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MALAYSIAN PARENTAL KNOWLEDGE, ACCEPTANCE AND PERCEPTION OF BEHAVIOUR MANAGEMENT FOR THEIR PRESCHOOL CHILDREN DENTAL TREATMENT.

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ABSTRACT

Optimum behaviour management by dentist during dental care are very essential to enhance the treatment adherence. This study is to evaluate parents' knowledge, acceptance and perceptions towards passive restraint, active restraint, parents' separation, voice-control, tell-show-do, conscious sedation, and general anaesthesia on their child during dental treatment as one of behaviour management techniques in dentistry. 32–item questionnaires constructed with seven set videos of selected behavior management techniques were developed and validated. Data were analysed using SPSS version 22. Fifty-five parents were recruited. The sample consists of parents with children aged 3 – 5 years old. 98% of the parents are married, and 2% are single. Most of the parents are degree holders. 42% of parents said they assist their children in tooth brushing and imply good oral home care practice. More than half of the parents are substantially aware of oral care, as 60% of parents bring their children to the dentist. Tell-Show-Do (TSD) is the most accepted technique by parents in dental treatment. The least accepted is General Anaesthesia. In conclusion, the parental knowledge and perception of suggested behaviour management techniques are above average. Proper explanation and clarification of the method will improve acceptance and lessen the parents' concern about their children's dental treatment.

Keywords: Tell-show-do, preschool children, dental treatment, behaviour.

INTRODUCTION

The foundation for children to practise dentistry is built on the ability to guide them through their dental experience. Although some children are relaxed and cooperative in the dental treatment environment, some demonstrate disruptive behaviours that make treatment more difficult. According to Wright (1975), children can be generally classified in one of three ways: cooperative, lacking the cooperative ability or potentially cooperative (1). Dental treatment for children usually requires behavioural management techniques (BMTs). Behavioural dentistry is an interdisciplinary science that develops a dental practitioner's understanding of the interpersonal social force influencing a patient's behaviour. This ability is a prerequisite to providing their immediate dental needs. Treating the patient and not just the tooth should be operative with all patients but is essential with a child patient. The objectives of behaviour management are to reduce anxiety and fear in children, gain an understanding of the parental attitude and establish better dentist-parent communication, parent education and childcare (2). To accomplish the treatment, dentists use various techniques to manage, modify, and shape undesirable behaviours into more appropriate behaviours to achieve high-quality, comprehensive care. Managing uncooperative children is an integral part of pediatric dentistry, and the dentist must occasionally rely on other BMTs as alternatives or adjuncts to communicative management (2).

Basic behaviour guidance includes tell-show-do, voice control, direct observation, pre-visit imagination, distraction, and parents' separation. Meanwhile, advanced behaviour guidance includes protective stabilisation, sedation, and general anaesthesia (2). Conversely, The European Academy of Pediatric Dentistry divided BMTs into pharmacological and non-pharmacological behaviour management (2, 3). Behaviour management techniques cannot be evaluated individually for validity but must be assessed within the context of the child's total dental experience.

MATERIAL AND METHOD

Through a convenient sample, this study was conducted in the Faculty of Dentistry and Faculty of Medicine Universiti Teknologi MARA and Hospital Sungai Buloh, Ministry of Health. The sample size was calculated using the Explanatory Factor Analysis (EFA). The inclusion criteria include parents who can read and understand the language of conduct, parents with preschooler age group children (3 – 5 years old), and their children who must be fit and healthy but show uncooperative or disruptive behaviour toward dental treatment. The exclusion criteria are parents with children with any kind of special needs condition. Ten (10) patients were recruited as pilot-study.

Vignettes development.

Seven types of BMTs were chosen which are passive restraint, active restraint, parent separation, voice control, tell-show-do, conscious sedation, and general anaesthesia. Every vignette was prepared according to an actual situation in a dental office before dental treatment. Each vignette takes about 1.5 minutes to 2 minutes. The language is English with Bahasa Malaysia subtitles to maximise content comprehension.

Questionnaire construction.

32-item questionnaires were constructed in four domains: demographic, knowledge, perception, and acceptance. The acceptance domains were assessed using these questions:

i. Do you think this technique is effective?

ii. Would you permit us to use the technique for your child?

iii. Are you worried about your child's treatment?

A 100mm horizontal visual analogue scale (H-VAS) is used to assess the acceptance of each BMT. This straight line ranked from the left end as "totally disagree' and far right as "totally agree'. Respondents are advised to place a vertical line anywhere on the horizontal scale that represents their acceptance of the BMTs using the formulated questions.

Data Analysis

Analysis of data included tabulation of frequency distributions for sociodemographic information obtained. All the statistical analysis was done with the SPSS version 25 software program, and the a priori level for acceptance of statistical significance was set at $P \leq 0.05$. To compare the level of acceptability, the mean rating for each of the seven behaviour management techniques was determined using Pairwise Comparison. Descriptive statistics were calculated for all the demographics. The mean gender level of the subjects was compared using an independent T-test. The age, ethnicity, marital status, level of education, occupation and income were analysed using one-way ANOVA. The correlation between the 7 BMT with oral home care practices, children who had received treatment before and the awareness of oral care was analysed using Pearson Correlation. Bonferroni was used to compare the two domains.

RESULTS AND DISCUSSION

Fifty-five of the respondents, eight young parents, 35 middle-aged parents, and 12 older age parents, were recruited. The data consist of 25 males and 30 females. Regarding oral health care awareness and knowledge, 43.6% of the respondents had received treatment in the dental clinic, while 9.1% had never had treatment. 21 parents lack oral home care practices, while only three have adequate ones. A one-way ANOVA test revealed a significant difference between BMT and age ($p=0.001$). Further analysis using the post-hoc Bonferroni test suggested that all possible pairs of mean age were significantly different. We observed that those with middle-aged parents had higher mean compared to others. A significant linear correlation exists between a child who received treatment and active restraint with $p=0.01$. A significant linear correlation exists between a child who received treatment and TSD with $p=0.022$ (Table 2). The vital difference in mean for each behavioural management technique acceptance was set at ($p>0.05$). A pairwise comparison with confidence interval adjustment was performed.

A balanced number of respondents between sexes where the female has five respondents more compared to male. This may be due to mothers being more aware of their children's behaviour than fathers, as agreed in a paper by Grietens et al., 2003 (4). 43.6% of the total respondents know the need for their children to get dental treatment. Meanwhile, 9.1% of the respondents lack awareness of taking their child for dental treatment. Parents' knowledge highlighted the optimum time to brush their children's teeth, bringing children regularly for dental visits and children's dental pain experience and reasons. Kaur 2009 found that parents are more interested in children's diet, snacking, and brushing habits, with a subsequent complaint of children eating sugary snacks and inadequate oral hygiene practices (5).

General anaesthesia is the least accepted technique as it implies medication, and the need for hospital management is seen as intimidating by most of the respondents. This technique is also considered the last resort and unnecessary for dental treatment. Other authors have emphasised that general anaesthesia is the alternative management after another method has failed (6, 7, 8). Different studies by Oliver et al. proved that restraint techniques, including active and passive, follow general anaesthesia as the least accepted technique (8).

There was a statistically significant relationship between the age and the tell-show-do technique (p=0.001). Middle-aged parents agree more about tell-show-do techniques to imply to their children. Adequate exposure to the method, sufficient explanation and demonstration, and practice of the procedure to the child are considered factors for acceptance of BMTs. Following the pairwise comparison, there were also statistically significant differences between the tell-show-do technique with parent's separation, passive restraint, active restraint, conscious sedation, and general anaesthesia. Most dentists in Malaysia use these two techniques at their best during dental treatment, making the parents believe and trust that these techniques suit their children.

TABLE, IMAGE, AND FIGURE

Table 1: Rating means for all BMT

Techniques	Mean
Tell-show-do	23.598
Voice control	21.564
Parents separation	20.304
Conscious sedation	20.146
Passive restraint	19.257
Active restraint	19.246
General anaesthesia	17.004

Variable	BMT	N	Acceptance Mean (SD)	P-value
Receiving Treatment	Active Restrain	55	19.25 (17.38 , 21.10)	0.01
	Tell-Show-Do	55	23.6 (22.44 , 24.7)	0.022

Table 2: The relationship between significant methods with a child that had received treatment.

BMT		N	Mean Difference	P-Value
Tell-show-do	Parents separation	55	4.341 (0.654, 8.028)	0.009
	Passive restraint	55	3.295 (0.065, 6.524)	0.041
	Conscious sedation	55	3.452 (0.216, 6.688)	0.027
	Active restraint	55	4.352 (1.213, 7.490)	0.001
	General Anaesthesia	55	6.595 (3.049, 10.140)	0.000
Voice control	General Anaesthesia	55	0.012 (0.0597, 8.525)	0.012

Table 3: Correlations between behavioural management techniques

CONCLUSION

The least aggressive techniques are more acceptable, and parents reported a significant preference for them over the pharmacological technique and restraint. The most accepted method is tell-show-do, and the least accepted technique is general anaesthesia.

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