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Field of Study: Dental Public Health (Behavioral Science)

1 TITLE OF PROPOSAL

The Level of Dental Anxiety and Its Associated Factors Among Primary School Children Receiving Incremental Dental Care at the Children Dental Centre and the Ministry of Health Malaysia Training Institute (Dental)

1.0 INTRODUCTION

1.1 Background of the study

Dental anxiety is frequently described as a vicious cycle characterized by avoidance of dental care, poor oral health, and worsening mental psychological impact (Wide and Hakeberg, 2021). Anxiety is incredibly prevalent, and the majority of people suffer some degree of dental anxiety, especially if they are about to undergo an unfamiliar procedure. Due to their anxiety, treating young children can be challenging for the dental professional, as their level of cooperation may be limited. Anxious patients should be a concern for dental professionals because it prevents many potential patients from seeking dental care and can be a source for occupational stress to the dental personnel undertaking dental treatment. Such a condition may result in dental care neglect and consequently poses a challenge for both dentists and patients. Additionally,

dental anxiety is frequently cited as a reason for irregular dental attendance, delay in obtaining dental care, or avoidance of dental care. The severity of dental anxiety varies from patient to patient (Badiyani and Kumar, 2017).

According to Popescu et al. (2014), dental anxiety was positively connected with the usage of chewing gum, the frequency of sweet consumption, and inadequate dental health education. Previous research conducted in 2010 in Brazil by Silveira et al. (2017) found that children with decayed teeth who had never seen the dentist were more likely to experience dental anxiety. Similar to dental anxiety, age was found to be connected with tooth discomfort. The older the child, the greater the tooth pain, which may be associated with a higher incidence of caries (Oliveira and Colares, 2009). Therefore, a more complex and extensive treatment will be required as caries experiences increases. According to a study conducted by Berge et al. (2002) on 322 children (4 to 12 years old) in Amsterdam using The Dental Subscale of the Children's Fear Survey Schedule (CFSS-DS), "drilling" and "injection" were rated highly by both high and lowly anxious children. A study by Radhika et al. (2013) in India concluded that noise produced in a dental clinic is anxiety-inducing and greatly contributes to the avoidance of dental treatment, with the majority of participants opting for audio-visual distraction as the most effective technique to overcome the issue.

1.2 Problem statement

Advancements in dental treatment procedures, technology, and understanding have had no effect on the decline in dental anxiety among children over the previous several decades (Moustafa and Ahmed, 2015). Furthermore, childhood dental dread and anxiety may remain into adulthood and are a significant predictor of adult avoidance of dental checkups.

Due to pandemic COVID-19, some major issues were identified at the end of 2020, such as a slow reduction in caries improvement, an increasing trend of periodontal problems, and the late stage of oral cancer detection. (Oral Health Program Annual Report, 2020). During the COVID-19 pandemic, the overall utilization of primary oral healthcare in the MOH decreased from 26.4 percent in 2019 to 7.8 percent in 2021, a decrease of 14.8%. Furthermore, the operations at primary dental clinics were carried out by adopting the new standards, such as the implementation of an online appointment system to reduce congestion in the clinic and the use of additional equipment during Aerosol Generating Procedure treatments (AGP) such as the use of multi-level PPEs, extra-oral vacuum suctions, and high-volume suctions. (Oral Health Program Annual Report, 2021).

According to an Italian survey conducted by Pisano, Galimi, and Cerniglia (2020), a significant percentage of children become nervous when hearing about the pandemic (e.g., on television). Increased anxiety in adults during epidemic crises is common and has been reported in the past, for instance during the 2009–2010 H1N1 pandemic (Everts, 2013). Nevertheless,

during the COVID-19 pandemic, children suffer from not going to kindergartens and schools, not having real contact with their friends and some family members and having to live at home with decreased ability to practice physical activity and carry out some of their hobbies. Tofangchiha et al. (2022) conducted a study that revealed a positive association between elevated levels of COVID-19 fear and higher dental anxiety, as well as impaired oral health-related quality of life (OHRQoL) in Iranian high school students. Moreover, there was a significant correlation between the fear of COVID-19 and heightened levels of anxiety, despair, and stress.

Behavior guidance techniques, both non pharmacological and pharmacological, are used to alleviate anxiety, nurture a positive dental attitude, and perform quality oral health care safely and efficiently for infants, children, adolescents, and persons with special health care needs (The American Academy of Pediatric Dentistry, 2015). A dental therapist plays an important role in early exposure of oral health care to the children. According to Dental Act (2018), a dental therapist may carry out certain clinical procedures for a person aged below 18 years old under supervision of a dentist. Therefore, all dental therapists should adhere to behavior guidance guidelines by incorporating varieties of techniques according to patient's needs in order to alleviate anxiety and perform quality oral health care safely and effectively.

Although dental anxiety has been extensively studied worldwide, there are limited studies available in Malaysia. Moreover, no such studies have been conducted in CDC&DTCM specifically for school children treated by dental therapist trainees.

1.3 Significance of the Study

Children and adolescents vary greatly from adults in terms of their development, personalities, and capacities to regulate emotions. The majority of youngsters feel that a trip to the dentist is terrifying and unpleasant, mostly because of the unfamiliar setting, sharp tools, loud noises, terrible scents, etc. To ensure that children have a positive experience at the dental clinic, each member of the dental team should always be prepared with the adequate knowledge and skills required to handle children's diverse requirements. Dental anxiety and dental pain are complex phenomena that can negatively impact a person's life. Dentists should be able to identify anxiety patients as well as be prepared to treat them in a way that reduces their dental anxiety levels (Leal, Abreu, and Frencken, 2009). It is essential to identify dentally anxious children and adolescents and assist them in overcoming their dental anxiety so that they can access dental care without fear or anxiety in adulthood. (Esa, Humphris, and Freeman, 2014).

The Children's Dental Centre and MOH Training Institute (Dental), was established as a training institution for dental auxiliaries, including dental therapists. The Diploma of Dental Therapist curriculum will emphasize a learner-centric and outcome-based approach, effective July 2021. (OBE). One of the disciplines under Specialized Dentistry (Pediatric Dentistry) is Behavior Guidance Techniques, which is subdivided into two subtopics of child behavior in dental settings. As a result, the trainees should be able to explain and implement interventions for children's behaviour in a dental setting by the end of the course. Nonetheless, no specific topic on anxiety management for pediatric patients is covered in the curriculum. Therefore, the findings of this study will provide a baseline data reference to strengthen the educational

programme regarding dental anxiety patients treated by dental therapist trainees in this institution.

Improvements in the curriculum may be executed to ensure effective and quality delivery of oral healthcare services to the children attending CDC and MOH TI, as well as the sustainability of knowledge among the dental therapists through their improvement in practicing correct behaviour management procedures. The meaningful data obtained will allow us to highlight areas that were underserved or misunderstood especially during patient assessment.

1.4 Conceptual Framework

There are several factors that can predict the cause of dental anxiety among schoolchildren. This model serves as a conceptual framework because it identifies the key factors that can influence the level of dental anxiety in children. Conceptual framework of the study was summarized as in Figure 1. A portion of this conceptual framework was adapted from Theory of Reasoned Action (TRA) by Azjen and Fishbein (1975).

The Theory of Reasoned Action has been widely employed in the field of health behaviour research to effectively forecast and elucidate various health-related behaviours (LaCaille, 2020). According to the Theory of Reasoned Action (TRA), it is possible to anticipate behavioural intentions based on attitudes and subjective norms. Attitudes refer to individuals' evaluative judgements, either positive or negative, on a certain behaviour. These judgements are

based on whether individuals perceive the behaviour as desirable or undesirable, and if they believe it will result in results that align with their own values. Subjective norms encompass the collective influence exerted by significant individuals in an individual's life, as well as their perceptions of the expectations of these others towards engaging in a particular behaviour. Subjective norms can be divided into two psychological values: normative beliefs and motivation to comply. In normative belief, it is whether or not someone believes that the other wants them to carry out an action. For example, the child believes that their mother wants them to go for dental treatment. In terms of motivation to comply, some kids may have a tendency not to want to do a dental checkup even though their mother wants them to (Azjen and Fishbein ,1972). A study conducted in 2012 and 2013 in the Iranian city of Zanzan with parents and their children ages 4 to 10 revealed that parental stress is a strong predictor of children's cooperation during dental treatment (Fazli and Kavandi, 2015). Importantly, dental treatment anxiety is learned and develops through observation, identification with, or suggestion (Inglehart and Tedesco, 1995).

This study will investigate the level of anxiety among school-aged children, which was the dependent variable, whereas the independent variables that can affect the outcome include oral health behavioral patterns, sociodemographic factors, as well as caries experience.

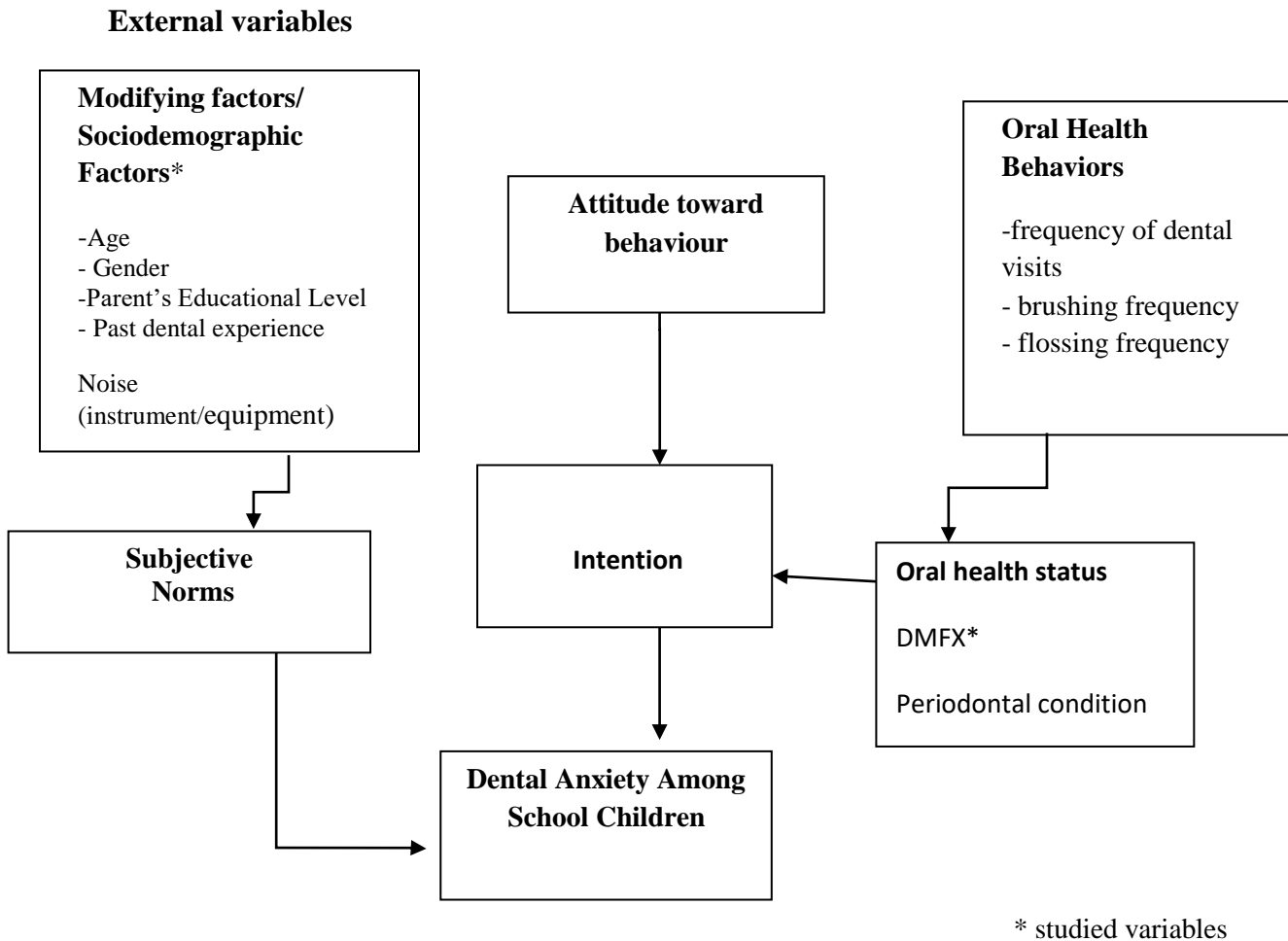


Figure 1. Conceptual framework of the study

2.0 Literature review

2.1 Prevalence of dental anxiety among children

Prior research revealed that 5% to 6% of the adult population avoided dental care due to acute anxiety, with the percentage increasing to 16% among children of school age (Kent and Blinkhorn, 1991). Bedi et al. (1992) investigated the prevalence of dental anxiety among 13- to 14-year-old Scottish children and concluded that dental anxiety tends to be more prevalent among females and children with lower socioeconomic status. In contrast, having symptoms, visiting the dentist less frequently, a history of extractions, and having dentist-phobic parents are all strongly associated with dental anxiety (Milsom, 2003).

According to the evidence, dental anxiety is common among children. There is also evidence that, as age increases, there is a difference in dental anxiety prevalence for male and female children, with female children reporting higher dental anxiety levels. However, it is unclear what role age and social deprivation play in the prevalence of dental anxiety, suggesting that it affects children of various ages and backgrounds. Comparing the results of different prevalence studies is limited in significant ways. Notably, prevalence can differ depending on the studied population (community or clinical), sampling strategy (random or non-random), assessment measure, and threshold used to identify dental anxiety, as well as the source of the informant (children, parent, or clinician). (Lodge and Tripp, 1995; Grisolia et al., 2021).

Researchers have also examined the gender-related causes of dental anxiety. Girls reported a higher level of fear than males, according to Ollendick et al. (1991). Males supported significantly more direct and indirect conditioning sources than females. When boys experienced direct or indirect conditioning with the feared stimulus, they were more likely to report fear than women. Girls, on the other hand, cited instructional and informational sources as their primary source of concern.

A study by Chabra et al. (2012) among 523 children aged 5–10 years and their parents visiting Krishna Dental College, India showed that anxiety and fear of the dental practitioner pose a challenge to the management of children in oral healthcare facilities. Many patients are reluctant to receive dental treatment because of preoccupied dental anxiety (Ilgüy et.al.,2005). A study of dental fear and utilization behaviour among antenatal mothers in the district of Seremban found that dental fear is a prevalent issue among antenatal mothers, which contributes to poor utilisation behaviour. It may be transmitted to her child via modelling or even more subtle forms of communication (Savithri and Esa, 2008). Consequently, appropriate management of dental fear must be implemented to increase utilisation of oral healthcare services among this target population.

2.2 Dental caries burden among school children

The prevalence of dental caries among 12-year-olds was 33.3% with a DMFT of 0.80, according to the National Oral Health Survey for School Children (NOHSS, 2017), while 66.7% of children were caries-free (Oral Health Division, 2017). Even though the data indicated an improving trend over the past three decades, it did not meet the National Oral Health Plan 2011-2020 objective (70 percent of 12-year-olds will be caries-free). The National Oral Health Survey for Preschool Children (NOHPS, 2015) found a declining trend in caries prevalence from previous surveys (71.3% in 2015, 76.2% in 2005, and 87.1% in 1995) in tandem with a slow reduction in caries severity among 5-year-olds, with dft values of 5.8 in 1995, 5.5 in 2005, and 4.75 in 2015.

Despite the fact that the percentage of children rendered orally fit and the percentage of children maintaining orally-fit status among primary schoolchildren in Malaysia met their targets in 2019, the CDC only achieved 51.7% of no treatment required (NTR) and 70.3% of case completion (POA, 2020). These cause shortfalls in quality for both National Indicator Approach (NIA) standards. However, the institution has taken remedial action through a scheduled dental visit by dedicated school dental teams based on school risk status. Following that, the percentage of children who were rendered orally fit in CDC and MOH TI improved significantly in 2020 among primary and secondary school children, with 90.7% (4298/4737) of case completion in primary school children and 90.6% in secondary school children.

2.3 Factors associated with dental anxiety among children

According to a study of dental attendance and anxiety among public and private schoolchildren in Jordan by Taani (2002), the majority of children only attended the dentist in an emergency. Fear of specific stimuli (pain and trauma) was the leading cause of dental anxiety in 60–65 percent of children. The most fear-inducing stimuli were the sight and sensation of an anesthetic injection and the sight, sound, and sensation of the drill. Moreover, it was discovered that public school children have a substantially higher 'overall dental fear' than private school children.

A study conducted by Hababbeh et al. (2012) on the dental experiences of 11- to 14-year-old Liverpool children, girls are substantially more anxious than boys about visiting the dentist. Significantly less anxious were children who reported more frequent dental visits than those who reported less frequent visits. Children with prior exposure with a specific type of dental treatment were significantly less anxious about that treatment. This was applicable to scale and polishing, local anesthesia, restorative treatment, dental extraction, and dental care performed under general anesthesia. Similarly, in a previous study conducted by Kruger et al. (1998) on 649 adolescents in New Zealand, the prevalence and incidence of dental caries were highest among the dentally anxious and lowest among the non-anxious. Therefore, dental anxiety is likely a significant predictor of dental caries experience and may be a risk factor for the incidence of dental caries.

In 2004, a survey of customer satisfaction with the school dental service among 16-year-old school children in the district of Tawau, Sabah, showed that fear of dental treatment took a major part in avoiding dental treatment, and non-acceptance of treatment provided was associated with extreme dental fear in another group of Malaysian primary schoolchildren. (Othman and Jaafar, 2004). A cross-sectional study of 1150 5–6-year-old preschoolers in Selangor, Malaysia, using the Malay-Modified Dental Anxiety Scale (M-MDAS), revealed that maternal dental anxiety and the child's dental caries experience have a significant impact on the child's oral health-related quality of life (COHRQoL). Demographic variables such as maternal education, income, urban or rural location, and kindergarten type may act as moderators to strengthen or diminish the relationship (Esa et. al, 2020).

In another study of 16-year-old adolescents in the South-West District of Penang Island, Esa et al. (2014) found a relationship between dental anxiety, dental caries disease, and treatment experience. Compared to urban adolescents, rural adolescents had substantially more decayed and missing teeth as well as physical symptoms of dental fear. However, there were no statistically significant differences in avoidance of dental treatment or dental anxiety induced by dental stimuli based on place of residence (Esa et al. 2014).

3.0 RESEARCH OBJECTIVES

3.1 General objective:

To study the level of dental anxiety and the factors associated among primary school children receiving incremental dental care (IDC) at the Children Dental Centre & MOH Training Institute (Dental)

3.2 Specific objectives:

1. To determine the level of dental anxiety among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)
2. To determine the caries experience among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)
3. To determine factors associated with mean dental anxiety score among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)

4.0 Research Question

1. What is the level of dental anxiety among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)?
2. What is the caries experience among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)?
3. What are the factors associated with dental anxiety among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)?

5.0 Research Hypothesis

1. There is significant high level of dental anxiety among school children in CDC & MOH TI (DENTAL).

6.0 METHODOLOGY

6.1 Study design

The study design is a descriptive, cross sectional study.

6.2 Study area

Children Dental Centre and MOH Training Institute (Dental) is an institution under Ministry of Health that has been recognized in training dental auxiliaries in Malaysia since 1949. This institution previously known as Dental Training School Malaysia (*Sekolah Latihan Pergigian Malaysia*) has been built in Penang, Malaysia. Dental auxiliaries comprise three categories namely; Dental Therapists, Dental Technologist and Dental Surgery Assistant. The dental therapist is the only operating dental auxiliary in Malaysia responsible in providing oral health care to preschoolers, primary and secondary school children in oral health promotion, preventive, and conservative as well as oral rehabilitation aspects. They perform oral assessment and treatment under supervision of a dental officer besides providing dental health education.

6.3 Study population and sample

6.3.1 Reference Population

The reference population for this study is the School children from 16 schools covered by incremental dental care in Children Dental Centre & MOH Training Institute (Dental)

6.3.2 Source Population:

The source of population is the primary school children receiving incremental dental care (IDC) at Children Dental Centre & MOH Training Institute (Dental) in 2023.

6.3.4 Sampling Frame

This study involves primary school children attending Children Dental Centre & MOH Training Institute (Dental) who fulfill the inclusion and exclusion criteria.

1. Inclusion Criteria

- Primary school children whose parents had signed the consent forms for participation of the study

2. Exclusion Criteria

- Parent's refusal to dental treatment provided by CDC & MOH TI(DENTAL)
- Primary school children with symptoms of acute toothache or any other emergency
- Primary school children with systemic diseases and/or major disabilities

6.3.5 Sample Size Determination

i. Dental anxiety

Sample size was calculated using the parameter below that applies the following single mean formula: -

$$n = \left(\frac{Z_{\alpha} * \sigma}{\Delta} \right)^2 \quad (\text{Daniel, 1999})$$

Where,

n = Sample size

Δ = Precision with population in CDC and MOH TI at 10%

Z_{α} = Level of confidence = 1.96

σ = Standard deviation of dental anxiety 1.02 (Taani, El-Qaderi and Abu Alhaija 2005:)

$$n = \left(\frac{1.96 * 1.02}{0.10} \right)^2$$
$$n = 400$$

i. Caries experience

Sample size for Objective 2 was calculated using the parameter below that applies the following single mean formula:

$$n = \left(\frac{Z_{\alpha} * \sigma}{\Delta} \right)^2 \quad (\text{Daniel, 1999})$$

where,

n = Sample size

Δ = Precision with population in CDC and MOH TI at 10%

Z_{α} = Level of confidence = 1.96

σ = Standard deviation of mean DMFT 1.09 (*Beena, 2013)

$$n = \left(\frac{1.96 * 1.09}{0.10} \right)^2$$
$$n = 456$$

Based on the calculation, we found that the higher the standard deviation (σ), the greater the sample size would be. The greater sample size could not be taken due to the limitation of time and resources. Therefore, the required sample size is 440 with anticipating of 10% non-response from study ($400 + (0.1*) = 440$)

6.3.6 Sampling Methods

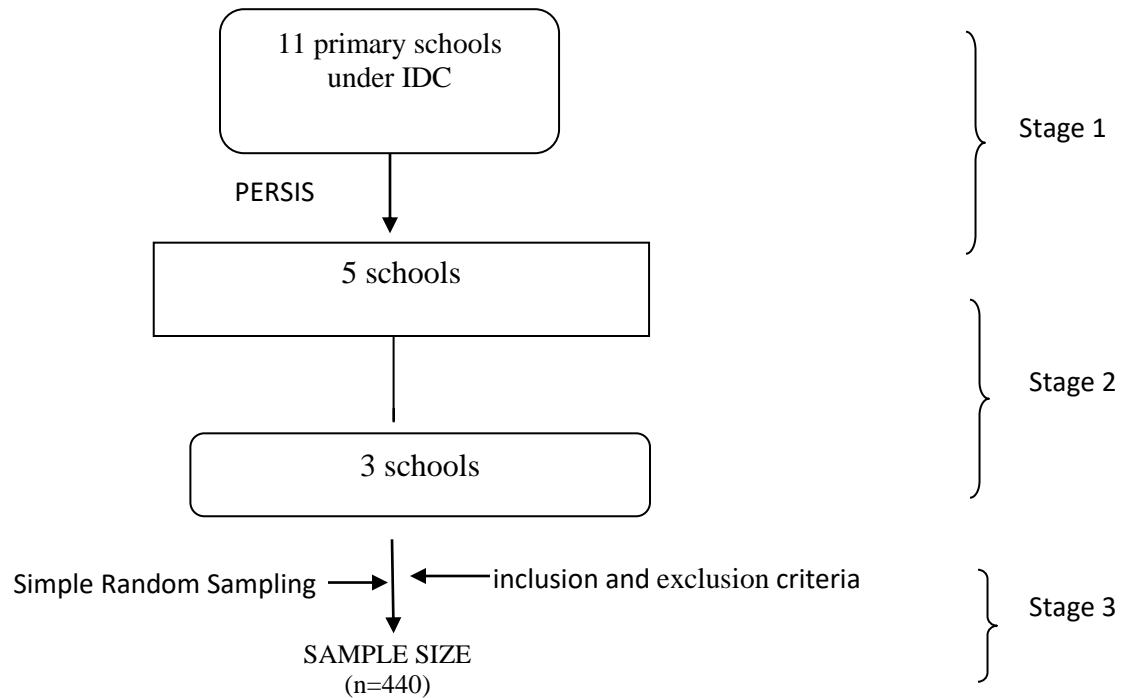


Figure 1. Flow Chart of Sampling Process

Sampling method used in this study is multi stage sampling. A sampling that involves of 11 primary schools under IDC programme in CDC& MOH TI were listed down. Based on school risk assessment (PERSIS- Penilaian Risiko Berasaskan Sekolah), 5 schools were selected conveniently i.e. SK Jelutong, SK Minden Height, SK Pulau Tikus, SK Jalan Hamilton and SK Wellesley. However, only 3 schools were selected considering the school's dental treatment shuttle schedule provided by the U 32 dental therapist. The children of each schools that formed the sampling frame of the study will be screened according to the inclusion and exclusion criteria. The selection of school children will be done randomly by getting the name lists from the officer in charge (Pegawai Yang Menjaga (YM)).

6.4 Research tool and Variables

i. Research tool

To facilitate data collection procedure, 2 sets of research tools will be used which comprised of a validated questionnaire and a proforma. For the questionnaire, there are 19 items in the questionnaire and divided into two sections. Section A consists of four (4) items regarding sociodemographic characteristics and Section B consists of 15 items that assessed the dental anxiety using a validated Dental Subscale of the Children's Fear Survey Schedule (CFSS-DS) that developed by Cuthbert and Melamed (1982). The question regarding CFSS-DS consists of 15 items and scored from 1 (not anxious) to 5 (very anxious) on a 5-point Likert scale, with total scores ranging from 15 to 45. Total score is a sum of all the items, range 5 to 75. Children with CFSS-DS ≥ 38 were defined as dentally anxious with 75 indicating maximal fear.

CFSS-DS will be individually translated from English into Malay by a single native Malay speaker. Then, Malay Version of CFSS-DS will be back-translated into English by an interpreter, and tested for inconsistencies. The aim was to obtain a single Malay translation which had similar conceptual meaning with the English CFSS-DS using the most suitable and simple wordings in Malay. The Malay version of the questionnaire will be pre-tested in a small group of school children. The caries experience will be recorded in the proforma using the DMFT index. The variables are D for tooth decay, M for tooth loss, and F for tooth fillings.

ii. Variables

In Section A the variables include:

- i. Gender
- ii. Race
- iii. Grade (Standard 1-6)
- iv. Parent's level of education

In Section B, the variables include dental anxiety towards:

- i. Dentist
- ii. Doctors
- iii. Injections
- iv. Having somebody examine your mouth
- v. Having to open your mouth
- vi. Having the stranger to touch you
- vii. Having somebody look at you
- viii. The dentist drilling
- ix. The sight of dentist drilling
- x. The noise of dentist drilling
- xi. Having somebody put instruments in your mouth
- xii. Choking
- xiii. Having to go to the hospitals
- xiv. People in the white uniform
- xv. Having the therapist clean your teeth

In the proforma, caries severity and experience will be assessed using DMFT index. The variables include:

- Decayed
- Missing
- Filled

6.5 Data Collection

Data will be collected using a self-administered and validated questionnaire as well as clinical examination. The informed consent from primary school children who met the inclusion and exclusion criteria will be distributed prior to data collection by the officer in charge (*Pegawai Yang Menjaga (YM)*). School students will be transported to CDC & MOH TI by shuttle in accordance with the school treatment schedule prepared by the senior Dental Therapist U32. The school children will be approached by the researcher to explain the purpose of the study and to clarify the questionnaire. The school children will be given sufficient time to answer the questions and no discussion is allowed.

Following the completion of the questionnaire, the school children will be assessed for dental caries by visual examination using artificial light while sitting on a dental chair. The DMFT index will be used to assess caries severity and experience by two examiners. Prior to data collection, the examiners will be calibrated using the Modified MOH ICDAS (MMI) and inter-examiner reliability will be checked using Cohen Kappa ($Kappa > 0.75$). Children's caries experience will be calculated according to the decayed, missing, and filled teeth

(DMFT) index. Having completed the oral examination, the completed questionnaire forms will be recovered and compiled for statistical analysis using SPSS version 26.0.

6.6 Proposed Statistical Analysis

Data acquired in the study will be entered and go through data cleaning before been analyzed using IBM SPSS version 26.0. Descriptive analysis will be carried out to obtain frequency and percentage for the categorical variables and mean (SD) or median (IQR) will be used for continuous variables.

The normality of the data will be checked using histogram, Kolmogorov-Smirnov, and Shapiro-Wilk normality test. Inferential statistics with the significant level set at 0.05 (two-tailed) will be carried out. The Pearson correlation will be used to assess the correlation between two continuous variables such as -mean dental anxiety score among primary school children and their DMF scores. Independent t-test and one-way ANOVA test will be used to determine the relationship between mean dental anxiety score with two independent groups and more than 3 independent groups.

6.7 Ethical Considerations

Permission from Medical Research and Ethics Committee, Ministry of Health for conducting research in the Ministry of Health facility will be achieved. The confidentiality and anonymity of participant are maintained and not expose in report or any other means. Participation in study is

voluntary and based on informed consent. To obtain the informed consent procedures, all participants and their parent will be explained about the study purpose and procedure of the study. The consent and assent form are in Bahasa Malaysia and English form. The study also will be registered to the National Medical Research Register (NMRR) and approval from National Institutes of Health will be achieved.

6.7.1 Privacy, confidentiality, and storage of data

All forms are anonymous and will be entered in SPSS software, in which only research team members can have access to the data. The researcher guarantees the confidentiality of the information provided by the participants. It will not be disclosed to the authority or any parties for the works unrelated to this research. Furthermore, the data obtained from this study will be published for knowledge purposes and presented as grouped data. The identity of the participants cannot be tracked individually. The data will be kept private and confidential for up to five years and destroyed after five years upon completion of this study.

6.7.2 Vulnerability of subject

The participants will be made aware that their participation in this study is completely voluntary. They may refuse or withdraw from the study at any time without subsequent penalty or action taken towards them.

6.7.3 Potential risk to the subjects

The potential risk to the subjects by participating in this study is minimal. There might be minimal discomfort during clinical examination

6.7.4 Honorarium

The participants will be thanked for taking part in the study and given a token of appreciation per individual.

6.7.5 Sponsorship

At present, this study is self-sponsored by the principal investigator (PI).

7.0 Expected Results

Table 1 Socio-demographic characteristics of primary school children receiving incremental dental care (IDC) at the Children Dental Centre & MOH Training Institute (Dental)

Variables		n (%)
Sex	Male	
	Female	
Race	Malay	
	Chinese	
	Indian	
	Others	
Educational level	No education	
	Primary/secondary school	
	Certificate/Diploma/Degree	
	Master/PhD	
School Grade	Year 1	
	Year 2	
	Year 3	
	Year 4	
	Year 5	
	Year 6	

Table 2. Level of dental anxiety among primary school children receiving incremental dental care (IDC) at the Children Dental Centre & MOH Training Institute (Dental)

Variables	Not anxious n (%)	Moderately anxious n (%)	Very anxious n (%)
Anxiety towards: 1. Dentist 2. Doctors 3. Injections 4. Having somebody examine your mouth 5. Having to open your mouth 6. Having the stranger to touch you 7. Having somebody look at you 8. The dentist drilling 9. The sight of dentist drilling 10. The noise of dentist drilling 11. Having somebody put instruments in your mouth 12. Choking 13. Having to go to the hospitals 14. People in the white uniform 15. Having the therapist clean your teeth			
Level of dental anxiety, n (%) i. Low dental anxiety ii. Moderate dental anxiety iii. High dental anxiety			
Mean (SD) dental anxiety score			

Table 3. Caries experience among primary school children receiving incremental dental care (IDC) at the Children Dental Centre & MOH Training Institute (Dental)

Variables	n (%)	Mean	SD
Decayed (D)			
Missing tooth (M)			
Filled tooth (F)			
Mean (SD) DMF score			

Table 4. Factors associated with mean dental anxiety score among primary school children receiving incremental dental care (IDC) at CDC & MOH TI (DENTAL)

Variables	Mean (SD)	Mean difference (95% CI)	t-stat (df)	p-value
Gender ^b				
Male				
Female				
Race ^c				
Malay				
Chinese				
Indian				
Others				
Parent's edu level ^c				
No education				
Primary/secondary school				
Certificate/Diploma/Degree				
Master/PhD				
School grade ^c				
Year 1				
Year 2				
Year 3				
Year 4				
Year 5				
Year 6				
Mean DMFT score ^a				

^aPearson correlation coefficient, r; ^bIndependent t test, t-stat; ^cOne way ANOVA, F stat

8.0 Others

8.1 Research milestone

Planned	Planned Milestone Date	Achieved (Yes/No)	Actual Completion (date)
Ethics approval	October 2023		
Data Collection	January 2024		
Data Entry	February 2024		
Data Analysis	March 2024		
Preparation of report	April 2024		
Submission of draft	May 2024		
Submission of final report	June 2024		

TABLE 5.1 RESEARCE MILESTONE

8.2 Gantt Chart

	April '23	May '23	Jun '23	Jul '23	Aug '23	Sep '23	Oct '23	Nov '23	Dec 23	Jan '24	Feb '24	Mar '24	April '24	May '24	Jun '24	Jul '24
<i>Proposal</i>																
<i>Submission of proposal</i>																
NMRR Registration																
<i>Data collection</i>																
<i>Data analysis</i>																
<i>Completion of first draft</i>																
<i>Submission of final draft</i>																

TABLE 5.2

8.3 Resources planning

Table 5. Resources planning for the study

No.	Particulars	Quantity	Unit Price (RM)	Amount (RM)
1.	Honorarium	440	1.00	440.00
2.	Printing i) Questionnaire/proforma ii) Patient information sheet iii) Consent form	440 x 2 pages 440 x 4 pages 440 x 2 pages	0.05	176.00
3.	Disposable dental probe and mirror	440 sets	2.50	1100.00
TOTAL (RM)				1716.00

9.0 References

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