Method</b>		
	Condom	54	37.2
	IUD-Cu T	10	6.9
	Oral pills	5	3.4
	Tubectomy	3	2.1
	Others	8	5.5
3.	<b>Duration of contraceptive use (n=80)</b>		

	Up to 6 months	36	45
	7-12 months	30	37.5
	>12 months	14	17.5
4.	<b>Prior use of contraception</b>		
	Present	30	20.7
	Absent	115	79.3
5.	<b>Reasons for discontinue/change in contraception from earlier method</b>		
	Planning for pregnancy	11	7.6
	Permanent method	5	3.4
	Not comfortable	4	2.8
	Contraceptive switching	6	4.1



**Figure 1** Distribution of the study participants with health problems.

Reproductive health problems are an important public health issue in most of the developing countries. A WHO working group defined reproductive morbidity 'as morbidity or dysfunction of the reproductive tract, or any morbidity is a consequence of reproductive behavior including pregnancy, abortion, childbirth or sexual behavior and may include those of psychological nature. Reproductive morbidity refers to the diseases that affect the reproductive system, although not necessarily as a consequence of reproduction. Reproductive morbidity can be classified into three categories: obstetric morbidity, gynecological morbidity and contraceptive morbidity. In developing countries, women are high risk for several reproductive health problems especially reproductive tract infection/sexual transmitted infection (RTI/STI). These problems arise primarily as a result of early marriage, high fertility, higher number of pregnancy and unsafe sex [5].

In the present study, 75% of women were found to have any one reproductive health problem. The mean age at menarche was 13.2 years among the subjects. According to Padubidri, menarche occurs between the ages 10-16 years, the peak being 13 years [6]. In the present study, 11.2 % of women had irregular cycles and 62.7% reported dysmenorrhoea. In a study done in Nigeria by Esimai et al., 9% reported irregular cycles and 60.5% reported dysmenorrhoea [7]. In the current study, 10.3% of subjects reported change in menstrual cycle after joining IT profession of which 0.8% reported dysmenorrhoea and 6.9% reported irregular cycles. This is probably due to the stress experienced by the working women which leads to hormonal imbalance. Few

studies are available to throw light upon this observation. This hypothesis needs to be explored further.

In the present study, 40.4% women were found to have any one premenstrual symptom. The lower abdominal pain (28.9%), back pain (22.3%), irritability (11.2%), breast pain (10.5%) and fatigue (8.5%) were commonly reported symptoms by the participants. When compared with a study done by Nour et al. [8], in Iran, 98.2% reported any one premenstrual symptom. The symptoms reported were feelings of tiredness or lethargy (84%), backache (69%), depressed mood (72.3%), sudden feeling of sadness or tearfulness (70.3%) and headache (47%). The possible reasons for the differences in the symptoms can be the age of the participants, cultural and geographical influences, and awareness of participants about their physical and emotional status in general and prior or during menstruation.

In the current study, the prevalence of reproductive tract infections (RTI) was 9.7% and abnormal vaginal discharge in 7.2%, vaginal candidiasis (4.4%), trichomoniasis (2.9%). In a study done in Delhi by Ranjan et al., reported the prevalence of RTI was 37% [9]. Another study done in Sirmour by Savita et al., among married women reported a prevalence of RTI as 51.9% [10]. These differences may be due to the difference in various behavioral and socio-demographic factors like marital status, educational status, place of residence etc. which are the predisposing factors to the risk of RTIs.

In the present study, 9.7% of married women reported at

least one spontaneous or induced abortion. The reasons given for induced abortion are congenital anomalies in prenatal screening and incomplete abortion. Among 609 Women IT professionals, 5.4 % reported to have polycystic ovarian disease, 5.3% having thyroid disorders and 3.1% had anemia (how did you evaluate these disease? The information was ascertained from the history). In a study done in Iran by Tehrani et al., reported the prevalence of polycystic ovarian syndrome as 7.1% [3]. A study done among women by Rebecca et al., in Puducherry reported that 15.8% women with thyroid dysfunction [11] (Figure 1).

In the current study, 1.8 % is on treatment for infertility. The WHO estimates of primary infertility in India are 3.9% (age-standardized to 25-49 yr) and 16.8 per cent (age-standardized to 15-49 yr) [12]. A study done in Mysore by Paul et al reported the prevalence of primary infertility in young women was 12.6% [13]. The reasons for increase in incidence of infertility may be delayed marriage, prolonged family planning and priority to career advancement (are there any signs of family planning in your study?). The results indicate a need for more research on the prevalence of infertility and on the factors that impact on the prevalence among working women.

In the current study, the contraceptive prevalence among married women was found to be 55.2% which in accordance with NFHS-3 data. The common methods adopted by women for spacing was condom among 37.2%, copper T by 6.9% followed by traditional methods 5.5% and 2.1% adopted sterilization. A study done by Takkar et al., in Chandigarh also reported that common methods adopted for spacing was condom, copper T and traditional methods [14].

## CONCLUSION

This study has elucidated the need to focus on the health status of women working in IT sector. We observed that dysmenorrhea was a common problem (62.7%), while polycystic ovarian disease was present in about 5.4% of the participants. A health promotion approach to the reproductive health of the women may be achieved by implementing women wellness clinics in the IT sector. IT industry, being an organized sector can also collaborate with primary, secondary and tertiary health care centers for a periodic examination and enable redressal of the health problems of women working in the industry.

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### Cite this article

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