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# Ikatan Peminatan Kesehatan Gigi Masyarakat Indonesia 2022

**Aksi Nyata IPKESGIMI dalam Mewujudkan Visi Indonesia Bebas Karies 2030**

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# Pertemuan Ilmiah Ikatan Peminatan Kesehatan Gigi Mayarakat Indonesia 2022

"Aksi Nyata IPKESGIMI dalam Mewujudkan Visi Indonesia Bebas Karies 2030"

**Editor**
Yuanita Lely Rachmawati
Fuad Husain Akbar

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Dalam rangka mewujudkan visi Indonesia Bebas Karies 2030, saat ini dibutuhkan program-program inovatif yang dapat membantu penurunan prevalensi penyakit gigi dan mulut terutama karies. Program yang sudah tersedia pun sebagai upaya mengatasi permasalahan gigi dan mulut masyarakat saat ini perlu diadvokasi dan diimplementasi dengan cara-cara yang kreatif. Sehingga penguatan kelembagaan untuk menghasilkan gagasan – gagasan perlu di dukung dengan penerapan translasi riset dan kedokteran gigi berbasis bukti ke dalam pelayanan dan program kesehatan gigi masyarakat, serta para pakar yang ahli dalam bidang ini juga senantiasa melakukan pengembangan, keilmuan kesehatan gigi masyarakat dan pencegahan, sehingga pada akhirnya diharapkan dengan adanya program-program untuk meningkatkan status kesehatan gigi masyarakat Indonesia maka senantiasa membangun kerja sama dengan pihak industri dalam pengembangan inovasi produk, selain itu juga menjajaki kerja sama dengan organisasi Internasional dalam ruang lingkup kesehatan gigi masyarakat dan pencegahan.

**Ketua Panitia**
Prof. Dr. Tri Erri Astoeti, drg., M.Kes., FISDPH. FISPD

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# ABSTRAK
# *LITERATURE REVIEW*

# The Difference of Effective Communication between Doctor and Pediatric-Adolescent-Elderly Patients in Dentistry: A Scoping Review.

Caesary Cloudya Panjaitan[1], Lia Hapsari Andayani[1], Sri Lestari[1], Mita Juliawati[1], Marta Juslily[1]

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Effective doctor-patient communication is an essential skill for establishing relationship. It can improves patient's compliance, satisfaction, and the quality of care. The communication between doctor and pediatric-adolescent-elderly patients is different in its implementation. Knowing the right communication can lead to successful treatment. The purpose of this scoping review was to explore the difference of effective communication between doctor and pediatric-adolescent-elderly patients in dentistry. The scoping review method in this study complies with PRISMA Guidelines with two internet databases, Pubmed and Google Scholar. A total of 21.217 articles were identified for the study in 2019-2022. However, after through screening, removal of duplicates, and irrelevant studies by 5 reviewers, only 16 articles were selected and included in the final review. Effective communication between doctor and pediatric-adolescent-elderly patients need different techniques. For pediatric patients, doctor discussed with their parents, then asking questions and giving information to the children (child patient centered-care). For adolescent patients, MTD (message to dentist) method was often used to encourage patients to inform the doctor about their anxiety and illness. For elderly patients, effective communication by maintaining a good relationship between doctor and patient. Effective communication sometimes can be difficult to achieve due to different age. It is important to doctor to treat the pediatric, adolescent, and elderly patients with their own effective communication techniques to improve quality of care in dentistry.

**Keywords:** effective communication, doctor-patient, dentistry

# The Role of Parents on Risk Factors of Child's Dental Caries: Literature Review

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Parents are very important in shaping the behavior of children. The attitudes and behavior of parents, especially mothers, in maintaining dental health have a significant influence on children's behavior. Even though they still have primary teeth, parents should pay serious attention to their children. This review to compile literature on the role of parents on risk factors of child's dental caries. Using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses) which is carried out systematically by following the correct stages or research protocols. The procedure of this systematic review consists of several steps. Searching the data with the (((RISK CARIES) AND (INFANT)) AND (MOTHER)) AND (KNOWLEDGE) paths yielded sixty-one journals. Then selected according to the inclusion criteria into 6 research titles.Based on pre-determined inclusion and exclusion criteria, articles focused on caries risk factors in children. Literature search was carried out in the database; PubMed library, PMC, google scholar. The accepted language for the articles included is English. The search led to 6 publications including, meta-analyses, systematic and non-systematic reviews, published between 2015 and 2020. Risk factors, including mother's knowledge, father's income, sugar consumption, junk food consumption, malnutrition, fluoride application and counseling methods regarding the transmission of caries from mother to child are risk factors that need to be considered in the preparation of dental caries prevention programs in the family.

**Keywords:** caries, risk, infant, parents, knowledge

# Dental Loupes And Ergonomic Dental Practice: A Scoping Review

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Musculoskeletal disorder (MSD) is a disorder that involve nerves, tendons, muscles and supporting structures. The prevalence of MSD in dentists was found between 40% to 60% in Indonesia. Several risk factors such as repetitive movement, lack of rest between patients, or awkward posture during work have been identified. One of the equipments that can help reduce discomfort at work is dental loupes. This scoping review aims to gain the insight about the role of dental loupes in ergonomic dental practice. Literature search using Google Scholar database for published articles from 2021 to 2022. Inclusion criteria were English and Indonesian language, both observational and experimental studies. Populations were dentists, dental students and dental nurses. Articles were screened by five researchers. From 186 articles, 6 were analyzed. Dental loupes does not have a significant correlation with the incidence of MSD, but it helps to provide stability, as well as to improved vision and clarity. The use of dental loupes at all magnifications positively influenced ergonomic working posture during the restoration procedures. The distance from the patient's mouth was the most relevant variable involving different neck and trunk forward bending, therefore loupes may give slight improvements in terms of neck and trunk rotations compared with the naked eye.This data provides some evidence that dental loupes has positive impact to maintain the ergonomic health in dental practice, though further research is still required.

**Keywords:** dental loupes, musculoskeletal disorders, ergonomic

# Primary Preventive Dentistry in Dental Curriculum : General Approach for Each Branch of Dentistry - A narrative literature review

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Primary preventive dentistry uses strategies and agents to prevent the onset of disease, reverse the progress of disease, or arrest the disease process before secondary preventive treatment come necessary. The dental education curriculum should focus mainly on primary prevention. The application of the concept of primary prevention in the dental education curriculum is carried out in all branches of dentistry. This literature study aims to formulate a primary preventive dentistry approach for each branch of dentistry. The method used is non-systematic or narrative review. The review summarizes general approach involved; professional oral assessments, patients involvement in the control of plaque, a naturally acquired bacterial biofilm that develop on the teeth, professional periodontal debridement, community water fluoridation, use of products for self-care and for professionally initiated remineralization procedures, use of antimicrobial agents to reduce plaque biofilm, use of dental sealants, practice of nutritionally healthy habits including sugar restriction. These conclude the theme for curriculum block design for second year academic dental student mainly focused on oral evaluation, dental prophylaxis, fluoride as preventive agent, dental sealant, health education, and health promotion.

**Keyword:** preventive dentistry, dental curriculum, health promotion, specific protection, narrative review

# Protective Protocol in Dental Setting during COVID-19 Pandemic: A Literature Review

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COVID-19 is a swiftly spreading disease. It only takes two months to cross oceans and continents, spread worldwide. The rapid spread of COVID-19 affects many aspects of life, including dental health services. Protective protocols in dental settings need to be developed to minimize the spread of this virus. Nevertheless, the development of protective protocols has challenges, which COVID-19 is still in active land research, where research results are still dynamic, and viruses that are still active mutate, produce new variants with new characteristics. Thus, this study aims to review the guidelines to develop a practical feasibility protective protocol in dental setting during COVID-19 pandemic. This study reviewed the published literature and the guidelines of international healthcare institutions on dentistry and COVID-19. We searched PubMed and Google Scholar electronic databases using MESH terms. The recommendations identified were tested with a convenience sample of experienced practitioners, and a practical step-by-step protocol is presented in this paper. To the date this paper was drafted, 35 articles were found, of which ten satisfied our inclusion criteria. From ten studies resumed, protective protocol in dental setting can be categorized into three phases: 1) pre-dental treatment, consist of before entering the dental office (identification patient (chief complaint, history of COVID-19, medical history), appoinment, and teledentistry) and at the dental office (handhygiene, screening, signage, also separating wall), 2) during the dental procedure (PPE, mouth rinse, rubber dams, high-volume saliva ejectors, extraoral radiographs, and using four-handed dentistry), 3) post-dental treatment (decontamination, cleaning PPE, managing laundry and medical waste).

**Keywords:** protective protocols, dental settings, COVID-19 pandemic

# Determinants to Increase Dental Care during Pregnancy: A Systematic Review

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The dental and oral health in pregnant women will affect to the dental and oral health their children were going to born. The dental management of pregnant patients involves special considerations. The aim of this study was to describe the factors which improve dental health services for an antenatal care. The strategy used to search for articles using PICO and carrying out in June 2022. The data used in this research were tertiary obtained from the results of research and carried out by the previous researchers. The source of tertiary data obtained in the article of journal International reputable were using the following databases: Scopus, Science Direct, PubMed, and Google Scholar. Searching articles or journals use keywords and boolean operators (AND, OR, NOT). The evaluation of the systematic review uses the PRISMA checklist. The total number of studies was 20 articles. Perceived need like as symptoms of gingivitis, dental pain, or dental problems were more likely to use dental service. Oral health education was motivation pregnant women to go to the dentist regularly. Awareness oral health problems were good self-perception of oral health for dental care. Socioeconomic factor were income, education level, and there is the health insurance. Perceived need, knowledge, awareness, and socioeconomic were identified as describe the factors could increase visits and dental oral health services for pregnant women.

**Keywords:** oral health, dental care, pregnancy, perceived need.

# ABSTRAK
# LAPORAN PENGABDIAN MASYARAKAT

# Application of The Ladder of Learning Process Theory on Changes in Brushing Teeth Behavior of Elementary School Children

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The Indonesian Basic Health Research 2018 stated that the largest proportion of dental health problems in Indonesia was damaged/cavities/toothache with a prevalence of 88.8%. The majority of the Indonesian population (94.7%) already have good brushing behavior, namely brushing their teeth every day. However, from this percentage, only 2.8% brushed their teeth at the right time, namely at least twice a day, after breakfast, and before going to bed. Efforts are being made to prevent dental and oral diseases, one of them being to get used to maintaining dental and oral health behaviors such as brushing teeth twice a day after breakfast and before going to bed with fluoridated toothpaste. To realize a caries-free Indonesia in 2030, promotive and preventive efforts have a strategic role, so it is necessary to pay attention to the concept of dental health education, especially for primary school children. The results of dental health screening for elementary school students generally obtained that the DMF-T average was quite high. Health center dentists with the UKGS program in collaboration with the teacher committee held a dental and oral health education program. The steps taken refer to the theory of behavior change by Roger which consists of Shocking, information, Education, and Motivation by paying attention to the stages of behavior change in The Ladder of the Learning Process, namely Awareness, Interest, Evaluation, Trial, and adoption. A well-planned dental and oral health education program is expected to result in changes to the better and correct behavior of brushing teeth in elementary school-aged children.

**Keywords:** the ladder of learning process, tooth brushing behavior, elementary school children

# The Dental Preventive Care Program for 5-Years Old Children Provided By Students in Community-Based Dental Education (CBDE) During Covid-19 Situation

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Access to oral health care was limited, especially for children during the Covid-19 situation, which resulted in changes to prevention and treatment services in the community. Therefore, this project set out to develop a preventive dental care program for 5-years old children during the Covid-19 in Pasar Rebo, East Jakarta. Fifteen final-year dental students participated in the CBDE for twelve weeks under the dentist's supervision. The innovative programs included oral health and need assessment through telesurvey, determined community oral health diagnosis by modified caries risk assessment, developed dental preventive care programs based on evidence, and performed monitoring and evaluation. Clinical dan subjective data were collected from 58 pairs of children and parents based on the WHO oral health survey. The prevalence of dental caries was 93.5% and 86% of the respondents were included in a high risk of dental caries. Several strategies of preventive dental care were completed, such as giving an oral health report for the parents (rapor gigi), supervised toothbrushing, application of fluoride varnish, limiting and monitoring consumption of free sugar, and providing digital oral health promotion to parents on the risk of dental caries through the social media platform. Training for Trainer (TOT) for 22 community health workers was also conducted regarding the early detection of dental caries. Publication through mass media was carried out to increase public awareness concerning teledentistry as a solution for consulting with dentists during the pandemic situation. In the final project, the students disseminated the result to provide feedback to the stakeholders.

**Keyword:** dental preventive program, community-based dental education, 5-years old children, Covid-19

# The COVID-19 Pandemic Doesn't Prevent Dentist From Getting Closer To Children at KB-TK Taam Avicenna Surabaya

Maharani, Aulia Dwi[1], Pargaputri, Agni Febrina[2], Patrika, Fauziah Julike[3], Hollanda, Ghita Hadi[1]

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Dental and oral health education should be taught to children as early as possible to raise good habits. One of the obstacles for dentists in providing education is the child's fear of the dentist. Delivering dental health education to children requires an interesting and communicative media which easy to remember and could eliminate children's fear of the dentists. This dental health education activity was carried out at KB-TK Taam Avicenna Surabaya with a total of 24 students. The aims of this activity are to increase students' knowledge about oral health and invites the children to get used to brush their teeth twice a day in the morning and at night. During pandemic covid-19 (August-October 2020), this activity was divided into 3: Survey, implementation, and evaluation. The survey was conducted to find out the oral health problems and to find out the participation of the Puskesmas and local health cadres. The implementation of educational activities begins with singing and dancing together for ice breaking followed by providing education through puppet show. For the evaluation, students were asked several questions about oral health while they were playing with dental snake and ladder. The evaluation of tooth brushing behavior was carried out using a toothbrush calendar. As the results, students were able to answer questions about dental health very well also they show a good behavior of brushing teeth proved by mark on the calendar which means they have brushed their teeth regularly twice a day for a month.

**Keywords:** dental health education, children, brush teeth, interesting educational media

# Storytelling: An Oral Health Education Media for Parents in Rubbik School Community, Semarang, Indonesia

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Parents have a big role in introducing the importance of maintaining oral health to children. One way is to use the storytelling method. Based on previous research that showed a high prevalence of dental caries in children in Semarang City, we would like to initiate a storytelling training program for parents of students studying at the Indonesian Rubbik Community, Semarang. The purpose of this community service program is to provide knowledge about storytelling techniques and basic oral health care for children. The method that will be used is writing an oral health education storybook for children aged 4-7 years and providing the storytelling technique training to 25 parents of children in the Indonesian Rubbik community. Evaluation of this program shows that parents are satisfied with the program. They can demonstrate storytelling using the provided book in small groups. The results of the pre-test and post-test also showed a significant difference in parents' knowledge about oral health. This activity potentially initiates the storytelling techniques as a method of oral health education for children among this community.

**Keywords:** storytelling, oral health education, children

# Readiness of Dentistry Students, University of Muhammadiyah Semarang in The Application Of Interprofessional Education

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The COVID-19 pandemic has forced health professionals as the main actors in implementing health efforts to be prepared to face the triple burden of challenges in the health sector. These health challenges include handling diseases caused by infectious diseases, degenerative diseases and emerging diseases such as COVID-19. However, the condition of global health human resources is overshadowed by crises such as manpower shortages, maldistribution, mismatch, imbalance in the number and quality of health professionals, mismatch between the competence of health professionals and the needs of the population, poor teamwork and weak leadership. Thus, the application of interprofessional education in the health education curriculum is needed to improve communication and teamwork skills of health workers. This research uses a qualitative approach with a case study method. Data collection methods used in this study were observation, interviews, health checks, documentation and manual tracking of data. The results of this study also provide experience in instilling the value of interprofessional collaboration to students to collaborate in solving community-based health problems. Interprofessional education in this study emphasizes advocacy on community health issues and social support that supports the development of an atmosphere or fosters a conducive atmosphere for community empowerment.

**Keywords:** interprofessional education, interprofessional collaboration

# Develop Health-Preneurship for Medical and Dental Students Universitas Hang Tuah

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The introduction of entrepreneurship is expected to change the mindset of students to aspire to become entrepreneurs, not just ambitions to become Civil Servants (PNS). This understanding must be started while still a student. Entrepreneurship education is beneficial in providing provisions before medical faculty and dentistry faculty students will later become doctors or dentists. This entrepreneurship development program can be implemented as a "Building health-preneurship" workshop. The method of implementing the training to build health-preneurship in 3 ways, namely a. provision of materials and discussions with experts; b. visits and discussions with health-preneurship actors; c. participants' exposure to the business model canvas. The results of the health-preneurship-building activities showed a significant difference between the participants' pre-test and post-test results. The difference in these results indicates an increase in the knowledge gained by the participants

**Keywords:** entrepreneurship, health-preneurship, student

# Upgrading Dental Health Belief on Car Community Members for Reducing Periodontal Risks as Impact of Snacking and Smoking Behavior

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The prevalence of oral problems in Indonesia according to Riskesdas 2018 is 57.6% nationwide is periodontal disease, after dental caries. Problems that occur in periodontal tissue depend on the Health Belief Model owned by each individual, which one of the components is "cues to action". This component can affect a person's behavior because each individual interacts with each other. Members in "ES Squad Surabaya" (Surabaya Car Community) usually held a gathering on the weekend in order to relieve fatigue from work (Sicilia, 2015). Based on survey on members of the car community, 62.5% of respondents tend to have inadequate oral hygiene behavior. About 86% respondents have risky habits that are often done together in the community, such as snacking and smoking that tend to have the potential to produce debris. As many as 75% of respondents have heavy smoking behavior. In the preliminary examination, the average OHI-S index was found to be at a score of 4,2 which means bad. After 6 times (on 6 days by the weekend) dental health education by peer group approach, 75% of respondents have improved oral hygiene behavior ($p<0,05$) based on the cues to action component. This shows that there is an external factor that affect them to behave in maintaining dental and oral hygiene. Peer opinions successfully directing them to balance snacking and smoking behavior when gathering with simple efforts to clean teeth and mouth directly using mineral water and mouthwash during their activities (a new habit after snacking and smoking together).

**Keywords:** periodontitis, smoking, snacking, peer, empowerment

# Improving Dental Students Perception Control Behavior Regarding COVID-19 Transmission in Periodontic Clinical Actions Involving Aerosol

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The transmission of COVID-19 is commonly through direct contact, droplets and aerosols. Some dental procedures involve droplets and aerosols such as the use of ultrasonic scalers, water-water syringes and handpieces in the Periodonsia field. Previous research found a significant correlation between personality traits conscientiousness on the perception of behavioral control, which will affect the intentions and behavior carried out, according to Theory of Planned Behavior. Individuals with high conscientiousness tend to be disciplined, orderly, and responsible. Therefore, this empowerment effort is using the approach of personality traits conscientiousness. In order to improve the perception of behavior control of dental profession education students for COVID-19 transmission control in clinical practice in Periodontia involving aerosol, program planning is carried out according to the Precede-Proceed theory. Program in which using predisposing factor to the program in the form of perception of behavioral control, using e-book of behavior guidance in clinical setting. The program is carried out according to P-Process theory by analyzing, strategic design of content creation, development & testing by conducting focus group discussions with stakeholders in the Periodontia department, implementation & monitoring by publishing, and evaluating programs by pre-test and post-test. An increase in perception of behavior control of dental profession education students for COVID-19 transmission control in clinical practice in Periodontia involving aerosol, with an average increase of 26% from the pre-test to post-test (Sig. $< 0.05$).

**Keywords:** COVID-19, aerosol, personality traits, perception of behavior control

# Teachers As Motor of Student Health Education in School Dental Health Program

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Elementary school students are a group of children who are vulnerable to oral diseases. Based on the 2018 Basic Health Research (RISKESDAS) the prevalence of caries aged 5-9 years was very high at 92.6%, so it requires so it requires special attention in prevention efforts. School Dental Health Program (Usaha Kesehatan Gigi Sekolah=UKGS) had been launched since 1951, however the implementation was not running effectively, many schools do not carry out these activities due to a lack of health workers. The teacher's roles are needed in the implementation of UKGS as an educational motor to change children's behavior in maintaining dental and oral health. The purpose of our community service activities is to prepare teachers by conducting training of trainers (ToT) and mentoring teachers in UKGS activities. A total of 33 teachers from 30 schools in Ciseeng District were trained about oral health education on December, 2021 such as how to brush their teeth properly and correctly by applying disclosing solution as a marker for dental plaque. Mentoring activities in 30 schools were carried out by applying this activity to students. There were significant increase in teacher knowledges about dental and oral health by 23.2% ($p = 0.000$). It is expected that teachers can carry out UKGS activities regularly for their students to reduce caries prevalence in order to achieve the goal of Indonesia free caries in 2030.

**Keywords:** UKGS, PHBS, caries, disclosing solution

# The Use of Kartu Menuju Gigi Sehat and Dental and Oral Health Reports at Posyandu and Kindergarten at Pasar Baru Health Center South Pesisir Regency West Sumatera

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The prevalence of caries in early childhood or Early Childhood Caries (ECC) in Indonesia in 2018 in children aged 5 years was 90.2% with a dmft of 8.1. It showed the mother's lack of attention to the dental and oral health of their child. Therefore, it is necessary to make continuous efforts for health workers, especially health center officers to increase maternal awareness about the importance of oral health in the form of increasing mothers' knowledge and behavior about maintaining children's dental and oral health. One of the innovative efforts carried out at the Pasar Baru Health Center was to carry out routine checks on the teeth of babies and toddlers at the posyandu every month using the Kartu Menuju Gigi Sehat (KMGS) which was designed to determine the growth pattern and dental health status of children which was filled in every month so the caries can be monitored as early as possible so the prevention efforts can be carried out quickly. This activity was integrated with posyandu activities. This KMGS can also be filled out at the mother and child clinic at Pasar Baru Health Center as part of the dental and MCH integration program. The next stage in children aged 5-7 years (Kindergarten) was the basic stage of behavior formation including dental and oral hygiene behavior. Dental and oral health in kindergarten students was monitored every 6 months using the Dental and Oral Health Report which contained the dental and oral health status, advice on follow-up of cases found, action cards, and daily notes on tooth brushing behavior and consumption of cariogenic and non-cariogenic foods which must be filled out every day. It is expected that it will form the dental and oral hygiene behavior and good eating patterns in children.

**Keyword:** early childhood caries, ecc, posyandu, kartu menuju gigi sehat

# Dental Care in Diversity (Density): Tele-dentistry and Oral Health Education for Elementary School Children

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Oral health education has advanced from a traditional cognitive approach, to various models of learning methods that support behavior change. Pandemic situation has led to a widespread adoption of online education in Indonesia, including tele-dentistry. Tele-dentistry can extend information to underserved populations such as those who lived in rural areas. Dental Care in Diversity (Density) programme was held using zoom meeting in November 2021. It involved 391 students from SD Unggulan Monginsidi Makasssar, SD Nasional 3 Bahasa Samarinda, SD Panca Setya 2 Sintang, SD Immanuel Bilingual Class Pontianak, SD Dharma Loka Pekanbaru, SD RK II Fransiskus Padang, SD Marsudirini Negara Bali, SDN Serayu Yogyakarta, and SD Muhamadiyah 3 Semarang. Oral health education consists of frequency, duration, techniques of tooth brushing and dental flossing. Nutritional constituent related to oral health and the importance of regular visits to the dentist were also informed, all by using power point and video presentation. Attractive educational e-flyers were distributed via whatsapp group to make it easier for children to remember the material given. The evaluation demonstrated positive changes in children's knowledge. Item about correct brushing time was only answered by 59,2% of children during pre-test, yet increased to 86,7% during post-test. Correct answer about regular visit to the dentist was only answered by 82,7% of children during pre-test, yet increased to 92,2% during post-test. This interactive real-time method had positive result because of its ability to present immediate feedback.

**Keyword** : dental caries, elementary school children, oral health education, tele-dentistry

# Pelita Sehatku An Integrated Health Program to Bring Health Services Closer

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Indonesian Health Survey 2018 reported that there are still pregnant mother, children, and elderly people who have limited access to health services, due to Indonesia's geographic conditions and uneven population density. Therefore, efforts are needed to help the government to bring health services closer to people who have limited access through community services project Pelita Sehatku. This project involved student of Faculty of Dentistry Universitas Brawijaya, with the vision of helping more lives by providing integrated health services for people in need and sustainable programs. The goal was to increase knowledge of oral health, nutrition, health behaviour and help reduce maternal mortality and stunting which is still high in Indonesia. This project was held in Pandansari Village from December 16th -19th, 2021, with a mission to bring closer access for health services by collaborating dentists, doctors and specialist. The programs were "Anak Sehat Indonesia" by doing oral health education to 60 school children, "Rumah Sehatku" which focuses on increasing nutritional awareness in 30 families, "Lansia berdaya" which provides counselling and checking blood pressure, blood sugar, and cholesterol in 100 elderly, "Senyum Yuk" by doing oral screening and therapy on 84 patients, "Ibu, Ayah, dan Aku" examination by Paediatrician on 38 toddlers and 7 pregnant mothers. As an evaluation at the end of the program, interviews and satisfaction surveys were conducted on the citizen who participate. From interviews and 113 satisfaction cards, 100% stated satisfied. For sustainability, the next project is a topical fluoride application program to children for caries prevention.

**Keywords:** health program, community services, pelita sehatku

# HALODENT Tele-Consultation as An Educational and Promotional Media

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COVID-19 have spread all over the world. COVID-19 is transmitted through droplets, fomites and contact transmission so that direct face-to-face interactions. The recommendation from the World Health Organization to reduce the spread of COVID-19 is through social restrictions. Dental procedures make dentists most susceptible to contracting COVID-19, therefore it is advisable to use tele-dentistry as a selection procedure before emergency cases reach the hospital. Tele-dentistry in Indonesia is applied in the form of tele-consultation. Patients can consult the dentist in real time through media that can be accessed online. Through tele-dentistry, patients and dentists can conduct remote consultations to minimize contact so that the spread of COVID-19 can be avoided. With this background, the Faculty of Dentistry, Universitas Brawijaya, through the community service program developed Halodent as a tele-consultation application in collaboration with the Faculty of Computer Science. This application provides real-time chat, educational videos and caries risk assessment. By implementing the service code of conduct, the public can access this application for free through an android phone safely. The purpose of making this application is as an educational resource as well as promotion of dental health services at the Universitas Brawijaya Hospital, especially for people in the Malang area. Halodent's operations involve clinical students and lecturers, so that Lecturers can carry out Community Service activities through this application. Since its launch in October 2022, Halodent has been visited by various levels of society. Through regularly evaluation this application will continue to be developed in line with user needs.

**Keywords:** tele-dentistry, education, promotion, FKG Universitas Brawijaya, halodent

# Tele-Survey: Oral Health Digital Survey During The Covid-19 Pandemic (Indonesian Dental Association South Jakarta Region Community Services Reports)

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The COVID-19 pandemic has challenged the existing healthcare systems all over the world. The World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) recommended delaying routine dental care. Several published dental health care protocols agree that providing emergency and urgent dental care should be prioritized. During the pandemic, Indonesian Dental Association (PDGI) might to reorganize and innovate to continue community services with minimal risk of cross-infection. Indonesian Dental Association (PDGI) South Jakarta Region carried out community service activities with the theme "BaSaH Virtual 2021: Telesurvey". This activity was held on 15-21 November 2021. Each participants were asked to collect 3 patient data consisting of informed consent form, intra-oral photos in 5 positions, and the oral health survey form. A mobile tele-dentistry model was developed to facilitate the acquisition of dental images, and transmission and reviewing of data. This activity was attended by 316 dentists who are members of PDGI South Jakarta and each participant received an SKP for the main practice category. Dentists in Indonesia require a minimum of 9 main skp of practice to extend the Registration Certificate. One of the main practical activities is community services. This activity has implications for supporting the dentists to perform screening for oral diseases and increasing the capacity to care for those who have limited or no access to care. This activity can be an alternative to community service activities during the pandemic.

**Keywords:** oral health, telesurvey, tele-dentistry

# Training of Trainers for Teachers to Increase The Motivation of Elementary School Children to Maintain The Dental Health

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Toothache often causes children not attending school. The prevalence of dental caries in school-age children is still high. Among the causes are they have the wrong habit on brushing teeth, and like sweet foods and drinks. It is important for teachers in schools to be involved to change this behavior. The teacher is a model for children who can motivate good behavior. The purpose of this community service is to train the teachers to educate and motivate the children to build new habits in brushing teeth, and choosing the healthy foods for teeth. This activity involved 4 dentists, 4 teachers and 53 children from Saraswati Elementary School Denpasar. Dental health education materials in the form of power points, animated educational videos, dental models, children's toothbrush and toothpaste. The questionnaires were used to measure motivation before and after education. The educational theme is "prevent cavities by brushing your teeth morning and night". Data were analyzed using Pair T test. At the beginning of the study, children had moderate motivation (72.9%), but at the end of the study, 79.66% children had high motivation to brush their teeth properly and eat-drink healthy foods. There are differences in motivation before and after the dental health education ($p<0.05$). Conclusion: Training of trainer for elementary school teachers can increase children's motivation in building the habit of brushing teeth properly and choosing the healthy foods to maintain their dental health.

**Keywords:** brushing teeth habits, elementary school teachers, healthy foods, motivation, training of trainers.

# ABSTRAK
## *ORIGINAL ARTICLE*

# Relationship Between Determinant Factors Tooth Decay and Filling in Indonesia (Mapping Determinants Factors Using Geographic Information System)

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Introduction: One of the goals of Indonesia's participation on sustainable development goals is improving health state. Efforts made to achieve health improvement is increasing availability of health care facilities so people can easily access and get treatment for dental and oral health. This study aimed to determine relationship between sociodemographic and health care services factors that affect tooth decay and filling in Indonesia. Methods: A cross sectional study using secondary data from Basic Health Research 2018 as classified based WHO age as much 14.031 subject are sociodemographic factors, utilization dental visit, total decay and filling. Health Facility Research 2019 data's using 17.741 healthcare facilities. Number of dentists as much 22.926 data through Indonesia Medical Council on December 2021. These variables were tested statistically and mapping using QGIS. Results: Mann-Whitney test showed a significant difference ($p<0,05$) between groups of gender, place of residence towards tooth decay and filling. Kruskal-Wallis test showed a significant difference ($p<0,05$) between groups of occupational status, education level, and frequency utilization towards tooth decay and filling. Spearman test showed a correlation statistically ($p<0,05$) between amount and ratio of healthcare facilities and dentist towards tooth decay and filling. Conclusion: In this study there are relationship between sociodemographic factors and healthcare services that affect tooth decay and filling. Efforts to equitable distribution of health care facilities and dentist, as well as intervention to increase utilization by looking all aspect of sociodemographic characteristics.

**Keywords:** decay, filling, sociodemographic, health care facilities, dentist.

# Relationship Between Parental Knowledge and Behavior on Prevention of Dental Caries Toward Early Childhood Caries

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Introduction: Early Childhood Caries (ECC) burden is of concern to the World Health Organisation, but the quantification of this burden and risk factors is unclearare. This disease caused an oral pain in early children and will affect the growth of children and the tooth replacement. The purpose of this study was to study the relationship between parental knowledge about children's dental health and parental behavior on caries prevention toward Early Childhood Caries in Yogyakarta as risk factors of ECC. Methods: An analytical survey study with cross-sectional design was done on children under five in Yogyakarta. The sample was taken by cluster random sampling technic among parents whose children attended PAUD/TK. The number of caries was measured using dmf.t Index. Research protocol was given to the parents, and followed by signing the informed consent form. Parental knowledge and behavior on the caries prevention was measured using closed questionnaire, the data analyzed using regression analysis in 95% CI using SPSS statistic program. Results: There were 74 parents and their childrens participated in this study. The results showed that 69% of childrens had caries in the moderate, high and very high categories, 85,1% of the parents had a moderate and low category of knowledge and 76,2% had a moderate and low of behavior. There is a significant correlation between parental dental health knowledge and caries prevention behavior (R2 = 42.8%, p = 0.) but caries prevention behavior affects caries (6.5%, p = 0.02). Conclusion: Parental knowledge on dental health affects their behavior on caries prevention on early childhood. Parents' behavior affects the early childhood caries. 85

**Keywords:** early childhood caries, parents' knowledge, parentas' behavior.

# Qualitative Study of Public Perceptions of Pakuwon City Mall Visitors Regarding Efforts to Prevent Children Dental Caries in Surabaya City

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Introduction: Indonesia has a relatively high level of dental caries severity. According to Riskesdas data in 2018 is 88.8% and the prevalence of root caries is 56.6%. In the 3-4 year age group the prevalence of caries in children in Indonesia is 81.5%, the 5-9 year age group is 92.6%, and the 10-14 year age group is 73.4%.To obtain qualitative data from the community's perspective on efforts to prevent dental caries in children, which varied and could cover various levels of society, taking into account the heterogeneous visitors of Pakuwon City Mall. Methods: Primary data source was obtained by using in-depth interviews based on Preceed-Proceed Model with informants from the community in Pakuwon City Mall to obtain information about their perceptions regarding the prevention of dental caries in children. Results: The majority of the informants (89%) claimed to have never heard of and made simple efforts to prevent dental caries in children including preventive and curative efforts that can be carried out by the Indonesian Dentist Association and the Ministry of Health of the Republic of Indonesia for the 2030 Caries-Free Program in Indonesia. Conclusions: People tend to not understand properly about this program. However, the enthusiasm and support of the community is shown as to improve the quality of dental and oral health nationally, but they have not received adequate information. People already have the motivation to improve the quality of health, but have different perceptions about what and how actually indicators of good oral health are.

**Keywords:** dental, caries, children, perception, qualitative

# Cultural Peculiarities "Arek Suroboyo" on The Mother's Parenting Pattern in Child's Dental Health Behavior

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Introduction: Data from Riskesdas 2018 noted that only 2.8% of people aged three years and over had the behavior of brushing their teeth twice a day. This problem implies that there are similarities in forms of negative behavior from an early age (children) to adults (parents). The prevalence of dental caries in Indonesia is recorded to be higher in urban children. The city of Surabaya is the second largest city in Indonesia with strong socio-cultural characteristics known for its strong solidarity, democracy, and egalitarian character. The social characteristics of the community have a role in the formation of parenting behavior for children. The purpose was to Identify the relationship between parenting patterns and characteristics of Arek Suroboyo on children's dental health behavior. Methods: A cross-sectional analytic study was conducted on 500 female respondents in the city of Surabaya. This study was carried out by assessing the parenting style of the mother with characteristics of arek suroboyo based on Baumrind's parenting theory (authoritarian; authoritative; neglectful; and indulgent) and then examining its relationship with dental and oral health behavior of children. Data analysis used linear regression test. Results: There is a significant relationship between the variables of parenting, education, population status, and literacy of mother's dental and oral health on the variable of children's dental health behavior ($p<0.05$). In children with good dental health behavior, it was confirmed that they had a low level of dental caries severity ($p<0.05$). Conclusions: The characteristics of arek suroboyo mothers who are effective in bringing up good dental health behavior in children are reflected in authoritative parenting patterns. The cultural peculiarities of the "native" people of Surabaya are confirmed in the dental health behavior of mothers who are noted to be free-thinking and quick to defend themselves when dealing with their child's dental caries problem.

**Keywords:** dental, caries, children, parenting, surabaya

# Characteristics of Mother's Dental Health Literacy That Underlies Children Dental Caries Prevention Behavior in Surabaya City

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Introduction: The high prevalence of dental caries in children can be influenced by host factors in the form of mother's behavior in making efforts to prevent dental caries in children. One form of behavior that can be measured observatory is verbal behavior. Verbal behavior in this study was assessed using oral health literacy indicators. Purpose: The purpose of this study was to map the mother's characteristics in terms of the educational system, family/social support system, and health system aspects that were specifically proven to determine oral health literacy in active behavior to prevent children's dental caries. Methods: A cross-sectional analytic study was conducted on 500 female respondents in the city of Surabaya. This research was conducted using the Modified-Health Literacy in Dentistry (MHeLD-26) instrument reviewed from the role of the education system, health system, and social support system, then confirmed by the form of the mother's behavior to prevent dental caries in children using the Pearson correlation test. Results: Mother's dental health literacy ability determines the behavior of children's dental caries prevention significantly and strongly ($p<0.05$; $R=0.942$). The characteristics of the history of the education system related to the health system of the Dentist are confirmed to be a positive determinant to form maternal dental health literacy. Family/social support system becomes a confounding aspect that can be supportive or vice versa ($p<0.05$; $R=0.887$). Conclusions: Mother's dental health literacy is composed based on the basic knowledge of oral health that is owned/believed to be. Mother's behavior in carrying out efforts to prevent children's dental caries can be distorted due to external factors. Social and family interactions can be a positive influence or vice versa if the dental health information obtained does not come from a dentist.

**Keywords:** Dental, Caries, Children, Maternal, Literacy

# The Relationship Between Instant Food and Energy Drinks with the Occurrence of Caries

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Introduction: Basic Health Research (RISKESDAS) 2018 shows West Java province has the highest dental caries problem (45.66%) even higher than the national average (45.3%). The increase in the percentage of people who have problems with caries in the community caused by bad habits of consuming instant food and energy drinks that can trigger acidic conditions in the mouth. The aim was to determine the relationship between the frequency of consumption of instant food and energy drink with the occurrence of caries at the age of 15–24 years in West Java in 2018. Methods: This study is an analytical observational study with a cross sectional design using secondary data from RISKESDAS 2018, the data was analysed using Chi-Square test. Results: The results showed that there was no significant relationship between the frequency of consumption of energy drinks with the DMF-T score (p-value = 0.568), besides that there was also no significant relationship between the frequency of consumption of instant food and the DMF-T score (p-value = 0.349). Conclusion: Frequency of consumption of instant food and energy drinks is not the only factor that determines the occurrence of caries.

**Keywords:** instant food, energy drinks, caries

# Prevalence of Tongue Cleaning in Elementary School Children in North Bandung

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Introduction: Indonesia is still struggling with the problem of dental caries in children. One of the efforts made to prevent caries is by brushing teeth. Another effort that needs to be done is cleaning the tongue. Although it does not significantly reduce the occurrence of plaque on the teeth, cleaning the tongue can reduce the colonization of the bacteria F. Nucleatum which is one of the bacteria that causes periodontal disease, and S. mutans which is the bacteria that causes dental caries. This study aims to determine the prevalence of elementary school children in the North Bandung area who perform tongue cleaning when brushing their teeth. Methods: This is a cross sectional study, using a questionnaire with an interview to obtain the data. The study involved 252 children (138 boys, 144 girls) in 1-6 grade from two elementary schools located in the North Bandung area. Results: 74 children (29.4%) did a thorough cleaning of the oral cavity, including cleaning the tongue, 93 children (36.9%) cleaned the tongue. 32.6% of all boys did the tongue cleaning, and 42.1% of all girls did the same. Children aged 10 years did the most tongue cleaning (9.9%). Conclusion: Not all the elementary school children in the North Bandung area cleaned their tongues.

**Keywords:** tongue cleaning, dental caries, elementary school children

# Factors Related to The Use of Dental Floss at The Community in DKI Jakarta

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Introduction: Caries and periodontal disease are the most common diseases caused by dental plaque. Most of the caries-prone areas of the teeth are interproximal surfaces that are difficult to reach by a toothbrush. The use of dental floss can help remove interproximal plaque as recommended by The American Dental Association (ADA) at least once a day. Objective: to determine the factors related to the use of dental floss at the community in DKI Jakarta. Methods: a cross sectional research with a total of 480 respondents were collected using a google form questionnaire and data were analyzed using the Chi-Square and logistic regression. Results: Most of respondents (71.7%) aged 18 to 25 years old, 59.4% were women and 62.5% had high education level. About 43.1% used a toothpick to remove food residue besides brushing teeth, even 5.2% of samples still use pins. Good Knowledge on dental floss was obtained among 64.8%. Only 38.8% of samples had ever used dental floss and among them were only 6.7% used dental floss regularly 1-3 times a day. Using logistic-regression we found that factors associating the use of dental floss were age, income, tooth brushing time, experience to the dentist and knowledge of dental floss. Conclusion: Regular flossing among the people in DKI Jakarta is very low, some of the reasons are that people do not know about dental floss, it is difficult to find and use it and it is expensive. The role of dentists is very important to socialize and recommend the use of dental floss to the community.

**Keywords:** dental plaque, oral hygiene, dental floss, DKI Jakarta

# The Effectiveness of "Daily Book Challenge" Educational Media on Improving Oral Hygiene Knowledge of The Children's at TK Mahardika

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Introduction: Lack of awareness of dental and oral health in the community, especially in early childhood, is due to the low level of knowledge of oral health. Educational media can be a means to help raise awareness of the importance of oral health. Objective: To determine the effectiveness of educational media "daily book challenge" on improvin oral hygiene knowledge of the children's at TK Mahardika. Methods: This study was a quasi experimental study with a pretest-posttest design. This study involved 30 childrens at TK Mahardika Palembang who were divided into two groups, namely the control group and the treatment group. Measurement of children's oral hygiene knowledge using a questionnaire and statistical analysis was carried out using the T-Independent test. Results: There was a significant difference between control group and experiment group, namely p = 0.000 (p <0.05) so that the hypothesis was accepted. Conclusion: The educational media "daily book challenge" is effective in improving the knowledge of oral hygiene for children at TK Mahardika.

**Keywords:** daily book challenge, oral hygiene, knowledge

# Socioeconomic Status as Factors Affecting the Dental Caries Experience in Indonesian Children (RISKESDAS 2018 Data Analysis)

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Introduction: Dental caries is a global health problem with the highest prevalence amongst dental diseases. The trend of dental caries prevalence trend in Indonesia is increasing, based on National Basic Health Research (RISKESDAS) data from 2007 to 2018. Socioeconomic factor can determine health beliefs and perceived need for dental health care use, which can then affect children's oral health, including dental caries. The purpose of this study is to examine the association of socioeconomic factors and dental caries experience in Indonesian population. Methods: The 2018 RISKESDAS in Indonesia was a two stage sampling cross-sectional survey, and was carried out in 26 provinces by the Ministry of Health. Biomedical, oral, and general health data were collected. This study was a multiple logistic regression analysis on caries experience of the secondary data, based on age groups according to WHO criteria for children. Sample size for each age group was 668, 690, and 649, respectively. Socioeconomic variables in the data were parents' educational level, occupation, and economic status. Results: The prevalence of dental caries for age group of 5, 12, and 15-year-old was 93.4%, 68.8%, and 68.1%, respectively. The education level of father was identified in all age groups with adjusted OR=8.9 (95%CI: 3.6-21.6) for 5-year-old, adjusted OR=2 (95%CI: 1.4-3) for 12-year-old, and adjusted OR=2.3 (95%CI: 1.5-3.5) for 15-year-old. Family economic status was significantly associated in the age group of 5-year-old with adjusted OR=3.5 (95% CI: 1.4-8.4). Conclusion: The socioeconomic factors had a significant association with the caries experience in Indonesian children.

**Keywords:** national basic health research, dental caries, socioeconomic factors

# Safety Culture Among Dentists in Dental Healthcare In Indonesia: A Cross-Sectional Study

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Objective: This study aims to measure the Safety Culture level using the Indonesian Safety Attitude Questionnaire (SAQ-Indo) and to describe the positive attitude of Indonesian dentists towards patient safety. Methods: A cross-sectional survey was conducted among 1111 dentists in dental healthcare in Indonesia, to ascertain the Safety Culture (SC) level across the six dimension of the SAQ-Indo. The SC score was a total score of 30 SAQ-Indo questions with Likert scale. The initial stage of the Quantitative Test resulted in a SC score with the conversion and categorization stages. The results were made into four categories, namely low, medium, good and very good using percentile. Furthermore, group were made for positive and negative categories. Result : The majority of respodents were dentist who practice in primary health facilities (77.2%). Dividing by percentile, the lowest 23.9% score was having a range of <2025, and the second was the medium group having a score range of 2025-2174 as much as 24.4%, the third was the good group with a 25.7% score range of 2175-2324 and very good group with 25.9% score range of ≥ 2325. Positive attitudes toward SC were found in 574 participants (51.7%). Positive Safety Culture was significantly associated with dentist education, gender, dental healthcare location, dental practice experience and ever been attending training on Patient Safety. Conclusion: Results from this study present the current status of dentist's Safety Culture score and help raise awareness of it. It could be used to improve patient safety in the future.

**Keywords:** safety culture, dentist, patient safety, Indonesia

# Detection and Determine Treatment Needs of Children Dental Caries Using DentMA Tele-dentistry: A Deep Learning Approaches

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Introduction: Early detection of dental caries remains the oral health problem control in children, appropriate to avoid advanced caries and its complications. The World Health Organization states dental caries as a pathological condition in the oral cavity that generally occurs in 60-90% of school age. The application of tele-dentistry is considered capable of detecting dental caries remotely without direct contact with patients. The advent of dentMA aplication has provide progress of tele-dentistry technology into dental health services, using deep learning models. The Images obtained from dental photographs of patients can be interpreted using deep learning models and convolutional neural networks (CNNs) potentially as valid and reliable tools in dental screening. This study aims to analyze detection of dental caries, email-dentin and untreated caries, followed by determine treatment needs in children using dentMA tele-dentistry. Methods: This research was conducted in a cross sectional manner using purposive sampling method. The number of subjects in this study were 124 children aged 4-6 years. This study was conducted by taking intraoral dental photos by the subject's mother using dentMA tele-dentistry application from the mother's personal smartphone. Results: Based on the results of the study, it was found that dentMA tele-dentistry was proven capable to screening of dental caries in children and its relationship to determining treatment needs ($p<0.005$). Conclusion: DentMA tele-dentistry can detect dental caries including enamel-dentin caries, detect untreated advanced caries and determine treatment needs. Dental self-examination is recommended to raise mother awareness of dental caries risks in their children.

**Keywords:** dental Caries, detection, tele-dentistry, treatment needs, deep learning

# Correlation of Gender, Education Level , and Age to Knowledge of Muslim Lifestyle in Maintaining Dental and Oral Health

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Introduction: This study aims to determine the relationship between gender, level of education, age, and knowledge of the Muslim lifestyle in maintaining dental and oral hygiene. Methods: This type of research is analytic observational with a cross-sectional research design. Subjects in this study amounted to 44 respondents. Subjects were asked to complete a questionnaire on knowledge of oral health in the Muslim lifestyle. Data analysis using Lambda and Spearman correlation tests. Results: The results of the study: The bivariate test results showed no significant correlation between gender and the questionnaire score (p=0.311 and r=0.222). There was also no significant correlation between the level of education on the questionnaire score (p=0.584 and r=0.088) and age on the questionnaire score (p=0.824 and r=-0.036). Conclusion: Knowledge of the Muslim lifestyle in maintaining dental and oral hygiene is not influenced by gender, level of education, and age.

**Keywords:** knowledge, muslim lifestyle, oral health

# The Relationship of Education Level, Age, and Gender to Oral Health-Related Quality of Life (OHRQoL) in the Elderly in Tahunan, Jepara, Indonesia

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Objective: This study aims to determine the relationship between education level, age, and gender on the oral health-related quality of life (OHRQoL) of elderly visitors to the dental clinic of Puskesmas Tahunan, Jepara. Methods: This type of research is analytic observational with a cross-sectional research design. Subjects in this study amounted to 53 elderly. Subjects were asked to fill out the Oral Health Impact Profile (OHIP-14) questionnaire in the Indonesian version. Data analysis used spearman correlation test and lambda correlation test. Results: The results of the bivariate test showed that there was a significant correlation between the level of education and the OHIP-14 score (p=0,001 and r=-0,433). There was no significant correlation between age and the OHIP-14 score (p=0,133 and r=0,209). There was also no significant correlation between gender and the OHIP-14 score (p=0,636 and r=0,088). Conclusion: The conclusion of this study is that age and gender do not correlate with the OHIP-14 score. The higher the level of education, the better the OHRQoL in the elderly in Tahunan, Jepara.

**Keywords:** oral health-related quality of life, oral health, OHIP-14, elderly, old people

# Improving Oral Hygiene Practices in Islamic Boarding School in Yogyakarta, Indonesia: A Mixed-Method Study

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Background: Several groups need special attention regarding oral hygiene, including Islamic boarding schools (IBS), because oral-health needs are not a priority and even become neglected. The purpose is to measure the effect of different interventions on improving knowledge, oral hygiene practices, and oral hygiene among IBS students (santris). Method: This mixed-method exploratory research applied three-phase exploratory sequential. Qualitative data were collected from three FGD with nine supervisors and one in-depth interview with the school principal to explore santris' oral hygiene practice, and supervisors' perceptions. The information was then used to develop educational interventions with video, poster, and leaflet. To measure the effects, a stepped-wedge cluster design with pre and post-test analyses was conducted. 90 santris in one IBS were non-randomly allocated to either three intervention groups. The outcome measures were knowledge, oral hygiene practice, and oral hygiene. Codes and categories were produced in qualitative analysis, while paired t-tests and Wilcoxon rank-tests were employed in quantitative analysis. Result: The qualitative study identified poor oral hygiene practices among the santris. There was a significant increase in knowledge and oral hygiene practice after intervention ($7.52 \pm 1.74$ pre-intervention to $7.77 \pm 0.34$ post-intervention and $9.78 \pm 2.92$ pre-intervention to $12.11 \pm 2.17$ post-intervention, respectively, $p < 0.001$). Oral hygiene was significantly improved among boys and those who received leaflets. Conclusion: Having developed a specific training materials, oral hygiene training intervention improved knowledge and oral hygiene practice. Its effect on oral hygiene particularly for female santris needs further strengthening of the intervention in this IBS setting.

**Keywords:** oral hygiene practices, islamic boarding school, video, poster, leaflet

# Development Of Kartu Petualangan As A Health Promotion Media to Improve The Discipline of Teeth Brushing In Children

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Intoduction: The behavior of teeth brushing with the correct method in Indonesian is still relatively low at 2.8%, causing an increase in oral health problems from 43.3% (2007) to 57.6% (2018). Based on the age group, the most oral health problems suffered were in the 5-9 year age group (51.72%). Efforts to improve children's behavior in maintaining their dental health require health promotion education with interesting and appropriate methods. This study aims to develop "Kartu Petualangan" as a media to improve the discipline of teeth brushing in children. Methods: This research uses Research and Development study method with eight stages. The stages are potential and problems, data collection, product design, product validation, design revision, product testing, product revision, and usage trial. Results: The problems identified through the literature study are used as the basis for product development. Before being tested the learning media was validated by experts. The results obtained from material experts (85%) and display experts (80%), they were in the "Eligible" category then revised according to expert input. After that, the product trials in small groups were carried out and got 86% results which were included in the "Very Eligible" category then revised according to input from the product trial questionnaire. Furthermore, the trial for use in a wider group was carried out and obtained 87% results which were included in the "Very Eligible" category. Conclusion: The "Kartu Petualangan" are suitable to be used as a media to improve the discipline of teeth brushing in children.

**Keywords:** health promotion media, reward stickers, teeth brushing

# Group Conversion and Counseling By Online Methods Increase Knowledge, Motivation And Behavior Than Konventional on Preschool's Mothers in Perguruan Rakyat Saraswati (An Exploratorysequential Mixed Method Study)

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Introduction: Dental caries prevalence in preschool-children is high, mostly untreated. Lack of parental attention is often associated with knowledge, motivation, and dental health behavior. This study aimed to compare the effectiveness of dental-health-education among online-group-conversation (OGC), online-counseling and conventional methods to develop mothers knowledge, motivation, and behavior. Methods: Study design was an-exploratory sequential mixed method. The qualitative study explores information on mothers' knowledge, motivation, and behavior towards children's oral health care and the obstacles. In-depth interviews were conducted with 20 respondents. The quantitative study determines effect of OGC and counseling on increasing knowledge, motivation, and behavior. A-randomized pretest-posttest control-group-design was involved 240 samples, divided into OCG, counseling, and control. Data analysis with ANOVA and Post-Hoc LSD test. Result: Qualitative finding, mothers have good knowledge, motivation, and behavior. However, there are still stumbling blocks. The main barriers are: knowledge barriers about caries prevention; motivational barriers to eating-pattern, brushing-teeth and visiting-dentist; and behavioral barriers to brushing-teeth, drinking-bottled-milk, eating-sweet, and dental-treatment. Quantitative finding, significant differences in knowledge, motivation, and behavior before-after treatment ($p<0.05$). OGC and counseling were significantly different comparing control ($p<0.05$). No-significant difference in knowledge and behavior between OCG and counseling ($p>0.05$), but significant difference in motivation ($p<0.05$). Conclusion: Mothers of preschool children have good knowledge, high motivation, and good behaviors. However, there are still certain some obstacles. Dental health education with OCG and counseling methods effecttive increasing preschool mothers' knowledge, motivation, and behavior. The OGC method suitable for educating mothers on simple-dental health cases, while counseling more suitable for special-attention cases.

**Keywords:** Behavior, counseling, knowledge, motivation, online group conversation, preschool's mother.

# Oral Hygiene Knowledge, Attitude, and Practice among Smoker Students in UIN Raden Intan Lampung 2022

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Introduction: Smoking is one of the main issues in global health problems. According to WHO's data, Indonesia placed third the country with the largest number of smokers in the world after China and India. Lampung Province has the highest smoking prevalence in Indonesia. Methods: A cross-sectional descriptive study was conducted among 219 students of UIN Raden Intan Lampung aged 17-25 years who had a smoking habit of at least ≥1 year. Data were collected with self-administered online questionnaire using google form, comprising of 32 multiple choice questions, to assess the subjects knowledge, attitude, and practice toward oral hygiene. The data extracted were tabulated, statistically analyzed and presented as frequency and percentages using SPSS. Results: Among the 219 participants, the results showed 50.9% of respondents had a fair level of knowledge, 76.2% of respondents had a good attitude level, but 53.7% of respondents still had a poor level of oral hygiene practice.

Conclusion: The participants in the present study had a satisfactory level of knowledge and attitude about oral health care. However, the knowledge and attitude acquired had to be implemented into their daily practice. Inclusion of oral health-oriented education programs in their curriculum would improve their knowledge, attitude, and practice which in turn could reduce the smoker prevalence in Indonesia, especially in Lampung Province.

**Keywords:** oral hygiene, knowledge, attitude, practice, smokers.

# Dental Caries and Quality of Life Among Pregnant Women

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Introduction: Dental caries can cause health problem among pregnant women including pain, eating and sleeping disturbances. It impact to the physical, social and mental health and also affected their disruption of the quality of life. This study aims to determine the relationship between the severity of dental caries and the quality of life among pregnant women at the Lubuk Buaya Public Health Center. Methods: This is a cross-sectional study that involving 74 pregnant women. The quality of life was measured by the OHIP-14 questionnaire with seven assessment aspects. Quality of life categories is good (score ≤ 27) and poor (score >27). PUFA index was used to assess caries severity. PUFA categories is negative (PUFA = 0) and positive (PUFA ≥1). Data were analyzed by chi-square test. Results: This study show that almost respondents (55.4% of pregnant women) have PUFA (+), with mean 0.82 ± 0.86 SD. Most pregnant women have poor quality of life (51.4%). Some chief complaints discovered due to the severity of caries like disruption of tasting food 10.8%, discomfort during chewing the food 48.7%, feeling tension 10.5%, stopping while eating 56.8%, feeling not relaxed 17.6%, daily activities disturbance 8.1% and less happy 9.5%. Pregnant women with PUFA (+) had more good quality of life, while pregnant women with PUFA (-) had more poor quality of life ($p < 0.05$). Conclusion: Caries severity influence quality of life. This suggests the need for strategies to prevent and manage caries in pregnant woman

**Keywords:** PUFA index, dental caries, pregnant women, quality of life, OHIP-14

# Analysis of Dental Caries Risk Factors in People Aged 35-44 years in DKI Jakarta: A Cross-sectional study using National Riskesdas 2018 data

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Intoduction: The prevalence of caries in Indonesia is still quite high at 88.8% with an average DMF-T value in 2018 of 7.1. Caries is a multifactorial disease of the oral cavity. The main caries factors consist of host, substrate, microorganism, and time. Other caries risk factors consist of age, gender, occupation, education, environment, behavior, culture, heredity, and systemic disease. This study aims to examine the relationship between sociodemographic factors, frequency of brushing teeth, frequency of consumption of sweet foods, sugary drinks, carbonated drinks, and energy drinks with caries in people aged 35-44 years. Methods: The study design used a cross-sectional, sample size of 2453. Data analysis used logistic regression to obtain the odds ratio (OR). Result and Conclussion: The prevalence of caries in people aged 35-44 years in DKI Jakarta is 92.5%. Risk factors related to caries were education (OR = 0.772), sweet foods (OR = 1.6) and toothbrush (OR = 1.2)

**Keywords:** caries, risk factors, logistic regression

# Trust and Satisfaction Models of Dental Treatment in Makassar

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Introduction: Trust and satisfaction are important components between in patient-doctor relation. Trust and satisfaction will lead to increased the adherence to treatment, continuity of patient-doctor relation, increased self-efficacy and disclosure of sensitive information. The study aims to determine the model of satisfaction and trust of dentist care in Makassar. Methods: It is an analytical observational study with a cross-sectional study design, using the snowball sampling method in Makassar on September 20-27, 2020. The population in this study was more than 18 years old, lived in Makassar and had received dental treatment. The sample total 322 people. The research instrument consisted of questionnaire of 7 questions about demographic information, 11 questions of Dentist Trust Scale (DTS) and 9 questions of Dental Care Satisfaction Scale (DCS). Data presentation in the form of tables, diagrams, and descriptions. Data analysis uses two stages, namely exploratory factor analysis and confirmatory factor analysis. Results: Found four different models, model 1 used trust and satisfaction dimension which model based on result post hoc analysis. Model 2 arrange by post hoc analysis result with one dimension doctor-patients relation in 14 questions of both DTS and DCS scale. Model 3 is apriori theory use a trust and satisfaction dimension. Model 4 are trust, satisfaction, and negative sentence items which perception of dissatisfaction. Conclusion: Reliance and satisfaction models to dental treatment in Makassar based on trust to dentist's decision provide the best expertise to treat patients, reliance to explain treatment choices, patient's perception about satisfaction and explanation about treatment

**Keywords:** doctor-patient relation, trust, satisfaction, dental treatment

# Improving Adolescents' Knowledge of Dental and Oral Health via Instagram Podcast: One Group Pre-Test Post-Test Design

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Introduction: The Baseline Health Research on 2018 showed the 15-24 year old adolescents' knowledge of an appropriate way to brush the teeth was 3.3% which was in the low category. The low knowledge of dental health becomes the main cause of dental caries. The great way to improve dental health knowledge is the health education via Instagram Podcast. Methods: An analitical observational study was performed along with one-group pre-test post-test conducted on August 2021. The population was 390 students of Kalibaru Vocational High School, Banyuwangi Regency. The sample was 85 students taken by simple random sampling. The variable was dental and oral health knowledge measured by the questionnaire. The questionnaire was distributed before and after the health education. The data were analysed by Wilcoxon Signed Rank Test to recognise the difference between the knowledge before and after the health education. Results: The 53 students (62.4%) were female and the rest of them was male. The 44 students (51.8%) were 16 years old and the rest of them was 15, 17, 18, and 19 years old. The average score of pre-test was 68.47 while post-test was 85.18. The average score of post-test increased. The result of Wilcoxon Signed Rank Test showed p value=0,00 less than α(0,05) which meant there was a difference between pre-test and post-test score. Conclusion: There was a difference between the knowledge of dental and oral health before and after the health education via Instagram Podcast.

**Keywords:** Instagram Podcast, knowledge of dental and oral health

# Patient Satisfaction Level of Dental Treatment at the Dental Clinic Hermina Hospital Manado

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Introduction: Good service quality is closely related to patient satisfaction in health care. One indicator of good quality health care is patient satisfaction with health services provided by dentists. The SERVQUAL dimension and the Donabedian domain are benchmarks for measuring service quality and the comparison of perceptions and expectations of patient satisfaction. Patient satisfaction with health services will have an impact on the health and welfare of the community. This study aims to determine the level of patient satisfaction with the services and treatment of dental and oral diseases at the Dental Clinic of Hermina Hospital Manado. Methods: This type of research is Cross Sectional Study with convenience sampling on a total sample of 105 respondents. Google form questionnaire or document as an instrument in research. Results: The average patient satisfaction was 69.39 (±3.77) with a minimum score of 35 respondents and a maximum of 70 of the 35 questionnaire questions. Conclusion: This study states that good service quality is positively related to patient satisfaction in performing dental care, meaning that the services provided are in accordance with patient expectations. This study shows that the dimensions of SERVQUAL and the three domains of Donabedian are indispensable in measuring service quality and are comparable.

**Keywords:** patient, dental care, hospital

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