

IMPACT OF AGE AT MENARCH AND TYPE OF PERIOD ON MENOPAUSAL CANCER INCIDENCE IN WOMEN OF AJMER MUNICIPAL AREA

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Abstract:

The present research work is an epidemiological study in Ajmer municipal area with retrospective and prospective recorded data on menopausal cancer. Present study is focused on the impact of marital status and occupation on menopausal cancer with focus on menopausal women ageing 30-70 of Ajmer municipal area. It will provide the long-term benefits to patients such as better estimation of risk in families with menopausal cancer and strategies to reduce risk, better prediction of drug response and patient prognosis, improve tailoring of treatments to patient subgroup and development of new therapeutic approach, earlier initiative of treatment, more effective use of resources for screening populations and an enhanced experience for women with or at risk of cancer and their families. Therefore, cancer education of women on ways to cope with menopause and cancer is required. cancer is multi-factorial disease where genetic vulnerability, surroundings, nourishment and other lifestyle risk factors act together. Better detection of modifiable risk factors and risk reduction of these cancers may permit implementation of useful strategies for prevention.

Epidemiology is used for the study of the distribution, determinants, patterns and factors affecting the health and disease conditions in a distinct population. It is a foundation of public health, and helps in making policy decisions and evidence-based exercise by identifying risk factors for disease and aims for protective healthcare.

Key words: Menopausal cancer, Life style, occupation, Menarch, Period

1.Introduction

Menopausal breast, uterine and cervical cancer is multi-factorial disease where genetic vulnerability, surroundings, nourishment and other lifestyle risk factors act together. Better detection of modifiable risk factors and risk reduction of these cancers may permit implementation of useful strategies for prevention. Considering the above underlying principle, the present study on “An Epidemiological Study of Pre ,Peri and post-menopausal women cancer (breast, cervical and uterine cancer) in Ajmer municipal area” was chosen and designed for the present study. The purpose of this study was to find out, demographic and life style risk factors which affects menopausal women cancer.

Ajmer has a hot semi-arid climate with over 55 centimeters (25.4 in) of rain every year, but most of the rain occurs in the Monsoon months, between June and September. Temperatures remain relatively high throughout the year, with the summer months of April to early July having an average daily temperature of about 30 °C (86 °F). During the monsoon there are frequent heavy rains and thunderstorms but flooding is not a common occurrence. The winter months of November to February are mild and temperate with average temperatures ranging from 15–18 °C (59–64 °F) with little or no humidity. There are, however, occasional cold weather fronts that cause temperatures to fall to near freezing levels.

Table 1.1: Profile of Ajmer Municipal Area (2011 Census)

Area(square kilometer)	Total population(including institutional and houseless population)			Rural/Urban	Census Location code No.
	Persons	Males	Females		
219.36	5,42,321	2,78,545	2,63,776	Urban	800570

2.Material and Method:

In the present study a systematic effort is made to reveal the trends of the terrible disease cancer in menopausal women in Ajmer municipal area over a period of five years (2010-2014). The emphasis has been laid on epidemiology in Ajmer municipal area. The study involved convenience sample of pre, peri and postmenopausal women having breast, cervical and uterine cancer in Ajmer municipal area. No single specific criterion in deciding sample size was proposed for further analysis. A sample size of 450 was taken. 450 pre, peri and postmenopausal women having breast, cervical and uterine cancer in Ajmer municipal area participated as respondents.

In the present study, along with epidemiology, an attempt was also made to observe the effect of diet, life-style, physical activity

and other demographic factors on breast, cervix and uterine cancer on menopausal women. Taking all of these different measurements into consideration, this study was conducted in Ajmer municipal area on pre,peri and post menopausal women having breast cervical and uterine cancer. The study protocol was approved by the ethical board of different general and cancer hospital and research center in Ajmer municipal area and all study participants provided written consent for epidemiological study.

3.Statistical tool used for hypothesis testing and data analysis

- **Analysis of variance (ANOVA):** It is a collection of statistical models used to analyze the differences among and between group means.
- **Kaise-Meyer-Olkin (KMO) Test:** This test was performed to check the sampling adequacy and reliability of the data.
- **Factor analysis:** It is a multivariate technique. In which the value of observed data are expressed as a number of possible causes in order to find which variable were most important.

4.Analysis and Results

4.1 Age at Menarche

Out of 450 pre, peri and post menopausal respondents, 48.2% women started menstruating at an early age of 10-12 years, 37.6% women started menstruating at 12-14 years, 7.3% women started menstruating at 14-16 and 6.9% women started menstruating after 16 years. About 50% women started menstruating early which shows higher exposure of estrogen hormone.

Table 4.1: Age at Menarche Frequency and Percentage Distribution of respondents

Age at Menarche					
		Frequency	Percent	Valid Percent	Cumulative Percent
Age at Menarche	10-12 Years	217	48.2	48.2	48.2
	12-14 Years	169	37.6	37.6	85.8
	14-16 Years	33	7.3	7.3	93.1
	After 16 Year	31	6.9	6.9	100.0
	Total	450	100.0	100.0	

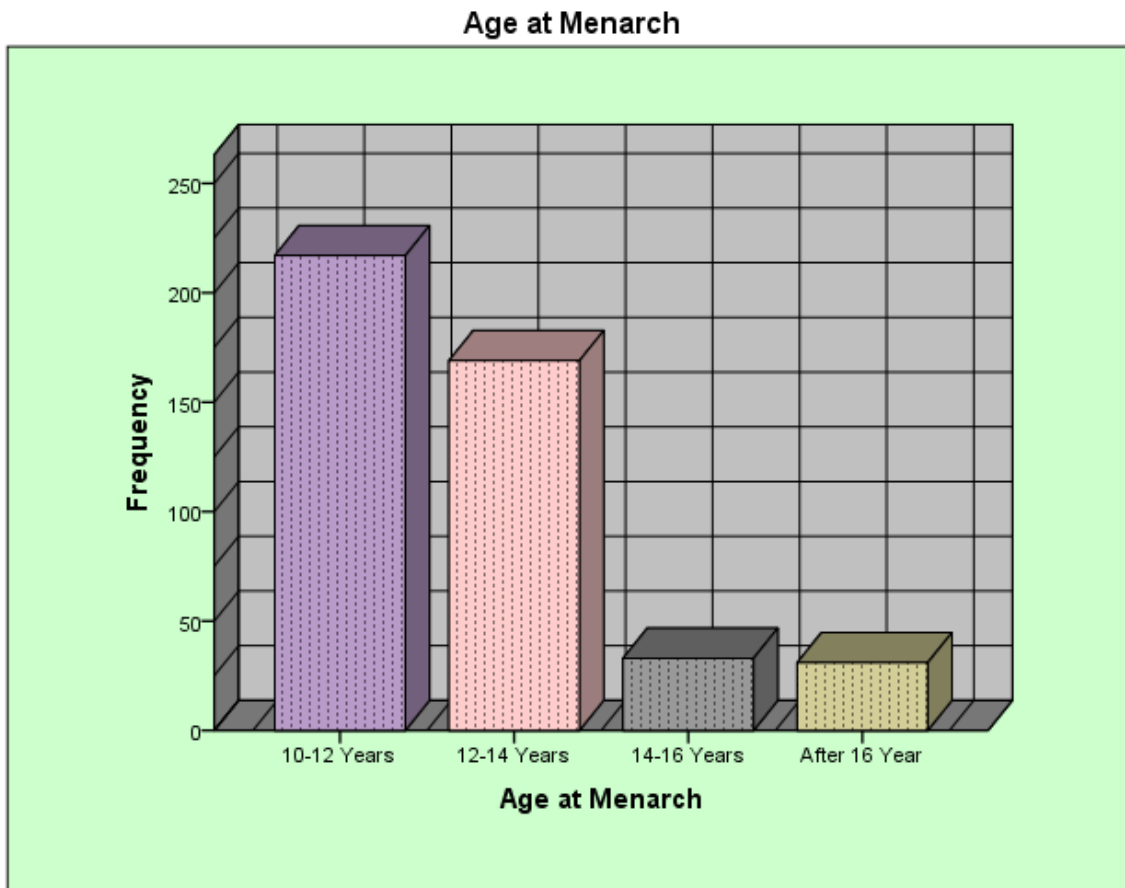


Fig. 4.1: Age at Menarche Frequency Distribution of Respondents

4.2 Type of Period

Out of 450 pre, peri and post menopausal respondents, one hundred and twenty two (27.1%) women were having regular periods; three hundred and twenty eight (72.9%) women were having irregular periods during menstruating stage .So most of the respondents had hormonal imbalance.

Table 4.2: Type of Period Frequency and Percentage Distribution of Respondents

Type of Period		Frequency	Percent	Valid Percent	Cumulative Percent
Type of Period	Regular	122	27.1	27.1	27.1
	Irregular	328	72.9	72.9	100.0
	Total	450	100.0	100.0	

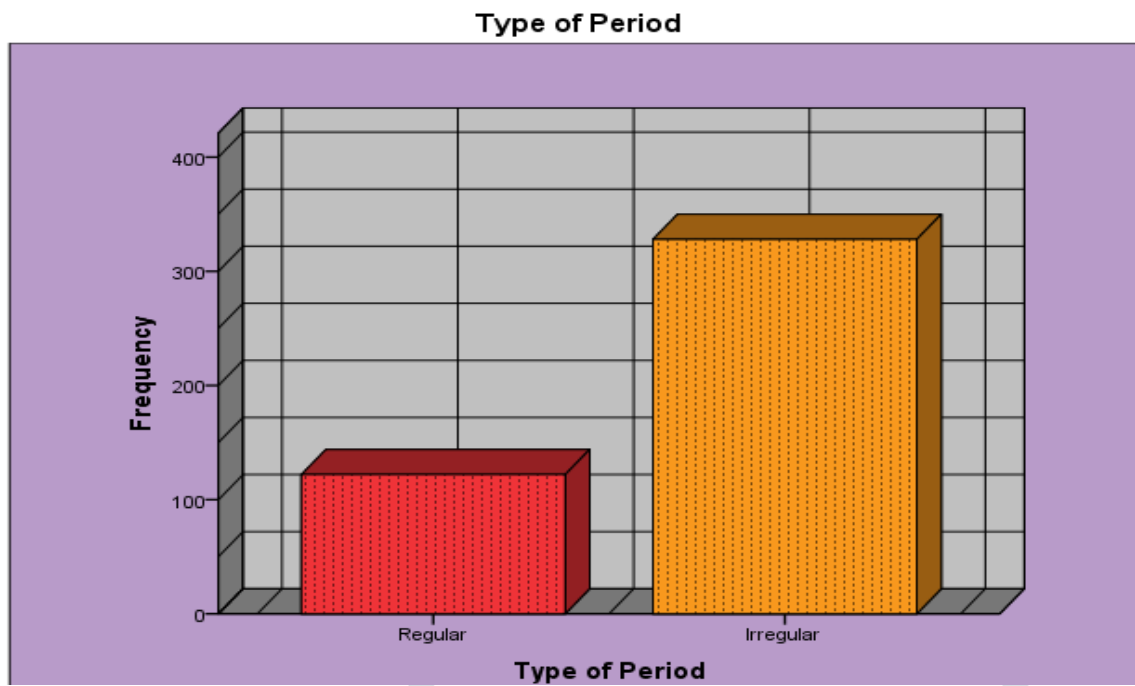


Fig. 4.2: Type of Period Frequency Distribution of Respondents

Table 4.3 Descriptive statistics of Age at Menarche variable

Age at Menarche	Breast	150	1.89	.931	.076	1.74	2.04	1	4
	Cervix	277	1.63	.809	.049	1.53	1.72	1	4
	Uterine	23	1.87	1.058	.221	1.41	2.33	1	4
	Total	450	1.73	.872	.041	1.65	1.81	1	4

Table 4.4 Descriptive statistics of Type of Period variable

Type of Period	Breast	150	1.71	.457	.037	1.63	1.78	1	2
	Cervix	277	1.73	.447	.027	1.67	1.78	1	2
	Uterine	23	1.91	.288	.060	1.79	2.04	1	2
	Total	450	1.73	.445	.021	1.69	1.77	1	2

5. Conclusion: it is concluded that both factors are impacting on menopausal cancer

5.1 Age at menopause

Results of factor loading value by principal component analysis show strong association between age at menopause and menopausal cancer in Ajmer. Research of Hsieh et al. (1990), Trichopoulos et al. (1972), Byrne et al. (2005) showed that if menopause is induced before age 35, cancer risk decreases. Little effect occurred in the surgically induce menopause. Relative risk of breast cancer increased with age at natural menopause. Women with natural menopause at age 55 and older had doubled the breast cancer risk in comparison with those whose menopause occurred before the age 45.

5.2 Type of Period

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