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A CASE CONTROL STUDY TO IDENTIFY THE RISK GROUP OF PRECANCEROUS ORAL LESIONS AND TO CORRELATE WITH PRE-DISPOSING FACTORS AND TO IMPLEMENT A NEED BASED AWARENESS PROGRAMME ON ORAL CANCER AMONG ADULTS RESIDING IN SELECTED RURAL SETTINGS AT MADURAI DISTRICT

Y. John Sam Arun Prabu*¹ and N. Gururaj²

¹Department of Community Health Nursing, CSI J.A. College of Nursing, Madurai, Tamil Nadu, India.

²Department of Oralpathology, CSI College of Dental Sciences and Research, Madurai, Tamil Nadu, India.

ABSTRACT

Aim of the study: To determine the precancerous lesion among adults with the habits of smoking, chewing tobacco and alcoholism cytological changes in the oral cavity through Oral exfoliative cytology investigation. To refer the identified cases of precancerous lesion for further treatment to C.S.I Dental college hospital. To create awareness among adults with the habits of smoking, chewing tobacco and alcoholism relating to oral cancer. **Materials and Methods:** The research design adopted for this study is Quasi- Experimental Case Control Design. The conceptual framework used for this study was Modified conceptual framework based on Web of Causation - Mac Mohan and Thomas Pugh 1970. The study was conducted in the rural settings of Madurai District in south Tamil Nadu. The sample size made using Power Analysis which was 1040. According to Cytological results 207 samples were identified with precancerous oral lesions. They were considered as Cases. Remaining 833 samples were considered as controls. Disproportionate stratified random sampling method used to select samples. Observational check list was used to identify the risk group of precancerous oral lesions through oral examination. Questionnaire was used to identify the pre-disposing factors on oral cancer among adults. Knowledge was assessed by using a questionnaire and the attitude was measured on a 3 point Likert scale and modified Fagerstrom. Addiction Scale were used to find the level of dependence among adults with precancerous oral lesions (cases). The data were analyzed based on the objectives of the study using descriptive and inferential statistics. **Results:** Totally 207 (100%) of cases had leukoplakia which is one of the ideal precancerous lesions. Majority 72.9% of Cases and 89.7% of Controls were having Pigmentation in the labial buccal mucosa and vestibule. High majority of the cases (90.3%) using biddies smoking and controls (78.9%) using cigarette smoking. Almost all of the cases (97.1%) and controls (96.6%) used below 5 packets of smokeless tobacco per day and the onset of smokeless tobacco were at the age of 25 and above in both cases and controls. The Level of knowledge on oral cancer was inadequate 134 (100%) before the structure teaching programme, and the level of attitude shows moderately favorable 39(29.1%) and low favorable 95(70.9%). After structured teaching programme the level of knowledge has considerably increased to moderate level 41(30.6%) and adequate level 90 (67.2%) and the level of attitude has highly increased to high favourable 134 (100%). Based on Level of dependence in smoking before the structure teaching programme among adults were moderately high 69(51.5%) and high 30(22.4%) and in smokeless tobacco were low 92(68.7) and moderately high 14(10.4%) and high 28(20.9%). After structured teaching programme the level of dependence has deliberately decreased to low level 134 (100%). **Interpretation and Conclusion:** The main conclusion of the present study is that many adults with the habit of smoking, smokeless tobacco, alcoholism and other substance abuse were unknowingly affected with pre-cancerous oral lesions. If it is detected earlier prevention from oral cancer is possible. Identification and rectification of pre disposing factors might reduce the risk of oral cancer. The structured teaching programme effectively improve the knowledge and Attitude of adults with pre-cancerous oral lesions (cases) regarding oral cancer which helps the adults to reduce the level of dependence in smoking and smokeless tobacco and the acceptance of treatment and thus reduces the prevalence of oral cancer.

KEYWORDS

Precancerous oral lesions, Oral Health, Smoking, Smokeless tobacco, Leukoplakia, Pigmentations, Pre-disposing factors, Knowledge, attitude, Dependence and Oral cancer.

Author for Correspondence:

John Sam Arun Prabu Y,
Department of Community Health Nursing,
CSI J.A. College of Nursing, Madurai, Tamil Nadu, India.
Email: johnsamarunprabu2020@gmail.com

INTRODUCTION

Background of the study: Statement of the problem

A case control study to identify the risk group of precancerous oral lesions and to correlate with pre-disposing factors and to implement a need based

awareness programme on oral cancer among adults residing in selected rural settings at Madurai district.

Objectives

1. To identify the prevalence of precancerous lesions among adults residing at selected rural settings at Madurai.
2. To describe the predisposing factors of precancerous oral lesions among tobacco using adults in cases and controls groups.
3. To find correlation between precancerous oral lesions and pre disposing factors among adults in cases and controls.

Conceptual Framework

The conceptual framework used for this study was Modified conceptual framework based on Web of Causation - Mac Mohan and Thomas Pugh 1970.

METHODOLOGY

A Quasi experimental study with case control design was adopted for this study. Disproportionate stratified random sampling technique was used to select samples. The sample size made using Power Analysis and was 1040. There were 207 Cases and 833 Controls. The samples were the adults with habits of tobacco in selected four villages. Observational check list was used to identify the risk group of precancerous oral lesions through oral examination. Questionnaire was used to identify the pre-disposing factors on oral cancer among adults. knowledge was assessed by using a questionnaire and the attitude was measured on a 3 point Likert scale and modified Fagerstrom Addiction Scale were used to find the level of dependence among adults with precancerous oral lesions (cases). The data analysed based on the objectives of the study using descriptive and inferential statistics. The tool was validated by experts and found to be valid for this study. The reliability was established through the Cronbach's Alpha and the reliability was found to be 0.96.

SUMMARY OF THE STUDY FINDINGS

Based on demographic variables, 35.3% of the Cases were between (38 - 47) years and 29.5% of controls were between (28 - 37) years. Most of the Cases and Controls not undergone formal education. Majority

of Cases (84.1%) and Controls (86.8%) were married and around 70% Cases and Controls were unskilled workers. 60.4% of Cases and 92.3% of Controls belonged to Hindu religion and all samples belonged to Non Vegetarian. Majority 43.5% of Cases and 37.8% of Controls got knowledge through mass media. Majority 96.1% of Cases and 94.2% of Controls were advised by family members to stop using tobacco.

Among the prevalence of risk group of precancerous oral lesions, Totally 207(100%) of cases had leukoplakia (in labial buccal mucosa and vestibule 61.83%, tongue dorsum and lateral border 23.19%, hard and soft palate 15%) which is one of the ideal precancerous lesions. Majority 72.9% of Cases and 89.7% of Controls having Pigmentation in the labial buccal mucosa and vestibule. Overall 86.3% adults were having Pigmentation in the labial buccal mucosa and vestibule followed 48.3% adults who had pigmentation in their tongue. Majority 93.2% of Cases and 89.6% of Controls and overall 90.3% adults were having staining in their teeth followed by 63.5% adults who were having teeth erosion.

Level of knowledge on oral cancer before the structured teaching programme among adults with pre-cancerous oral lesions (Case group) was generally inadequate 134(100%). After structured teaching programme the level of knowledge has considerably increased to moderate level 41(30.6%) and adequate level 90(67.2%).

Level of attitude on oral cancer before the structured teaching programme among adults with pre-cancerous oral lesions (Case group) were moderately favourable 39(29.1%) and low favourable 95(70.9%) after structured teaching programme, the level of attitude has highly increased to high favourable 134 (100%).

Level of dependence in smoking before the structured teaching programme among adults with pre-cancerous oral lesions (Case group) were moderately high 69(51.5%) and high 30(22.4%). After structured teaching programme the level of dependence has deliberately decreased to low level 134(100%).

Level of dependence in smokeless tobacco before the structured teaching programme among adults with pre-cancerous oral lesions (Case group) were low 92(68.7) and moderately high 14(10.4%) and high 28(20.9%). After structured teaching programme, the level of dependence has deliberately decreased to low level 134(100%).

The obtained F ratio value 2.633 (p=0.076) showed significant association between the personal monthly income of the adults and their level of knowledge regarding oral cancer and the obtained 't' value 1.639 (P=0.106) showed significant relationship between religion and their knowledge regarding oral cancer.

The obtained 't' value 2.673 (P=0.009) showed significant relationship between source of information through mass media and their knowledge regarding oral cancer and all the other demographic variables were not associated with post-test knowledge of oral cancer.

All the demographic variables except type of family, religion, source of information through friends and neighbours, health personnel and cover note were associated with post-test attitude on oral cancer.

There was a significant association between the age, occupation, religion, source of information and level of dependence in smoking and also information through friends and neighbours and cover note of tobacco products show significant relationship with level of Dependence in smoking.

There was a significant relationship between Source of information to stop using tobacco through friends, family history of tobacco use among first degree relatives and level of dependence in smoking. There was a significant relationship between the demographic variables such as age in years, educational status, occupation, personal monthly income, religion and the level of dependence in smokeless tobacco. With regard to the source of information there was a significant relationship between mass media, health personnel and those who answered don't know and the level of dependence in smokeless tobacco. With regard to the source of information to stop using tobacco there was a significant relationship between family members and health personnel and the level of dependence in smokeless tobacco.

Table No.1: Distribution of Mean, Standard Deviation and Statistical Value on Total Screening Score among Cases and Controls N= 1040

S.No	Risk group of pre-cancerous oral lesion	Group	Number	Mean	SD	Statistical value 't'
1	Total screening score	Case Control	207 833	27.71 21.55	10.74 10.97	7.255 P=0.000 S

Table No.2: Distribution of Mean, Standard Deviation and Statistical Value on Total Pre-Disposing Factors among Cases and Controls N= 1040

S.No	Pre disposing factors	Group	Number	Mean	SD	Statistical value 't'
1	Total Pre disposing factors	Case Control	207 833	56.21 51.82	5.23 5.05	11.113 P=0.000 S

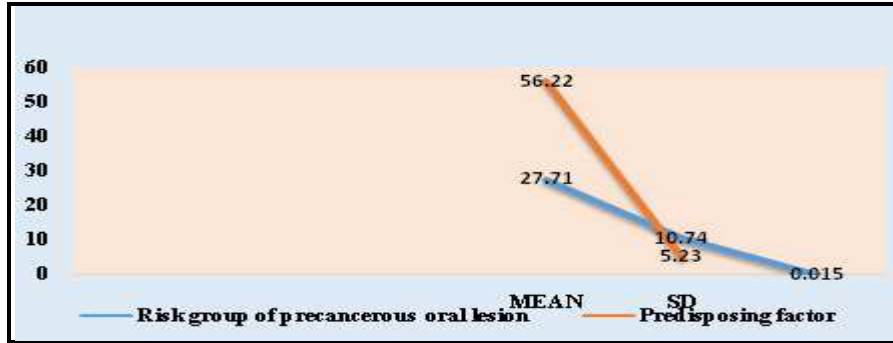


Figure No.1: Relationship between Risk Group of Precancerous Oral Lesion and Pre-Disposing Factors among Cases Only

RECOMMENDATIONS

1. The present study can be replicated in similar and different settings with large samples to validate and generalize findings of the study.
2. The same study can be conducted as a comparative study between the urban and rural adults.
3. Detection of Pre-Cancerous Oral Lesion by 'Exfoliative Cytology test can be suggested for NCD programme in the primary health centres.
4. A similar study may be conducted in other backward districts, taluks and villages.
5. Health education module can be prepared and tested for its application.

IMPLICATIONS

1. Nursing educator should emphasize more on preparing students in terms of predisposing factors of oral cancer and to impart health information to the community and health education must be repeated until they have gained the knowledge and showed the change in the behavior.
2. Health professionals, especially community health nurses should be taught about the screening procedure and motivated to perform oral examination to find the precancerous oral lesions which may prevent oral cancer.
3. The nurse administrator should arrange an outreach activity with the collaboration of different agencies which will aim at creating awareness among the community.

4. Nursing researcher might contribute to the profession to accumulate new knowledge regarding the different aspects of health education programme and can educate and motivate the community towards health promotional activities.

CONCLUSION

The main conclusion of the present study is that many adults with the habit of smoking, smokeless tobacco, alcoholism and consuming other substances were unknowingly affected with pre-cancerous oral lesions. If it is detected earlier prevention from oral cancer is possible. Identification and rectification of pre disposing factors will reduces the risk of oral cancer.

The structured teaching programme could effectively improve the knowledge and attitude of adults with pre-cancerous oral lesions (cases) regarding oral cancer which helps the adults to reduce the level of dependence in smoking and smokeless tobacco and acceptance of treatment and thus reduce the prevalence of oral cancer. Awareness about devastating consequences of tobacco use and exposure to smoke need to spread, protect the lives of the ignorant and to give the present and future generation a healthy life.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

BIBLIOGRAPHY

1. Belcher Anne E. Cancer nursing, *Missouri, Mosby Publications*, 1st Edition, 1992, 288.
2. Park K. Park's Text Book of preventive and social medicine, *M/s. Banarsidas Bhanot Publishers, Jabalpur*, 18th Edition, 2005, 302-310.
3. Muthy N S, Juneja A, Sehgal A. cancer projections by the turn of century - Indian scene, *Indian Journal of Cancer*, 27(2), 1990, 74-82.
4. World Health Organisation, *Oral Health*, www.who.int/oral_health/en/.
5. www.who.int/./orh_report03_en.pdf.
6. Zareei M Asodpoor F. Evaluation of knowledge and diagnose experience among dentists, kerman, *Iran I shahid Baherhti Dent, Sch*, 19, 2001, 357-364.
7. Rajiv Ranjan, Prasad, Dilip Kumar Yadav. Epidemiology of cancer Indian Scenario, *Journal of Indian Medical Association*, 103(9), 2005, 483-485.
8. Ram Sharan Mehta. A text book of Oncology Nursing, *Jaypee Brothers Medical Pub (P) Ltd*, 1st Edition, 2009, 442.

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