CURRENT TREND OF PHYSIOTHERAPY INTERVENTIONS FOR PATIENTS WITH TRAUMATIC BRAIN INJURY: A SYSTEMATIC REVIEW

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FACULTY OF HEALTH SCIENCES

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INTELLECTUAL PROPERTIES

PROJECT TITLE: CURRENT TREND OF PHYSIOTHERAPY INTERVENTIONS FOR PATIENTS WITH TRAUMATIC BRAIN INJURY: A SYSTEMATIC REVIEW

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The roots of the Faculty date back since 1996, when it was founded and placed under the Faculty of Applied Sciences. Several diploma courses were offered during this period of time. The separation with the Faculty of Applied Sciences and the inception of the Medical Degree at UiTM led to the restructuring of the faculty. In 2002, the Faculty of Medicine and the Faculty of Health Sciences agreed to merge, though this union was short-lived. New age for the Faculty of Health Sciences (Fakulti Sains Kesihatan, FSK) began in 2004, when it was re-established as a single institution and to date, more than 40 academic programs were offered and the number continues hence reflecting FSK as an institution having one of the most comprehensive health science programs in the country.

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ABSTRACT

Objective: To date, there are not known of the best standardized recommendations concerning physiotherapy interventions in the aspects of improving gait and activity daily of life (ADL). This literature review aimed to review the best current physiotherapy intervention for patients after traumatic brain injury (TBI). 

Methods: We searched seven databases; EBSCOhost, Web of Science, IEEE Xplore Digital Library, Science Direct, Proquest, Scopus and PubMed (limits: January 2005 to March 2016) for randomized controlled trials studies on physiotherapy interventions for traumatic brain injury patients. The methodological quality of studies was determined by the Physiotherapy Evidence Database (PEDro) scale.

Result: Six studies met the inclusion criteria according to gait and activity daily of life (ADL) outcome measures. As overall, majority of the results of the six studies showed an improvement in the outcome measures used in study especially the gait and ADL outcome measure; Zhao et al. (2015), Vanderploeg et al. (2008), Zhu et al. (2007) and Cuthbert et al. (2014). Two studies showed no differences between groups where the interventions used did not support the objective of the study; Leung et al. (2014) and Wilson et al. (2006) respectively.

Conclusion: There current trend of physiotherapy interventions were varied according to the age of the patients, the severity level of the TBI and the outcome measure used in the TBI patients rehabilitation. The best current physiotherapy treatments for TBI patients was the 100 Hz TEAS to reduce wrist spasticity. In future, research study should be conducted with larger sample size, more homogenous groups of subjects with more reliable and valid outcome measures to offer the best results and better outcome. Additionally, future research will be most beneficial when involving technology such as virtual reality and robotics.

Keywords: physiotherapy interventions, traumatic brain injury, current trend.