# The Outcomes in Stroke Patients After Rehabilitation (O.S.P.A.R.)

Christopher Seerattan, Christopher Seetahal. Isa-Ameerah Searles, Jada Sanchez, Kadeen Scott, Kyle Sharief, Shane Sieunarine,
Dr. Gerard Antoine, Dr. Koomatie Ramsaroop

[1]Department of Paraclinical Sciences, Faculty of Medical Sciences, The UWI

e: Kadeen.scott@my.uwi.edu veraram2000@yahoo.com

## Introduction

Stroke is the 3rd leading cause of death in Trinidad and Tobago and rehabilitation therapy is arguably the best management for this debilitating disease.

This study hoped to assess the outcomes of stroke patients after rehabilitation. Understanding these outcomes represent a valuable step in elevating the efficacy of stroke rehabilitation in Trinidad and Tobago. Subsequently, improving the lives of stroke patients and their families, as well as, reducing the burden on healthcare workers and institutions.

## Objectives

- To assess the Barthel index score of stroke patients during rehabilitation in the physiotherapy clinic at The Eric Williams Medical Science Complex (EWMSC).
- To analyze the common comorbidities among the stroke patients of the Eric Williams Medical Science Complex.

## Methodology

- A retrospective case series design was used, and data was collected from patients of the stroke rehabilitation department, EWMSC.
- Purposive Sampling was utilized. 203 patients were contacted and 110 gave consent.
- Unique Identifiers, who were unaffiliated with the research, contacted patients for consent and conducted data collection to maintain the confidentiality of all patients
- The data collected included patients' demographics, past medical and social history. Also collected were the results for their medical investigations upon intake, at 3 months and at 6 months.
- Data Analysis was done using IBM SPSS version 28.0

## Results

- Response Rate- 54.2%
- Age- <40 years- 9%
  40-65 years- 61%
  >65 years- 30%
- Gender- Female-45%
  Male- 55%
- Type or stroke- Ischemic- 87%
  Hemorrhagic- 13%

Figure 1: Displaying Comorbidities, Past Medical History and Social History for each Gender

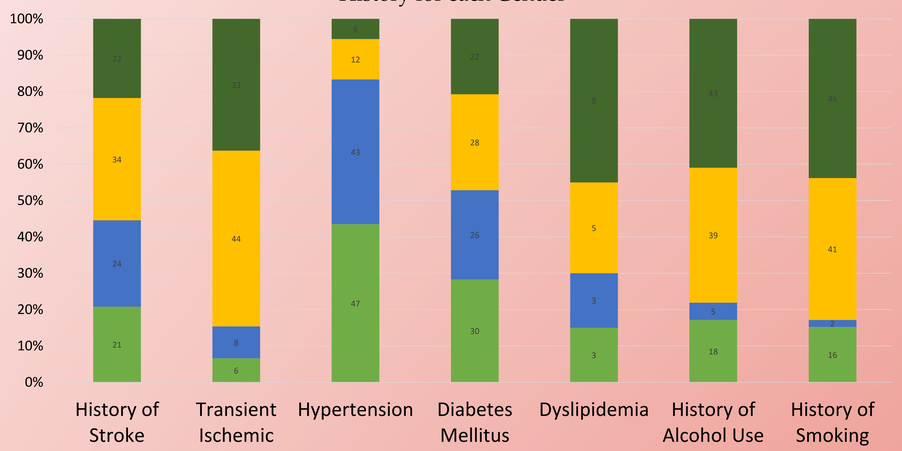
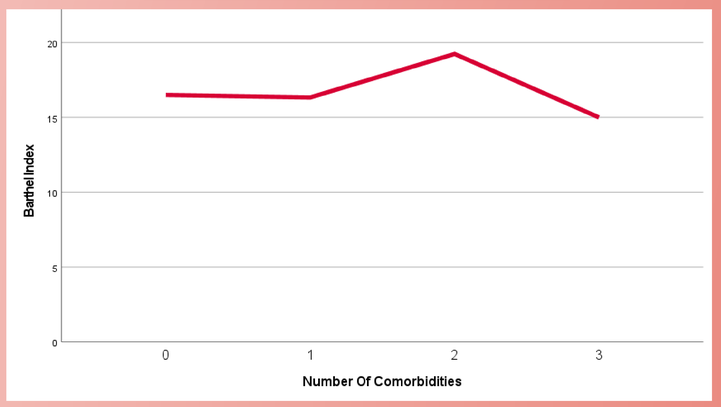



Figure 2: Displaying Patients level of Dependency at Intake, 3 Months and 6 Months

| Level of Dependency | Intake | 3 Months | 6 Months |
|---|---|---|---|
| Total Dependance | 6 | 0 | 0 |
| Very Dependent | 7 | 4 | 2 |
| Partially Dependent | 5 | 3 | 1 |
| Minimally Dependent | 12 | 1 | 0 |
| Independent | 45 | 26 | 14 |
| No available data | 25 | 66 | 83 |

Figure 3 Showing The relationship between the number of Comorbidities and Barthel's Index Score on Admission




## Discussion

It was observed that persons with 3 comorbidities were more functionally dependent than those with 2. This implies that there exists a direct correlation between the number of comorbidities and the Barthel Index score, where the more comorbid conditions the patient presented with, the lower their functional status, which may prolong the rehabilitation process.

The most prevalent comorbidity observed was hypertension, a known stroke risk factor, with 82% of the stroke patients found with this disease. These results imply that there should be more strategies to address these comorbidities and their consequences.

Limitations:

-Due to COVID-19 restrictions, written consent was difficult to obtain as the number of patients visiting EWMSC daily was reduced to limit the level of interaction amongst persons. Also, the technologically naive nature of the study population, consisting mainly of patients ages 50 to 80, limited our sample size.

- The lack of availability of certain data. Many patient files did not contain their electrocardiograms, echocardiograms, carotid dopplers and complete Barthel's Index scoring, affecting the quantity of data collected and limiting the scope of the subsequent analysis.

## Conclusion

This study confirms the fact that rehabilitation is a useful resource in the management of post-stroke patients. Also, geriatric, male and hypertensive patients are at greater risk for strokes and tend to have a longer recovery process.
From the results of this study, we recommend that health care resources be geared to facilitate the stroke patient with comorbidities who require multidisciplinary strategies for adequate functional status and morbidity outcomes.

### References

[1] Adeoye O, Nyström KV, Yavagal DR, Luciano J, Nogueira RG, Zorowitz RD, et al. Recommendations for the establishment of stroke systems of care: A 2019 update. Stroke [Internet]. 2019;50(7):e187–210. [cited 2022Jun21] Available from: http://dx.doi.org/10.1161/STR.0000000000000173
[2] Galanth S, Tressieres B, Lannuzel A, Foucan P, Alecu C. Factors influencing prognosis and functional outcome one year after a first-time stroke in a Caribbean population. Arch Phys Med Rehabil [Internet]. 2014;95(11):2134–9. [cited 2022Jun23]
Available:

### Acknowledgments

The O.S.P.A.R. team would like to thank Mr. Haille Ellis, Mr. Nicholas Mohammed, Dr. Melinda Nancoo, Dr. Christopher Romain, Dr. Michelle Trotman and Dr. Suneetha Anga for their generous and invaluable assistance provided throughout this project.