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KNOWLEDGE AND AWARENESS OF ORAL ULCERS AMONG DENTAL STUDENTS

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ABSTRACT

A mouth ulcer is an ulcer that occurs on the mucous membrane of the oral cavity. Mouth ulcers range in size, and the exact symptoms of the mouth ulcer will depend on what type of ulcer a person has. Still, there are some common causes and several factors that may aggravate mouth ulcers, including the following like quitting smoking, citrus fruits and other foods high in acidity (or) spice, cheek biting , braces or poor-fitting dentures, a deficient filling, hormonal changes (or) genetic factors. The aim of the study is to create awareness on oral ulcers among dental students. This was a survey based study and was conducted in an online forum "Google forms". This survey was taken by around 100 dental students, both undergraduates and postgraduates. The questionnaire was framed to evaluate the ideas and knowledge of dental students about oral ulcers. The information collected through the survey was analysed using SPSS and presented as descriptive statistics.A total of 100 dental students participated in this survey, out of which 31% of the participants are final years and when the question regarding any recent ulcers for the past 6 months or more was asked it was noted that, majority of the participants (57%) of them have got mouth ulcers recently, from which it is seen how common mouth ulcers are. Within the limitations of our study it is clear that the students have knowledge about oral ulcers but awareness about the treatment and prevention for the same is not well known among the dental students.

INTRODUCTION

A mouth ulcer is an ulcer that occurs on the mucous membrane of the oral cavity [1]. Mouth ulcers are very common, occurring in association with many diseases and by many different mechanisms, but usually there is no serious underlying cause [2]. The two most common causes of oral ulceration are local trauma and aphthous stomatitis, a condition characterized by recurrent formation of oral ulcers for largely unknown reasons.

Mouth ulcers often cause pain and discomfort and may alter the person's choice of food while healing occurs [3]. They may form individually or multiple ulcers may appear at once. Once formed, the ulcer may be maintained by inflammation and/or secondary infection. Rarely, a mouth ulcer that does not heal may be a sign of oral cancer. Aphthous stomatitis and local trauma are very common causes of oral ulceration.

Recurrent aphthous ulceration (RAU) or recurrent aphthous stomatitis (RAS) is one of the known painful oral mucosal conditions. These ulcers are generally painful with an erythematous halo roofed by a yellowish-gray fibromembranous layer. The size of the RAS is up to 1 cm in diameter, well circumscribed, and normally round in shape. The main surfaces affected are labial and buccal mucosa and the ventral surface of the tongue. These ulcers heal within 10 to 14 days[4].

Numerous hypotheses have been formulated regarding the etiology of RAS. These include both environmental and genetic factors [5]. The exact cause of aphthous stomatitis is unknown, but there may be a genetic predisposition in some people. Other possible causes include hematinic deficiency, stopping smoking, stress, menstruation, trauma, food allergies or hypersensitivity to sodium lauryl sulphate. Aphthous stomatitis has no clinically detectable signs or symptoms outside the mouth, but the recurrent ulceration can cause much discomfort to sufferers [6]. Treatment is aimed at reducing the pain and swelling and speeding healing, and may involve systemic or topical steroids, analgesics (pain killers), antiseptics, anti-inflammatories or barrier pastes to protect the raw areas.

Most mouth ulcers that are not associated with recurrent aphthous stomatitis are caused by local trauma. The mucous membrane lining of the mouth is thinner than the skin, and easily damaged by mechanical, thermal (heat/cold), chemical, or electrical means, or by irradiation [7].

Mechanical - Common causes of oral ulceration include rubbing on sharp edges of teeth, fillings, crowns, false teeth, or braces, or accidental biting caused by a lack of awareness of painful stimuli in the mouth [7,8].

Thermal and Electrical burn - Thermal burns usually result from placing hot food or beverages in the mouth [9]. This may occur in those who eat or drink before a local anesthetic has worn off. Electrical burns in the mouth are usually caused by chewing on live electrical wiring.

Chemical Injury - Caustic chemicals may cause ulceration of the oral mucosa if they are of strong-enough concentration and in contact for a sufficient length

of time. The holding of medication in the mouth instead of swallowing it occurs mostly in children, those under psychiatric care, or simply because of a lack of understanding [9,10].

Irradiation - As a result of radiotherapy to the mouth, radiation-induced stomatitis may develop, which can be associated with mucosal erosions and ulceration. If the salivary glands are irradiated, there may also be xerostomia (dry mouth), making the oral mucosa more vulnerable to frictional damage as the lubricating function of saliva is lost, and mucosal atrophy (thinning), which makes a breach of the epithelium more likely [11].

Our department is passionate about child care, we have published numerous high quality articles in this domain over the past 3 years [12–30]. With this inspiration we planned to pursue research on knowledge and awareness on oral ulcers among dental students.

Hence, the aim of the study is to create awareness on oral ulcers among dental students.

MATERIALS AND METHODS

The study protocol was approved by the institutional review board and ethical approval was obtained.This was a survey-based study and conducted in an online forum, google forms. This survey was taken by 100 dental students from a private dental college. The questionnaire consisted of 10 questions. The questions were framed to evaluate the knowledge and awareness on oral ulcers among dental students.

Data Collection - The collected answers from the questionnaire were tabulated in an excel sheet and using SPSS software the results were obtained. The results were obtained and statistically analysed through SPSS software, chi square test was done to check the association and a p value of 0.05 was said to be statistically significant. The survey was conducted in the month of January, 2020.

A customized examination was used to collect data and a specific table for collected data records was prepared. All data were analyzed by multiple logistics regression analysis using SPSS software version, inference of the study is given below.

RESULTS AND DISCUSSION

Table 1: Demographic data of the study participants and the results of questionnaire survey (presented in percentage)

QUESTIONS	RESPONSE	NUMBER	PERCENTAGE

Which year you're in ?	1st year 2nd year 3rd year Final year Internship Post graduate	7 7 20 31 25 10	7% 7% 20% 31% 25% 10%
Did you get any mouth ulcers in the last 6 months or 1 year ?	Yes No	57 43	57% 43%
If yes, What do you think the triggering factors are ? (Figure 1)	Cheek biting Problem with chewing or brushing Spicy food consumption Indigestion Poor oral hygiene Stress or anxiety Braces Other	20 36 69 15 16 71 43 1	7% 13% 25% 6% 6% 26% 16% 1%
Where do you get oral ulcer often ?	Buccal mucosa Upper labial mucosa Lower labial mucosa Buccal vestibule Lateral border of the tongue Tip of the tongue	50 14 36 49 53 40	20.7% 5.8% 14.9% 20.2% 21.9% 16.5%
Do you eat a lot of citrus fruit ?	Yes No	30 70	30% 70%
Do you feel pain when you have mouth ulcers ? (Figure 2)	Yes No	80 20	80% 20%

How long will you have the ulcer when you get ? (Figure 3)	2-5 days 5-7 days More than 7 days	32 41 27	32% 41% 27%
Have you taken any treatment or visited dentist for mouth ulcers ?	Yes No	39 61	39% 61%
What is the most commonly used topical therapeutic for the treatment of mouth ulcers ?	Hexigel Quadra gel Rexidin M	29 62 9	29% 62% 9%

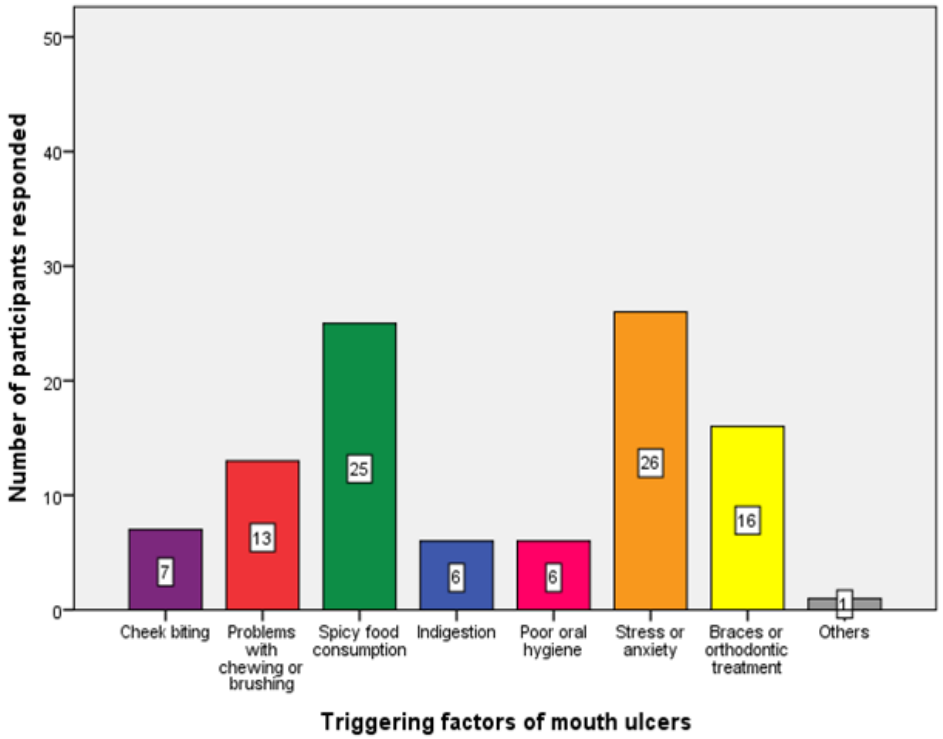

Figure 1 - The bar graph depicts the response to the given question “What do you think are the triggering factors for mouth ulcers?”. X axis represents the type of response to the question and Y axis represents the number of participants who answered, Cheek biting (Violet), Problems with chewing or brushing (Red). Spicy food consumption (Green), Indigestion (Blue), Poor oral hygiene (Pink), Stress or anxiety (Orange), Braces or orthodontic treatments (Yellow) and others (Grey). Majority of the participants (26%) have answered that the triggering factor for mouth ulcer is Stress or anxiety.

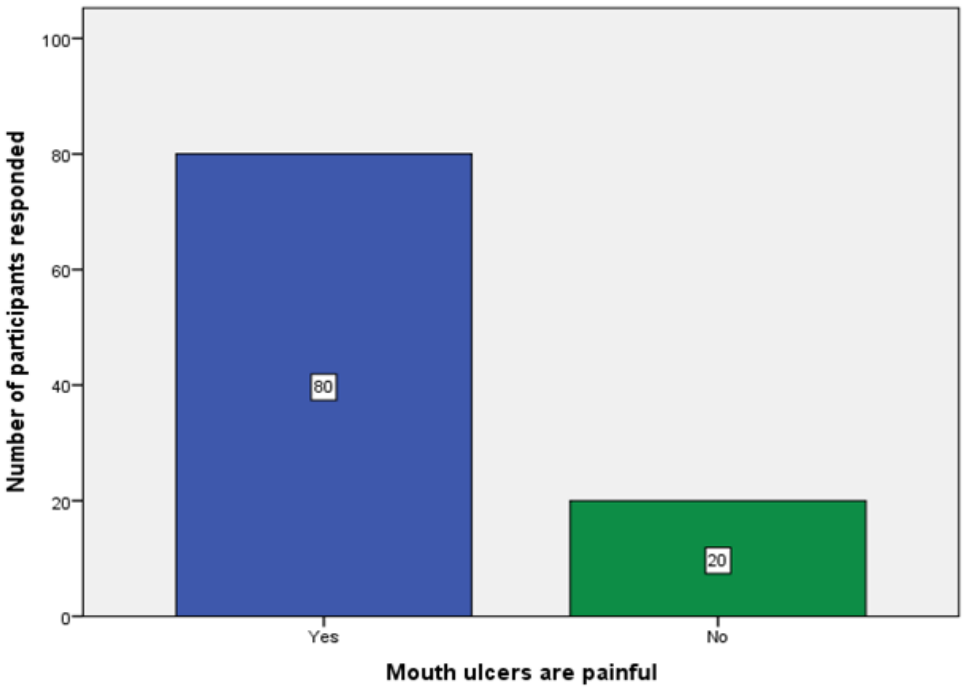

Figure 2 - The bar graph depicts the response to the given question "Do you feel pain when you have mouth ulcers ?". X axis represents the type of response to the question and Y axis represents the number of participants who answered, Yes (Blue) and No (Green). Majority of the participants (80%) have answered that the mouth ulcers are painful.

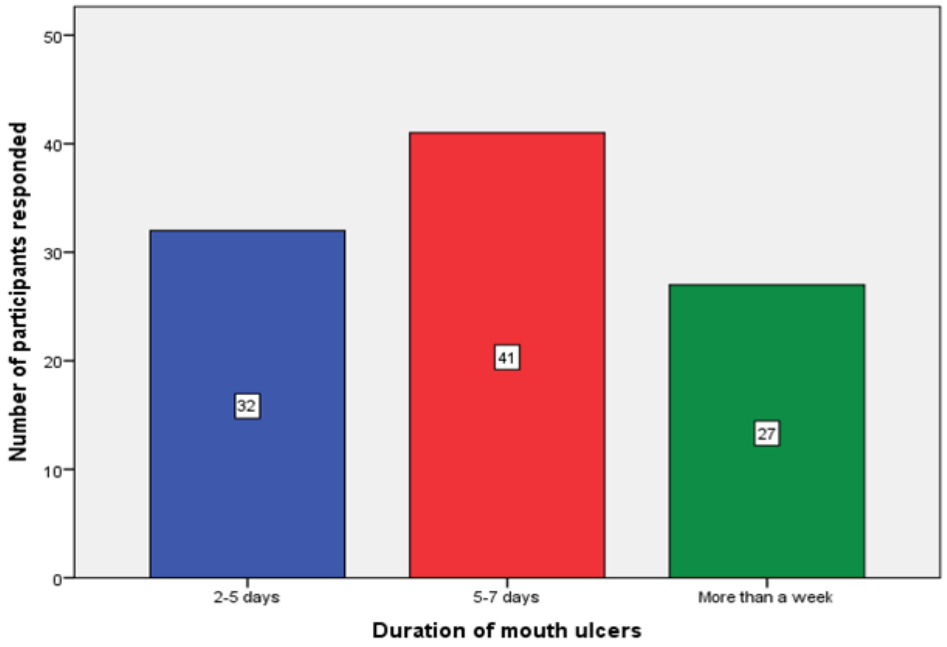

Figure 3 - The bar graph depicts the response to the given question "How long will you have the ulcer when you get ?". X axis represents the type of response to the question and Y axis represents the number of participants who answered, 2-5 days (Blue), 5-7 days (Red) and More than a week (Green). Majority of the participants (41%) have answered that the duration of mouth ulcer is 5-7 days.

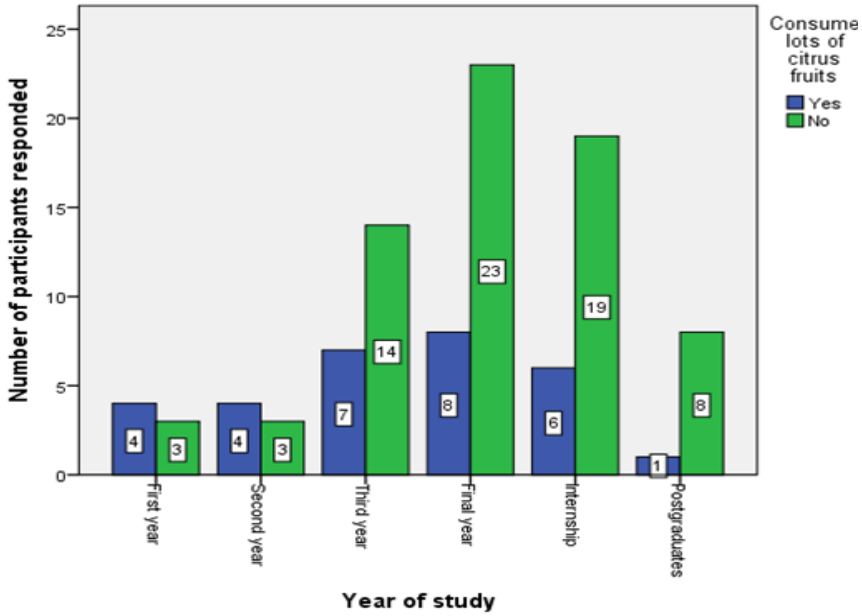

Figure 4 -The bar graph represents the association between the year of study and their responses to the question. X axis represents the year of study of the participants and Y axis represents the number of responses, Yes (Blue) and No (Green). Higher number of final years (23) have answered that they don't consume too much citrus fruit. Chi square analysis was done (P value was found to be 0.203 > 0.05, which is statistically not significant. There was no significant difference between the year of study and the response to the question asked.

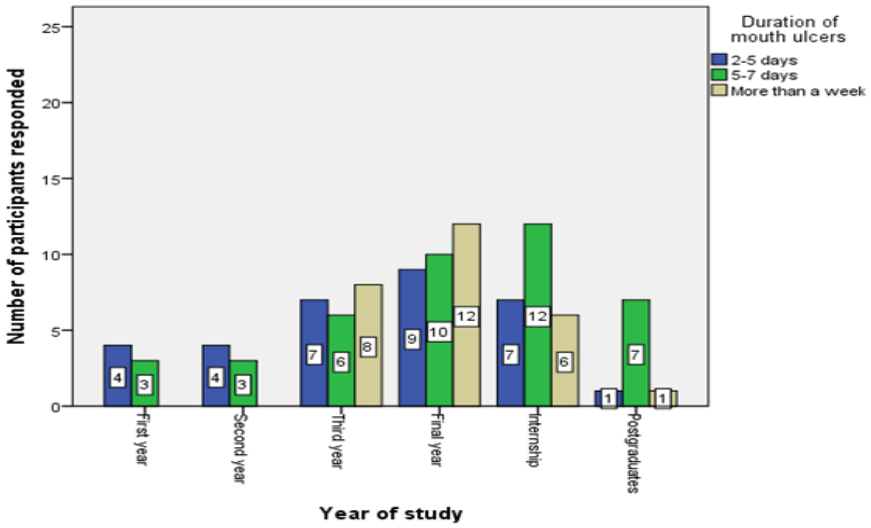

Figure 5 - The bar graph represents the association between the year of study and their responses to the question. X axis represents the year of study of the participants and Y axis represents the number of responses, 2-5 days (Blue), 5-7 days (Red) and More than a week (Green) . Higher number of final years (12) have answered that the duration of mouth ulcer is more than a week and a higher number of interns (12) have answered it's around 5-7 days. Chi square analysis was done (P value was found to be 0.097 > 0.05, which is statistically not significant. There was no significant difference between the year of study and the response to the question asked.

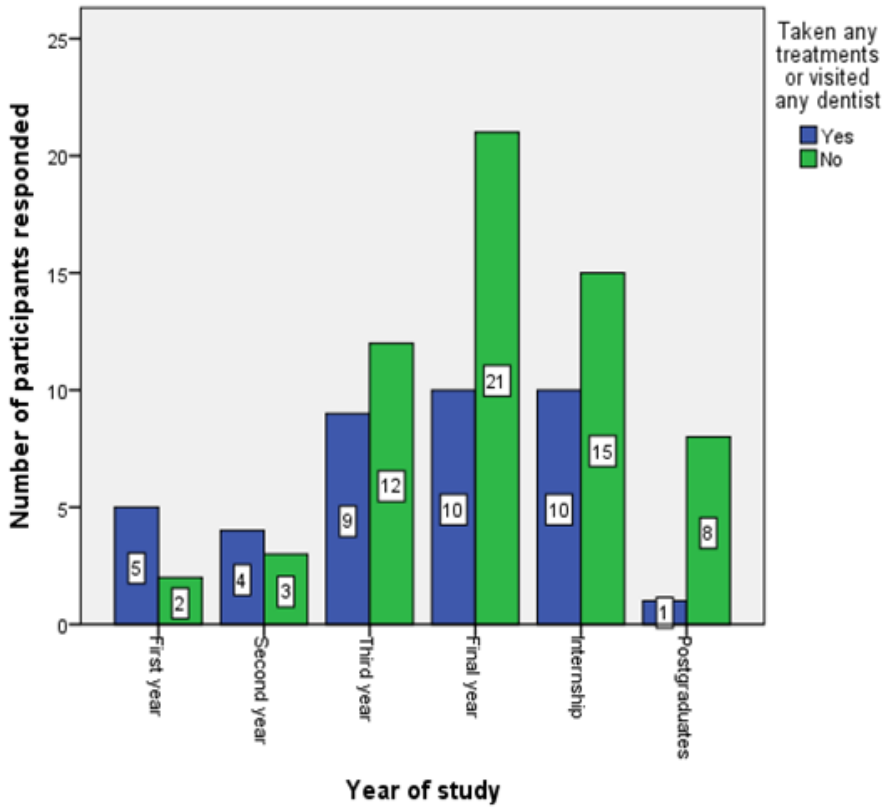

Figure 6 - The bar graph represents the association between the year of study and their responses to the question. X axis represents the year of study of the participants and Y axis represents the number of responses, Yes (Blue) and No (Green). Higher number of final years (21) have answered that they have not taken any medications or visited dentists for mouth ulcers. Chi square analysis was done (P value was found to be 0.171 > 0.05, which is statistically not significant. There was no significant difference between the year of study and the response to the question asked.

A total of 100 dental students participated in this survey, out of which 31% of the participants are final years and when the question regarding any recent ulcers for the past 6 months or more was asked it was noted that, majority of the participants (57%) of them have got mouth ulcers recently, from which it is seen how common mouth ulcers are [31].

According to the present study it was noted that, the most common triggering factor for mouth ulcers are stress (26%) followed by spicy food consumption which correlated with the study done by Ajmal et al., [32] (Figure 1). Stressful situations are supposed to cause a transitory rise in salivary cortisol and/or in immune regulatory activity in inflammation by increasing the quantity and activity of leukocytes. Stress plays a major role in formation of mouth ulcers [33].

From this survey it was seen that, the majority of the participants have answered that the most common area for getting a mouth ulcer lateral border of the tongue (21.9%), which correlated with the study done by Mortazavi et al., [34]. Mouth ulcers in the tongue make eating, drinking, and talking

uncomfortable. Women, adolescents, and people with a family history of mouth ulcers are at higher risk for developing mouth ulcers in the tongue.
When the question regarding whether the participants consume a lot of citrus fruits was asked it was noted that, 70% of the participants do not develop ulcers in mouth because of citrus fruits which contradicted with the study done by Altenburg et al., [35]. Correlation between the year of study and participantspreference regarding citrus fruits was done and P value was found to be 0.203 > 0.05, which is statistically not significant (Figure 4).

As citrus fruits are rich in Vitamin C they might sting with the oral cavity which leads to formation of mouth ulcers [36].
Around 80% of the participants confess that mouth ulcers are painful while the rest 20% believe mouth ulcers are painless (Figure 2). Mouth ulcers are painful when they occur in gums and tongue as making the individual feel uncomfortable. According to the 41% of the participants confessed that, the duration for mouth ulcers are 5-7 days which contradicted the study done by Aswath et al., [37] (Figure 3). Correlation between the year of study and duration of mouth ulcer was done and P value was found to be 0.097 > 0.05, which is statistically not significant (Figure 5).

61% of the participants confessed that they have not taken any medication or visited any dentist for mouth ulcers and majority of the participants (67%) answered that quadra gel is the most commonly used topical therapeutic treatment for oral ulcers. Correlation between the year of study and medications or any treatment for oral ulcers was done and P value was found to be 0.171 > 0.05, which is statistically not significant (Figure 6).

CONCLUSION

Within the limitations of our study, it was found that students had knowledge about oral ulcers but they did not have the awareness about the treatment and prevention for the same. Early detection of the cause and management of aphthous ulcer will help improve the health status of the individual. To overcome these problems, more awareness programmes on oral health and about effects of stress management might help in reducing the occurrence of aphthous ulcers.

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CONFLICT OF INTEREST

The authors declare that there were no conflicts of interest in the present study

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