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Knowledge, Attitude, Awareness About The Role Of Oral Pathologist - A Survey Among General Dentists

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ABSTRACT

BACKGROUND - There is a paucity of information about knowledge,attitude and awareness about the role of oral pathology among general dentists. Oral pathology is the branch of dental science dealing with pathology affecting the oral and maxillofacial regions.The information about the current scenario of oral pathology speciality and its future perspective is evident in the literature.

AIM - To assess knowledge, attitude and awareness about the role of Oral pathologist among general dentists.

MATERIALS AND METHODS - The printed and validated questionnaire regarding the role of oral pathology was supplied to general dentists. The data collection software is google forms. The data was tabulated in an excel spreadsheet. The data was collected and statistically analysed in SPSS. Chi-Square analysis was performed and $p<0.05$ was considered as statistically significant.

RESULTS - Most participants surveyed about 31.2 % of the oral pathologists are mainly involved in Teaching, 31.2% of the participants mentioned that they do Clinical practicing and 19.3% mentioned that oral pathologists review dental x-rays and

18.34% mentioned that they perform tissue and bone biopsies (Chi-Square 5.254 ,P value = 0.512). Only 37.6 % of the participants mentioned that oral pathologists help to diagnose and treat any disease, 12.8% of the participants mentioned they found dental problems, 16.5% selected Diagnosis and determining the cause of the condition and 33% of the participants selected All of the above (Chi-Square 12.815,P value = 0.046).

CONCLUSION - This paper may be considered as a baseline study regarding Knowledge,Attitude,Awareness about the role of Oral pathologist among general dentists.Although general dentists were aware of oral pathology speciality, their stance of referring and consulting oral pathologists for oral pathology cases for histopathology report is poor.

KEY WORDS - Innovative technique, novel method, Awareness, Oral pathologist, Biopsy, Histopathology, Diagnosis.

INTRODUCTION

Oral pathology is the branch of dental science dealing with pathology affecting the oral and the maxillofacial regions (1). The information about the current scenario of the role of Oral Pathologist among general dentists and its future perspective is evident in the literature (2). Oral pathology forms a crucial link between basic dental sciences and clinical dental sciences (3). More recently, they also play a vital role in diagnosis and treatment planning sometimes guiding the oral and maxillofacial surgeons in their surgical procedures since they have the distinction of meeting patients, observing the clinical presentation of the disease process, investigating the cause of the pathology and determining the cause of the condition (4,5). Oral pathology is a wide-ranging dental specialty that includes a wide range of abnormalities and diseases. An oral pathologist is therefore concerned not so much with the teeth as with diagnosis, treatment, and study of disorders of the mouth, jaw, and soft tissues (6). Oral and maxillofacial pathology is the specialty of dentistry and pathology which deals with the nature, identification, and management of diseases affecting the oral and maxillofacial regions. It is a science that investigates the causes, processes and effects of these diseases. The most undeniable significant role of oral pathologists in daily dental practice is in diagnosing a premalignant lesion from malignant (7). Though it is impossible to learn all the oral lesions and conditions, a fundamental knowledge of oral pathology is essential to become a successful practitioner (8). So this is high time when Dental Council Of India should encourage & initiate to create centers of oral pathology in each dental institution with adequate infrastructure and material for quality dental research. However, many diseases of the mucosa, other soft tissue and bone require additional information to make a precise diagnosis (9). This information in many instances may be provided by biopsy and submission of tissue for histopathologic examination. The indications for oral biopsy and other allied techniques and the procedures that will help ensure accurate diagnosis (9,10).

Oral Pathology is the backbone of dental science and the bridge between dental and medical sciences. Oral pathologists can be called as an epitome of research in dentistry, given the large area available for research and the vast area of issue to be explored regarding the pathophysiology of diseases related. They also play a vital role in determining the final histological diagnosis based on clinico-radiologic-pathologic correlation (11). Our team has extensive knowledge and research experience that has translated into high quality publications (12–31). This study aimed to assess knowledge, attitude and awareness about the role of Oral pathologist among general dentists.

MATERIALS AND METHODS

Self-administered standardized questionnaires were designed based on the role of oral pathologist among general dentists. The questionnaire was distributed through online google forms link and the study population included 100 participants. The study was done in chennai. The participants were explained about the purpose of the study in detail. The questions were carefully studied and the corresponding answers were marked by the participants. The data was collected and statistically analysed in SPSS. Chi-Square analysis was performed and $p<0.05$ was considered as statistically significant. The Inclusion Criteria is Subjects with age groups between 20- 40 yrs and Oral pathologists working a minimum of 5 years duration. The Exclusion Criteria is an online questionnaire method of data collection that enables more number of oral pathologists to participate in the study and it creates a higher Level of knowledge and awareness. The data collection software is google forms. The data was tabulated in an excel spreadsheet. List of output variables were age,sex - descriptive analysis and awareness and knowledge about the oral pathologist are explanatory variables. The data were represented as a pie chart and bar graph. In analytics, the statistical tests used were descriptive statistics (frequency and percentage). The statistics software used was SPSS. The independent variables were age and sex. The dependent variables were year,oral pathologist,knowledge and attitude.

RESULTS

In our study, about 38.5% were BDS and 14.7% were MDS and 46.8% were PhD **(figure 1)**. Only 44.% of the participants were aware about the department of oral pathology **(figure 2)**. In our study, 70% of the population were aware of knowledge about Oral pathology and 30.3 % of the participants were not aware **(figure 3)**.When the participants were asked if they were aware about the oral pathologist activities, 31.2 % of the participants mentioned that aware about oral pathologists are mainly involved in Teaching, 31.2% of the participants mentioned that they do Clinical practising and 19.3% mentioned that the oral pathologists review dental x-rays and 18.34% mentioned that they do perform tissue and bone biopsies **(figure 4)**. When the participants were asked if they were aware about the importance of Oral pathologists, Only 37.6 % of the participants mentioned that oral pathologists help to diagnose and treat any disease, 12.8% of the participants mentioned they found dental problems, 16.5% selected Diagnosis and determining the cause of the condition and 33% of the participants selected “All of the above” **(figure 5)**. When the participants were asked if they were aware about the role of Oral pathologist,Only 30.3% of the participants mentioned that oral pathologists dissect specimens and report on cases for other doctors, 22% of the participants said they are involved in research, 14.7% of the participants selected investigating the genetic cause of developmental disease and 33% of the participants selected “All of the above” **(figure 6)**.When the participants were asked if they were aware about the knowledge about the Oral biopsy specimens for histopathological diagnosis,Only 39.4% of the participants mentioned that they send the oral biopsy specimens to an oral pathologist, 34.9% of the participants selected general pathologists and 25.7% of the participants were not aware **(Figure 7)**. In the present study Bar graph represents the association between the highest level of education and knowledge about the department of Oral pathology were evaluated using pearson chi square test, yields a P value is 0.021,(p value >0.05). Hence,it is statistically not significant **(Figure 8)**. In our study, Bar graph represents the association between the highest level of education and knowledge about Oral pathology were evaluated using pearson chi square test, yields a p value of 0.074,(p value >0.05).Hence, it is statistically significant **(Figure 9)**. In our study,

Bar graph represents the association between the highest level of education and knowledge about Oral pathologist activities were evaluated using pearson chi square test, yields a P value is 0.046,(p value >0.05).Hence,it is statistically not significant **(Figure 10)**.

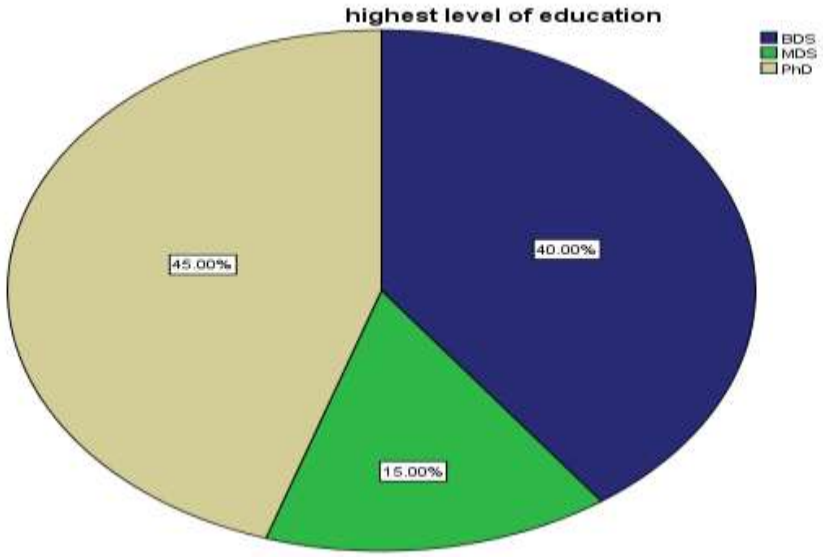

Figure 1: Shows the percentage of responses of the participants for the highest level of education.Dark Blue indicates “BDS”, Green indicates “MDS”, Beige indicates “PhD”.Majority (45%) of the participants were phD,(40%) of the participants are BDS, (15%) of the participants are MDS.

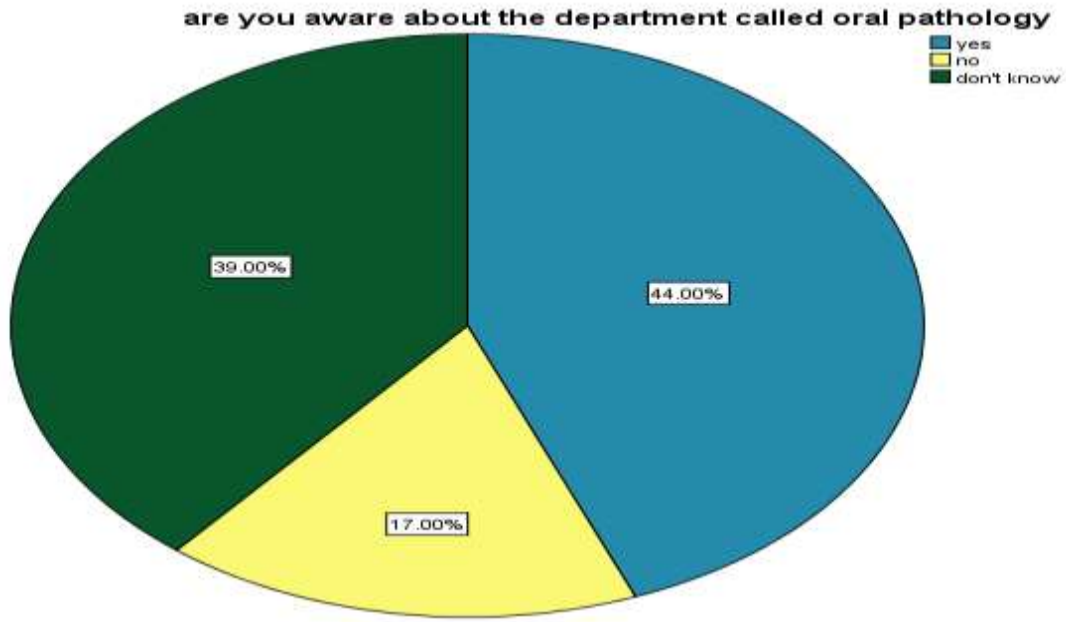

Figure 2 : Shows the percentage of responses of the participants for the knowledge about the department of Oral pathology. Light blue indicates “yes”, light yellow indicates “no”and Dark green indicates “don’t know”.Majority (44%) of the participants chose yes,(17%) of the participants represented no and (39%) of the participants represented don't know.

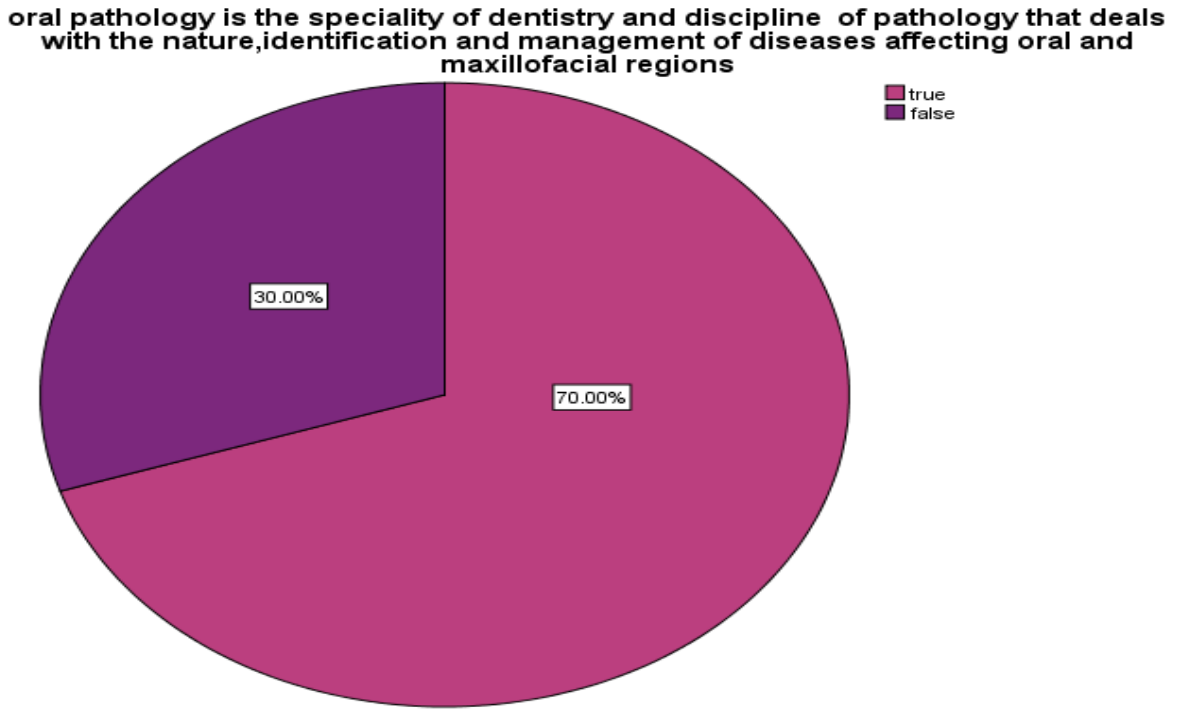

Figure 3: Shows the percentage of responses of the participants for the knowledge about Oral pathology.Dark pink indicates “True”, violet indicates “False”.Majority (70%) of the participants chose true,(30%) of the participants represented false.

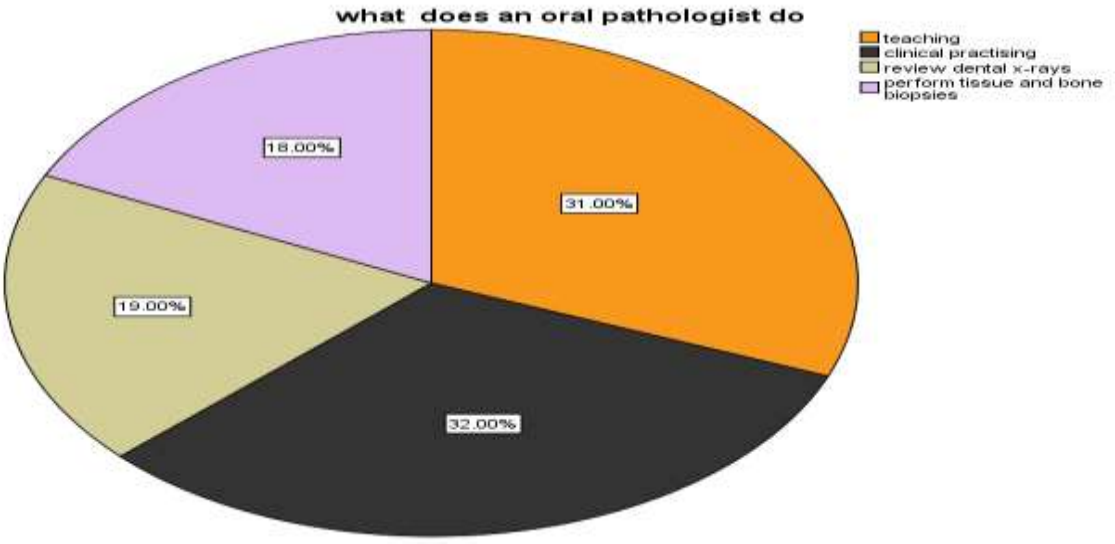

Figure 4 : Shows the percentage of responses of the participants for the knowledge about Oral pathologist activities.Orange indicates "teaching", black indicates " clinical practicing"and Beige indicates "review dental x-rays"and light purple indicates "perform tissue and bone biopsies".Majority (32%) of the participants represented clinical practicing,(31%) of the participants represented teaching and (19%) of the participants represented review dental x-rays and (18%) of the participants represented perform tissue and bone biopsies.

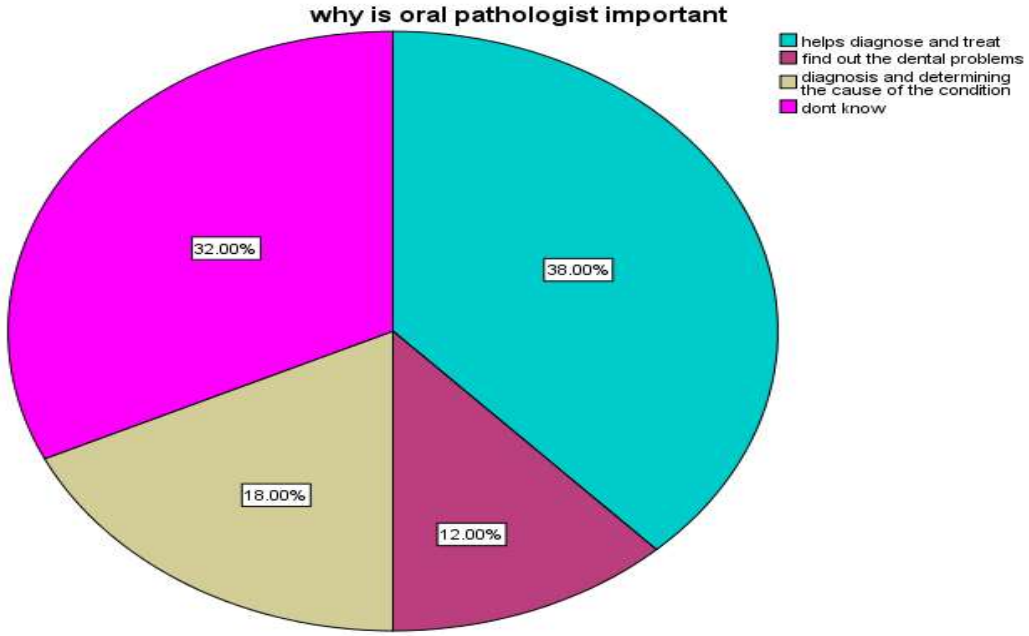

Figure 5 : Shows the percentage of responses of the participants about the importance of Oral pathologist. Sky Blue indicates "helps diagnose and treat",Dark pink indicates "find out the dental problems"and Beige indicates "diagnosis and determining the cause of the condition "and Fuschia indicates "don't know".Majority (38%) of the participants represented helps diagnose and treat,(12%) of the participants represented find out the dental problems and (18%) of the participants represented

diagnosis and determining the cause of the condition and (32%) of the participants represented don't know.

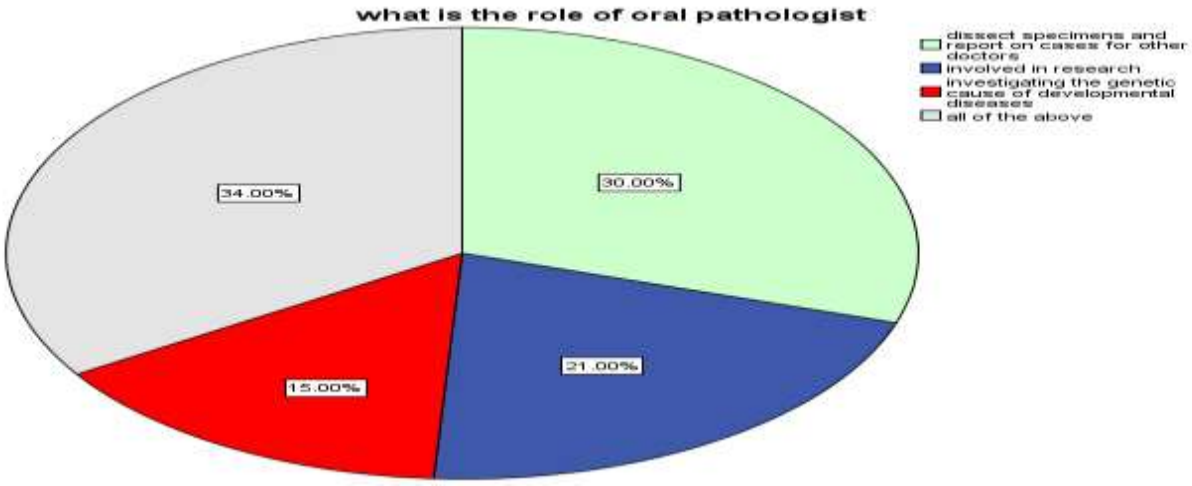

Figure 6 : Shows the percentage of responses of the participants about the role of Oral pathologist.Solid light green indicates “dissect specimens and report on cases for other doctors” Dark blue indicates “involved in research ”and red indicates “investigating the genetic cause of developmental diseases ”and gray indicates “all of the above”.Majority (34%) of the participants represented all of the above,(30%) of the participants represented dissect specimens and report on cases for other doctors and (21%) of the participants represented involved in research and (15%) of the participants represented investigating the genetic cause of developmental diseases.

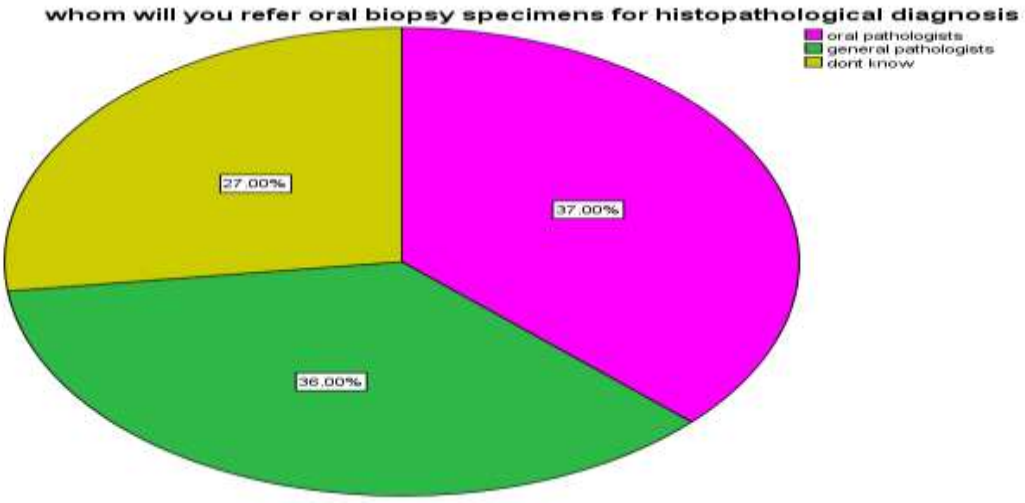

Figure 7 : Shows the percentage of responses of the participants for the knowledge about the Oral biopsy specimens for histopathological diagnosis. Fuschia indicates “oral pathologists”, light green indicates “general pathologists”and Dark yellow indicates “don’t know”.Majority (37%) of the participants represented oral pathologists,(36%) of the participants represented general pathologists and (27%) of the participants represented don't know.

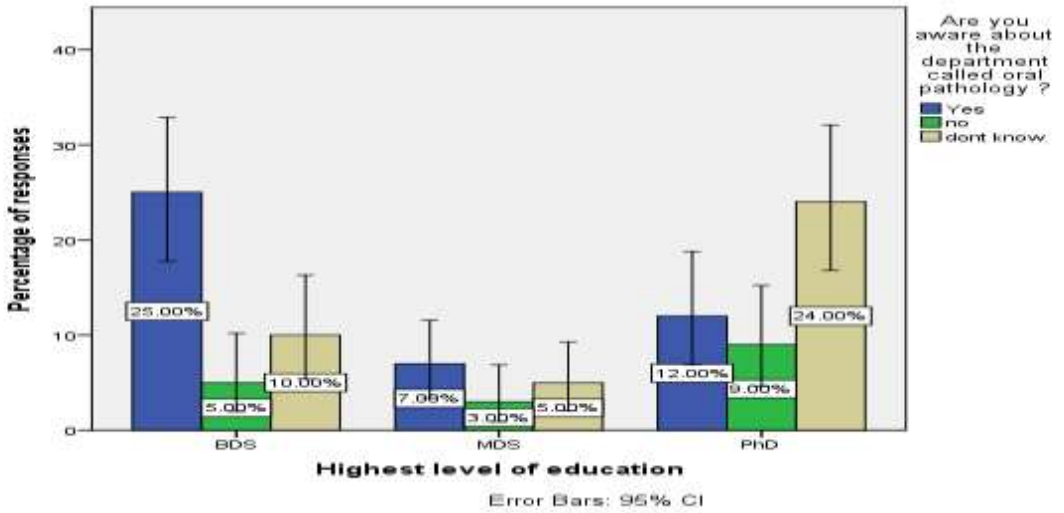

Figure 8: Error Bar graph represents the association between the highest level of education and knowledge about the department of Oral pathology. X axis represents the highest level of education and Y axis represents the percentage of responses. Light Blue colour denotes Yes, Light yellow colour denotes No and Dark green colour denotes Don't know.The BDS, MDS and PhD responded with their knowledge about the department of Oral pathology.

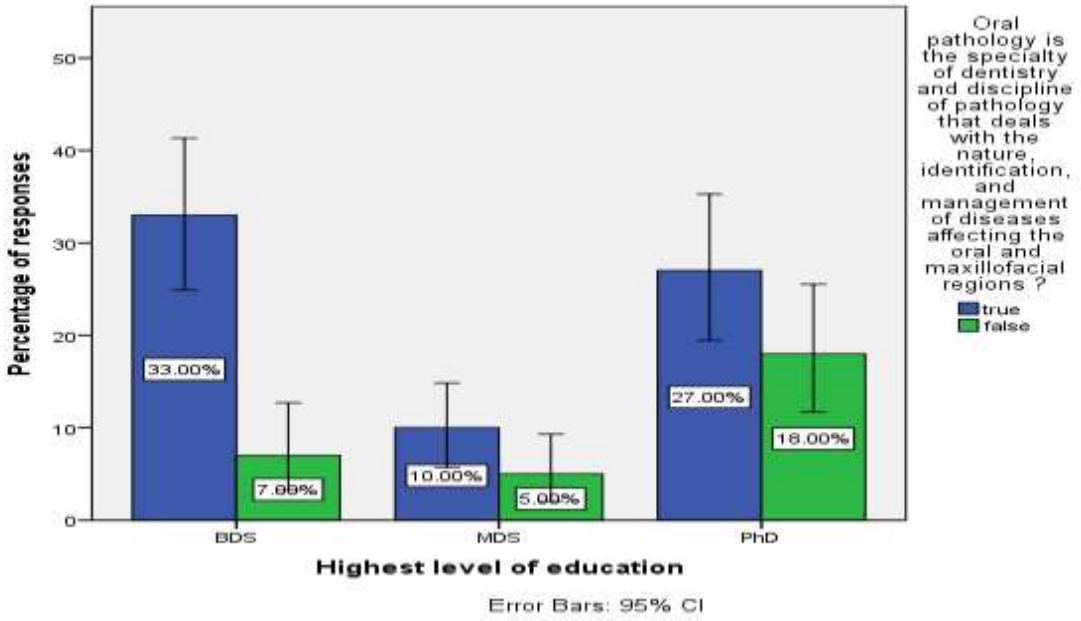

Figure 9: Error bar graph represents the association between the highest level of education and knowledge about Oral pathology. X axis represents the highest level of education and Y axis represents the percentage of responses. Dark Pink colour denotes True and Ultra violet colour denotes False.The BDS, MDS and PhD responded with their knowledge about Oral pathology.

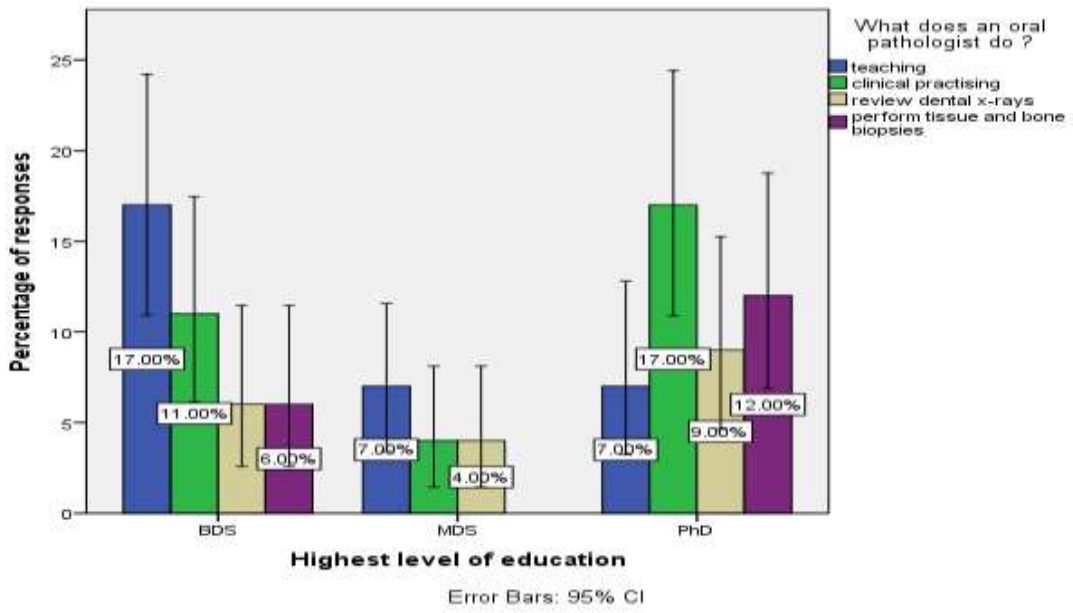

Figure 10: Error bar graph represents the association between the highest level of education and knowledge about Oral pathologist activities. X axis represents the highest level of education and Y axis represents the percentage of responses. Orange colour denotes Teaching, Black colour denotes Clinical Practising, Beige colour denotes review dental X-rays and Light Purple colour denotes performing tissue and bone biopsies.The BDS, MDS and PhD responded with their knowledge about Oral pathologist activities.

DISCUSSION

The findings of the survey suggests that general dentists were aware of the oral pathologists and they have a positive attitude towards oral pathologists and also strongly agree its necessity in the recent world. In accordance with the previous study, 65% agreed that they had knowledge about the department of Oral pathology (32). In the present study, 44% agree that it is an important bridging specialty between dentistry and medicine, and strong links exist between them. In the previous study, 58% agreed that they had knowledge about Oral pathology. Only 61.4% agree that Oral pathology services should be instituted in dental departments under hospitals in the public and private sector. In other studies 38.8% agreed with the knowledge about Oral pathology activities (33). In our study, only 32% agree that Oral pathology is a dental specialty that involves studying and diagnosing mouth and jaw disorders, including issues with orofacial skin and also teaching and clinical practising and reviewing dental x-rays and performing tissue and bone biopsies.

In accordance with the previous study, 60% agreed on the importance of Oral pathologists whereas in our study, 38% agree that Oral pathologists are uniquely qualified by training to combine expertise in histo-pathologic diagnosis, clinical diagnosis, and treatment. The majority of oral pathologists are academicians, and optimal education of students of all types is a major focus of the specialty (14). In accordance with the previous study, 45% were aware about the role of Oral pathologist. In our study, 34% were aware that clinicopathologic club or workshops regarding oral cancer grading, immunofluorescence, and special

staining techniques in oral lesions should be instituted, Oral pathology is a specialty of dentistry that focuses on the diagnosis and treatment of oral diseases, including oral cancer. Pathologists are involved in all areas of disease management including research, diagnosis, examination and treatment (34). In accordance with the previous study, 44% were aware and knowledgeable about the Oral biopsy specimens for histopathological diagnosis (35). In our study, only 39% were aware that oral lesions may need to be diagnosed by removing a sample of tissue from the oral cavity. Biopsy is widely used in the medical field, but the practice is not quite widespread in dental practice. This could be a reason due to lack of awareness about the speciality among medical professionals

In consistent with the previous study, 18% were aware about the oral pathology lesions (36).

In our study, 29% were aware that the common superficial oral lesions include candidiasis, recurrent herpes labialis, recurrent aphthous stomatitis, erythema migrans, hairy tongue, and lichen planus. Although the etiology is uncertain, evidence suggests an immune-mediated mechanism involving CD8+ cytotoxic, T-cell–induced apoptosis of epithelial cells. However, lesions that do not exhibit classic features may require biopsy for diagnosis. In accordance with the previous study, 44% agreed that oral pathologists were important to dentistry but in the present study, 53% agree that the oral pathologist is important to dentistry (18). Because they play an active role in cancer screening by performing biopsy and cytological procedures themselves and also the addition of immunohistochemistry and gene sequencing has strengthened diagnostic pathology in recent years (37)**.**

The limitations of the study was the number of articles collected were less compared to other review and article selection bias. The study is limited by cross-sectional design so temporal or cause - effect relationships cannot be established. The future scope of the study is to create awareness and knowledge about the role of Oral pathologists among clinical dentistry.

CONCLUSION

Oral pathologists need to take the lead role in research in dental institutions, including clinical and basic research in molecular biology, stem cell research, immunology, and genetic studies for various oral diseases. This paper may be considered as a baseline study regarding Knowledge,Attitude,Awareness about the role of Oral pathologist among general dentists. Although general dentists were aware of oral pathology speciality, their stance of referring and consulting oral pathologists for oral pathology cases for histopathology report is poor.

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CONFLICT OF INTEREST

The author declares that there was no conflict of interest in the present study

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