CHAPTER VII

SUMMARY, CONCLUSION AND RECOMMENDATIONS

SUMMARY

The socio-demographic, economic, cultural transformation among women due to increase in women's educational level has also brought about many lifestyle changes, since last two to three decades may be responsible for increase in cancer breast cases.

The present research study entitled "to study lifestyle and other risk factor of breast cancer: a case – control study" was conducted in Satara district of state Maharashtra, India having 11 talukas and 1707 villages. A hospital based case- control study was carried out among newly diagnosed cases of cancer breast and control groups.

Krishna Hospital Karad and other selected private as well as public health care facilities from Karad and Satara town providing cancer diagnostic and therapeutic cancer services or may be referring cases for therapeutic purposes to Krishna Hospital Karad, Sangli, Pune or Mumbai were included in this study.

The study subjects were all newly diagnosed cases of cancer breast i.e. within period of one year of diagnosis, irrespective of age and stage of cancer breast. Similarly age, religion and residence matched women without breast cancer was included as controls. According to inclusion and exclusion criteria, cancer breast cases which were diagnosed in year 2009 and 2010 totaled to 217. Similar number of controls was also used for present study, so total sample size was 434. The data was collected by the researcher utilizing self administered pre-tested questionnaire which was adopted from previously published studies as well as newly designed after experts' opinion. The questionnaire included the information on Socio-demographic-economic characteristics of the women, personal characteristics, reproductive characteristics, family history of cancer breast, radiation exposure and other lifestyle related risk factors which are directly and indirectly related to the cancer breast by personal face to face interview method in local language. Patient's comfort was maintained during interview time and checklist was used to avoid duplication of cases or controls. Data so collected was entered into

Microsoft Excel 2007 and analyzed by using SPSS 17 statistical software. Descriptive statistics, Exposure rate of risk factors in both cases and controls, Strength of association by using Odd's ratio and association or relationship between risk factors and cancer breast was analyzed by using chi-square test. Total duration of the study was four years and nine months i.e. from year Oct 2008 to June 2013.

In all, 217 women with breast cancer and 217 with controls were interviewed. The age group ranged from 25 yrs to 70 yrs with a mean ± SD age of cases and control was 48.59 ± 11.34 and 48.43 ± 11.23 respectively. The highest numbers of cases (32%) were in the age group of 40-49 yrs, which declined there after. The majority of breast cancer cases (88%) were Hindu by religion and majority (67.28%) were residing in rural areas. No statistically significant difference was observed between cases and control with respect to age, religion and residence ($p > 0.05$), which reflected successful matching between cases and controls. The majority of cases, 63.89% were housewives, 30.41% were illiterate and educational level of cases and controls showed significant statistical difference ($p < 0.05$). The proportion of cases was high in Upper economic class 56.68% as compared to controls (49.31%).

In the present study, risk of getting Breast cancer was 8 times higher in unmarried women as compared to married. Only 5.06 % cases were nulliparous and had 2 times risk of developing cancer breast as compared to parus women. Similarly, abortion rate was higher in cases (21.65%) and the risk was 2 times higher in cases as compared to the controls. The strength of association between menopause and breast cancer as indicated by odd's ratio was 2.5 and it was 10.5 for non breast feeding as compared to breast feeding women. Risk of developing breast cancer due to overweight was 2.5 times higher in cases as compared to controls. The family history of breast cancer as a risk factor for cancer breast was 8 times higher in cases as compared to controls. The risk of developing breast cancer was 1.5 times in cases as compared to controls who ever used OC pills; however Hormone therapy (DMPA) did not show any risk. The strength of association between exposure to tobacco and breast cancer as indicated by odd's ratio was 1.2 for those using tobacco 2 to 4 times a day however risk was increased to 2.5 for those using tobacco for 5 and more per day. Alcohol use did not play role in occurrence of breast cancer.

The risk of developing breast cancer as indicated by odd's ratio of 44 among the women who had known history of breast disease, similarly the women with history of oppherectomy, risk of developing breast cancer was 14 times higher as compared to controls. Lack of physical exercise was a risk for breast cancer and risk was 4 times higher as compared to those did regular physical exercise The strength of association between radiological exposure and breast cancer as indicated by odd's ratio was 3 and it was 1.8 for women had psychological stress as compared to no psychological stress.

The rate of consumption of visible fat (ghee, oil, animal fat etc) in diet was maximum 68.66% in cases as compared to controls (35.94%) and risk of getting breast cancer was 4 times higher in cases as compared to controls. However, risk was 13.5 times higher in cases who consumed extra and excess salt in their diet as compared to salt free diet. The role of consuming fruits, tea/coffee and Wax / hair removal creams did not play any role in onset of breast cancer.

CONCLUSION

The present study revealed that, maximum breast cancer cases were in age group 40-49 yrs. The risk factors such as unmarried status of women, nulli-parity, menopause, absence of breast feeding, overweight, family H/o breast cancer, use of tobacco, past H/o breast disease, History of ovarian disease, lack of physical exercise, psychological stress, high consumption of visible fat and use of extra salt were strongly associated with breast cancer, however weak association was seen with factors such as use of sex hormones and history of abortions.

The factors such as use of brassier, deodorants were shown protective effect against breast cancer, however the risk factors such as use of alcohol, drinking of tea/coffee, use of Wax/ hair removal creams, consumption of fruits, use of only OC pills or hormone replacement therapy had no relationship with occurrence of breast cancer.

RECOMMENDATIONS

- In present study, most of the breast cancer cases were detected in late stage so ultimate prognosis of the disease will be poor. Based on these findings, it is recommended that breast cancer cases should be diagnosed in early stage and should be treated adequately. This could be resulted into down staging of breast cancer which further leads to good prognosis of the disease.
- Down staging of breast cancer in rural community could be possible by population based health education intervention strategy. Information, education and communication activities should be carried out periodically by public-private partnership. Peripheral public health care workers viz Auxiliary Nurse Midwifery, ASHA workers, Anganwadi workers should be trained for self breast examination, clinical breast examination, access to health care services, community mobilization and participation to reduce the exposure to known identified risk factors in relation to breast cancer reported by present study and modify the life style for healthy life.
- Opportunistic screening for breast cancer should be carried out at public health care institutions and private hospitals for early detection of breast cancer which could be helpful for down staging of breast cancer.
- Develop breast cancer dominance model that give the social status to women suffering from breast cancer and reduce the stigma, eliminate cultural templates and provide emotional stability. Community should be participated to treat every case of breast cancer as a girl child and fulfill the needs; government should provide strong financial support for breast cancer awareness campaigns, early diagnosis and prompt treatment. A strong political is required to establish heath infrastructure for diagnosis and treatment of breast cancer in rural area by provision of special budgetary health expenditure for capacity development.
- The treatment of breast cancer should be considered as right of every woman so services could be accessed and enjoyed without discrimination of residence, poverty, cast, religion and ethnicity etc. Similarly, even after breast cancer surgery, rehabilitation is carried out by cosmetic therapy so women even though

after surgery she should look like as normal woman before breast cancer. This will improve the quality of life of cancer survivors, family members and community.

- Integration of National Cancer Control Programme into general health care services so that the community at large residing in remote rural area also gets benefited by anti-cancer services.
- Up gradation of existing health care establishments for better cancer services mainly focused on clinical breast examination and biopsy at primary health centers and treatment intervention at nearest district hospital.
- Public-private partnership can establish for better heath care services and reduce incidence and mortality due to cancer in India.
- Strong enforcement of public health legislations including ban on alcohol, tobacco and hazards food stuffs.