

## **Research Psychology Masters, University of Witwatersrand**



UNIVERSITY OF THE  
WITWATERSRAND,  
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**"Toxic Thoughts" –  
Impact of Chronic Kidney Disease on cognitive functioning  
and psychological well-being**

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## Abstract

### Background

Chronic Kidney Disease (CKD) is a reality faced by many around the world. There has been much physiological study around factors associated with CKD, as well as many studies surrounding the psychosocial impacts of the disease, with relatively less attention given to neuropsychological effects the disease can have on sufferers. This paper investigates the cognitive impacts as well as psychological impacts simultaneously, impacting on sufferers of End Stage Kidney Disease (ESKD).

### Methods

Sixteen medically stable patients aged ( $M = 40.56$ ,  $SD = 12.52$ ) years with ESKD, were investigated. Eight of the patients were evaluated before and after six months of successful kidney transplant, using the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), which assessed immediate memory, visuospatial / constructional, language, and attention. They were also tested on a brief symptom inventory (BSI 18) to assess depression and anxiety in these patients. A further eight who remained on dialysis, and had not undergone renal transplant were evaluated in the same manner for comparative purposes.

### Results

Between-group comparisons showed a statistically significant improvement in overall cognitive functioning, as well as in the specific cognitive domains of visuospatial / constructional, language and attention for participants who had undergone renal transplant surgery compared to their counterparts who had not. Results also found that there were no statistically significant differences between the levels of anxiety experienced between patients in the two groups. When assessing the differences in cognitive improvement within the transplant patient group before and after transplant, improvement in the delayed memory function of renal transplant patients post-transplant was found.

### Conclusion

These data show improvements in delayed memory function of patients having undergone renal transplant therapy, while also highlighting a continued decline of overall cognitive functioning in patients remaining on hemodialysis therapy.