





MADPHS SCIENTIFIC 2023

Health White Paper:

Impact on Oral Healthcare Delivery System

20 MAY 2023 SATURDAY IMPIANA HOTEL, IPOH

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President's Message

Assalamualaikum dan selamat sejahtera, Dear fellow colleagues and esteemed members,

I am pleased to welcome you to the MADPHS Scientific Conference on 20 May 2023, which focuses on the theme "Health White Paper: Impact on Oral Healthcare Delivery System." This conference is a unique opportunity to bring together dental public health specialists, dental officers, policymakers, and other stakeholders to discuss the Health White Paper.

As dental public health specialists, we play a crucial role in promoting oral health and preventing oral diseases among Malaysians. The Health White Paper presents an opportunity for us to strengthen the oral healthcare delivery system and improve the overall health of Malaysians. The emphasis on primary care, wellness, preventive healthcare, public health function, health financing, and addressing health inequalities aligns with the dental public health approach, and we must actively engage and provide input to the development of Health White Paper to ensure that the oral healthcare delivery system is optimized to improve oral health outcomes for all Malaysians.

The conference includes a range of interesting programs, such as debates, forums, e-poster competitions, and speeches from various speakers. In addition to the Health White Paper, other interesting topics included are the National Oral Health Policy, Health Financing Reform, and the Capitation system. We believe that this conference will provide an excellent opportunity for all attendees to learn, discuss, share and network with fellow professionals in the field of oral health.

We are also proud to host an e-poster competition, where participants can showcase their research and share their findings with a wider audience. We hope that this competition will encourage participants to pursue further research in oral health and contribute to the advancement of the field.

I encourage all participants to actively engage in the conference and take advantage of the opportunity to network with colleagues from other states. Let us use this conference as a platform to shape the future of oral healthcare delivery in Malaysia and work together towards a healthier Malaysia.

As the President of MADPHS, I would like to thank all our sponsors, co-organizers, and volunteers who have made this conference possible. I also want to thank all the participants for their active involvement and contribution to this event.

Finally, I would like to express my gratitude to the organizing committee for their hard work and dedication in putting together this conference. I hope that this conference will be stimulating, informative, and productive for all of us. Thank you.

"Building better oral health for Malaysians"

Salam Hormat,

Dr. Galleh Zakaria

President, Malaysian Association of Dental Public Health Specialists (MADPHS) Term: 2022-2024



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CONFERENCE POSTER







MADPHS SCIENTIFIC CONFERENCE 2023

2 0 MĀŸ **AGENDA** 2023 8.00 AM REGISTRATION 8.30 AM **Welcoming Remarks and Opening** President MADPHS 2022/2024 8.40 AM Plenary 1 Title: National Oral Health Policy Speaker: Dr Noormi Binti Othman Principal Director of Oral Health, MOH Plenary 2 9.20 AM Title: Overview of Health White Paper Speaker: Dr Muhammed Anis Bin Abd Wahab Deputy Director, National Health Financing Section, Planning Division, MOH TEA BREAK 10.00 AM 10.25 AM **Sponsor Presentation** 10.45 AM "Dental Public Health Award" Ceremony 11.00 AM Title: Health White Paper: Opportunity for Oral Healthcare Service Moderator: MADPHS (Assoc. Prof. Dr. Budi Aslinie Binti Md Sabri) Panelists: i. Brig. Jen. (Dr.) Mohd Asri Bin Din E-Poster **MOD Representative** Viewing ii. Assoc. Prof. Dr. Tuti Ningseh Binti Mohd Dom **MOHE Representative** iii. Dr Akmal Aida Binti Othman **MOH Representative** iv. Assoc. Prof. Dr. Mas Suryalis Binti Ahmad **MDA Representative** 1.15 PM **LUNCH BREAK** 2.15 PM **Key Note Speech** Title: Is Malaysia Ready for Health Financing Reform? Speaker: Mr Azrul Bin Mohd Khalib Head & Founder of the Galen Centre for Health & Social Policy 3.30 PM Postgraduate Debate Title: Capitation system would improve the quality of oral healthcare system delivery in Malaysia Affirmative and Opposing Team: Rep from UM, UiTM & USM Moderator: MADPHS (Dr. Wong Siong Ting) Commentators: i. Mr Azrul Bin Mohd Khalib ii. Assoc. Prof. Dr. Tuti Ningseh Binti Mohd Dom iii. Dr Akmal Aida Binti Othman 4.45 PM **Award Ceremony** • E-poster competition Debate 5.00 PM **END**





Our **SPEAKERS**



Plenary 1

National Oral Health Policy Dr. Noormi binti Othman

Principal Director of Oral Health, MOH

Plenary 2

Overview of Health White Paper

Dr. Muhammed Anis bin Abd WahabDeputy Director, National Health Financing Section
Planning Division, MOH







Is Malaysia Ready for Health Financing Reform?

Mr. Azrul bin Mohd Khalib Head & Founder of the Galen Centre for Health & Social Policy







Topic

Health White Paper: Opportunity for Oral Healthcare Service

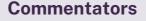


Postgraduate Debate





Moderator











Debate Topic

Capitation system would improve the quality of oral healthcare system delivery in Malaysia

Debaters



















DR. NURLIYANA ROSLAN DrDPH Year 1

DR. LENNY LESA DrDPH Year 2

DR RAJA NUR ADILAH DrDPH Year 2





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Judges





P01

INSIGHTS FOR CLINICIANS MANAGING ORAL CANCER PATIENTS: THE PSYCHOLOGICAL IMPACT OF CAREGIVING

Aira Syazleen Ahmad 1,2*, Jennifer Geraldine Doss 2,3, Siti Mazlipah Ismail 4

- ¹ Pejabat Kesihatan Pergigian Daerah Kuala Krai, Ministry of Health Malaysia
- ³Oral Cancer Research & Coordinating Centre, Universiti Malaya
- ⁴Department of Oral & Maxillofacial Clinical Sciences, Faculty of Dentistry, Universiti Malaya
- * Email: dr.aira @moh.gov.my

Introduction: Caregivers of oral cancer patients are at a significant risk of experiencing psychological impact on their quality of life.

Objective: The purpose of this study was to investigate the levels of quality of life (QoL) and supportive care needs (SCN) among oral cancer caregivers and to determine the factors that influence their QoL.

Methods: Data were collected through convenience sampling in 2021 from 56 caregivers of oral cancer patients who visited tertiary hospitals as outpatients in Malaysia. The Malaysian versions of the Caregiver Quality of Life Oncology Questionnaire (M-CarGOQoL) and Comprehensive Needs Assessment Tool for Cancer Caregiver (M-CNAT-C) were used to measure the QoL and SCN.

Results: Caregivers' mean QoL score was 76.16 \pm 16.01, with the lowest QoL score noted for their psychological well-being (64.87 \pm 30.12). Despite this, their SCN for psychological support was reported to be the least (17.26 \pm 24). Stepwise multiple regression analysis showed that caregivers' SCN related to their health and psychological problems; practical support; and their gender; explained 53.7% of the variance in QoL. The most influential factor was SCN relating to health and psychological problems, which accounted for 12.7% of the variance.

Conclusions: The SCN of oral cancer caregivers experiencing lower QoL, particularly in psychological health, appeared to be greater, which justifies the need for psychological health-focused preventive measures to improve their QoL.

Keywords: quality of life; supportive care needs; oral cancer; caregiver

JOB SATISFACTION AMONG DENTAL SURGERY ASSISTANTS WORKING IN PENANG'S GOVERNMENT DENTAL CLINICS

Stephanie Oung Ker Yue , Enny Esdayantey Abdul Manab , Rozihan Mat Hasan@Husin , Rosnani Ngah Hafizzuddin Mohd Yusof

- Bahagian Kesihatan Pergigian Pulau Pinang, Ministry of Health Malaysia
- Pejabat Kesihatan Pergigian Daerah Seberang Perai Tengah, Ministry of Health Malaysia
- ³ Klinik Pergigian Teluk Bahang, Ministry of Health Malaysia
- Email: stephanie.oung88@gmail.com

P02

Introduction: Job satisfaction has been associated with the work environment, productivity, and quality of work. Dental surgery assistants (DSAs) are important members of the oral healthcare team as they enhance the efficiency of dental surgeons in oral healthcare delivery for patients.

Objective: The objective of the study was to determine the level of job satisfaction and the factors influencing job satisfaction of DSAs working in Penang's government dental clinics.

Methods: A cross-sectional study involving all eligible DSAs who met the inclusion and exclusion criteria was carried out using a self-administered questionnaire.

Results: The response rate was 84.0%. Among the 205 respondents, the majority (74.6%) were females, 80.5% were of Malay ethnicity, 83.4% were married and 94.1% had permanent appointments. The mean age of respondents was 35.26+7.60 years while the mean total duration of service was 11.37+7.44 years. The mean duration of service at current workplace was 6.62+5.68 years. Overall, the majority of the respondents (80.5%) were satisfied with their job. They were most satisfied with their relationship with other colleagues (94.6%), relationship with superiors (90.2%) and suitability of the skills possessed with the given task (90.2%). Comparatively, job satisfaction levels were lower for career advancement opportunities (81.0%), workload (77.6%) as well as monthly salary and incentives (72.7%). There was a statistically significant difference between gender with satisfaction levels of participation opportunities given to make decisions (p=0.008) and appreciation for the work that has been done (p=0.009). The difference in the duration of service at current workplace was found significant for workload satisfaction (p=0.006). There was also a statistically significant difference between the type of appointment, whether permanent or contract, with satisfaction for career advancement opportunities (p=0.005).

Conclusion: The majority of DSAs are satisfied with their job but there is a need to develop a more attractive career pathway for DSAs to improve oral healthcare delivery in Malaysia.

Keywords: dental surgery assistants; job satisfaction



P03

FAMILY FUNCTIONING AND ORAL HEALTH LITERACY LEVEL AMONG YOUNG ADULTS Nurul Salwa Che Abdul Rahim^{1*}, Norintan Ab-Murat¹

¹ Department of Community Oral Health & Clinical Prevention, Faculty of Dentistry, Universiti Malaya * Email: s2001635@siswa.um.edu.my

Introduction: As young adults begin to have the primary responsibility for their oral health, identifying young adults' oral health literacy (OHL) level is important to assist them in making an informed-health decision. A good family functioning characterised with cohesive and adaptable families will accommodate young adults' development and contribute to a better OHL and behaviour.

Objective: To determine the relationship between family functioning and OHL level among selected Malaysian young adults aged 18-20 years old.

Methods: This was a cross-sectional study involving students from Universiti Malaya using a self-administered online questionnaire. Domains in the questionnaire include socio-demographic background (SDB), oral health behaviour (OHB), Malaysian version of Oral Health Literacy Adult Questionnaire (OHL-AQ) and short form of Malay version of Family Adaptability and Cohesion Evaluation Scales III (FACES III-M-SF). Descriptive analysis was performed. Association between each variable were tested using chi square analysis, meanwhile, correlation between each variable were tested using the Spearman correlation analysis. Data was analysed using SPSS version 28 and p < 0.05 was considered as the significance level.

Results: A total of 521 completed questionnaires were returned with a response rate of 48%. Only 28.4% of the participants had adequate OHL level, 14.4% had marginal and 57.2% had inadequate OHL level. Most participants belonged to a 'separated' level of family cohesion while 51.8% of the participants belonged to a 'very flexible' level of family adaptability. Altogether, 49.1% participants belonged to a family function classified as 'moderately balanced'. A significant association between family cohesion, family adaptability and OHL existed with SDB and OHB. Positive correlation was found between OHL and family cohesion and a significant negative correlation was found between OHL with family adaptability.

Conclusion: Most participants had an inadequate level of OHL and belonged to 'moderately balanced' level of family function. There is a significant association between participant's OHL, family cohesion and family adaptability with SDB and OHB of participants. Positive correlation was found between OHL and family cohesion and a significant negative correlation was found between OHL with family adaptability.

Keywords: family functioning; family cohesion; family adaptability; oral health literacy; young adult

THE PERCEPTIONS OF DENTAL PERSONNEL MANAGING AND REFERRING CASES TO THE DENTAL PUBLIC HEALTH SPECIALIST UNIT IN ALOR SETAR, KEDAH

Nurul Fahizha F^{1*}, Norashikin Y¹, Budi Aslinie MS¹

Centre of Population Oral Health & Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA Email: 2021858902@student.uitm.edu.my



Introduction: The Dental Public Health Specialist Unit (DPHSU) in Alor Setar, Kedah, is one of the first preventive dentistry clinics established and run by dental public health specialists. Since its establishment, no research has been conducted to evaluate the DPHSU's utilisation. This research assesses DPHSUs before the development of more DPHSUs in the future.

Objectives: This qualitative study explores the utilisation and perception of dental personnel managing and referring cases to the DPHSU in Alor Setar, Kedah.

Methods: Interviews were conducted with 23 dental clinicians in Alor Setar, Kedah and 11 dental personnel managing patients in DPHSU. All interviews were recorded, transcribed verbatim and thematically analysed using the NVivo software. **Results:** Referrals to the DPHSU were from primary care, orthodontics, periodontics, and restorative dentistry. Patients referred included individuals who wanted to stop smoking, had poor oral hygiene, needed a caries risk assessment, or needed dental anxiety care. The factors that led to referral were patients' motivation to modify their behaviours, and the operators wanting to focus on their specialist therapy instead of spending too much time on patient's habits management. Experiences and barriers faced by managers in DPHSU were identified across four domains: patient management, training, resources, and suggestions. Barriers identified were low attendance, lack of referral, unfollowed cases, undertrained personnel, and understaffing.

Conclusion: Barriers and constraints encountered in referring patients may result in under-referral and low attendance to the unit. Dental clinicians observed improvements in the patient's oral health and motivation despite experiencing obstacles and hurdles in providing preventative care to the referred patient. The DPHSU could have developed into an effective preventative service, provided that obstacles and difficulties were minimised to the smallest possible extent.

Keywords: dental public health; dental public health specialist; preventive clinic



P05

GOOGLE TRENDS ANALYSIS OF TOOTHACHE-RELATED INFORMATION-SEEKING BEHAVIOURS DURING COVID-19 PANDEMIC IN MALAYSIA

Mohamad Noor Sairi 1, Nor Azlida Mohd Nor 1, Yasmin Kamarudin 2

- 1 Department of Community Oral Health & Clinical Prevention, Faculty of Dentistry, Universiti Malaya
- ² Department of Paediatric Dentistry & Orthodontics, Faculty of Dentistry, Universiti Malaya
- * Email: dr.mohamadnoorsairi@gmail.com

Introduction: During the COVID-19 outbreak in Malaysia, several Movement Control Orders (MCO) were implemented, resulting in restricted access to dental care. The public may have searched for online information to manage their dental problems and needs. Google Trends is widely regarded as the primary tool for studying online behaviour for exploring trends in web search activity related to specific topics over time.

Objectives: This study aimed to investigate toothache-related seeking information keywords via Google Trends and their correlation with different phases of MCO implementation.

Methods: A retrospective study was conducted using Google Trends to collect Relative Search Volume (RSV) on toothacherelated information from 2020 until 2021 in Malaysia. MCO underwent several phases: first MCO (March-May 2020), Conditional MCO (May-June 2020), Recovery MCO (June 2020-March 2021), MCO by states (March-May 2021), MCO3.0 (May-June 2021) and National Recovery Plan (NRP) from June 2021 onwards. Data were analysed descriptively using Microsoft Excel and SPSS software.

Results: The mean value for RSV was 74.43 (SD±8.46), and the highest RSV was 100 during the week of 25th July 2021. The highest recorded RSV period between May to September 2021 coincided with MCO3.0 and the early phase of NRP. The most searched toothache-related keyword was "ubat sakit gigi", with an RSV of 100. All top related search keywords were in the Malay language. States with the highest recorded RSV of toothache-related keywords were Kelantan, Sabah, and Terengganu. There was a positive correlation between RSV of toothache-related keywords and different phases of MCO, r=0.206 and p=0.036 (p<0.05).

Conclusions: MCO implementations and seasonal interest during the COVID-19 pandemic seemed to influence the trend of Google users in Malaysia seeking information about toothaches. The states with a higher burden of dental caries and low water fluoridation coverage, such as Kelantan, Sabah, and Terengganu, have greater toothache-related search behaviour. These findings may be used as supplementary data to support planning for oral health services and information delivery.

Keywords: COVID-19; Google trends; information seeking behaviour; toothache; relative search volume

DENTAL E-PROFESSIONALISM AND ETHICS GOVERNANCE IN SOCIAL MEDIA IN MALAYSIA: A DOCUMENT REVIEW

Abdul Raob NA^{1*}, Md Bohari NF¹, Md Sabri BA¹

¹Centre of Population Oral Health & Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA *Email: 2021858902@student.uitm.edu.my



Introduction: E-professionalism is a subset of professionalism described as applying conventional professionalism concepts to online activities. The idea of e-professionalism is nested in the ethics of healthcare. Dentists, like other professionals, should always adhere to the principle of ethics while using social media.

Objective: To investigate the Acts, regulations, the Code of Conduct, or guidelines available pertaining to social media usage among dentists in Malaysia.

Methods: A document review using the READ approach that involved investigating any existing Acts, regulations, Code of conduct or guidelines that were available pertaining to the use of social media in dentistry.

Results: There were twenty-five (25) documents directly or indirectly related to Dental Act 2018 under the Oral Health Division, Ministry of Health Malaysia (MOH). Eight (8) documents were found directly or indirectly pertaining to social media usage among dental practitioners in Malaysia. There is no specific document policy on social media guidance that includes all dental practitioners in Malaysia.

Conclusion: The public sector dental practitioners need to adhere to the Code of Ethics in Social Media usage for MOH Staff, which is general to all health practitioners in the Ministry of Health. It would be helpful if the Code of Ethics in social media usage for MOH Staff were available and applicable to everyone, including private and public dental practitioners, as an easy guide for everyone. In order to advance toward good ethical behaviour in dentistry, it is necessary to offer the dental profession conducive guidelines in social media usage.

Keywords: social media; e-professionalism; ethics; dentistry



P07

FACTORS ASSOCIATED WITH ORAL HEALTH-SEEKING BEHAVIOUR OF RURAL MALAYSIAN ADULTS WHO SELF-REPORTED ORAL HEALTH PROBLEMS

Yeung R'ong Tan1*, Jennifer G Doss1

Department of Community Oral Health & Clinical Prevention, Faculty of Dentistry, Universiti Malaya * E-mail: dr.tanyr@gmail.com

Introduction: Access to dental care is important for the population to receive basic preventive services and education, which would enable early intervention of oral diseases. This is a challenge in rural areas where resources are limited and where the population experiences poorer health status, awareness, attitudes, and larger knowledge gaps than those from better-off communities.

Objective: The purpose of this study was to identify the factors associated with oral health-seeking behaviour of rural Malaysian adults who self-reported oral health problems.

Methods: The National Health and Morbidity Survey 2019, a cross-sectional nationwide household survey that focused on non-institutionalised Malaysians, provided the data for this study on adults in Malaysia who were 18 years of age and older. Complex sample descriptive statistics were used to describe the characteristics and oral health-seeking behaviour of the respondents. The relationship between associated factors (predisposing, enabling, and health needs factor) and oral health-seeking behaviours were investigated using multivariable logistic regression analysis (sought healthcare and self-medication).

Results: Overall, 10,134 respondents, estimated to represent 18.2 million Malaysian adults were included in the analysis. Of these, 603 Malaysian adults self-reported oral health problems with only 6.2% from rural areas. Among rural Malaysian adults who self-reported oral health problems, less than half sought oral healthcare (42.9%) while almost one-fifth self-medicated (17.3%). Among the rural population, income level and self-rated health were associated with seeking oral healthcare while education level and income level were associated with self-medication.

Conclusion: Inequalities in oral health-seeking behaviour exist between Malaysians living in rural areas. The development and implementation of appropriate strategies targeted at vulnerable populations in Malaysia based on the associated factors identified from this study findings could help to kick-start an attempt to improve oral health in rural areas.

Keywords: adults; Malaysia; oral health-seeking behaviour; rural population; self-medication

IMPACT OF THE COVID-19 PANDEMIC ON THE ORAL HEALTH STATUS OF PRIMARY SCHOOL CHILDREN IN PERAK: A RETROSPECTIVE ANALYSIS

Nurfazlina Rosman^{1*}, Salleh Zakaria¹, Faryna Md Yaakub¹, Christina Joyce¹, Nor Farida Baharom¹

Oral Health Division, Perak State Health Department, Ministry of Health Malaysia Email: drnurfazlina@moh.gov.my



Introduction: In response to the COVID-19 pandemic, school closures were implemented in 2020 and 2021, resulting in the suspension of the Incremental Dental Care (IDC) program. This could have negative implications for the oral health of primary schoolchildren.

Objective: This study aimed to assess the impact of the COVID-19 pandemic on the oral health status of primary schoolchildren in Perak, Malaysia.

Methods: A retrospective analysis of PG 201 reports for 137 selected schools was conducted to evaluate caries-free (DMFX=0), gingival status (GIS=0), and oral hygiene status (OH = Grade A) parameters. Primary schools that had received dental care from 2016 to 2022 were included in the study. Standard 3 and 6 students were selected to enable tracking of oral health disease trends over two years within the same cohort. The data was divided into two groups. Group A consisted of Standard 3 students in 2016 who received dental care annually from the school dental team until Standard 6 in 2019. Group B comprised students in Standard 3 in 2019 who missed dental care due to school closures resulting from the COVID-19 pandemic.

Results: Among Group A students, caries-free status decreased by 11.1% from 91.0% to 79.9%, while oral hygiene Grade A declined by 4.8% from 90.2% to 85.4%. Gingival condition varied slightly between 82.6% and 83.6%. Among Group B students, caries-free status decreased by 9.6% from 91.4% to 81.8%, oral hygiene Grade A decreased by 10.6% from 89.6% to 79.0%, and gingival status decreased by 8.3% from 88.8% to 80.5%.

Conclusions: The COVID-19 pandemic had an impact on the gingival and oral hygiene status of primary schoolchildren but had a minimal effect on the caries-free status. Further research is necessary to identify the factors contributing to oral health status during the COVID-19 pandemic.

Keywords: caries-free; COVID-19; schoolchildren



A QUALITATIVE STUDY ON EXPLORING BARRIERS TO THE IMPLEMENTATION OF DIGITAL TECHNOLOGY IN ORAL HEALTH PROMOTION AMONG DENTAL PUBLIC HEALTH SPECIALISTS IN MALAYSIA

Amirul Faiz bin Luai ^{1,2*} , Nawwal Alwani Mohd Radzi ¹ , Budi Aslinie Md Sabri ¹

- Centre of Population Oral Health and Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA
- Discipline of Dental Public Health, Department of Family Oral Health, Faculty of Dentistry, Universiti Kebangsaan Malaysia

E-mail: amirulfaiz2308@gmail.com

Introduction: The promotion of oral health and prevention of oral diseases through digital Oral Health Promotion (OHP) has the potential to revolutionise oral healthcare delivery. To ensure its implementation and effectiveness, it is important to identify the barriers that may hinder its success. This will inform stakeholders on the development of targeted strategies to address these issues.

Objective: This research aims to explore the barriers hindering the implementation of digital technology in oral health promotion among Malaysian dental public health specialists.

Methods: Purposive sampling was used to select eight dental public health specialists from two different ministries in Malaysia. Thematic analysis was conducted using NVivoTM on the data collected from semistructured interviews and categorised into themes and sub-themes.

Results: The thematic analysis revealed three major themes with 19 sub-themes, totalling 51 occurrences across the interviews. The most discussed theme among the respondents was the lack of a supportive environment or infrastructure. The respondents identified a lack of facilities, resources, and infrastructure (n=6) and poor internet connection and stability (n=6) as the primary barriers to adopting and implementing digitalised OHP.

Conclusions: This study highlights the lack of facilities, resources, and infrastructure, as well as poor internet connection and stability as the primary barriers that may hinder the adoption of digital dentistry in OHP among dental professionals in Malaysia. The findings of this study can be used as a guideline by dental health promoters, educators, and professionals to advance the usage of digital dentistry in a broader context. Existing governing bodies can provide guidance for the implementation of digital dentistry.

Keywords: barriers; dental public health specialists; digitalisation; Malaysia; oral health promotion

INTERNET UTILISATION AND ONLINE HEALTH-SEEKING BEHAVIOURS AMONG DENTAL THERAPISTS IN MALAYSIA

Zarikh Saqina Zaberi 1,2*, Nor Azlida Mohd Nor, Nor Shafina Mohamed Nazari

- Department of Community Oral Health & Clinical Prevention, Faculty of Dentistry, Universiti Malaya
- Oral Health Programme, Ministry of Health, Malaysia
- Department of Restorative Dentistry, Faculty of Dentistry, Universiti Malaya
- Email: zarihzaberi@gmail.com

Introduction: As technology continues to play an important role in healthcare, eHealth literacy has become essential for healthcare providers including dental therapists.

Objectives: This study aimed to investigate internet utilisation, online health-seeking behaviours, and eHealth literacy among dental therapists in Malaysia.

Methods: This was a cross-sectional study using an online questionnaire involving dental therapists working at government dental clinics in Pahang (n=163). The questionnaire was distributed via Google Forms collecting information about sociodemographics, internet use, online health-seeking behaviours, and eHealth literacy. Descriptive and ANOVA tests were used to analyse the data.

Results: A total of 142 respondents completed the questionnaire yielding a response rate of 87.1%. The majority were Malay (93.66%), with a mean age of 31.49±7.62. Most participants (45.07%) spent 1 to 4 hours browsing the internet daily. The majority (73.9%) usually searched for health information online. Most participants (52.81%) relied on official health organisation websites for health-related information, while some relied on social media (27.46%) and search engines such as Google (18.31%). The majority of respondents (98.59%) trusted the information provided on the internet with 86.61% expressing that the information obtained affected their health decision, while only 59.15% ever suggested health websites for patients. The majority (93.66%) agreed on the importance of having access to health information on the internet with 90.84% acknowledging the usefulness of the information. The mean eHealth literacy score was 31.29±3.76 which was considered high despite a perceived lack of confidence (68.31%), knowledge (70.42%), and skills to evaluate health information (73.24%) on the internet.

Conclusions: The findings of this study suggest that most dental therapists are active internet users and frequently utilise the internet for health information. Findings indicated that dental therapists had good overall eHealth literacy, despite a lack of perceived skills in a certain area, suggesting there is an opportunity of integrating digital health into the provision of dental services for better oral healthcare delivery.

Keywords: dental therapist; eHealth literacy; health-related behaviours; internet



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LEVEL OF KNOWLEDGE AND ATTITUDES TOWARDS DEDICATED DENTAL PROMOTION TEAM (DPT) AMONG MEMBERS IN THE CENTRAL REGION OF MALAYSIA

Hamizah Masrom ^{1*}, Rozihan Mat Hasan@Husin ², Faizah Kamaruddin ¹, Anis Nadhia Roslan ³, Masriza Mohamad ¹, Rohaida Alias ⁴, Nur Fatehah Mohamad Yusof ¹, Ku Amirah Ku Haris ⁵

- 1 Selangor State Dental Health Department, Ministry of Health Malaysia
- ² Penang State Dental Health Department, Ministry of Health Malaysia
- ³ Hulu Langat District Dental Health Office, Ministry of Health Malaysia
- ⁴ Hulu Selangor District Dental Health Office, Ministry of Health Malaysia
- ⁵Oral Health Programme, Ministry of Health Malaysia
- * Email: hamizahmasrom@moh.gov.my

Introduction: In Malaysia, Dedicated Dental Promotion Team (DPT) was initiated in 2017 in the Federal Territory of Kuala Lumpur & Putrajaya (FTKL & P) with the aim to improve oral health status of the targeted population through oral health promotion activities. Then, it was implemented in two other states namely, Selangor and Negeri Sembilan in 2018 and 2020 respectively. Therefore, conducting this study would provide important insights regarding DPT that will be useful for further improvement.

Objectives: To assess level of knowledge among DPT members towards the objectives, roles, and activities of DPT and to determine their attitudes towards the importance and feasibility of DPT.

Methods: A cross sectional study was conducted among 120 current and former DPT members working in Selangor, FTKL & P, and Negeri Sembilan State Oral Health Division from July to September 2022. A multi-stage sampling method was employed, and a validated self-administered questionnaire was used to measure knowledge and attitudes towards DPT. Data were quantitatively analysed using Microsoft Excel Version 2018 software.

Results: A total of 120 respondents participated in this study with 95.8% response rate. Most respondents (73.7%) had moderate overall knowledge about DPT. Knowledge towards the objectives of DPT was good (84.1%), whereas knowledge towards the roles (76.9%) and activities (61.7%) of DPT were found to be moderate. Majority (82.3%) has positive attitudes towards the importance of DPT. While attitudes towards the feasibility of DPT were found to be moderate (71.3%).

Conclusions: The level of knowledge towards DPT among the team members is moderate. However, the majority of them have positive attitudes towards the importance of DPT. Therefore, the development of guidelines for DPT need to be considered and take into account the expansion of DPT initiative nationwide.

Keywords: dedicated dental promotion team; oral health promotion

COST EFFECTIVENESS OF COMMUNITY WATER FLUORIDATION: A COMPARATIVE ANALYSIS BETWEEN PERAK AND PAHANG IN MALAYSIA

Susan Shalani Gnanapragasam ^{1,2}*, Nor Azlida Mohd Nor ¹, Tengku Nurfarhana Nadirah Tengku Hamzah ³, Sharifa Ezat Wan Puteh ⁴

- Department of Community Oral Health & Clinical Prevention, Faculty of Dentistry, Universiti Malaya
- Oral Health Programme, Ministry of Health, Malaysia
- ³ Department of Paediatric Dentistry & Orthodontics, Faculty of Dentistry, Universiti Malaya
- ⁴ Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia
- * Email: susanshalani@gmail.com

Introduction: Community Water Fluoridation (CWF) in Malaysia has declined since 2014 due to its discontinuation in Pahang over financial constraints, resulting in increased caries prevalence among schoolchildren in Pahang state. Despite having a long history of CWF programme in Malaysia, little is known about its cost effectiveness.

Objective: To evaluate the cost effectiveness of CWF in preventing dental caries in Perak compared to Pahang, where CWF programme has been ceased.

Methods: This was an economic evaluation based on retrospective data of CWF programme in Perak and school dental records from 2015 to 2019 among 12-year-old schoolchildren in both states. Analysis was conducted from the perspective of healthcare providers which included the Ministry of Health and local water treatment facilities authorities. Cost estimates were extracted from actual resource utilisation for CWF programme and fee schedule [Fees (Medical) (Cost of Services) Order 2014] for caries related treatment cost. These costs were presented in 2015 Malaysian Ringgit (MYR). Health effects data were obtained from the school dental records and measured as mean caries (Decayed, Missing, Filled Teeth (DMFT)) increment from 2015 to 2019. The incremental cost-effectiveness ratio (ICER) was estimated as cost per dental caries prevented.

Results: From 2015 to 2019, the cost per capita for CWF in Perak was estimated at Malaysian Ringgit (MYR) 6.28. The estimated mean cost of caries related treatment was higher in Pahang (MYR 79.43) than in Perak (MYR 14.44) over a period of 5 years among the schoolchildren. The CWF programme had an ICER of MYR -90.32 per dental caries prevented.

Conclusions: The findings suggest that the continuation of the CWF programme in Perak's public water supplies was cost effective for the schoolchildren, despite having exposure to other sources of fluoride. Findings from this study may assist policymakers to support reimplementation of CWF in Pahang.

Keywords: caries; cost effectiveness; preventive dentistry; water fluoridation

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ORAL HEALTH BELIEFS, PERCEPTIONS, AND UTILISATION OF ORAL HEALTH CARE SERVICES AMONG INDIGENOUS (ORANG ASLI) IN BERA, MALAYSIA: A QUALITATIVE STUDY

Izzati Mohd Khairunjauhari 1*, Nor Faezah Md. Bohari 1, Ilham Wan Mokhtar 2

- $rac{1}{2}$ Centre of Population Oral Health & Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA
- ²Centre of Comprehensive Care Studies, Faculty of Dentistry, Universiti Teknologi MARA
- *Email: izzkhair87@gmail.com

Introduction: A wide gap is still observed in the inequality among the Orang Asli and non-Orang Asli regarding the beliefs and perception of their oral health and acceptance of oral health care utilisation. Inclusivity is vital to ensure they are not excluded from getting quality oral healthcare services.

Objectives: To explore the oral health beliefs, perceptions, and utilisations of oral health care services among the indigenous (Orang Asli) in Bera, Pahang, Malaysia.

Methods: A qualitative study utilising Focus Group Discussions (FGD) was conducted to ascertain views and opinions among Orang Asli Semelai in Bera to determine current beliefs and perceptions of their oral health and assess their perceptions of the deployment of the oral health care services. Nineteen participants were involved in the FGD (response rate= 95%) from suburban and rural villages in Bera, Pahang. Qualitative data were analysed via thematic analysis involving open- and close-coding, followed by identifying emerging themes.

Results: The results showed that the Orang Asli Semelai believed that oral health problems are caused by improper oral health care, preferred modern over traditional medicine predominantly because of relative inaccessibility to traditional medicine, and considerable acceptance of dentists and dental treatments. Most still chewed betel nuts and believed that slaked lime paste caused oral cancer. The main barriers to utilising oral healthcare services were time constraints and distance to the nearby clinic.

Conclusion: The findings implied that most indigenous communities in Bera were open to modern oral healthcare to improve their oral health conditions. This study also provided recommendations for stakeholders to overcome barriers with future mobile dental clinics for Orang Asli to attend to the treatment needs and for oral health promotion programs to improve these indigenous communities' oral health and well-being.

Keywords: Indigenous people; Orang Asli; oral health beliefs; oral health care services

THE MEMBERS' PERSPECTIVE ON STRENGTHS AND WEAKNESSES OF THE DEDICATED DENTAL PROMOTION TEAM (DPT)

Hamizah Masrom 1 , Rozihan Mat Hasan@Husin 2 , Faizah Kamaruddin 1 , Anis Nadhia Roslan 3 , Masriza Mohamad 1 , Rohaida Alias 4 , Nur Fatehah Mohamad Yusof 1 , Ku Amirah Ku Haris 5

Selangor State Dental Health Department, Ministry of Health Malaysia

Penang State Dental Health Department, Ministry of Health Malaysia

- ³ Hulu Langat District Dental Health Office, Ministry of Health Malaysia
- ⁴ Hulu Selangor District Dental Health Office, Ministry of Health Malaysia
- ⁵ Oral Health Programme, Ministry of Health Malaysia
- * Email: drfatehah@moh.gov.my

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Introduction: Health promotion is essential in addressing lack of knowledge and awareness about oral health care in public. Dedicated Dental Promotion Team (DPT) has proved to be effective in ensuring the oral health promotion and prevention programme in previous research. However, currently the implementation of DPT across the states are not standardised and there is no proper output monitoring mechanism.

Objective: To determine the strengths and weaknesses of DPT programme from DPT members' point of view.

Methods: A cross sectional study was conducted among 120 current and former DPT members and DPT working in Selangor, FTKL & P and Negeri Sembilan State Oral Health Division from July to September 2022. A multi-stage sampling method was employed, a validated self-administered questionnaire was used to assess the strengths and weaknesses of DPT. Data were descriptively analysed using Microsoft Excel Version 2108 software.

Results: Majority of the respondents acknowledged that DPT formation will enhance the coverage of OHP activities and delivery (82.3%). Additionally, 74.4% admitted that DPT formation will provide more focus in handling OHP activities. With regards to the implementation of DPT, numbers of members had issues with insufficient team members (63.9%), using own vehicle to carry out DPT visits (51.7%), finding replacement for those who were unable to be on duty (76.3%), getting official transport (61.4%), potential of decrease in clinical skills (40.9%), and interruption in the smoothness of dental services in school/preschool/nursery (28.8%).

Conclusion: DPT has its strengths in terms of enhancing oral health promotion activities and the skills of DPT members in delivering oral health messages. However, attention should be given to tackle issues regarding manpower allocation, training, and transportation.

Keywords: Dedicated Dental Promotion Team; oral health promotion



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VIRTUAL COUNSELLING OF TOBACCO CESSATION COUNSELLING DURING THE COVID-19 PANDEMIC: A QUALITATIVE STUDY ON THE EXPERIENCES AND PERCEPTIONS OF MALAYSIAN DENTAL UNDERGRADUATES AND THEIR PATIENTS

Nurliyana Roslan^{1,2*}, Norashikin Yusof¹, Nor Faezah Md Bohari¹

- 1 Centre of Population Oral Health & Clinical Prevention Studies, Faculty of Dentistry, Universiti Teknologi MARA
- ² Oral Health Programme, Ministry of Health Malaysia
- * Email: 2022215334@student.uitm.edu.my

Introduction: When dental institutions were closed during the implementation of the Movement Control Order (MCO) due to the COVID-19 pandemic, dental students experienced difficulties in completing their smoking cessation schedule. In order to meet their clinical requirements, an option was to allow students to provide virtual counselling (VC) for smoking cessation.

Objective: This study aimed to explore Malaysian dental undergraduates' and patients' experiences undergoing smoking cessation counselling through virtual platforms.

Methods: The study consisted of qualitative, semi-structured Focus Group Discussions (for students, n=23) and in-depth interviews (for patients, n=9); to phenomenologically describe the perceptions of participants involved in the VC. Each session was recorded with the participants' permission. The recorded session was transcribed verbatim and thematically analysed using the qualitative data analysis software, NVivoTM.

Results: The major themes that emerged were: 1) General opinions and experiences, 2) Content of VCs, 3) Remote access to counselling, 4) Patient-clinician relationships, 5) Technical issues, 6) Changes after VCs, and 7) Future application. Most students and patients were satisfied with VC because it is convenient, allowing them to be creative and eliminating the hassle of transportation and traffic. However, several students thought it lacked the personal touch and guidance generally provided by lecturers present during physical class.

Conclusion: VC enables remote access to counselling, but it is also subjected to some limitations, especially regarding lack of clinical assessments, human touch, and internet issues. Though participants were optimistic about adapting it in the future, multiple factors must be considered.

Keywords: experience; dental students; patients; smoking cessation; virtual counselling

THE ORAL HEALTH WORKFORCE DISTRIBUTION OF SCHOOL DENTAL SERVICES IN PAHANG

Hidir Atni 1*, Nor Faezah Bohari 1, Budi Aslinie Sabri 1

Centre of Population Oral Health & Clinical Prevention Studies, Dentistry Faculty, Universiti Teknologi MARA

Email: dr.mohdhidir@moh.gov.my

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Introduction: Frequently, the planning of the oral healthcare workforce is limited to the calculation of dentist-to-population ratios, nevertheless, this approach overlooks several crucial variables, such as the load of oral health needs.

Objectives: Workload analysis is implemented to gain a comprehensive understanding of the true oral health requirements. This study aims to enhance our comprehension of the workforce imbalance and its effect on the distribution of personnel serving School Dental Services (SDS) in Pahang.

Methods: To achieve standardized workforce sizing for every school, the operator-to-student ratio, that is, the ratio of a single operator to the entire student body, is utilized. The collected data is then merged and inputted into ArcGIS Pro software for geospatial analysis. Statistical analysis is conducted through the utilization of SPSS software.

Results: In Pahang, 10% (n=72) of schools have a low operator-to-student ratio, with 47 of them located in Kuantan. There is a significant difference in DMFT mean between rural (0.74; SD=0.60) and urban (0.86; SD=0.58) schools (p=0.02). Kuantan's urban schools have a significant operator burden, with a shortage of operators compared to other districts, amplifying the workforce distribution imbalance.

Conclusion: Compared to urban areas, there is a greater ratio of one operator to the total student population in rural areas. However, schools with a higher number of students necessitate more children to be treated per operator. Thus, the need for a just distribution of SDS workforce based on workload is evident.

Keywords: workforce, school dental service; ArcGis Pro



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COMPLICATIONS DURING DENTAL EXTRACTION IN AN UNDIAGNOSED WOLFF-PARKINSON-WHITE SYNDROME (WPWS) PATIENT: A CASE REPORT

Norshafiqa Rosli 1*, Rokiah Mamikutty 2, Jahlelawati Zul 3, Misah Md Ramli 4

- ¹UTC Dental Clinic, Ipoh, Ministry of Health Malaysia
- ² Kinta District Dental Health Office, Ministry of Health Malaysia
- ³ Hospital Raja Permaisuri Bainun, Ministry of Health Malaysia
- ⁴Perak State Health Department (Dental), Ministry of Health Malaysia
- * Email: shafiqarosli@yahoo.com

Introduction: In dental practice, cardiac arrhythmia involving Wolff-Parkinson-White Syndrome (WPWS) is rare. WPWS was first described in 1930 and occurs in an estimated 0.1% - 0.45% in various subpopulations. We report a case of possible development of cardiac arrhythmia after local anaesthesia delivery in an undiagnosed patient with Wolff-Parkinson-White Syndrome (WPWS). Case Report: A 42-year-old- Indonesian woman, presented at a primary dental clinic requesting the removal of the upper right posterior tooth. After examination, the treatment proposed was the extraction of 14, and the patient agreed. The patient is medically fit and healthy and had a history of extraction of lower teeth, treated uneventfully previously. One cartridge of local anaesthesia (Mepivacaine 2%, 1:100000 adrenaline) was given. During the extraction procedure, the patient claimed that she felt tightness in her chest, inner ear imbalance and shivering in her hands, followed by her lower limb. The procedure was stopped, and the patient was immediately referred to the respective medical team before being sent to the Emergency Department (ED) as the patient turned unresponsive. She regained consciousness in Resuscitation Zone, ED and was discharged on the same day as the patient's Glasgow Coma Scale (GCS) was full and blood parameter was normal with a medical diagnosis of possible development of cardiac arrhythmia after local anaesthesia.

Discussion: The incidental finding of the electrocardiogram (ECG) of this patient, which indicates shortened PR interval and presence of delta waves, came to a diagnosis that the patient has Wolff-Parkinson-White Syndrome (WPWS) and was confirmed by a discussion with Emergency Physician retrospectively. Local anaesthesia given was within a safe dose range, with appropriate technique.

Conclusion: The case highlights the importance of thorough preoperative patient evaluation, even in a busy primary dental clinic. It is imperative for dental professionals to be able to detect potential cardiac emergencies to ensure prompt medical attention and appropriate referral.

Keywords: Cardiac arrhythmia; local anaesthesia; Wolff-Parkinson-White Syndrome

PRELIMINARY RESEARCH ON THE CORRELATION BETWEEN PULP CHAMBER VOLUME OF MANDIBULAR FIRST MOLAR AND CHRONOLOGICAL AGE BASED ON DEUTEROMALAY SUBRACE

Dinisha Tharmalingam^{1*}, Fahmi Oscandar^{2,3}, Yuti Malinda⁴, Sudradjat Supian⁵, Murnisari Dardjan⁶

Faculty of Dentistry, Universitas Padjadjaran, Bandung, Indonesia

Dental School, Universiti Sains Malaysia, Kelantan, Malaysia

- ³ Oral and Maxillofacial Radiology Department Forensic Odontology, Faculty of Dentistry, Universitas Padjadjaran, Bandung, Indonesia
- ⁴ Oral Biology (Oral Microbiology) Department Forensic Odontology, Faculty of Dentistry, Universitas Padjadjaran, Bandung, Indonesia
- ⁵ Department of Mathematics, Faculty of Mathematics and Natural Science, Universitas Padjadjaran, Bandung, Indonesia
- ⁶ Oral Biology (Oral Pathology) Department Forensic Odontology, Faculty of Dentistry, Universitas Padjadjaran, Bandung, Indonesia
- * Email: dinisha15@live.com

Introduction: Growth and development of pulp chamber volume decreases in size as the age increases and this change can be observed using radiograph. This is because the measurement parameters are solely based on the tooth's growth and development morphology. To overcome this issue, dental pulp chamber volume is used as the measurement parameter of age estimation. In this study, mandibular first molars of the Deutero-Malay subrace were used.

Objective: To determine the correlation between pulp chamber volume of mandibular first molar and chronological age in Deutero-Malay subrace.

Methods: The analytical research design was done on Deutero-Malay subrace aged 6 to 50 years old in the Department of Oral and Maxillofacial Radiology at Dental Hospital of Universitas Padjadjaran, Indonesia based on the inclusion criteria. A total of 180 intact mandibular first molars were used as the study sample. The pulp chamber volume was measured with the software program ITK Snap v3.6.0 from CBCT DICOM data (Vatech Korea, 2006). Data were then analysed to determine the correlation between pulp chamber volume of mandibular first molar and chronological age using regression analysis.

Results: The results shows that the correlation between pulp chamber volume of mandibular first molar can be obtained from the linear regression equation and for male AGE = 54.036 – 0.975 (pulp chamber volume) and for female AGE = 52.573 – 0.943 (pulp chamber volume) from first mandibular molar. The regression was statistically significant (p<0.05). The coefficient of determination (R2) for male was 0.962 and for females 0.970. The mean absolute error for male was 2.557 while for females it was 2.199, between the actual age and estimated age for all tested teeth.

Conclusion: This study found a correlation between pulp chamber volume of mandibular first molar and chronological age in Deutero-Malay subrace. This finding may be useful in age estimation, which can be helpful in forensic investigations and identification of individuals with unknown age.

Keywords: mandibular first molar; pulp chamber volume; Deutero-Malay subrace; forensic odontology

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