ATTITUDES TOWARDS A NEW TEACHING AID IN DENTAL EDUCATION: A PRELIMINARY INVESTIGATION - PART II

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ABSTRACT

Local anaesthesia is a vital skill and a requirement for most dental procedures. One of the widely used techniques in local anaesthesia is the inferior alveolar nerve block (IANB). Appropriate training is essential for dental undergraduates to mitigate risks and develop the ability of students to learn skills of local administration prior to the care of patients. Due to this issue, an innovative local anaesthesia simulator kit has been developed as a considered new teaching aid in pre-clinical IANB training. Hence, the main objective of this study is to explain students' attitudes towards the new teaching aid using simulator kit called Local Anaesthesia Simulator Kit (LASK). Dental undergraduates from Year 3 were recruited in this cross-sectional study. The perceived attitudes of students towards the intention to use LASK were reported in this study using descriptive statistics. Overall, the majority of students have a positive attitude towards LASK. More than 75% of the respondents had positive attitudes towards the intention to continue using LASK because its benefits offered and ease of use of LASK. In conclusion, effective and efficient techniques for the administration of IANB in dental procedures, particularly at the undergraduate level, remain crucial.

Keywords: *Attitude, New Teaching Aid, Dental Undergraduate, Local Anaesthetics Simulator Kit*

RESEARCH HIGHLIGHTS

1. Overall, the study findings revealed that the majority of students were optimistic about the new teaching aid called LASK in performing the inferior alveolar nerve block (IANB). The ease of use of the LASK and the advantages provided by the LASK were obtained by the highest percentage of the intention to use the new teaching aid.
2. This study also revealed that the intention to continue using LASK in the future because this LASK will be remained appropriate to the dental profession as well as its use will be relevant to the working style of the profession.
3. As a result of this optimistic attitudes towards the intention to use LASK, it thus can be introduced as new promising andragogy in pre-clinical training in performing the inferior alveolar nerve block. The data findings could contribute to the recommendations for further implementation of this new teaching aid - Local Anaesthesia Simulator Kit (LASK) at regional dental schools.

Research Objectives

One of the most frequent local anaesthesia technique is the inferior alveolar nerve block (IANB). This technique however has reported to have a high rate of failure among dental graduates, interns and even dental professionals. It is therefore vital for dental undergraduates to master the skills of local anaesthesia prior to the care of patients in their clinical years. Skull mannequins (bones) or dental models have been used in conventional pre-clinical teaching methods in worldwide dental schools. Student-to-student local anaesthesia has also been commonly used to learn how to administer IANB administration. However, most students feel lacking in confidence and inadequately prepared for their first injection into a human-beings; even though going through this simulation training. In response to this issue, a local anaesthesia simulator kit so-called LASK has been developed.

It is considered as new andragogy to be used in the preclinic training to perform an IANB. Therefore, it is important to consider the attitudes of students towards the intention to use this innovative teaching aid called LASK. This paper is mainly intended to determine the attitudes of the students to the Local Anaesthesia Simulator Kit (LASK) in administering the IANB.

Methodology

In this study, a cross-sectional design was employed. A survey instrument was then used more as a data collection method. Three items were describing demographic characteristics of respondents and nine items using 5-Likert scale statements were examined attitudes of students towards the intention to use the new teaching aid using simulator kit (LASK). Prior to data collection, reliability and validity of survey instrument were evaluated; using internal consistency and content validity techniques, respectively. The study was conducted with a population of 1st and 3rd year students enrolled in Semester 1/2020 through two phases; at the Sungai Buloh Campus of the Faculty of Dentistry, Universiti Teknologi MARA, Cawangan Selangor. This current paper presents data findings of 2nd phase, which comprises the 3rd year students. Participation in this study is voluntary and informed consent was obtained from the respondents. They were informed about the nature and purpose of the research prior to completing the self-administered structured survey instrument. Descriptive statistics (i.e. standard deviations and frequency distributions) were utilized to describe survey respondents; including demographic profile and perceived attitudes towards LASK intention to use IBM SPSS Statistics Version 23®. This research obtained ethical approval from the Research Ethics Committee of the University (REC/182/19).

Results

In total, there were 67 of 3rd year dental undergraduate participated and valid for data analysis. Nearly all respondents were female (n=62; 92.5%). Majority of respondents were between the ages of 21 to 22 years old (n=59, 88.1%), only 12% were between the ages of 23 to 25 years old (n=8). Most of all respondents strongly agreed or agreed to the statement on the intention to continue the use of this novel teaching aid; for most of these reasons; including ease of use of LASK (n=54; 80.6%), benefits of LASK offered (n= 53; 79.1%), and help to manage better time (n=39; 58.2%). More than 70% respondents strongly agreed and agreed to continue using LASK in the future as it is considered suitable for their career (n=51; 76.2%) and working style (n=48; 71.7%); and to have potential to use LASK in their profession (n=47; 70.2%). In addition, the respondents agreed and strongly agreed that after seeing classmates using LASK (n=41; 59.7%) and evaluating the use of LASK in the study plan, the respondents will continue to use LASK in the future (n=46; 68.7%). However, 43.3% of respondents disagreed and strongly disagreed LASK when it was difficult to learn how to use the LASK (n=63). Overall, mean scores of attitudes were 3.71 (SD = 0.38).

Findings

In analysing descriptive data, a positive attitude has resulted from a high percentage of positive and negative items responses. As a whole, the majority of students can be found to have optimistic attitudes towards the new teaching aid of LASK. The findings in this study are consistent with previous studies; which indicated that user's positive attitudes can lead to a positive and direct contribution to the intention to use new technology (Boulton, 2017; Mirzajani et al., 2016).

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Author's Biography

Siti Noorsuriani Maon is an associate professor at Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Malaysia. She received her PhD from University of Queensland (UQ), Australia in 2013. She has actively participated in several research works and community projects relevant to her interest. Her research interest includes management, health behavior, health informatics and technological intervention in health improvement.

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Tengku Dr Intan Baizura Tengku Jamaluddin has seventeen years in the dental fraternity providing oral and maxillofacial surgery services at hospitals in Ministry of Health, Malaysia and at Universiti Teknologi MARA (UiTM). Experienced in treating patients with cleft, craniofacial anomalies, pathological and post-trauma disabilities. An active member of community engagement projects with NGOs and international parties. Aspires to act with a multidisciplinary research team to reach research endpoints that can be translated into education policy for the empowerment of marginalised communities.