

THE 11TH DENTAL STUDENTS' SCIENTIFIC CONFERENCE



SCAN ME

"Research for the betterment of health and well-being"

28th March 2022
8am - 5pm



KULLIYAH OF DENTISTRY, IIUM Kuantan

*Happy
Conferencing!*



11th Dental Students'
Scientific Conference
2022



LINK: [https://iium.zoom.us/j/97673430972?](https://iium.zoom.us/j/97673430972?pwd=dHR1YWcvUWFxQitxVmcyUUMyc29CZz09)
pwd=dHR1YWcvUWFxQitxVmcyUUMyc29CZz09
Meeting ID: 976 7343 0972
Passcode: 28032022



KULLIYAH OF DENTISTRY
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MESSAGE FROM THE RECTOR



السلام عليكم

Praised be to Allah SWT and thank you for giving me an opportunity to give a few words in conjunction with 11th Dental Students' Scientific Conference 2022.

I would like to congratulate the committee members for organising the conference even during the uncertainties with COVID-19 pandemic.

On top of that, a huge congratulations to our students who were able to complete their research projects and presenting the findings in this conference.

The theme: "Research for the betterment of health and well-being" poses a challenge over the COVID 19 pandemic, where a lot of research had been done around the globe to ensure human life can be spared. Through such efforts, prevention tools towards COVID 19 such as vaccines and saliva rapid test were developed to contain the situation worldwide

On the other hand, issue on mental health is becoming a major concern in the community. This, needs different approaches to help to reduce the spread in the community. In other words, much need to be done and this conference is timely in this regard.

On that note, I would like to congratulate the final year students for their hard work even though some are affected greatly by the COVID 19. Today is an opportunity for you to share what you have learnt throughout the two years and how you overcome some of the challenges faced. I hope the experience gained from the learning process will be of great beneficial learning for you, at the same time make you better person and oral healthcare professionals in serving IIUM Vision for the betterment of human life and civilisation.

I wish you all the best with the conference and may it leads to the fruitful outcomes.

Thank you.

Dzulkifli Abdul Razak, Prof Emeritus Tan Sri Dato'
Rector

MESSAGE FROM THE DEAN



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Assalamualaikum w.b.t

All praises be to Allah, the most gracious, the most merciful, and peace and blessings be upon His messenger prophet Muhammad SAW. I'm delighted to welcome all judges, students, and delegates to our 11th Dental Students Scientific Conference 2022.



COVID 19 pandemic has affected all of us, including our social life. Last year, our final year students had to present their research results using online platform only as mass gathering was not permissible. However, alhamdulillah, this year we are having a hybrid platform for our final year students to present their research findings.

"Research for the betterment of health and well-being" is this year's theme. As we all know that research is needed to search for cure and save lives. For the past 2 years of COVID 19 pandemic, about 440 million cases worldwide has been reported. A lot of research had been done on vaccine, post covid syndrome as well as mental health issues. This shows that research culture is one of the crucial elements to provide a better health and well-being. We hope that this COVID 19 situation will get better not only in our beloved country, but also the other part of the world.

Hence, it is important for our dental undergraduates to learn on how to do research furthermore, the findings should be shared to the publics. Research culture also in accordance with IIUM motto which is to inculcate the culture of iqra' and bring rahmah to all mankind.

Finally, congratulations to our final year students for all your hard work and this is the time for you to shine. Huge appreciation to the supervisors as well who are working hard to make sure their students able to complete their research project. Last but not least, well done to the DSSC committee for organizing this year event and also preparing this platform for our students to present their findings.

Thank you.

Prof. Dr. Zainul Ahmad Rajion
Dean

MESSAGE FROM THE CHAIRPERSON

السلام عليكم

All praises to Allah, the Most Gracious and the Most Merciful.

Welcome all the delegates to 11th Dental students' Scientific Conference 2022. This is the kulliyah's annual event in which all our final year students presenting their research findings after years of hardwork and dedication.



First and foremost, I would like to express my heartfelt gratitude to all committee members who have worked really hard to ensure that this event can be held this year.

This year, Research for the betterment of health and well-being was chosen as the theme of the conference. It reflects the current situation that is happening globally, the pandemic. In the past few years, the world has been affected by COVID-19. The effects of this virus pandemic were really huge in our daily life. Students were not able to attend the classes physically, businesses were closed, and our movement was restricted. However, Alhamdulillah, with the advance research activity, we can see the light at the end of the tunnel. The vaccines have significantly made situations better even though we are still fighting the battle.

I would like to congratulate the final year students and their supervisors who are able to complete their research within the stipulated time. Even with the closure of the kulliyah at certain period and inability to meet the supervisors physically, the students were fully dedicated to accomplishing their task. This is a positive attitude shown by our students, and hopefully this commendable trait will be continued in their professional working environment later.

Lastly, my best wishes to all presenters for this conference. May this event can be the steppingstone for a continuous learning experience in future, InshaAllah.

Thank you.

Wassalam

Dr Mohd Nor Hafizi
Chairperson
11th Dental students' Scientific Conference 2022

ORGANIZING COMMITTEE



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Y.Bhg Prof. Tan Sri Dato
Dzulkifli Abdul Razak



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Asst Prof Dr Sulhi Abidin



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binti Ismail



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SCIENTIFIC PROGRAMME



Time	Event
8.00 - 8.30am	Registration of participants
8.30 - 9.00am	Arrival of Dean, Judges, and Guest of Honor
9.00 - 9.10am	Negaraku, IIUM Song, and Doa Recitation
9.10 - 9.15am	Welcoming Remarks by Chairperson for 11th DSSC
9.15 - 9.20am	Opening Speech by Dean Kulliyyah of Dentistry
9.20 - 9.25 am	Officiating Speech by Guest of Honor
9.25 - 9.35 am	Opening Gimmick
9.35 - 10.05am	Lecture by keynote speaker, Assoc. Prof. Dr. Tuti Ningseh Binti Mohd Dom, Universiti Kebangsaan Malaysia
10.05 - 10.15am	Morning break
10.15 - 1.00pm	Oral and Poster Presentation
1.00 - 2.00pm	Lunch break/Poster viewing
2.00 - 4.00pm	Oral and Poster Presentation
4.00 - 4.30pm	Judges Meeting and Tea break
4.30 - 4.40pm	Closing ceremony (Feedback from judges, and award presentation)

HONORABLE JUDGES

Oral Presentation (Basic & Clinical Science)

Assoc. Prof. Dr. Tuti Ningseh Binti
Mohd Dom
Faculty of Dentistry
Universiti Kebangsaan Malaysia

Dr. Munirah Yaacob
Kulliyah of Dentistry,
International Islamic University Malaysia

Assoc. Prof. Dr Said Nurumal
Kulliyah of Nursing,
International Islamic University Malaysia

Poster Presentation (Basic & Clinical Science)

Assoc. Prof. Dr. Nik Mohd Mazuan
Nik Mohd Rosdy
Faculty of Dentistry
Universiti Teknologi MARA (UiTM)

Dr. Mohd Hafiz Arzmi
Kulliyah of Dentistry,
International Islamic University Malaysia

Dr. Nurulwahida Saad
Kulliyah of Allied Health Sciences,
International Islamic University Malaysia

Oral Presentation (Review)

Ts. Dr. Muhammad Salahuddin bin Haris @ Harith
Kulliyah of Pharmacy,
International Islamic University Malaysia

Dr. Siti Roshaidai Mohd Arifin
Kulliyah of Nursing,
International Islamic University Malaysia

LIST OF PRESENTATION



Oral Presentation (Basic & Clinical Science)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
1	O- 01	ASSESSMENT OF ACADEMIC RELATED STRESSORS AND THEIR ASSOCIATION WITH PSYCHOLOGICAL DISTRESS AMONG KULLIYAH OF DENTISTRY STUDENTS DURING COVID 19 PANDEMIC	1.Mohamad Firdaus Khaled	10.15 - 10.30 am
2	O - 02	BARODONTALGIA AMONG DIVERS IN MALAYSIA	1.Karim Ahmed Alfaqawi	10.35 - 10.50 am
3	O - 03	A CLINICAL COGNITIVE COMPETENCY AMONG FINAL YEAR DENTAL STUDENTS ON ALL CERAMIC CROWN PREPARATION	1.Nurul Natasha Mohd Zainudin	10.55 - 11.10 am
4	O - 04	CORTICAL BONE ANALYSIS IN TYPE 2 DIABETES MELLITUS & NON-DIABETIC PATIENTS BASED ON PANORAMIC RADIOGRAPH	1.Aina Nor Azman	10.15 - 11.30 am
5	O - 05	ORAL HEALTH-RELATED QUALITY OF LIFE IN ORTHODONTICS: A CROSS SECTIONAL STUDY ON ADOLESCENTS AND ADULTS IN ORTHODONTIC TREATMENT IN KUANTAN, PAHANG	1.Muhammad Hanis Iskandar 2.Muhammad Ikram Zubir	11.35 - 11.50 am
6	O - 06	KNOWLEDGE, PERCEIVED RISK, AND THE ASSOCIATED PREVENTIVE BEHAVIOURS AMIDST COVID-19 PANDEMIC AMONG UNDERGRADUATE DENTAL STUDENTS IN MALAYSIA	1.Nur Hanisah Ismail 2.Nur Yasrin Maisarah Abu Kassim	11.55 - 12.10 pm
7	O -07	COMPARATIVE EVALUATION OF DENTAL AND CEPHALOMETRIC SKELETAL CHARACTERISTICS IN THE SAGITTAL AND VERTICAL PLANE	1.Fatin Nabihah Zaharul 2.Hanis Izzati Abdul Hamid	12.15 - 12.30 pm

LIST OF PRESENTATION

Oral Presentation (Basic & Clinical Science)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
8	O- 08	BONDING EFFICACY OF COMPOSITE RESIN TO ENAMEL EXPOSED TO CARBONATED DRINKS AN IN VITRO STUDY	1.Nur Aina Athirah Mohd Zaidi 2.Nur Syahirah Abidin	12.35 - 12.50 pm
9	O - 09	RADIOGRAPHIC ASSESSMENT OF MAXILLARY CANINE POSITION AND RISK OF IMPACTION AMONG 9-10 YEARS OLD CHILDREN	1.Nur Farhana Auni Sharuddin 2.Nur Hafizah Asha'ar	2.00 - 2.15 pm
10	O - 10	ASSESSMENT OF DENSE BONE ISLANDS (DBI) OF THE JAW AMONG ORTHODONTIC PATIENTS IN KULLIYAH OF DENTISTRY	1.Muhammad Khairul Syahmi Ismail 2.Syafiqah Nasihah Abd Karim	2.20 - 2.35 pm
11	O - 11	PERCEPTION ON VENEERS IN RELATION TO ISLAMIC PERSPECTIVE IN KUANTAN COMMUNITY	1.Liyana Shafiqah Ahmad Muzamir 2.Husna Mohamad Kamil	2.40 - 2.55 pm
12	O - 12	DENTAL STUDENTS' PREFERENCE FOR RETURNING TO THE CLINICAL SETTING DURING THE COVID-19 PANDEMIC	1.Nur A'in Ab Ghani	3.00 - 3.15 pm
13	O - 13	IMPACT OF COVID-19 AMONG DENTAL STUDENTS IN MALAYSIA	1.Zawin Najah Azhar 2.Nur Hazirah Yazid	3.20 - 3.35 pm
14	O -14	INITIAL ASSESSMENT AND EVALUATION OF TRAUMATIC FACIAL INJURIES	1.Mohamed Izzat Zakwan Mohamed Shah 2.Humairah Lokman	3.40 - 3.55 pm
15	O -15	POSTERIOR SUPERIOR ALVEOLAR ARTERY: A CONEBEAM COMPUTED TOMOGRAPHIC STUDY	1.Nur Alyssa Abdul Rahman 2.Amir Harris Hasran	4.00 - 4.15 pm

LIST OF PRESENTATION



Poster Presentation (Basic & Clinical Science)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
1	P- 01	VALIDATION OF MALAY VERSION OF THE FEAR, EATING HABITS, AND ORAL HEALTH PERCEPTION ON COVID-19	1.Muhammad Akmal Haziq Rozlan	10.15 - 10.30 am
2	P - 02	ORAL HEALTH ATTITUDES AND BEHAVIOURS AMONG UNDERGRADUATE HEALTH SCIENCE STUDENTS IN IIUM Kuantan Campus	1.Nor'Ainza Syahirah Nordin	10.35 - 10.50 am
3	P - 03	TRAUMATIC DENTAL INJURY-KNOWLEDGE, AWARENESS AND PRACTICE AMONG GENERAL DENTAL PRACTITIONERS IN MALAYSIA	1.Nor Aelessya Shakira Rusli	10.55 - 11.10 am
4	P - 04	THE LEVEL OF AWARENESS OF ORAL CANCER AND ORAL POTENTIALLY MALIGNANT DISORDERS AMONG CLINICAL DENTAL STUDENTS AT INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA	1.Siti Hajar Suhaimi	11.15 - 11.30 am
5	P - 05	GENDER AND AGE ASSESSMENT BASED ON MANDIBULAR MORPHOMETRY ANALYSIS VIA ORTHOPANTOMOGRAPH - A RETROSPECTIVE STUDY	1.Nur Nazihah Mohd Samani	11.35 - 11.50 am
6	P - 06	CHANGES IN ORAL HEALTH-RELATED QUALITY OF LIFE IN CHILDREN FOLLOWING COMPREHENSIVE DENTAL TREATMENT UNDER GENERAL ANAESTHESIA IN SULTAN AHMAD SHAH MEDICAL CENTRE, Kuantan: A RETROSPECTIVE STUDY	1.Umi Kaltsum Rozali	11.55 - 12.10 pm
7	P -07	STRESS AND ANXIETY DURING THE COVID-19 OUTBREAK AMONG IIUM ACADEMIC STAFF: AN ONLINE SURVEY	1.Nur Affiq Md Sofri 2.Muhammad Haziq Muhammad Nazmi	12.15 - 12.30 pm

LIST OF PRESENTATION

Poster Presentation (Basic & Clinical Science)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
8	P- 08	IUM DENTAL STUDENTS' PERSPECTIVE ON IMPLEMENTATION OF ONLINE LEARNING AND THE IMPACT ON ACADEMIC PERFORMANCES DURING COVID 19 PANDEMIC	1.Nurina Binti Sabaznur 2.Siti Zakirah Binti Yaakop	12.35 - 12.50 pm
9	P - 09	THE RELIABILITY OF SKETCHANDCALCTM AREA CALCULATOR SOFTWARE IN EVALUATING THE OBTURATED SURFACE AREA OF MANDIBULAR PREMOLARS AND MOLARS	1.Shuhadatul Hasanah Imam Sopingi 2.Nur Madihah Mat Yasin	2.00 - 2.15 pm
10	P - 10	AWARENESS OF GENERAL DENTAL PRACTITIONERS TOWARDS ORAL BIOPSY PROCEDURES	1.Ain Na Syafiqah Shamsuddin	2.20 - 2.35 pm
11	P - 11	FINAL YEAR KULLIYAH OF DENTISTRY DENTAL STUDENTS' PERCEPTIONS AND KNOWLEDGE ON LOUPES	1.Sharifah Ummu Fatimah Syed Hamid	2.40 - 2.55 pm
12	P - 12	ORTHODONTIC PATIENT'S ATTITUDE AND READINESS TOWARDS TELE-ORTHODONTICS	1.Nur Atiqah Md Hasidin	3.00 - 3.15 pm
13	P - 13	DEMOGRAPHICS OF ORTHOGNATHIC CASES SEEN IN KULLIYAH OF DENTISTRY, INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA	1.Nur Arafiah Amat	3.20 - 3.35 pm
14	P -14	MUSCULOSKELETAL DISORDERS (MSD) AMONG DENTAL PRACTITIONERS IN KULLIYAH OF DENTISTRY, IUM KUANTAN	1.Fatin Amirah Abdullah	3.40 - 3.55 pm

LIST OF PRESENTATION



Oral Presentation (Review)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
1	OR- 01	OROFACIAL MANIFESTATION AND COMPLICATIONS OF MUCORMYCOSIS IN CHILDREN: A SYSTEMATIC LITERATURE REVIEW	1.Elias Chan Arif Chan 2.Ikmal Haikal Abdul Khalim	10.15 - 10.30 am
2	OR- 02	ANTIMICROBIAL EFFICACY OF ELECTROLYZED WATER AGAINST ROOT CANAL PATHOGEN: A SCOPING REVIEW	1.Siti Nabilah Aini @ Jaini 1.Siti Nazihah Abd Rahman	10.35 - 10.50 am
3	OR- 03	REVISIT OF ROOT AMPUTATION IN PERIODONTICS: A LITERATURE REVIEW	1.Muhammad Afiq Ahmad Shafri	10.55 - 11.10 am
4	OR-04	BONE GRAFTING MATERIALS IN PERIODONTAL REGENERATION: A NARATIVE REVIEW	1.Nor Amirah Mohd Naim	11.15 - 11.30 am
5	OR- 05	REVISITING GENETICS OF CLEFT LIP WITH OR WITHOUT CLEFT PALATE AND CLEFT PALATE ONLY- A COMPREHENSIVE	1.Mohamad Irsyad Saiful Zaaba	11.35 - 11.50 am
6	OR- 06	THE ROLE OF MEDICINAL PLANTS IN BONE HEALING: A SCOPING REVIEW	1.Nur Ain Sofia Roslan 2.Yulia Anesha Mohd Noor Hashim	11.55 - 12.10 pm
7	OR-07	THE PREVALENCE OF EROSIVE TOOTH WEAR AND TREATMENT OPTIONS: A SYSTEMATIC REVIEW	1.Nur Ain Nabilah Muhamad Nazdan	12.15 - 12.30 pm
8	OR- 08	THE EFFECTIVENESS OF HIGH-VOLUME EVACUATOR IN AEROSOL AND SPLATTER REDUCTION DURING DENTAL PROCEDURES: A SYSTEMATIC REVIEW AND METAANALYSIS	1.Nurdarwisyah Qariyah Nora @ Jasmin	12.35 - 12.50 pm

LIST OF PRESENTATION

Oral Presentation (Review)

NO.	ABSTRACT ID	RESEARCH TITLE	PRESENTERS	TIME
9	OR- 09	IMPROVISATION OF STANDARD OPERATING PROCEDURE IN DENTAL FACILITIES DURING PANDEMIC: A SYSTEMATIC REVIEW	1. Muhamad Asyraf Mohd Salleh	2.00 - 2.15 pm
10	OR- 10	GREEN TEETH DUE TO HYPERBILIRUBINEMIA: A LITERATURE REVIEW	1.Nur Araziemah Amat	2.20 - 2.35 pm

PRESENTERS



11th Dental Students'
Scientific Conference
2022





11th Dental Students'
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ABSTRACT ORAL PRESENTATION

BASIC AND CLINICAL SCIENCE

ASSESSMENT OF ACADEMIC RELATED STRESSORS AND THEIR ASSOCIATION WITH PSYCHOLOGICAL DISTRESS AMONG KULLIYAH OF DENTISTRY STUDENTS DURING COVID-19 PANDEMIC



Mohamad Firdaus Khaled¹, Ghasak Ghazi Faisal², Ali Sabri Radeef³

¹Student, Kulliyah of Dentistry, International Islamic University Malaysia,

²Lecturer, Department Fundamental Dental and Medical Sciences, Kulliyah of Dentistry, International Islamic University Malaysia,

³Lecturer, Department of Psychiatry, Kulliyah of Medicine, International Islamic University Malaysia,

Introduction: Remote teaching and learning methods were introduced to reduce the risk of spread of COVID-19 virus during the pandemic. This put the students under extra risk of psychological distress due to the sudden change in the study mode in addition to the pandemic. **Materials and methods:** A cross sectional study was conducted on a sample of 224 students of Kulliyah of dentistry. The psychological distress was assessed using Kessler psychological distress scale (K10) while coping mechanisms were determined using the Brief-COPE questionnaire. Perceived social support was assessed using the Multidimensional scale of perceived social support questionnaire. Student COVID-19 related sources of stressors questionnaire was used to identify the stressors. **Results:** The prevalence of psychological distress was 22.32% mild, 18.75% moderate and 40.18% severe distress. Students aged ≤ 21 years old showed a significantly lower mean of psychological distress. Significant stressors contributing to psychological distress were 'Fear of failing or unable to catch up', 'Lack of motivation to learn', 'Feeling incompetent', 'Academic Overload', 'Time management problems' and 'Cannot catch up with online learning'. Regarding coping mechanisms, most of the students apply approach rather than avoidant coping mechanisms. Psychological distress has significant positive correlation with avoidant coping and inverse correlation with perceived social support. **Conclusions:** Multiple COVID-19 related stressors are associated with psychological distress among dental students. Good social support and approach coping mechanisms are important to alleviate the psychological distress.

Keywords: Psychological Distress, Perceived Social Support, Dental Student, Coping mechanisms Covid-19

ABSTRACT ID: O - 01

BARODONTALGIA AMONG DIVERS IN MALAYSIA: A CROSS-SECTIONAL STUDY

Karim Ahmed Abdullah Alfaqawi¹, Sulhi b Abidin², Anis Zafirah Mustapa², Muhammad Faiz bin Mohd Hanapiah³

¹Undergraduate student, Kulliyah of Dentistry, International Islamic University Malaysia, Kuantan, Malaysia.

²Assistant Professor, Prosthodontics Department, Kulliyah of Dentistry, International Islamic University Malaysia, Kuantan, Malaysia.

³Assistant Professor, Marine Department, Kulliyah of Science, International Islamic University Malaysia, Kuantan, Malaysia.

Introduction: Barodontalgia is defined as the pressure-induced toothache caused by the ambient pressure changes during diving. It is commonly presented with previous history of dental defects. It may lead to localized or systemic problems like breathing difficulty and loss of concentration. Many studies have been conducted about barodontalgia yet there is no official data has been published thus far. **Objectives:** to find out the prevalence of barodontalgia among divers, to explore the contributory factors causing dental pain, and to determine the consequences of barodontalgia among divers. **Methods:** 100 Malaysian divers were chosen to participate in this study. The questionnaire was distributed via online platform. They were asked regarding their personal and demographic data, their oral health care, the variety of symptoms experienced during diving, and oral health awareness in managing the consequences of barodontalgia. **Results:** 63 respondents of 100 active divers participated in this study with a response rate of 63%. The age of the divers ranged from 20 to 67 years old. The prevalence of barodontalgia among divers were 25% in which 44% experienced multiple episodes of barodontalgia during diving. Divers reported symptoms like loss of concentration (38%), headache (25%), dental related problems (6%), and breathing difficulty (6%). The factors that contributed to barodontalgia were decayed teeth (44%), faulty restorations (38%), and gum related problems (6%). **Conclusion:** the factors that contribute to barodontalgia are all important elements that engage to dental pain however, there is no single contributory factor that is strongly associated with dental pain.

Keywords: Barodontalgia, Divers, Pressure

ABSTRACT ID: O - 02



11th Dental Students'
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A CLINICAL COGNITIVE COMPETENCY AMONG FINAL YEAR DENTAL STUDENTS ON ALL CERAMIC CROWN PREPARATION

Nurul Natasha Mohd Zainudin¹, Wan Noor Nazayan Wan Nik², Iswan Zuraidi Zainol³, Mohamad Shafiq Mohd Ibrahim⁴

¹Student, Kulliyah of Dentistry, International Islamic University Malaysia (IIUM)

²Lecturer, Department of Prosthodontics, Kulliyah of Dentistry, IIUM

³Lecturer, Department Orthodontics, Kulliyah of Dentistry, IIUM

⁴Lecturer, Department of Paediatric and Dental Public Health, Kulliyah of Dentistry, IIUM

Introduction: A dental graduate is expected to be competent in cognitive, affective, and psychomotor skills. Due to coronavirus pandemic, the number of clinical requirements has been revised following reduction of the clinical session. In the Prosthodontics Department, the requirements for crowns have been reduced which indirectly will affect the opportunity of students to sharpen their clinical or psychomotor skills. **Aim and objectives:** To assess the clinical cognitive competency among final year dental students of Kulliyah of Dentistry, particularly on all ceramic crown preparation. **Material and methods:** This research is a cross-sectional study carried out among final year dental students, Kulliyah of Dentistry, Kuantan, IIUM. Four (4) sets of prepared Nissin® teeth for an all ceramic crown were assessed by the final year dental students using the calibrated rubrics. The students assessed the preparation twice within a week between two (2) assessments. Intraclass correlation coefficient (ICC) analysis was used to analyse test-retest reliability of the data from this research. **Results:** The results show that the students have a good understanding of the rubrics of all ceramic crown preparation with at least 2 to 3 out of 6 criteria recorded ICC scores from fair to good reliability. Perceptual and judgemental variation, confusion in assessment teeth with borderline performance, and lack of clinical practice affect the consistency of the results. **Conclusion:** All final year dental students have adequate clinical cognitive competency in all ceramic crown preparation. However, this could not replace psychomotor skills as both skills complement each other to become a competent dentist.

Keywords: all ceramic crown, cognitive competency, consistency, covid-19, dental students

ABSTRACT ID: O - 03

CORTICAL BONE ANALYSIS IN TYPE 2 DIABETES MELLITUS & NON-DIABETIC PATIENTS BASED ON PANORAMIC RADIOGRAPH

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Introductions: Type 2 Diabetes Mellitus (T2DM) may have effects on the mandibular cortical bone alteration that can be assessed through dental panoramic radiograph based on previous studies. This study aimed to assess the mandibular cortical bone changes associated with T2DM by comparing the Mental Index (MI) in T2DM and non-diabetic patients. Further aimed is to investigate the influence of gender and age on mandibular cortical bone changes based on digital panoramic radiographs. **Materials and methods:** A retrospective record review (radiological data) of 35 T2DM and 35 non-diabetics panoramic radiographs were assessed on Planmeca Romexis Digital Software using Mental Index (MI) as the morphometric parameter. The mean MI for T2DM and non-diabetic patients were statistically analysed. Intraobserver agreement was assessed using Intraclass correlation coefficient (ICC) for MI. **Results:** The mean MI showed significant difference between T2DM and non-diabetic patients ($p < 0.05$). Whereas, the mean MI showed no significant difference between genders ($p > 0.05$). The correlation between age and MI showed no significant correlation ($p > 0.05$). **Conclusions:** In conclusion, T2DM may affect mandibular cortical bone structure. Gender and age have no influence on the mandibular cortical bone changes. MI is a useful morphometric index to assess the mandibular cortical bone changes.

Keywords: Mental Index, Mandibular Cortical Bone, Type 2 Diabetes Mellitus, Panoramic radiograph, Bone density

ABSTRACT ID: O - 04

ORAL HEALTH-RELATED QUALITY OF LIFE IN ORTHODONTICS: A CROSS SECTIONAL STUDY ON ADOLESCENTS AND ADULTS IN ORTHODONTIC TREATMENT IN KUANTAN, PAHANG



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Introduction: Orthodontic treatment is always complementary to oral health-related quality of life (OHRQoL). The main reasons patients seek orthodontic treatment are due to aesthetics, oral-facial functionality, and psychological well-being. As known, orthodontic treatment is relevant in patients with malocclusion problems or facial disharmony. The Oral Health Impact Profile (OHIP) is an instrument frequently used to evaluate the patient's subjective perception of oral well-being. This study aimed to assess the OHIP subscale's impact on OHRQoL and to compare the OHRQoL between adolescents and adults. **Materials and Methods:** A total of 160 subjects (60 adolescents and 100 adults) undergoing orthodontic treatment completed the Malaysian Oral Health Impact Profile (S-OHIP(M)) to assess OHRQoL. The instrument consisted of 14 items grouped into 7 subscales which were (i) functional limitation, (ii) physical pain, (iii) psychological discomfort, (iv) physical disability, (v) psychological disability, (vi) social disability, and (vii) handicap. Mann-Whitney U and Kruskal Wallis test was applied to compare the OHRQoL between both age groups and demographic characteristics. **Results:** There is a statistically significant difference in median score for quality of life between adolescents 12(9) and adults 16(8). Physical pain had the highest impact on OHRQoL in both groups whereas social disability had the least impact for both groups. **Conclusions:** Our study showed that the adult groups reported a higher score of impact on OHRQoL compared to adolescent groups. In addition, adolescents and adults reported physical pain has the highest impact on OHRQoL during orthodontic treatment and social disability was the least affected factor in OHRQoL.

Keywords: Health-related quality of life, orthodontics, adolescent, adult.

ABSTRACT ID: O - 05

KNOWLEDGE, PERCEIVED RISK, AND THE ASSOCIATED PREVENTIVE BEHAVIOURS AMIDST COVID-19 PANDEMIC AMONG UNDERGRADUATE DENTAL STUDENTS IN MALAYSIA

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Introduction: Coronavirus disease 19 (COVID-19) is a dreadful disease that affected many sectors including dental practice in Malaysia. However, studies on dental students' knowledge, perception, and behaviours with regards to COVID-19 are very limited. Thus, this study aims to determine the knowledge status, perceived risk, and preventive behaviours of dental students in Malaysia on COVID-19. **Materials and methods:** A cross-sectional study was conducted among undergraduate dental students from 13 dental schools across Malaysia using online questionnaires. **Results:** From 355 respondents, 93.5% obtained a high score of knowledge on COVID-19. Female respondents scored higher than males in perceived risks and preventive behaviours. Chinese respondents scored highest in knowledge, while Malay respondents had the highest perceived risk score. The mean preventive behaviours score did not vary across ethnicity. On-campus students scored higher in knowledge and perceived risk whereas off-campus students practiced more preventive behaviours. Clinical students' knowledge score was higher than preclinical students. Final year students scored higher in knowledge and perceived risk compared to their juniors. **Conclusion:** Majority of dental students have good knowledge and high perceived risk of COVID-19, and they practiced most of the preventive behaviours. However, the latest information on this disease should be incorporated into dental schools' curriculums and updated periodically.

Keywords: COVID-19, dental student, knowledge, perceived risk, preventive behaviour

ABSTRACT ID: O - 06

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Introduction: Clinical information regarding skeletal and dental characteristics are essential for orthodontic diagnosis and treatment planning. Therefore, an evaluation to predict the association between skeletal and dental variables would prove diagnostically invaluable. **Material and methods:** Orthodontic study models and lateral cephalograms of 117 Malay patients between 18 and 41 years old (mean age 26.5 ± 5.38) were evaluated for molar relationship (class I, II or III), A point-Nasion-B point (ANB) angle (skeletal Class I, II or III) and maxillary-mandibular planes (MMP) angle (normo-, hypo- or hyperdivergent). Reassessment was done after two weeks for intra- and inter-examiner reliability. The association between these variables were analysed with Chi-square test. **Results:** There was perfect agreement for intra- and inter-examiner reliability with kappa scored 1. A highly statistically significant association between molar relationship and sagittal skeletal pattern ($p=0.000$), and statistically significant association between sagittal and vertical skeletal pattern ($p=0.048$) was found. There was no significant association between molar relationship and vertical skeletal pattern ($p=0.855$). **Conclusion:** Skeletal Class I, molar Class II and normodivergent vertical pattern were the most prevalent. There was association between sagittal and vertical dimension, and between sagittal and molar relationships. However, there was no association between vertical plane and molar relationships.

Keywords: Orthodontics, Malocclusion, Vertical dimension, Cephalometry, Diagnosis

ABSTRACT ID: O - 07

BONDING EFFICACY OF COMPOSITE RESIN TO ENAMEL EXPOSED TO CARBONATED DRINKS: AN IN VITRO STUDY

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Introduction: Carbonated beverages are widely consumed over the world. The effect of acidic liquids on dental enamel has a significant impact on composite resin adhering to the enamel substrate. The purpose of this study was to see how acidic beverages affected the bonding of composite resin to exposed enamel. **Methods and Materials:** 48 premolars were taken and divided into four groups: 24 hours immersion ($n=2$), 15 days immersion ($n=6$), and no immersion ($n=2$). The samples were divided into the following categories: G1-AS: Immersion in artificial saliva as a control, G2-Beverage A: 3x/15 mins immersion in Beverage A, G3-Beverage B: 3x/15 mins immersion in Beverage B, G4-Beverage C: 3x/15 mins immersion in Beverage C. Prior to immersion, the buccal surfaces of the enamel were minimally ground at the layer of enamel solely using a Tungsten carbide bur, then flattened with #600 - #1200 silicon carbide paper (SiC) paper. Specimens were submerged in the media for 24 hours and 15 days, respectively. Following immersion, the specimens' prepared surfaces were repaired using composite resin. Then, using a Scanning Electron Microscope, the enamel pattern was morphological micro analyzed and the shear bond strength was determined (SEM). **Results:** One-way ANOVA with multiple comparison tests were used to statistically evaluate the data. When compared to control media, all of the beverages tested significantly reduced shear strength. Following immersion in the test beverages, enamel's morphology changed noticeably, with Beverage A displaying the most pronounced morphological changes. **Conclusion:** All acidic beverages examined had a detrimental impact on shear strength. In different periods of time, varying degrees of enamel demineralization was detected.

Keywords: Soft drink, composite, tooth degradation

ABSTRACT ID: O - 08

RADIOGRAPHIC ASSESSMENT OF MAXILLARY CANINE POSITION AND RISK OF IMPACTION AMONG 9-10 YEARS OLD CHILDREN



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Introduction: Early diagnosis and interceptive treatment of the maxillary canine impaction is crucial as it reduces treatment complexity, decreases risks of complications and adverse outcomes. **Material and methods:** Orthopantomographs (OPG) of 289 healthy children aged between 9 to 10 years were observed where the average position of maxillary canines based on the relation to the lateral incisor, sector locations and angulations to the bicondylar line were traced. The average position was obtained by using descriptive statistics. One sample Wilcoxon signed rank test is done to predict the risk of impaction by comparing the data obtained to the average position from previous studies. **Results:** Our findings showed that the average position of the maxillary canines in our population are statistically different from the average position of non-impacted canines in previous studies. However, on average, more than 85% of canines in our population are still located within the safe range of satisfactory position with females showing slight predominance outside of the satisfactory range. **Conclusion:** There is low risk of impaction of maxillary canines in the Malaysian population. However more retrospective studies using more radiographic and clinical indicators needs to be done to further confirm the risk of impaction.

Keywords: Impacted canines, maxillary canines, Malaysian children, orthopantomographs

ABSTRACT ID: O - 09

ASSESSMENT OF DENSE BONE ISLANDS (DBI) OF THE JAW AMONG ORTHODONTIC PATIENTS IN KULLIYAH OF DENTISTRY

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Introduction: Dense Bone Island (DBI) of the jaw is an asymptomatic, localized, well defined, radiopaque lesion without the presence of a radiolucent rim. It has unknown etiology and is usually found incidentally during a routine radiographic assessment. DBI is frequently detected in young adults, has no sex predilection, and is usually located at the posterior area of the mandible. DBI has no significant clinical intra-oral manifestation, thus no treatment or intervention is needed. However, in certain cases, it is reported DBI may cause changes to the adjacent surrounding tooth that may cause complications towards orthodontics treatment. **Objectives:** To assess the prevalence and distribution of DBI according to the gender and age of the patients. To determine the variability of DBI lesions in regard to the number of lesions, type, location, shape, and size of DBI in panoramic radiograph of orthodontic patients and to explore the effect of DBI on orthodontic treatment planning. **Study Design:** A retrospective study on 490 panoramic radiographs of orthodontics patients coming to Kulliyah of Dentistry IIUM from 2017 to 2019. **Results:** DBI was identified in 108 out of 490 patients with a prevalence of 22% with females mostly affected by the lesion. The most affected age group were between the age of 13 to 17 years old. Most of the lesions were identified at the apical area of the premolars of the left mandible with irregular shape. No intervention or alteration of orthodontics treatment was recorded. **Conclusion:** The Presence of DBI in the jaw does not interfere with patients' orthodontics treatment planning.

Keywords: Dense Bone Island (DBI), Idiopathic Osteosclerosis, Orthodontics

ABSTRACT ID: O - 10

PERCEPTION ON VENEERS IN RELATION TO ISLAMIC PERSPECTIVE IN KUANTAN COMMUNITY

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Introduction: Facial attractiveness plays a part in social relationships and cosmetic dental treatments can improve their look. One of the widely performed cosmetic treatments in dentistry is veneer. However, in some cases, patients without any dental problem asked for veneers just to get a “killer smile”. And this concept is totally not in line with the Islamic principles and guidelines. **Materials and Methods:** A total of 250 respondents were chosen by convenience sampling within the Kuantan community. A set of questionnaires was distributed via Google Forms and the data collected was analyzed using SPSS Ver 25. **Results:** A total of 250 respondents completed the survey with 6% of them having experience with veneer treatment. There was a significant difference between perception and knowledge towards veneers and fiqh. However, the correlation coefficient showed there was a poor correlation between these two variables. **Conclusion:** Poor correlation between one's perception and their knowledge on veneer treatment from Islamic perspective.

Keywords: Aesthetic Dentistry, Dental Veneers, Dental Fiqh, Islamic Principle

ABSTRACT ID: O - 11

DENTAL STUDENTS' PREFERENCE FOR RETURNING TO CLINICAL SETTING DURING COVID-19 PANDEMIC

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Background: The coronavirus disease (Covid-19) has hit the world and affect all aspects of life. This forces all educational institutions and most universities in Malaysia to close for the safety of the students. Dental students are one of the most affected group since students in clinical years have to enter the clinic for their clinical courses. The objectives of this study is to determine the students' preference in returning to clinical settings during this pandemic besides assessing the factors that lead to their decision. We also want to assess their perceptions on risk of the Covid-19 infection. **Materials and Methods:** A cross sectional study has been conducted from November 2020 until January 2022 with the approval from IIUM research ethics committee. Online questionnaires have been distributed to clinical dental students in all dental school in Malaysia including the public and private universities in Malaysia. **Results:** Most of the dental students in Malaysia prefer to return to the clinical setting during the Covid-19 pandemic due to their high level of internal motivation besides having great sense of professionalism and their believe in Covid-19 risks to self. **Conclusion:** More than two-third (n=238) of dental students in Malaysia prefer to return to the clinical setting during the Covid-19 pandemic.

Keywords: Covid-19, Pandemic, Dental students, Clinic, Return

ABSTRACT ID: O - 12

IMPACT OF COVID-19 AMONG DENTAL STUDENTS IN MALAYSIA



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Introduction: The coronavirus disease 2019 (COVID-19) caused by a novel coronavirus (SARS-CoV-2) has gained worldwide attention and dental students' performances may indirectly be affected following the preventive measures in containing the disease. This study aims to evaluate the impact of COVID-19 pandemic on physical, mental, financial health and academic concern among dental students in Malaysia. **Methods:** The current research implemented a cross sectional study among dental students in Malaysia. Assessment of the impact of COVID-19 on dental education was done by the distribution of a set of online survey consisting of 28 questions to dental students (n=353) from public and private universities in Malaysia. The questionnaires include sociodemographic backgrounds and assessment on the mental health, financial health, physical health and academic concern. Kruskal Wallis test and Mann-Whitney U test were used to analyse the impact of COVID-19 to these 4 domains according to sociodemographic background. **Results:** A total number of 353 respondents was recorded and 76.2% comprised of female. 59.7% were clinical students and 40.3% were preclinical students. Most of students were concerned about their own emotional health, financial concern, physical wellbeing, in which Year 3 students were found to be more concerned about their mental and financial health concern. **Conclusions:** COVID-19 pandemic had indeed significantly affected Malaysian dental students mainly due to fear of the quality of online learning and the amount of clinical skills acquired. Therefore, it is important to identify dental stressors and lessen the impact of COVID-19 to dental students.

Keywords: COVID-19, pandemic, dentistry, medicine, mental health.

ABSTRACT ID: O - 13

INITIAL EVALUATION AND ASSESSMENT OF TRAUMATIC FACIAL INJURIES

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Introduction: Maxillofacial injuries are one of the most common presentations in the Emergency department. Improper evaluation and diagnosis could lead to devastating consequences. Thus, a systematic evaluation of traumatic patients is essential to reduce possible complications. **Materials and Method:** Data of patients that attended the emergency department from June 2017 to June 2021 with maxillofacial trauma and concomitant head injury were obtained from the Medical Records Department using iPesakit software. The revision of the patient's record was stressed upon the relation between initial and final investigations and management done as well as the relation between initial and final diagnosis. The association between these variables were analysed with Chi-square and Kappa Correlation test. **Result:** In general, we found that there were adequate initial assessments made on the facial injuries. There was a moderate agreement between initial and final diagnosis in certain areas of facial bone fracture. Initial and final dental diagnosis however have a very weak agreement. **Conclusion:** The initial assessment done in Sultan Ahmad Shah Medical Centre were adequate for diagnosis and management of maxillofacial trauma patients although the initial and final diagnosis achieved were found inconsistent especially for dental trauma.

Keywords: Maxillofacial injuries, Maxillofacial Trauma, Soft tissue injuries, Management

ABSTRACT ID: O - 14

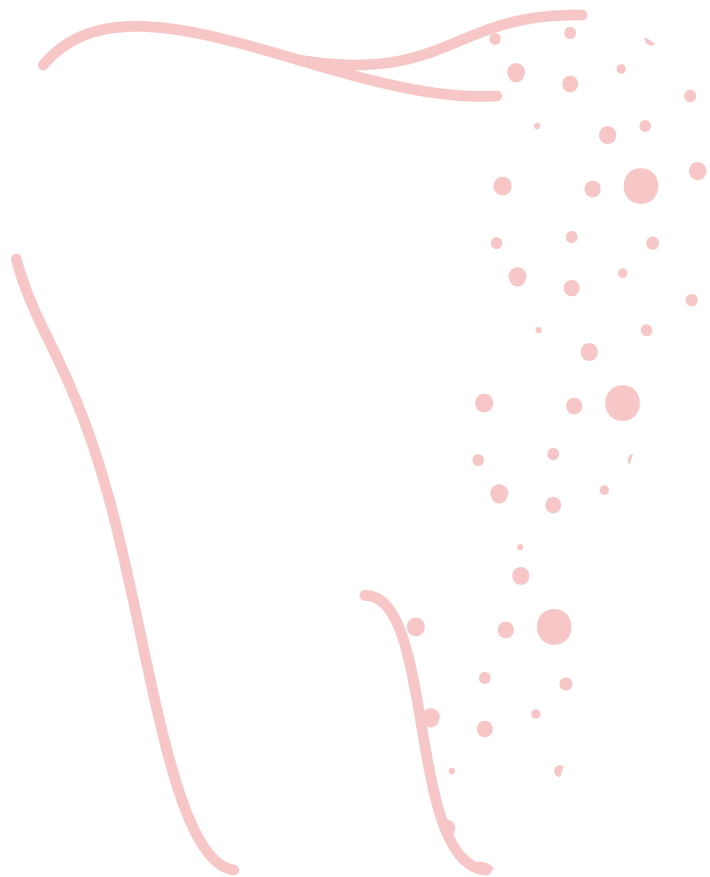
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Introductions: Knowledge on the variation of the course of posterior superior alveolar artery (PSAA) within maxillary structures is vital for surgeons before any maxillary surgery. This study was designed to understand the anatomical variations of PSAA by determining the prevalence of intraosseous PSAA and assessing the anatomical reference point and diameter of the PSAA. **Materials and Methods:** 100 CBCT images were included in this study. The vertical distance from the PSAA to the maxillary sinus floor and alveolar crest were measured. The vertical distance between maxillary sinus floor and alveolar crest were also evaluated. Diameter and horizontal position of PSAA were analysed. The results were tested by using chi-square test and independent t-test. **Results:** The PSAA can be seen in 73.5% of the cases and 70.1% were located intraosseously. Mean diameter of the canal was 1.09 ± 0.43 mm. There were insignificant differences in the mean diameter, the vertical distance between PSAA and alveolar crest, as well as between maxillary sinus floor and alveolar crest for dentate and edentulous patients. Meanwhile, there was a significantly greater vertical distance between the PSAA and the maxillary sinus floor in edentulous (9.24 ± 4.75 mm) than in dentate patients (6.78 ± 3.43 mm) with p-value of 0.002. **Conclusion:** This study provides useful information regarding the most prevalent location and diameter of the PSAA which indicates the importance of preoperative evaluation through CBCT to reduce the risk of intraoperative bleeding that may complicate the treatment.

Keywords: cone beam computed tomography, posterior superior alveolar artery, maxillary sinus, maxillary artery.

ABSTRACT ID: O - 15

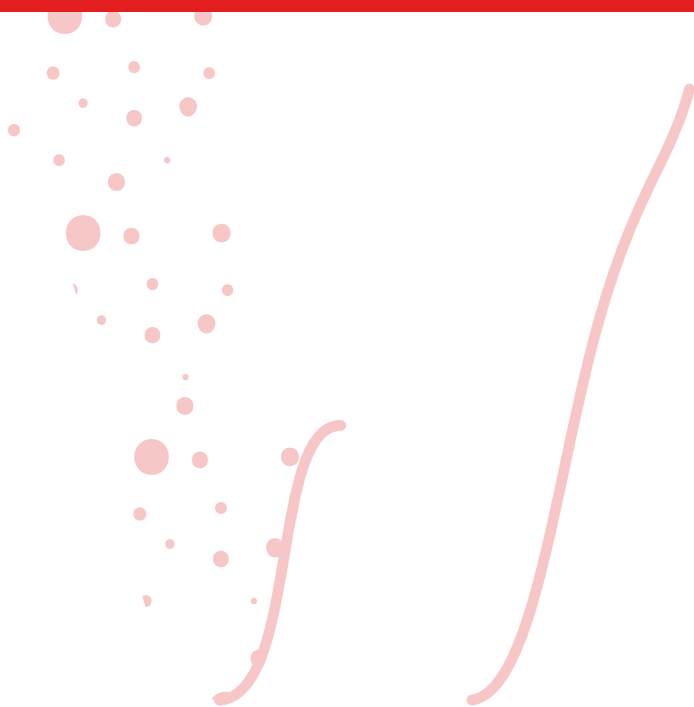




11th Dental Students'
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2022

ABSTRACT POSTER PRESENTATION

BASIC AND CLINICAL SCIENCE



VALIDATION OF MALAY VERSION OF THE FEAR, EATING HABITS, AND ORAL HEALTH PERCEPTION ON COVID-19

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Introductions: Restricted movement control during COVID-19 outbreaks impacted to the children's daily life. This study purposely to assess the impact of the parents' fears to their children's eating habits, dental care, and parent's oral health perception on COVID-19. **Materials and Methods:** A cross-sectional study was conducted among the parents with children aged below 12 years old in Kuantan, with approval from IIUM Research Ethic Committee (IREC). The validated questionnaires were distributed via online including the demographic data, fear score, eating habits patterns and parent's oral health perception on COVID-19. **Descriptive data analysis and Pearson's coefficient test for association were conducted.** **Results:** The respondent's feedback successful collected was 99. The families cannot go out for leisure (72%), only went out to get their essential needs (88.9%). Respondents had not changed in food quantities, increased in healthier food intake, and carbohydrate consumptions were 55%, 56%, 40% respectively. Ability to supervise their children's toothbrushing were increased (56%). Before pandemic, seeking dental treatments were 65%, while after the pandemic were 74%. Their children had not experienced any dental trauma (83%). Out of children with dental caries (65.7%), only 43.4% seek for dental care. The association between the fear level with number of children aged below 12 years-old and supervision of toothbrushing were $p < 0.01$. **Conclusion:** The parent's fear toward the pandemic was associated with the number of children aged below 12 years-old and dental care. However, there was no association between parents' fears towards children's eating habits and oral health perception on COVID-19.

Keywords: Covid-19, Restricted movement control, Parent's fear, Eating habits, Oral Health

ABSTRACT ID: P - 01

ORAL HEALTH ATTITUDES AND BEHAVIOURS AMONG UNDERGRADUATE HEALTH SCIENCE STUDENTS IN IIUM KUANTAN CAMPUS

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Introduction: Oral health is a component of overall health that has an impact on an individual's general well-being. HU-DBI questionnaire has been interested to evaluate patients' perceptions of oral health care. It is believed that individuals enrolled in undergraduate health science are expected to have a positive attitude and behaviour toward their oral health. **Objectives:** To investigate and compare the oral health attitudes and behaviours among undergraduate health sciences students at IIUMK and to evaluate between preclinical and clinical students on their oral health awareness. **Material and methods:** 100 respondents were recruited from each course. A modified online questionnaire assessing attitudes and behaviours towards oral health was used. Results were analysed by descriptive statistics, Kruskal Wallis test, and Mann-Whitney test. **Result:** The majority of respondents denied smoking habits involvement (95.8%). Half number of them have brushed their teeth and used dental floss in their daily life. Dentistry depicted the highest mean score of HU-DBI (17.92). Clinical year students showed significant difference ($p = 0.044$) and depicted higher scores compared to preclinical whilst gender showed approximate similar with the scores. **Conclusion:** The outcome for oral health attitudes and behaviours among dental students have a greater score compared to medical, nursing, allied health science, and pharmacy courses. It also highlights the overall clinical students showed better oral health care than preclinical students in all courses.

Keywords: Oral health, Attitude, Behaviour, Undergraduate, Health science

ABSTRACT ID: P - 02

TRAUMATIC DENTAL INJURY – KNOWLEDGE, AWARENESS AND PRACTICE AMONG GENERAL DENTAL PRACTITIONERS IN MALAYSIA



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Introduction: Traumatic dental injury (TDI) is a collection of injuries related to the teeth and/or other structures surrounding the tooth. Urgent attention and immediate treatment is critical for the tooth's survival. Any mismanagement of TDIs may lead to inferior healing and poor outcome as most cases are usually first seen in primary care. **Materials and methods:** A cross-sectional study was conducted among GDPs across Malaysia via an online questionnaire. **Results:** A total number of 80 respondents were recorded. Most of the GDPs possess a good level of knowledge (48.8%) and practice (62.5%) but moderate level of awareness (47.5%) on TDIs. Self-assessment of TDI knowledge had a profound influence on the level of knowledge ($p=0.014$), awareness ($p=0.001$) and practice ($p=0.023$). Interest in related specialties plays a significant role in the level of knowledge ($p=0.039$). Recent experience with TDI was found to have influenced their level of awareness ($p=0.020$). **Conclusion:** Malaysian GDPs possess good knowledge and practice but moderate awareness on TDI and its management. Self assessment, recent experience and interest in dental traumatology related specialties influenced the score in this study. Continuous education and recent updates dental traumatology are recommended to ensure adequate care for patients.

Keywords: Dental trauma, Knowledge, Awareness, Practice, IADT

ABSTRACT ID: P - 03

THE LEVEL OF AWARENESS OF ORAL CANCER AND ORAL POTENTIALLY MALIGNANT DISORDERS AMONG CLINICAL DENTAL STUDENTS AT INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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Introduction: The aim of this study is to assess oral cancer and oral potentially malignant disorder (OPMD) awareness among undergraduate clinical dental students in Kulliyah of Dentistry, International Islamic University Malaysia, as well as to correlate if the year of study has influence on their clinical practice pertaining to the oral cancer and oral potentially malignant disorder (OPMD) detection and prevention. **Materials and methods:** A validated questionnaire which tested oral cancer and oral potentially malignant disorders awareness was given to the clinical dental students, the third, fourth and fifth year students of the Kulliyah of Dentistry, IIUM. A total of 148 students participated in this survey. **Results:** Knowledge score of oral cancer and OPMD was generated from correct responses assessed from 41 items in the survey, meanwhile the clinical practice aspect was determined through a score of (0-40). Knowledge scores ranged from 18-41 (mean: 30.29, SD:3.835) where the mean knowledge score is not significant among the three groups. Attitude scores ranged from 21-38 (mean: 30.05, SD:3.341), where the mean of clinical practice scores is also insignificant among the three groups. The ability and confidence to diagnose and recognize suspicious oral lesions did not correlate with their level of study ($r=0.037$, $p>0.05$). **Conclusion:** Thus, this study justified the importance of continuous clinical exposure and ample clinical practices for dental students to master and improve their knowledge on oral cancer detection and prevention.

Keywords: Oral Potentially Malignant Disorders, Oral Cancer, Awareness, Dental Students, Malaysia

ABSTRACT ID: P - 04

GENDER AND AGE ASSESSMENT BASED ON MANDIBULAR MORPHOMETRY ANALYSIS VIA ORTHOPANTOMOGRAPH – A RETROSPECTIVE STUDY

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Introduction: Mandible is the strongest and most durable facial bone. **Aim and objectives:** This study aimed at assessing age and gender based on mandibular morphometry via orthopantomographs. **Material and methods:** 202 OPG consisted of 116 females and 86 males between ages of 18-50 years old were selected from the computer server at radiology department of Kuliyah of Dentistry ranging from 2010 until 2020. The OPG were viewed on Planmeca Romexis software where linear and angular mandibular parameters were assessed accordingly in millimeters. Relationship and correlation analysis among the mandibular morphometry measurements with regards to gender and age were tested respectively. **Results:** Four bilateral linear mandibular parameters (maximum ramus breadth, MxRB; minimum ramus breadth, MnRB; coronoid height, CH and condylar height, CdH) showed statistically significant difference ($p < 0.05$) in terms of relationship between gender and mandibular morphometry. Meanwhile, only maximum ramus breadth (MxRB) bilaterally, right minimum ramus breadth (MnRB), right coronoid height (CH) and right gonial angle (GA) were found to be statistically significant and correlated with age. Hence, the regression equations for the correlated mandibular measurements were generated accordingly. **Discussion:** A generally strong relationship between linear mandibular morphometry and sex for all landmarks were found. Meanwhile, for age assessment, only three linear mandibular measurements and one angular mandibular parameter were significantly correlated. **Conclusion:** In conclusion, OPG mandibular measurements were proved to be a good tool for gender and age assessment for certain morphometry.

Keywords: Mandibular morphometry; dimorphism; gender; age; orthopantomography

ABSTRACT ID: P - 05

ORAL HEALTH-RELATED QUALITY OF LIFE IN CHILDREN FOLLOWING COMPREHENSIVE DENTAL TREATMENT UNDER GENERAL ANAESTHESIA IN SULTAN AHMAD SHAH MEDICAL CENTRE, KUANTAN: A RETROSPECTIVE STUDY

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Introductions: Dental caries in children is a worrying oral health disease which is known as one of the most common non-communicable diseases worldwide and is often neglected. Comprehensive dental treatment under general anaesthesia (CDTGA) is often a sustainable option for children who cannot cope with difficult dental treatment under circumstances such as young age, fear in the dental setting and severity of the oral problems. Children with dental caries associated with a significant negative impact on the oral health-related quality of life (OHRQoL). The Early Childhood Oral Health Impact Scale (ECOHIS) was used to assess oral impacts on the quality of life of preschool aged children and their families **Materials and methods:** A sample of 37 parents of children aged 3 to 8 years who underwent comprehensive dental treatment under general anaesthesia (CDTGA) were recruited from Sultan Ahmad Shah Medical Centre, Kuantan. Parents completed the Malay-ECOHIS for pre-treatment and post-treatment via phone call and/or WhatsApp link. The Malay-ECOHIS consists of 13 questions and is divided into two main parts, namely, the child impact section (9 items) and the family impact section (4 items). **Results:** 37 parents comprise of 32 females (86.5%) and 5 males (13.5%) completed the pre-and post-treatment. The overall ECOHIS percent change exhibited a statistically significant reduction of 22.55% after the treatment while the total CIS scores shows statistically significant with ($p < 0.05$). However, FIS scores showed no significance difference in COHRQoL with ($p > 0.05$). **Conclusions:** CDTGA in SASMEC is associated with considerable improvement in COHRQoL.

Keywords: Children's oral health-related quality of life (COHRQoL), Early childhood oral health impact scale (ECOHIS), Comprehensive dental treatment under general anaesthesia (CDTGA)

ABSTRACT ID: P - 06

STRESS AND ANXIETY DURING COVID-19 OUTBREAK AMONG IIUM ACADEMIC STAFF: AN ONLINE SURVEY



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Introduction: Increase in the number of commitments and workloads during Covid-19 can induce stress and disturb psychological health of the lecturers. As a concerned individual, they cannot escape from the possibility of constant worrying and fear too as the number of morbidity and mortality cases of Covid-19 outbreak are increasing day by day. This constant worrying for their safety and people surrounding them can impose negative effects on the psychological health of the lecturers. Therefore, this study aims to determine the levels of stress and anxiety among IIUM academic staff during the Covid-19 outbreak. The objectives of this study are to assess the level of stress and anxiety among IIUM academic staff during Covid-19 pandemic, to discern psychological influence of gender and to examine the psychological effects of academic disruptions on IIUM lecturers. **Material and methods:** An online questionnaire in English language was distributed using non-probability convenient sampling to lecturers in different academic rankings of International Islamic University Malaysia (IIUM). The analysis of the data includes socio demographic background, Depression, anxiety, Stress-Scale 21 items (DASS-21) and Perceived Stress Scale (PSS-10). This research is descriptive research and the statistics tools used for this research were non parametric tests which consisted of Mann-Whitney test, Kruskal- Wallis test and Spearman test . $P < 0.05$ will be accepted as significant. **Results:** A total of 230 respondents were recorded by using this online survey. It can be seen that the majority of the respondents are from 35 to 44, Malaysian, female, married, PhD academic level, from Gombak campus and do not have history of psychological or psychiatric conditions. IIUM academic staff was reported to have low to moderate levels of stress according to PSS-10 scale and none of the IIUM academic staff was reported to have severe or extremely severe levels of depression and anxiety while only mild or moderate stress levels were reported among the IIUM academic staff according to DASS-21 scale. Age groups and history of pre-existing psychological and psychiatric conditions shown to have significant differences in the levels of stress, anxiety and depression. Females are shown to have significant differences in the level of anxiety. **Conclusion:** Online survey evaluation assessed in this study did portray the correlation of the level of stress and anxiety of IIUM academic staff with their socio demographic background. Small number of studies available served as a limitation for this study.

Keywords: stress, anxiety, depression, academic staff, Covid-19

ABSTRACT ID: P - 07

ONLINE LEARNING DURING THE COVID 19 PANDEMIC: DENTAL STUDENTS' PERSPECTIVE AND IMPACT ON ACADEMIC PERFORMANCE, ONE INSTITUTION EXPERIENCE

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Introduction: COVID-19 pandemic caused all universities in Malaysia to stop face-to-face learning and practical sessions for dental students and continued with the online learning. The aim of this study was to assess International Islamic University Malaysia (IIUM) dental students' perspectives on the implementation of online learning during the COVID-19 pandemic and its impact on academic performance. **Materials and Methods:** To assess students' perspectives regarding online learning, an online questionnaire containing evaluative statements regarding handling, didactic benefit, motivation and challenges of online learning was distributed to all IIUM dental students. The impact of online learning on academic performance was assessed by comparing the students' results of Professional Exams for the years 2018/2019 (data before online learning implementation) and 2019/2020 (data after online learning implementation). The data were analyzed using SPSS version 26.0. **Results:** 249 IIUM dental students involved in answering the questionnaire. Based on the mean score range, students gave positive responses towards management and benefits of online learning. Most statements in domain motivations scored neutral. From domain challenges, students showed that they faced some difficulties during online learning. Comparison between examination results showed significant improvement in Oral Biology (Year 1), Microbiology and Pharmacology (Year 2) subjects after implementing online learning. Dental Material (Year 2) and GMGS (Year 3) subjects showed declines in mean score while other subjects showed no significant difference. **Conclusion:** Despite some challenges, students showed positive responses towards some aspects of online learning. Implementation of online learning had both positive and negative impacts on academic performances.

Keywords: COVID-19, Online learning, Students' perspective, Academic performance

ABSTRACT ID: P - 08

THE RELIABILITY OF SKETCHANDCALCTM AREA CALCULATOR SOFTWARE IN EVALUATING THE OBTURATED SURFACE AREA OF MANDIBULAR PREMOLARS AND MOLARS

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Introductions: The measurement consistency of an assessment tool in biomedical research is important for validation of data. This study aims to determine the reliability of SketchAndCalcTM Area Calculator software in evaluating the obturated surface area of mandibular premolars and molars between two examiners and compare to the previous studies. **Materials and methods:** 30 scanning electron microscopy (SEM) images of extracted single rooted mandibular premolars and 30 SEM images of mandibular molars were obtained from previous studies. The extracted teeth were previously obturated with GuttaFlow Bioseal. Calibration between two examiners was done prior to start of the study. SketchAndCalcTM Area Calculator software was used to evaluate the volumetric percentage of obturated surface area. Inter-examiner reliability was determined between two examiners and compared to the previous studies using Intraclass Correlation Coefficient (ICC) with the following categories; ICC <0.50: poor reliability, ICC 0.50-0.75: moderate reliability, ICC 0.75-0.90: good reliability, ICC >0.9: excellent reliability. **Results:** The ICC values between two examiners were 0.979 in mandibular premolars and 0.918 in mandibular molars. Meanwhile, the ICC values between two examiners and to the previous studies were 0.844 in mandibular premolars and 0.962 in mandibular molars. **Conclusions:** Excellent inter-examiner reliability was observed in premolars and molars, however when compared to the previous studies, good and excellent inter-examiner reliability were observed in premolars and molars respectively.

Keywords: SketchAndCalcTM Area Calculator software, mandibular premolars, mandibular molars, GuttaFlow Bioseal, Inter-examiner reliability

ABSTRACT ID: P - 09

AWARENESS OF GENERAL DENTAL PRACTITIONERS TOWARDS ORAL BIOPSY PROCEDURE

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Introduction: Oral biopsy is defined as removal of tissue samples from a living body in order to reach a definitive diagnosis through histopathological examination. It is among the procedures that can be undertake under general dental practitioners (GDP) care, especially for the localised benign lesions. GDP are expected to have a broad knowledge in evaluating oral diseases, managing the common oral lesions and should be able to make a proper referral for cases which are for specialist care. **Objectives:** To assess the awareness of the GDP towards oral biopsy procedures, to evaluate the demographic data and educational background of the GDP and to correlate the findings of awareness and demographic data. **Material and methods:** Validated online questionnaires using google form were spread among private GDP who were registered with Malaysian Dental Council (MDC) via email and WhatsApp. The data were analysed using SPSS version 25. **Results:** 63 out of 175 respondents answered the questionnaire. 40 were female and 23 were male participants. 79% of respondents were aware of type of lesions requiring biopsy, however only 24% GDP performed biopsy by themselves while 76% of them did not perform biopsy. The most common reasons for not performing biopsy were due to lack of clinical training, lack of experience and theoretical knowledge but no practical skill. **Conclusions:** Majority of GDP were aware regarding oral biopsy procedure, however only few who performed the biopsy by themselves. This is due to lack of training, lack of experience and theoretical knowledge but no practical skills.

Keywords: Oral biopsy, dental practitioners, lesions, oral cancer, GDP

ABSTRACT ID: P - 10

FINAL YEAR KULLIYAH OF DENTISTRY DENTAL STUDENTS' PERCEPTIONS AND KNOWLEDGE ON LOUPES



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Introduction: Dental practitioners benefit greatly from the usage of magnification devices in their practices and dental loupes are one of the magnification tools available. It aids in diagnosis and management by providing a clearer view of the operating field. The surgeon's visibility of the operating field is improved, thus improving the alignment of the neck and back muscles leading to reduced risk of developing musculoskeletal disorders. **Aim and objectives:** To study the perceptions and knowledge of the final year dental students on the usage of dental loupes. **Material and methods:** A total of 54 final year dental students of Kulliyah of Dentistry (KOD), International Islamic University Malaysia (IIUM) session 2021/2022 were recruited to be the subjects of this study. A set of questionnaires was distributed via Google Forms after they examined the teeth that were mounted on a phantom head with and without the use of loupes. The data collected was analysed using SPSS software Ver 25. **Results:** A total of 54 students completed the survey with 100% of them agreeing that the use of dental loupes is beneficial for their clinical practices. **Conclusion:** Despite the fact that the majority of students have never used it in a clinical setting, the students know about dental loupes.

Keywords: dental loupes, magnification, clinical setting, dental students

ABSTRACT ID: P - 11

ORTHODONTIC PATIENT'S PERSPECTIVE, ATTITUDE AND READINESS TOWARDS TELE-ORTHODONTICS

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Introduction: Amid the COVID-19 emergency, dental clinics temporarily suspended all deferrable procedures to reduce the spread of the pathogen, and the tele-orthodontics approach was taken as an alternative to face-to-face orthodontic follow-ups. Tele-orthodontics is the application of telecommunication to orthodontic treatment by using information technology, without requiring direct contact between clinician and patient. Therefore, our objective for this study is to evaluate the perspective, attitude and readiness of IIUM orthodontic patients towards tele-orthodontics. **Materials and Methods:** This prospective study was conducted at Kulliyah of Dentistry involving active orthodontic patients in an orthodontic specialist clinic from January 2021 until December 2021. Online questionnaires were distributed to patients who received online consultations. **Results:** From 46 orthodontic patients, 82.4% of them agreed that tele-orthodontics systems were convenient for them. 82% of them agreed that tele-orthodontics should be practiced during the pandemic and 72% of them agreed that it should be practiced even after the pandemic. 89.1% of them agreed that tele-orthodontics brings benefits to them during the pandemic, and 74% of them agreed that tele-orthodontics might bring benefits even after the pandemic. Overall, there was no significant difference between sociodemographic background with the total scores of patients' perspectives, attitude and readiness towards tele-orthodontics. **Conclusion:** The majority of the patients in this study showed good perspective, attitude and readiness towards tele-orthodontics and there was no significant difference between sociodemographic background with the total scores of patients' perspectives, attitude and readiness towards tele-orthodontics.

Keywords: Tele-orthodontics, Tele-dentistry, perspectives, attitude, readiness

ABSTRACT ID: P - 12

DEMOGRAPHIC OF ORTHOGNATHIC CASES SEEN IN KULLIYAH OF DENTISTRY IIUM

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Introduction: Orthognathic is a combined orthodontic and surgical treatment, aimed to restore functional occlusion and the facial aesthetic of dentofacial deformity. KOD orthognathic team has been established in 2018. There are no published demographic profile of the of orthognathic patients referred. **Aim:** This study aimed to establish the demographic data and the correlation for the orthognathic cases seen in KOD, IIUM since the establishment of joint clinic from 2018 until December 2020. **Material and methods:** Total of 28 patients were referred for orthognathic consultation. One patient was excluded as no referral letter was attached. Patients' data were obtained from patients' case notes, photos and study models. Data collected were then categorized into patients' demographic profiles, clinical features, patients' psychological status and treatments. Demographic pattern and correlation were analyzed using SPSS version 25.0. **Results:** Out of 27 patients, most patients were females (66.7%), Malay (55.6%) and within the age group of 21 to 30 years old (44.4%) and were from Pahang (88%). Most patients presented with Class III skeletal base discrepancy (66.7%), facial asymmetry (76.0%), increased vertical dimension (51.9%), shifted chin point (83.3%), Class III incisal relationship (70.4%), reversed overjet (70.4%), reduced overbite (56.0%) and crossbite (77.7%). Significant relationships were found between skeletal base discrepancy with incisal relationship, overjet, crossbite, canine relationships and right molar relationship. 57.14% agreed to orthognathic surgery, 32.14% opted for orthodontic treatment alone whilst 10.7% refused any treatment. **Conclusion:** This established baseline demographic data may aid in the management and planning of the resources for this team.

Keywords: Orthognathic, Demographic, Skeletal Discrepancy

ABSTRACT ID: P - 13

MUSCULOSKELETAL DISORDERS (MSD) AMONG DENTAL PRACTITIONERS IN KULLIYAH OF DENTISTRY, IIUM Kuantan

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Introductions: Dental practitioners are subjected to prolonged static postures, repetitive movements and stress, contributing significantly to musculoskeletal disorders. MSD is a multifactorial disorder that can cause pain or discomfort in any affected body region. If this situation is left untreated, it may negatively affect the work performance of dental practitioners. This study aimed to determine the prevalence, risk factors and effects of MSD among dental practitioners in Kulliyah of Dentistry (KOD), IIUM Kuantan. **Materials and methods:** This cross-sectional study used a validated Standardised Nordic Questionnaire to assess the prevalence, risk factors, and effects of MSD among dental practitioners at KOD IIUM. The survey was conducted online through Google Forms and distributed to KOD IIUM dental practitioners with at least one year of clinical experience. The data was validated using the Chi-Square Test. **Results:** 45 dental practitioners have participated in this study with an 83% response rate. 86.7% of the respondents had at least one body region affected by MSD. The highest prevalence of musculoskeletal complaint was the neck (62.2%), followed by the shoulder (53.3%) and lower back (48.9%). Common risk factors of MSD were prolonged static posture, awkward posture and short breaks. MSD caused a decrease in work capacity, the need for medication and stress. **Conclusions:** The findings support increasing evidence that dental practitioners are at significant risk of developing MSD. Thus, ergonomic awareness education and interventions are needed to prevent a reduction in work performance and incidence of MSD among dental practitioners in KOD IIUM.

Keywords: Dental Practitioners, Musculoskeletal Disorder, Standardised Nordic Questionnaire

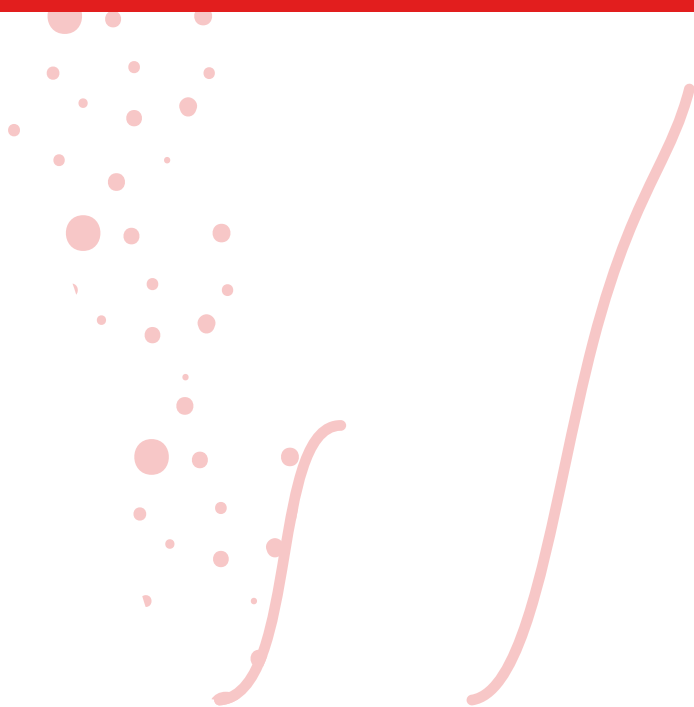
ABSTRACT ID: P - 14



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ABSTRACT ORAL PRESENTATION

REVIEW



OROFACIAL MANIFESTATION AND COMPLICATIONS OF MUCORMYCOSIS IN CHILDREN: A SYSTEMATIC LITERATURE REVIEW

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Introduction: Mucormycosis or black fungus is a fatal infection caused by mucormycetes that affects patients with compromised immune systems globally. The clinical information on the occurrence of the disease among children is still scarce. **Aim:** This systematic literature review aims to determine the orofacial manifestations and complications arising from mucormycosis or 'black fungus' among children. **Methodology:** The databases used are PubMed, SCOPUS, and Cochrane Library. A series of keywords were used to find the relevant articles such as "Children OR child OR infant", "Dental OR oral OR facial OR face" and "Mucormycosis OR black fungus OR zygomycosis". Based on the Preferred Reporting Items for Systematic review and Meta-Analysis guidelines, articles were selected by two reviewers. The articles were selected by a predetermined inclusion and exclusion criteria. Risk of bias was checked for the final papers selected. **Result:** 531 articles were found from the first phase of the search, SCOPUS (114), PubMed (413), and Cochrane Library (4). The articles went through the inclusion and exclusion criteria, and duplicates were removed. Only 31 articles were used for the final analysis. **Discussion:** Data gathered were discussed including the types of causative organisms, epidemiology of the disease, the predisposing factors and the orofacial manifestations and complications of mucormycosis occurring in paediatric patients. **Conclusion:** The most common clinical manifestations of mucormycosis in children were facial swelling and tissue necrosis. The infection progresses rapidly and results in death in the majority of cases.

Keywords: Mucormycosis, Orofacial manifestation, Complications, Children

ABSTRACT ID: OR - 01

ANTIMICROBIAL EFFICACY OF ELECTROLYZED WATER AGAINST ROOT CANAL PATHOGEN: A SCOPING REVIEW

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Introduction: Sodium hypochlorite (NaOCl) is a commonly used irrigant in root canal therapy because it has antimicrobial properties and is able to dissolve organic tissues. Recently, electrolyzed water (EW) has been verified as an effective disinfectant that can be used as an alternative to NaOCl. **Aim:** To compare antimicrobial properties of EW with NaOCl on root canal pathogen. **Methodology:** The scoping review was performed according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews protocol guidelines. Four databases (PubMed, PLOS, Science Direct and Google Scholar) were used to identify studies eligible for this review. The articles included were from January 2011 to September 2021. Joanna Briggs Institute Critical Appraisal Tool was used for quality assessment. **Result:** Of the 783 articles recovered from the search, only eight articles were eligible to be included in this study. Based on this review, EW showed comparable antimicrobial efficacy with NaOCl. However, the evidence on the effect of concentration and treatment time towards antimicrobial efficacy is still lacking. **Conclusion:** Electrolyzed water can be an alternative for endodontic irrigant as it was proven to have comparable antimicrobial efficacy with widely used NaOCl.

Keywords: Root canal bacteria; electrochemically activated water; electrolyte solution; sodium hypochlorite; antibacterial

ABSTRACT ID: OR - 02

REVISIT OF ROOT AMPUTATION PROCEDURES IN PERIODONTICS: A LITERATURE REVIEW



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Background: One of the most serious sequelae of periodontitis in multirooted teeth is attachment loss in the intraradicular area. Regenerative approach has been evaluated and proven to be the ideal treatment for improving molar furcation status. However, this approach was generally not suitable in treating more complex furcation involvement cases such as class II in maxillary molars and class III in all molars. Therefore, it is believed that a relatively more advanced treatment modality such as resective therapy can effectively eliminate the furcation defects and increase tooth longevity. **Objective:** This review aims to provide a contemporary and comprehensive overview of root amputation in periodontics. **Methods:** Comprehensive searches in 4 different databases - PubMed, Scopus, Science Direct and Google Scholar -were performed for publications that fit with the predetermined inclusion and exclusion criteria. The retrieved articles quality was assessed based on SANRA guidelines. **Discussion:** Treating periodontally compromised molar through root amputation procedure is a viable alternative and has been documented with reasonable long-term effectiveness. However, the prognosis is highly depending on the type of case selection, optimally performed endodontic treatment, and the amount of osseous supports surrounding the remaining roots. The Guided Bone Regeneration (GBR) is a good modification and very effective in eradicating some limitations of root amputation. **Conclusion:** This narrative review provides a current overview of root amputation practice in periodontics.

Keywords: Root Amputation, Root resection, furcation, periodontology, maxilla, mandibular

ABSTRACT ID: OR - 03

BONE GRAFTING MATERIALS IN PERIODONTAL REGENERATION: A NARRATIVE REVIEW

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Introduction: Over the past few decades, periodontal regeneration has received a great deal of attention in research because of the importance in improving the result of the therapy. The information regarding various bone grafting materials and advancing technologies in periodontal regeneration are abundant and can be quite overwhelming. **Objectives:** This review aims to provide a contemporary overview of bone grafting materials that can be applied in periodontal regeneration, discuss their properties, summarise their application, enlighten the present emerging technologies and the future perspectives of periodontal regeneration. **Methods:** Literature searches were done in three online databases (Scopus, PubMed and ScienceDirect) focusing on current 10 years of publication up to December 2021. Scale for Assessment of Narrative Review Articles (SANRA) was used to analyse the quality of articles to be included in this study. Otherwise, this review follows the guidelines of the narrative review checklist. **Discussion:** Bone grafting materials used for periodontal regeneration typically belong to synthetic materials such as ceramics, polymers or combination of both. They include calcium phosphate, calcium sulphate, bioactive glass, synthetic polymers, chitosan, pectin, collagen and alginate. Many recent studies were done regarding tissue engineering to create better design of these bone grafting materials such as three-dimensional printing, controlled delivery systems and stem cell technologies. **Conclusion:** Synthetic materials and other contemporary regenerative technologies are gradually replacing bone grafts. In terms of knowledge, additional research is required to create ideal material for periodontal regeneration since the ideal has not yet been identified.

Keywords: bone graft, periodontal regeneration, tissue engineering

ABSTRACT ID: OR - 04

REVISITING GENETICS OF CLEFT LIP WITH OR WITHOUT CLEFT PALATE AND CLEFT PALATE ONLY – A COMPREHENSIVE REVIEW

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Introduction: Cleft lip with or without cleft palate (CLP) and cleft palate (CP) only is one of the most common orofacial deformities observed in human where almost 1% of babies born each year are affected. This condition occurs when the specific and independently derived facial primordial failed to fused together, hence forming the cleft of the lip and palate. These orofacial abnormalities can be divided into syndromic and non-syndromic where the deformities are either associated with other disorder or present on its own, respectively. It is important to understand every step in the lip and palate development during embryonic stage to pinpoint the exact problem affecting the normal development of the human face. With current technologies, more genes were identified to be associated and caused cleft lip and palate and cleft palate only in human. **Methodology:** The literature search was done using the available databases; PubMed and SCOPUS, using terms such as “cleft lip and palate”, “cleft lip”, “cleft palate”, “cleft and animal model”, “cleft and genetics”. **Results and Discussion:** Many genes are recently discovered to be associated and linked with the incidence of CLP and CP. Polymorphism in some of the genes has been associated with the incidence of CLP and CPO. **Conclusion:** Identification of these genes provides new knowledge on how these craniofacial abnormalities occurs and hopefully will enable earlier treatment of these deformities to be implemented.

Keywords: “cleft lip and palate”, “cleft lip”, “cleft palate”, “cleft and animal model”, “cleft and genetics”

ABSTRACT ID: OR - 05

THE ROLE OF MEDICINAL PLANTS IN BONE HEALING: A SCOPING REVIEW

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Introduction: Bone fractures are defined as a medical condition where there is presence of break in bone continuity and it is one of the common global traumatic injuries to humans. The possible contributing factors would be injuries, communicable and non-communicable diseases, nutritional diseases and more. Healing of bone is essential for the continuity of its function in daily lives. There are a few remedies that have been conducted to help in accelerating physiological bone healing processes such as electrical stimulation, pulsed ultrasound and bone grafts. However, it requires advanced hospital facilities compared to medicinal plants which had been used centuries ago. Therefore, in this review we will be accentuating the medicinal plant's role in bone healing focusing on Malaysian plants. Further discussions will be carried out based on the selected medicinal plants previous studies results and investigation-based supporting evidence. **Methodology:** Comprehensive searches in 4 databases were carried out from the beginning of databases until May 2021, according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol. In total, 813 articles were collected and screened on basis or pre-determined inclusion and exclusion criteria. **Results:** 29 articles were included in the review. Majority of publications reported significant findings of different medicinal plants on bone fracture healing regardless of extraction method and formulation. **Conclusion:** Piper sarmentosum, Tridax procumbens, Sambucus Williamsii Hance, Lepidium Sativum, Peperomia pellucida and Prunus Dulcis appear to have a beneficial effect on bone healing. However, the review is limited by the small number of studies available.

Keywords: Bone healing, medicinal plants in bone healing, fracture healing, bone fracture.

ABSTRACT ID: OR - 06

THE PREVALENCE OF EROSION TOOTH WEAR AND TREATMENT OPTIONS: A SYSTEMATIC REVIEW



11th Dental Students' Scientific Conference 2022

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Introduction: Erosive tooth wear (ETW) is defined as dental hard tissue loss caused by the exposure to the acid without bacteria involvement. Over the last few decades, epidemiological studies have revealed a high prevalence of ETW among children and adolescents. This systematic review aimed to determine the prevalence of erosive tooth wear worldwide and to identify treatment options available for erosive tooth wear. **Materials and methods:** The study was conducted in accordance with the PRISMA 2020 for systematic reviews. The data was collected based on searches for the following keywords: ("Tooth wear" OR "erosi* tooth wear") AND ("prevalence" OR "treatment options"). Searches were performed on databases Pubmed, Scopus, and ScienceDirect to find studies in English languages on this subject within the year 2011 to 2021. **Results:** A total of 1727 reports from three different databases, Scopus, PubMed and ScienceDirect were retrieved. After a series of screening, 49 studies that fulfilled the inclusion criteria were included in this review, 34 studies addressing the prevalence of ETW and 15 studies related to treatment available for ETW. The prevalence of ETW varies worldwide, ranging from 0.6% to 100% worldwide. The most frequently reported treatment of ETW was the restorative intervention. Preventive, monitoring, restorative intervention and maintenance were the treatments available for ETW. **Conclusion:** This systematic review shows the prevalence of ETW varies among children and adults worldwide. Thus, further management is required to reduce and prevent the progression of ETW. The restorative intervention was the most common treatment approach for ETW.

Keywords: "prevalence of tooth wear", "tooth wear", "treatment erosive tooth wear"

ABSTRACT ID: OR - 07

THE EFFECTIVENESS OF HIGH-VOLUME EVACUATOR IN AEROSOL AND SPLATTER REDUCTION DURING DENTAL PROCEDURES: A SYSTEMATIC REVIEW AND META-ANALYSIS.

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Introduction: In dental practice, most of the procedures performed are associated with aerosol or splatter formation that has the potential risk for disease transmission. Hence, this systematic review aims to identify available experimental studies assessing the use of a High-Volume Evacuator (HVE) in dental procedures and to evaluate its efficiency in minimizing the aerosol or splatter. **Materials and methods:** Thorough searches strategy was employed for four electronic databases; COCHRANE, PubMed, Scopus and Google Scholar. The PICOT question was used to screen relevant articles systematically according to PRISMA framework. The OHAT quality assessment tool was employed to assess the quality included studies. Meta-analysis was conducted for studies with a low risk of bias and similar outcomes. **Result:** Of 431 potentially relevant articles, 19 experimental studies were qualitatively and quantitatively analyzed for the efficiency of HVE. Nearly 90% of included studies are at fair risk of bias. The scaling and teeth drilling was the most common dental procedures tested. Meta-analysis of in-vivo studies showed that HVE significantly reduced the bacterial load by average of 80.6% with MD of -35.3 (95% confidence interval, -50.8 to -19.82; I²=34%) in mean colony forming unit. While the result for in-vitro studies shows HVE significantly reduced aerosol load by MD of -61.4 in µg/m³ with substantial heterogeneity. **Conclusion:** The meta-analysis shows the effectiveness of HVE in reducing aerosol and splatter during dental procedures, particularly during scaling treatment. However, the eligible studies for meta-analysis were limited by the variation in methods for aerosol collection. Hence, more studies were needed.

Keywords: Systematic review, Meta-analysis, Aerosol, High volume evacuator, HVE

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A STANDARD OPERATING PROCEDURE FOR DENTAL FACILITIES DURING PANDEMIC: A SCOPING REVIEW

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Introduction: Dental personnel are frequently exposed to airborne and bloodborne infectious agents. Thus, it is important to identify an effective standard operating procedure during a pandemic to ensure the safety of the dental personnel and patients in dental facilities. This scoping review describes the hazards and steps that should be taken to prevent cross-transmission in the dental environment.

Materials and method: The present scoping review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-analysis extension for Scoping Reviews (PRISMA-ScR) protocol guidelines. Three databases, including PubMed, Scopus, and Science Direct, were searched up from January 2020 to November 2021 to identify studies eligible for this review. Joanna Briggs Institute (JBI) Critical Appraisal Tool checklist for analytical cross-sectional studies was used for quality assessment.

Result: A total of 607 articles were retrieved from the search. Following article screening, only two studies were eligible for this scoping review. The results showed comprehensive and systematic guidelines for dental facilities operating during the pandemic. The SOPs proposed from the review include infection control measures, limiting person-to-person contact, and limited dental emergencies for high-risk patients.

Conclusion: Clear and scientific-based evidence of standard operating procedures during a pandemic for dentistry are available; however, the number is still limited. Thus, more update is needed to ensure the safety of the dental personnel and patients during a pandemic situation.

KEYWORDS: Standard operating procedures; dental clinic; dental facility; pandemic, COVID-19

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GREEN TEETH DUE TO HYPERBILIRUBINEMIA: A LITERATURE REVIEW

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Introductions: Cases of green teeth due to hyperbilirubinemia is considered rare and uncommon in community as well as aesthetically unpleasant. This literature review aims to study the pathophysiology and management of green teeth due to hyperbilirubinemia. **Materials and methods:** Various articles and case reports have been collected from various database including Scopus, PubMed and ScienceDirect until December 2021. **Results:** Hyperbilirubinemia indicates raised bilirubin level due to alteration in bilirubin breakdown. Its high concentration cause the entrapment of bilirubin pigments in dentinal layer, thus exhibiting green teeth. It is highly prevalent in cases with underlying biliary atresia. The extension of green pigmentation developed in chronological pattern and the extension of discoloration depends on the duration and severity of hyperbilirubinemia whilst some author described it to be dependent on the development of enamel. The management of chlorodontia due to hyperbilirubinemia varies depending on the degree of green teeth and type of dentition affected. This include teeth bleaching, direct composite restoration and fabrication of fixed-prosthesis. **Conclusions:** Green teeth due to hyperbilirubinemia occur in patients with elevated bilirubin level. Its treatment options aim to restore dental aesthetics. However, green teeth does not develop in all patients with history of jaundice. Further investigations are needed to confirm factors that cause green teeth in certain jaundiced patients.

Keywords: Green teeth, Chlorodontia, Hyperbilirubinemia, Jaundice, Tooth discoloration

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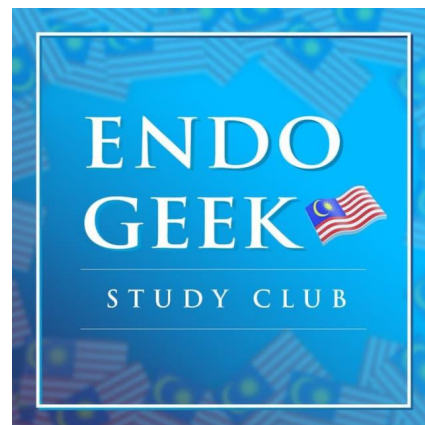


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