

# **Glasgow Coma Scale versus Full Outline of Unresponsiveness Scale in Predicting Discharge Outcomes of Traumatic Brain Injury**

## **Thesis**

*Submitted for Partial Fulfillment of the Requirement  
of Master Degree in Medical Surgical Nursing  
"Critical Care Nursing"*

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2019**

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2019**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

فَلَوْلَا

سَبَّاكَ لَا عِلْمَ لَنَا  
إِلَّا مَا هَلَمْتَنَا إِنْكَ أَنْتَ  
الْعَلِيمُ الْكَيْمُ

صَدَقَ اللَّهُ الْعَظِيمُ

سورة البقرة الآية: ٣٦



## **Acknowledgement**

*First of all, all gratitude is due to **Allah** Almighty for blessing this work, until it has reached its end, as a part of His generous help, throughout my life.*

*The success of any work depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this work.*

*I would like to express my deepest gratitude and sincere appreciation toward **Prof. Sahar Yassien Mohammad**, Assistant Professor of Medical-Surgical Nursing, Ain Shams University, who devoted much of her time, effort, and generous advice for the completion of this work. Words can never express my hearty thanks and indebtedness to her valuable advice, experienced guidance and encouragement.*

*My deep hearty gratitude and thankfulness are to **Assist. Prof. Dr. Dalia Ali Ameen**, Assistant Professor of Medical Surgical Nursing, Faculty of Nursing, Ain Shams University for her continued effort, support, sincere advice, suggestions and guidance during all phases of this work.*

*My deep hearty gratitude and thankfulness are to **Mr Mohamed Fawzy**, statistician for his continued effort, support, sincere advice, suggestions and guidance during the statistical phases of this work.*

*Last but not least I would like to express my deep thanks to all patients and their families who participated in this research and to all persons who directly and indirectly helped me by giving their time, effort and encouragement to the fulfillment of this work.*

*Eman Bakry Kassem*



## ***Dedication***

*I would to dedicate this thesis to my family, parents, brother, sisters, friends and colleague for their tolerance and sustained support.*

*Special thanks and apologize to my husband, daughter and son for their tolerance and sustained support.*

*Eman Bakry Kassem*

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## List of Abbreviations

Abb.	Full Term
<b>ABG</b>	Arterial blood gases
<b>BP</b>	Blood pressure
<b>°C</b>	Degree Celsius
<b>CBF</b>	Cerebral blood flow
<b>CNS</b>	Central nervous system
<b>CPP</b>	Cerebral perfusion pressure
<b>CSF</b>	Cerebrospinal fluid
<b>CT</b>	Computed tomography
<b>DAI</b>	Diffuse axonal injury
<b>DVT</b>	Deep venous thrombosis
<b>EDH</b>	Epidural hemorrhages
<b>F</b>	Fahrenheit
<b>FOUR scale</b>	Full Outline of UnResponsiveness scale
<b>g/kg</b>	Grams to Kilograms
<b>GCS</b>	Glasgow Coma Score
<b>H</b>	Hour
<b>Hrs</b>	Hours
<b>I.V</b>	Intravenous
<b>ICH</b>	Intracerebral hemorrhage
<b>ICP</b>	Intracranial pressure
<b>ICU</b>	Intensive Care Unit
<b>IVH</b>	Intraventricular hemorrhage
<b>L</b>	Left
<b>LOC</b>	Level of consciousness
<b>LOS</b>	Length of stay
<b>mg/dL</b>	Milligrams per deciliter
<b>mmHg</b>	Millimeter of mercury

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 *List of Abbreviations*

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Abb.	Full Term
<b>MTBI</b>	Moderate traumatic brain injury
<b>NPV</b>	Negative Predictive value
<b>PaCO<sub>2</sub></b>	Partial pressure of carbon dioxide
<b>PPV</b>	Positive Predictive value
<b>R</b>	Right
<b>ROC-curve</b>	Receiver Operating Characteristic curve
<b>SAH</b>	Subarachnoid hemorrhage
<b>Sens</b>	Sensitivity
<b>SDH</b>	Subdural hemorrhage
<b>Spec</b>	Specificity
<b>SPSS</b>	Statistical Package for Social Sciences SPSS
<b>STBI</b>	Severe traumatic brain injury
<b>T</b>	Tube
<b>TBI</b>	Traumatic brain injury

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## **Glasgow Coma Scale versus Full Outline of Unresponsiveness Scale in Predicting Discharge Outcomes of Traumatic Brain Injury**

### **Abstract**

Head injury is a major cause of mortality and morbidity across the world. Effective initial assessment and early intervention have a valuable importance in patients with traumatic brain injury (TBI), so as to ensure the maximum favorable outcome. This study **aimed to** compare between the Full Outline of UnResponsiveness Scale and the Glasgow Coma Scale in predicting outcomes in patients with traumatic brain injury. **Design** comparative research design was utilized. It was **conducted** at Neurosurgery Intensive Care Unit (ICU) in Al Fayoum University Hospital. **Study subjects** a purposive sample of 100 adult patient with TBI .**Tools:** three tools were used Tool I: "Patients Profile Data Form", Tool II: "Level of Consciousness Assessment" and Tool III: "Discharge Data Assessment Record". **Results:** GCS is superior to FOUR scale in prediction of length of stay while they are the same in prediction of motor disability and sensory impairment (physical impairment). FOUR scale is superior to GCS in prediction of mortality and full recovery without any squeal. It was **concluded** the FOUR scale provides more neurologic details than the GCS and is a valid predictor of outcome in patients with TBI thus it should be considered for future prognostic models. It was **recommended** that using of FOUR scale for predicting outcomes in patients with traumatic brain injuries is the better but it need a special training to be applicable.

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**Keywords:** Traumatic brain injury, Glasgow Coma scale, Full Outline of Unresponsiveness Scale, discharge Outcomes.