UNIVERSITI TEKNOLOGI MARA

MALAY LANGUAGE CHILD ORAL HEALTH
IMPACT PROFILE-SHORT FORM 19:

QUESTIONNAIRE VALIDATION AND
ASSESSMENT OF THE IMPACT OF DENTAL
CARIES AND DENTAL PAIN ON CHILDREN'S
ORAL HEALTH-RELATED QUALITY OF LIFE

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ABSTRACT

The Child Oral Health Impact Profile-Short Form 19 (COHIP-SF 19) is a shortened version of the original questionnaire developed to assess oral health-related quality of life (OHRQoL) in children across a broad age range. COHIP-SF 19 has been translated and validated in several other languages. **Objective**: This study aimed to translate and validate Malay language COHIP-SF 19 (ML COHIP-SF 19), to assess its psychometric properties among Malaysian children, and to investigate the associations between dental caries, dental pain, and OHRQoL using the newly validated questionnaire. **Methods**: Phase 1 involved translation of the original English version using an established forward and back-translation followed by psychometric properties testing of the final version among children through Cronbach's alpha, non-parametric Spearman's correlation test, and Confirmatory factor analysis (CFA). Phase 2 evaluated the impact of dental caries and dental pain on the children's OHRQoL using ML COHIP-SF 19 where independent t-test, Spearman's correlation test, and multiple regression were performed. Dental caries was recorded using International Caries Detection and Assessment System (ICDAS) and dental pain was measured using Faces Pain Scales-Revised. **Results**: Phase 1 involved 252 children (mean age=11.33 ± 1.87 years). The overall scores of ML COHIP-SF 19 ranged from 20 to 75 (55.67 ± 10.45) with high internal consistency (α=0.81). The convergent validity indicated that the self-perceived oral health rating had a fair correlation with the questionnaire total score and socio-emotional well-being subscale score (rs = 0.38–0.42, p < 0.05). Phase 2 involved 70 children (35 caries and 35 control) aged 12.03 ± 1.96 years with almost equal gender distribution. 52.9% of the participants reported that they had experienced dental pain. Children with dental pain had significantly lower scores (50.57 ± 9.40) compared to those without dental pain (57.79 ± 9.33) (p<0.01). Males (β=-4.65, p=0.03), younger children (β=-1.26, p=0.02), those without pain experience (β=-4.64, p=0.03), and children who rated their oral health status more positively (β=4.46, p<0.01) had better OHRQoL. **Conclusions**: ML COHIP-SF 19 has satisfactory psychometric characteristics with an acceptable model fit and suggests the feasibility of applying it among 9-to-16-year-old Malaysian children. Although the use of validated ML COHIP-SF 19 found no significant differences in OHRQoL between children with and without dental caries, better OHRQoL was observed among children with no previous experience of dental pain.

ACKNOWLEDGEMENT

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CHAPTER 1

INTRODUCTION

1.1   Research Background

The term "oral health" is defined as the standard of health of the oral and related tissues that enable an individual to eat, speak and socialise without active disease, discomfort and embarrassment, and which contributes to the general well-being (McGrath et al., 2004). It is widely recognized that maintaining good oral health is essential, as it enables us to perform daily activities such as eating, communicating, and expressing our feelings with confidence (WHO, 2022). Oral health-related quality of life (OHRQoL) is a patient-reported outcome measure (PROM) that assesses patients' perspectives on the impact of oral diseases on their physical functional well-being, socio-emotional status, self-esteem, and oral health status. Oral diseases such as dental caries have been shown to greatly reduce the quality of life (QoL) of affected patients (Peres et al., 2019).

Despite being a preventable disease, dental caries remain a global health burden. Recently, the National Health and Morbidity Survey (NHMS) in 2017 reported that three out of ten 12-year-old children in Malaysia were affected by dental caries (Karim et al., 2020). The prevalence of caries-free among children in Malaysia remains a concern despite an upward trend over the years. Children with dental caries may experience difficulty in sleeping, limited chewing function, and disturbances in their daily activities (Gomes et aL, 2019). Moreover, the delayed treatment of dental caries can lead to more complex treatment needs. Addressing dental caries in the early stages is crucial because untreated dental caries can lead to dental pain. Although individuals can adapt to pain perceptions through their life experiences, these adaptations may have an adverse impact on their function and social and psychological wellbeing (Raja et al., 2020). Unsurprisingly, dental pain has been linked to a negative impact on the OHRQoL in children (Barasuol et al., 2020).

Thus, it is essential to characterise dental caries and dental pain experiences among children in Malaysia. However, at present, no research has explored the impact