Young Graduate Hospital-Internship Program: Bridging Dental Education Theory And Practice

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Introduction: In Malaysia, the dental curriculum includes a one-year equivalent module of general medicine and general surgery. Although the module includes cognitive, psychomotor and clinical components, students generally have very little opportunity to practise the oral health knowledge acquired in their education in a hospital setting. An internship program was initiated which allows fresh graduates to have a 6-week stint in a teaching hospital to conduct an oral health promotion programme for inpatients, their caregivers, and healthcare workers. Objectives: To assess the ability of fresh graduates in conducting an independent oral health promotion in a hospital setting.

Methods: Five recently graduated dentists who responded to the internship advertisement were recruited into a two-part programme:(1) development of a work proposal at a one half-day workshop and, (2) adaptation and implementation of the proposal in actual hospital setting for a six-week period. Oral health promotion activities were conducted for the following: patients at obstetrics and gynaecology wards, paediatric oncology wards, antenatal clinics and outpatient clinics, visitors, medical nurses and doctors. Evaluation of the programme conduct was carried out quantitatively by number of patients who received their services, personal interview and a focus group discussion.

Results: Interns provided services for 370 patients. They provided hands-on demonstrations on basic routine oral hygiene procedures emphasising the role of oral health as an integral part of general health. Qualitative evaluation highlighted the satisfaction of the interns in being able to practice oral health promotion for inpatients and contribute significantly in voluntary work. Healthcare workers provided positive feedback for the programme. Conclusions: The programme was not only able to provide the needed hospital-based opportunities for the interns but it had also enhanced the dynamic camaraderie and sharing of experiences among the interns who were all from different universities.

Keywords: young graduates, oral health promotion, hospital internship, Malaysia

Incorporation of Motivational Interviewing into Undergraduate Dental Curriculum

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Objectives: Motivational interviewing (MI) is an effective way for helping patients improves their health behaviours. This project incorporates MI into undergraduate dental curriculum and evaluates the learning outcomes and students’ learning experiences.

Methods: Led by the Faculty of Dentistry, an interprofessional teaching development project was carried out at the University of Hong Kong to introduce MI into undergraduate curriculum in Dentistry, Medicine, and Nursing. A culturally relevant learning resource bank was prepared. Staff development workshops were organized. MI was nested into the problem-based learning of BDS-II class. Students learned from the online learning materials, a theme-based seminar and a practical workshop. The
Results: The research based on normality test results using the Shapiro-Wilk method toward the treatment group and the control group gained sig> 0.05, and p value 0.000 (<0.05), it indicates that there was a minimum significant change between the two research groups.

Conclusions: The analysis result reveals that the use of instructional media such as picture story books and stacking words and pictures game for the deaf children related to dental and oral health issues considered effective in changing the child’s knowledge of the deaf child.

Keywords: the deaf child, pictures book, stacking words and pictures game

Association Between Personality Traits and Stress Levels Among Senior Dental Students: Evidence from Southeast Asia

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Objective: To evaluate the association between dental students’ personality traits and stress levels in relation to dental programs among senior dental students in University Malaya (UM) in Malaysia and National University of Singapore (NUS).

Methods: A cross-sectional survey using a self-administered questionnaire was conducted on senior dental students in UM and NUS. The questionnaire comprised items on demographic information, the Big Five Inventory (BFI) Personality Traits test and a modified Dental Environment Stress (DES) scale. Data were analysed using SPSS version 17.0.1 and WINSTEPS: Rasch analysis, t-test, Pearson Correlation and Hierarchical regression statistics were used for data analysis.

Results: The response rate was 100% (UM=132, NUS=76). In UM, Agreeableness was the most prevalent personality trait with mean score (0.30, sd=0.41) significantly higher than that among NUS students (p=0.016). In NUS, it was Neuroticism with mean score (0.36, sd=0.49) significantly higher than that in UM (p=0.002). The DES mean score was higher among NUS (mean=0.23, sd=0.78) than UM students (mean=0.07, sd=0.99). In UM, Neuroticism (r=0.338, p<0.001) was significantly correlated with stress levels while in NUS, these were Neuroticism (r=0.278, p=0.015), Agreeableness (r=0.250, p=0.029) and Conscientiousness (r=0.242, p=0.035) personality traits. The correlation was strongest for personality trait Neuroticism in both schools. Hierarchical regression showed that gender and Neuroticism were significant predictors for stress levels with the latter showed relatively bigger effect size (R^2=0.18, gender R^2=0.04)

Conclusions: Certain types of students’ personality traits were significantly associated with students’ stress levels.

Key words: dental students, personality traits, Southeast Asia, stress
p<0.05). As well as in Group B, the means of IL-8 and Caspase-3 on the fifth day were 16.3+1.528 and 11.33+0.577 that were statistically lower than those of the controls (Group D: 22.3+3.21 and 17.33+2.645 respectively, p<0.05). Comparing Groups A and C, there was an increase in the means of IL-8 and Caspase-3 from the third day to the fifth day. However, for the control groups (B and D), there was a decrease in the means of IL-8 and Caspase-3 from the third day to the fifth day.

Conclusions The exposure of 15 ppm silver nanoparticles gel to gingival fibroblast in Rattus novergicus reduces the expressions of pro-inflammatory cytokine IL-8 in the wound healing process, and reduces the expressions of Caspase-3 in the apoptotic process. That indicates the proliferation of fibroblast will be increased and this is going to accelerate the wound healing process on the third day.

An interim report of a RCT of ayurvedic oral health practices
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Objectives To evaluate the effectiveness of a traditional ayurvedic practice ('oil pulling') on periodontal parameters: plaque levels and gingival health.

Methods Sixty-eight young adults without caries or periodontal pockets (CPI>3) were block randomized (in groups of four) to two arms of a cross-over clinical trial. In the first arm of the trial, the test group was assigned to ‘oil pulling’ and conventional oral hygiene methods (standardised toothbrush and toothpaste). The control group were assigned to receive only conventional oral hygiene methods (standardised toothbrush and toothpaste). The test group were provided with a 700mL of virgin coconut oil (label concealed) and were requested to rinse daily with a tablespoon of the oil before brushing. Assessments of oral hygiene was determined by the Plaque Index - PI (Silness and Loe, 1964); and the Gingival Index - GI (Loe and Silness, 1963) at baseline and mid-term follow-up (4-6 weeks). Changes in PI scores, proportion of sites with visible plaque (PVP), GI scores and proportion of sites with gingival bleeding (PGB) were determined overtime using Wilcoxon Signed-Rank tests for related data. In addition, changes in PI, PVP, GI and PGB were determined between groups using Mann-Whitney U tests for independent samples.

Results The overall response rate was 94.1% (64/68; 2 test and 2 control subjects were lost to follow-up). Among the test group, there were significant changes in PVP [mean change=-0.11 (SD 0.16), p<0.01], GI score [mean=0.18 (SD 0.27), p<0.01] and in PGB [mean=0.16 (SD 0.26), p<0.05]. Among the control group, there were significant changes in GI score [mean=0.19 (SD 0.33), p<0.01] and in PGB [mean=0.16 (SD 0.29), p<0.01]. Changes in periodontal health parameters were not significant between the test and control group (p>0.05).

Conclusions At the interim of this cross-over randomized control trial, changes in plaque and gingival health were evident among both test and control groups. However, no significant differences in any parameters were apparent. This questions the value of the ayurvedic health practice of ‘oil pulling’.

Use of Flouride Toothpaste, Sweets Intake, Location and Children’s OHRQoL
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Objectives Oral health related quality of life (OHRQoL) measures were developed to assess the impacts of oral conditions on individual’s daily performances and quality of life. In our study, Malay Child-OIDP index was used. The objectives of the study were to evaluate the prevalence and score of oral impacts on 8 daily performances among 11-12 year old school children in Malaysia, levels of impact intensity, the extent of impacts and factors associated with children’s OHRQoL.

Methods This was a cross-sectional study with population comprised 11-12 year old school children in Negeri Sembilan state, Malaysia. Sample size was 3455 and children’s OHRQoL was assessed using the Malay Child-OIDP index which assessed oral impacts on eight daily performances, i.e. eating, speaking, cleaning teeth, relaxing, emotional stability, smiling, doing schoolwork and socializing. Data were non-normally distributed and were analysed using non-parametric test, i.e. Mann-Whitney and Chi-square test. Significant factors for children’s OHRQoL were assessed using multiple logistic regressions.

Results Overall, 3285 schoolchildren responded with 92.7% response rate. The prevalence of overall oral impacts in the last 3 months was 60.2% and the mean total impact score was 5.49. The most prevalent oral impacts were on eating (40.6%), cleaning teeth (31.7%) and emotional stability (24.4%). In each of the 8 performances, the majority of impacts were of ‘very little’ to ‘moderate’ levels of impact intensity. In terms of the extent of impact, 44.6% of schoolchildren reported having up to 4 performances affected by their oral conditions. Significant factors associated with children’s OHRQoL were location (OR=1.16, 95%CI=1.00-1.33), use of fluoride toothpaste (OR=1.25, 95%CI=1.02-1.54; OR=1.65, 95%CI=1.26-2.16) and sweets intake (OR=1.35, 95%CI=1.11-1.67; OR=1.40, 95%CI=1.12-1.75).

Conclusions The prevalence of oral impacts was 60.2%. Location, use of fluoride toothpaste and frequency of sweets intake were significant factors associated with OHRQoL among 11-12 year old children in Malaysia.

The Effect of Mouthrinse Containing Immunoglobulin-Y Anti ComD S.mutans towards S. mutans Biofilm Formation

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Objectives The bond between protein surface of S.mutans with IgY can reduce pathogenic properties of S.mutans. The effectiveness of IgY as a dental caries vaccine should be improved by creating IgY specific to ComD that has a role in the mechanism of quorum sensing. To determine the effects of mouthrinse containing IgY Anti ComDS.mutans towards the ability of S.mutans isolated from caries and free caries subjects to form biofilm.

Methods DMFT scores of subjects were measured and divided into 2 groups: caries group and free caries group. Subjects were assigned to rinse twice daily (for 6 days) with 15-20 ml solution of mouth rinse for 30 seconds containing IgY Anti-ComD S.mutans. Plaque samples were taken from the buccal surface of the tooth in each subjects before and after using mouth rinse. S.mutans samples were taken from the plaque culture medium of each subjects. Then crystal violet biofilm test procedure was performed using microplate reader to obtain the value of optical density (OD).

Results The average of biofilm mass (OD values) before application of mouth rinse containing IgY Anti ComD S.mutans in free caries subjects is 0.163 and in caries subjects 0.153. There is a reduction of biofilm formation after administration of mouth rinse containing IgY Anti ComD S.mutans in free caries subjects 0.141 and in caries subjects 0.136 (p> 0.05).

Conclusions Mouth rinse containing IgY Anti-ComD S.mutans could decrease S.mutans biofilm formation isolated from caries and free caries subjects.