UNIVERSITI TEKNOLOGI MARA

COMFORT, TOLERANCE AND PREFERENCE OF PATIENTS ON HELMET VENTILATION THERAPY

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the requirements for the
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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Helmet non-invasive ventilation (NIV) is a latest NIV interface which allows the delivery of positive pressure ventilation to the lungs via both nose and mouth. Studies suggested that helmet NIV is more tolerated with better clinical outcomes than the other NIV interfaces in treating Acute Respiratory Failure (ARF) patients. However, helmet NIV intolerance and failure are the typical responses reported. Since the helmet NIV is new in Malaysia, this study is proposed to provide an overview on comfort, tolerance and preference of patients with ARF on this therapy. This study used a mixed method design. In quantitative phase, 67 patients with ARF who completed helmet NIV therapy were purposively selected from the Emergency Department in one of the Northern Malaysia public hospitals. After at least 15 minutes post therapy and confirmed hemodynamically stable, patients were asked to score their comfort level on a visual analog scale (VAS). Next, their external behaviour were evaluated using Kolcaba's Comfort Behavioural Checklist (CBC). The evaluation were completed by 43 males and 24 females. The general comfort level was moderate, with the VAS mean score of 75.82, SD 20.53 and the CBC mean score of 88.54, SD 7.35. In qualitative phase, the subset of 12 patients were interviewed to explore their experience throughout the therapy. The thematic analysis revealed six themes: comfort definition, impression, acceptance, changes and encounters (comfort and discomfort- unable to breath, entrapped, noise and insecure), wishes and hopes and closure. Despite of different impression on NIV helmet, patients shared similar comfort definition which led to the therapy acceptance. However, the changes and encounters during the therapy affect their overall experience and eventually influenced their tolerance and future therapy decision. The findings provide an overview and insight on comfort experience of the patients with helmet NIV, which indirectly provide a basis for therapy improvement.

Keywords: Acute Respiratory Failure, Comfort, Emergency, Non-invasive Ventilation Helmet, Tolerance, Preference

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