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SOCIODEMOGRAPHIC AND BEHAVIOURAL RISK FACTORS OF CERVICAL CANCER IN A SELECTED RURAL COMMUNITY OF KERALA

Nursing

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ABSTRACT

Background: Cervical cancer is a major public health problem and is the leading cause of death worldwide, especially in developing countries like India. The burden of the cervical cancer in India is enormous and it accounts for significant mortality and morbidity.
Objectives: Aim of the study was to assess various sociodemographic and behavioural risk factors of cervical cancer among rural women.
Materials &Methods: A community based cross sectional study was conducted in selected tribal settlements of Idukki district of Kerala, India from April 2015 to September 2015. 430 married women in the age group of 30- 60 years were selected by multistage cluster sampling. Sociodemographic details and risk factors of cervical cancer were assessed using demographic data sheet and risk assessment questionnaire.
Results: More than half of the subjects, 246 (57.2%) were in the age group of 30-40 years. Lowest proportion of subjects (13.5%) belonged to the age group of 50- 60 years of age. Majority 383 (89.1%) were Hindus and 74.2% belonged to nuclear family. Study findings revealed that various risk factors of cervical cancer were prevalent in the study population. Risk factors like early onset sexual intercourse below the age of 18 years, early pregnancy and childbirth, multiparity, and prolonged use of oral contraceptives was 46%, 24.7%,51.2% and 35.1% respectively.
Conclusion: Significant proportion of the studied women had various risk factors of cervical cancer. So screening measures for early detection should be focussed to the high risk group to reduce disease related mortality and morbidity.

KEYWORDS

Cervical cancer; Sociodemographic risk factors;Behavioural risk factors; Rural women; India

INTRODUCTION

The burden of the cancer is increasing worldwide and is the second most common cause of death. The incidence new cases are expected to increase by about 70% over next two decades[1,2].International agency for Research on Cancer (IARC) reports foresee an enormous increase to 19.3 million new cancer cases per year by 2025 because of aging global population. Indeed, more than 12% of deaths each year are caused by cancer. More than half of all cancers and cancer related deaths have occurred in under developed countries and this number will increase further by 2025[3].

Cervical cancer is the second most common cancer and an important cause of death worldwide[4,5]. While in developing countries like India,it is the most common cancer among women. It is the single largest killer of middle aged Indian women in the age group of 30 – 69, accounting for 17% of cancer deaths. More than one fifth of newly diagnosed cervical cancer cases are occurring in India[6,7]. Nearly 75-80 % of cervical cancer cases in India are detected in the later stage, which increases mortality and morbidity associated with this disease.

More than 80% of global burden of cervical cancer is occurring in developing and underdeveloped countries[8]. This discrepancy is due to lack of effective control measures in these countries. Cervical cancer is highly preventable if effective preventive strategies are implemented to detect and treat precancerous lesions[9]. Cervical cancer mainly affects middle aged women, particularly those from poor socioeconomic status due to lack of access to regular screening services and inadequate knowledge regarding preventive strategies. Some epidemiological studies suggest strong relationship between cervical cancer incidence and early onset sexual intercourse, multiple sexual partners and multiparity[5]. High risk Human Papilioma Virus (HPV) infection is an important precursor of squamous cell carcinoma of cervix. However independent risk factors like smoking, number of pregnancies, infectious agents and oral contraceptive use are associated with squamous cell carcinoma and adenocarcinoma of cervix.

Limited community based studies have been conducted in rural communities of Kerala to assess risk factors of cervical cancer. Present study aimed at the detection of various sociodemographic and behavioural risk factors of cervical cancer so that various screening programmes targeting the high risk group can be developed and implemented for the prevention of cervical cancer. The outcome of the study could provide health care professionals to have a view concerning the risk status of women for developing cervical cancer and a base for future interventions focussing on women in the context of cervical cancer prevention.

MATERIALS AND METHODS

A descriptive cross sectional study has been carried out in a selected rural community of Idukki district, Kerala, India from April 2015 to September 2015. 430 women in the age group of 30- 60 years were recruited from the selected community using multistage cluster sampling.Desired sample size was calculated using power analysis considering design effect. Ethical clearance was obtained from institutional ethics committee and informed consent was taken from each participant prior to data collection.

Tools used for data collection were demographic data sheet to collect sociodemographic data and risk assessment questionnaire to identify the risk status of women for developing cervical cancer. Appropriate validity and reliability of tool was established before data collection. Risk assessment questionnaire consisted of 16 items related to risk factors of cervical cancer.Each of the risk factors were graded according to their level and score was given and total score was calculated and total score obtained were divided into three categories as low risk, moderate risk and high risk category. Analysis was done using Statistical Package for social sciences (SPSS) version 21. Tests of significance were performed using 95% confidence interval and the level of significance was set at 0.05.

RESULTS

More than half of the subjects, 246 (57.2%) were in the age group of 30-40 years. With regard to religion majority 383 (89.1%) were Hindus. Most of the subjects 319 (74.2%) belonged to nuclear family. Two third of the subjects had education less than high school and higher secondary. Majority of subjects were either housewives or labourers.

More than two third of the subjects, 273(63.5%) were between 16-20 years and 17.7% of subjects were in the age group of 12-15 years at the time of marriage. With regard to age at the time of first pregnancy, 24.7% and 52.5% of subjects were below 18 years and 18-21 years of age. 49.8 % of subjects had parity more than three and 40.9 % had more than three children.

Most of the subjects 359 (83.50%) belonged to low risk category, 62(14.40%) to moderate risk category and 9(2.10%) to high risk category.Table 1 depicts frequency distribution of subjects according to selected sociodemographic and behavioural risk factors of cervical cancer. Frequency distribution of subjects according to the presence of selected clinical and lifestyle risk factors of cervical cancer are presented in table 2.

Table 1 – Frequency and percentage distribution of subjects according to presence of selected sociodemographic and behavioural risk factors of cervical cancer. N=430

Sino	Risk factors	f	%
1.	Age above 40 years	214	49.8
2.	Early age at first intercourse (<18)	198	46
3.	Early pregnancy and childbirth (<18)	106	24.7
4.	Multiparity (≥ 3)	220	51.2
5.	Multiple sexual partners	22	5.1
6.	Oral contraceptive use		
	Less than 5 years	44	10.2
	More than 5 years	151	35.1
7.	Previous history of cancer	4	0.9
8	Family history of cancer	23	5.3
9.	Not undergone Pap smear test in the last three year	427	99.3

Table 2- Frequency and percentage distribution of subjects according to presence of selected clinical and lifestyle risk factors of cervical cancer. N=430

Si.no	Risk factors	f	%
1.	Sexually transmitted diseases	102	23.7
2.	Autoimmune diseases	11	2.6
3.	Chronic steroid use	8	1.9
4.	Abnormal vaginal discharge	153	35.6
5.	Abnormal vaginal bleeding	40	9.3
6.	Tobacco use		
	< 10 Years	43	10
	>10 years	89	20.7
7.	Alcohol use	0	0
8.	Consumption of fruits and vegetables in a week		
	Never / occasionally	82	19.1
	1-3 times/week	69	16
	More than three times	279	64.9

DISCUSSION

Present study assessed sociodemographic and behavioural risk factors of cervical cancer among women. In the study, 26.3% of study subjects had no formal education, 2.1% were graduates and 33.5% had high school or higher secondary education. These findings were consistent with findings of studies conducted in India[10,11]. While contradictory findings were reported in studies conducted in Kerala and North Bengal[12,13]. Majority of the subjects (89.1%) participated in our study belonged to Hindu religion and all were married. Similar findings were reported in a study conducted in India[10].Present study found that most of the subjects 318 (75.2%) belonged to nuclear family which was supported by findings of a study carried out in Kerala, where over half of the subjects lived in nuclear family[12].It was also reported in the present study that 44.2% and 42.3% of subjects were housewives and labourers. Similar findings have been reported in a study conducted in Karnataka, India[11]. However, most of the subjects (80.4%) were homemakers in a study done in Kerala, India[12].

The factor of early marriage was found to be high in our study and more than one third of the subjects (46%) were below 18 years at the time of marriage**.** That is consistent with findings of a **cross-sectional community based study carried out in West Bengal[14]. Cervical intra** epithelium is more susceptible to carcinogenic agents during adolescence. So early onset of sexual activity and pregnancy are well known risk factors of cervical cancer. Low age at first sexual intercourse exposes young women to semen which is a potential carcinogen.

Early pregnancy and childbirth before the age of 18 years was reported by 24.7% of women participated in the study. A community based study done in Karnataka, India also revealed that 22.1% of women were married before the age of 18 years and more than half had first pregnancy before 22 years of age[11]. However, contradictory findings have been found in a survey conducted in West Bengal[14]. Relative risk of acquiring disease was 6 times more for women who had first pregnancy before 18 years of age as compared to those who had first pregnancy after the age of 18 years. Two-fold increased risk for cervical cancer have been reported among women with an early age at first pregnancy of 15–19 years as compared to those with first pregnancy above 25 years of age[15] . A study conducted in UK to assess risk factors of adenocarcinoma and squamous cell carcinoma of cervix among women aged 22 -41 years revealed increased risk of adenocarcinoma of cervix with early age at first pregnancy[16].

Multi parity is a well known risk factor of cervical cancer. In the present study more than half of the subjects (51.2%) had 3 or more than 3 children. These findings were consistent with findings of studies conducted in Karnataka and West Bengal, where 43.2% and 37.2% women had 3 or more than 3 children[11,14]. Progressive rise in the incidence of cervical cancer with increasing parity have been noticed in a hospital based cytological screening study[17]. Multiparity increases the risk of HPV infection due to repeated hormonal influences, pregnancy induced cervical changes and labour related trauma[15].

Occurrence of abnormal vaginal discharge was reported by 35.6% of study subjects. Symptoms of leucorrhoea and mucopurulent discharge were observed in 36.8% and 40.9% of women in studies conducted in India[11,14].History of tobacco use was reported by 30.7% of respondents of our study sample. Study conducted in west Bengal reported betel/tobacco chewing of 45.7%[14]. In the present study, family history of cancer was reported by 4% of women. But cross sectional survey conducted in West Bengal identified family history of cancer among 9% of subjects[14].

Present study revealed that, majority of women (91.8%) never used condom and preferred to use OCP or tubal ligation. These findings are in accordance with findings of a study conducted in India[13]. Prolonged use of oral contraceptive use for more than five years was reported by 35.5% of the study population. However contradictory findings of only 1.7% of contraceptive use have been reported in a study done in India[11].

CONCLUSION

It is important to consider socio-demographic and behavioural factors of cervical cancer while formulating public health policies and implementing cervical cancer control programmes. Suitable programmes targeting high risk group need to be developed to improve cervical cancer awareness and to control burden associated with this in developing countries like India.

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