

THE CKD EPIDEMIC IN THE AFRICAN CONTINENT: A SYSTEMATIC REVIEW

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INTRODUCTION AND OBJECTIVES

Chronic kidney disease (CKD) is emerging as an expanding public health problem in Africa. Strategies aimed at countering CKD epidemics in Africa depend on assessment of the burden of the problem and at setting up affordable early detection programs. This study aims at providing systematic evidence on the burden of CKD in the general population of countries of the whole African continent.

METHODS

MEDLINE and PUBMED databases were searched for articles without language or period restriction by sensitive search strategies focusing on CKD among general population. Articles were independently assessed by two reviewers and were included if they were based on the assessment of CKD prevalence in the general population of all African countries. Studies including patients affected by acute kidney injury, renal carcinoma, end stage renal disease; surveys on African American or focused on high risk categories (HIV, diabetic, hypertensive and lupus patients) were excluded from this review.

RESULTS

5363 references were retrieved. 5346 articles were excluded because they did not meet the inclusion and exclusion criteria. Thus, 17 studies (totaling 12885 individuals; age ranging from 12 to 95 years; 46% males) were included in the final analysis. The diagnosis of CKD was based on KDOQI (eGFR<60 ml/min/1.73 m²) in 70% of studies while the remaining 30% studies were based on the assessment of proteinuria (either dipstick or 24 hours proteinuria)

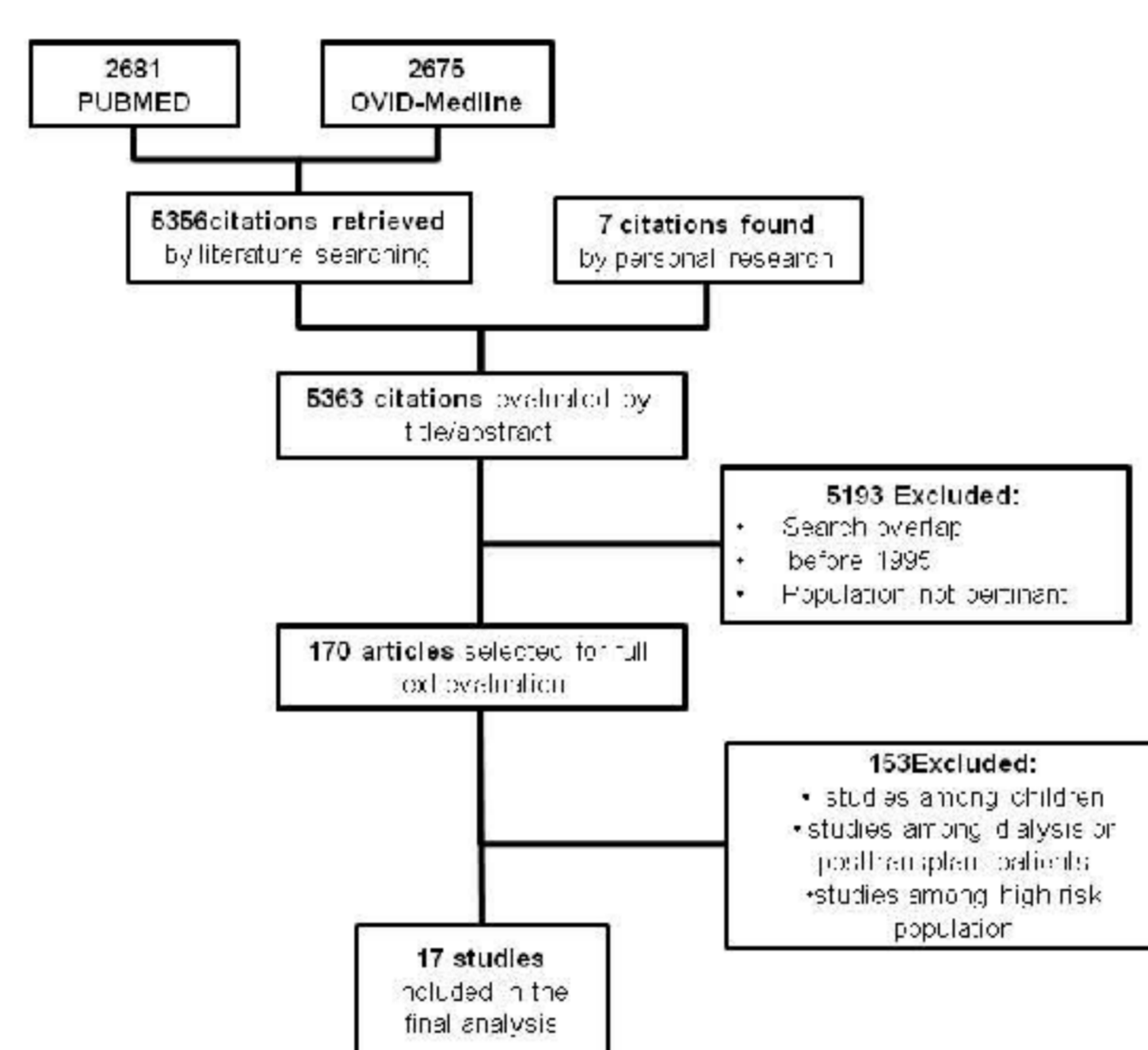


Fig 1: Flow chart of the study selection

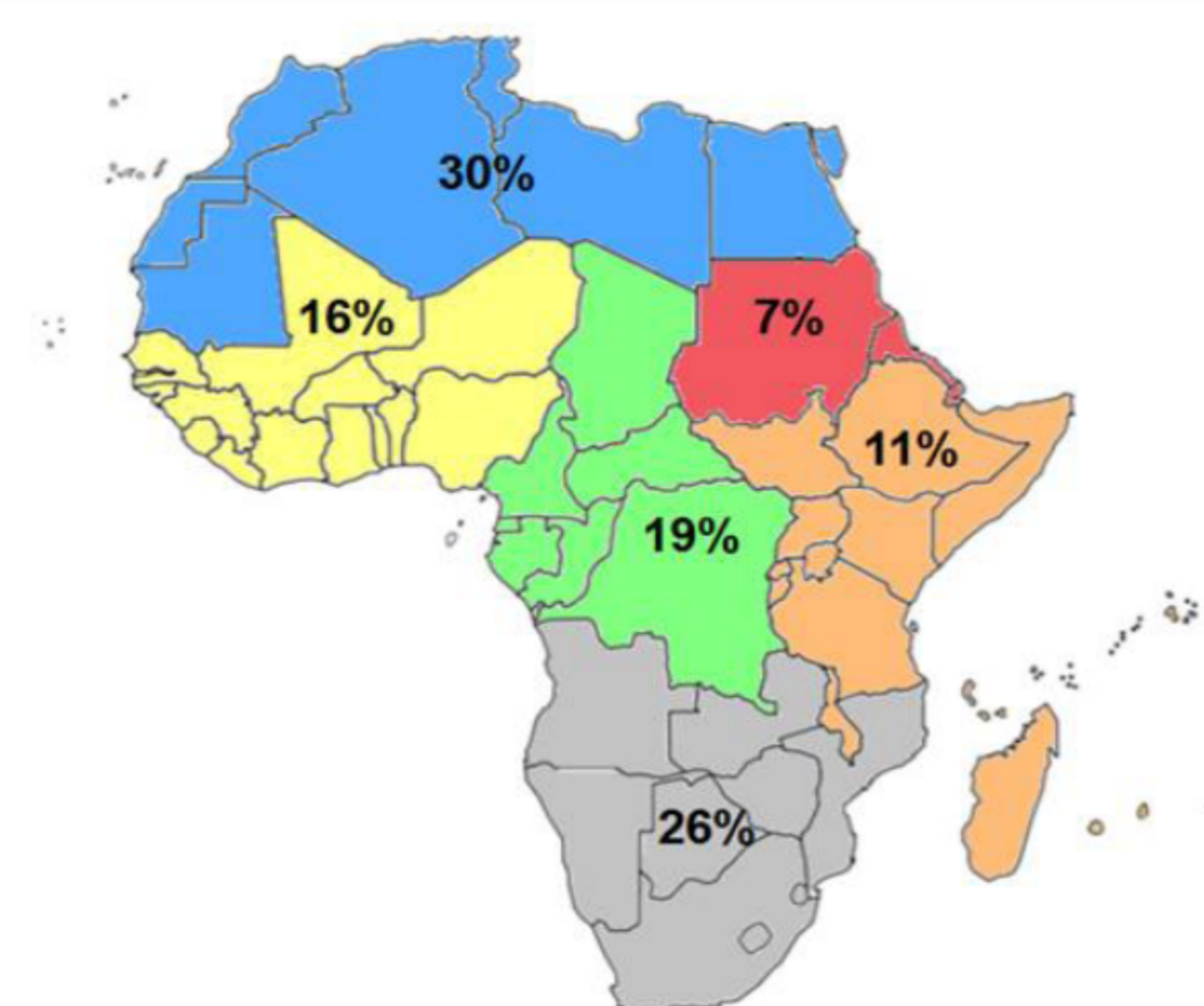


Fig 2: Prevalence of CKD in Africa

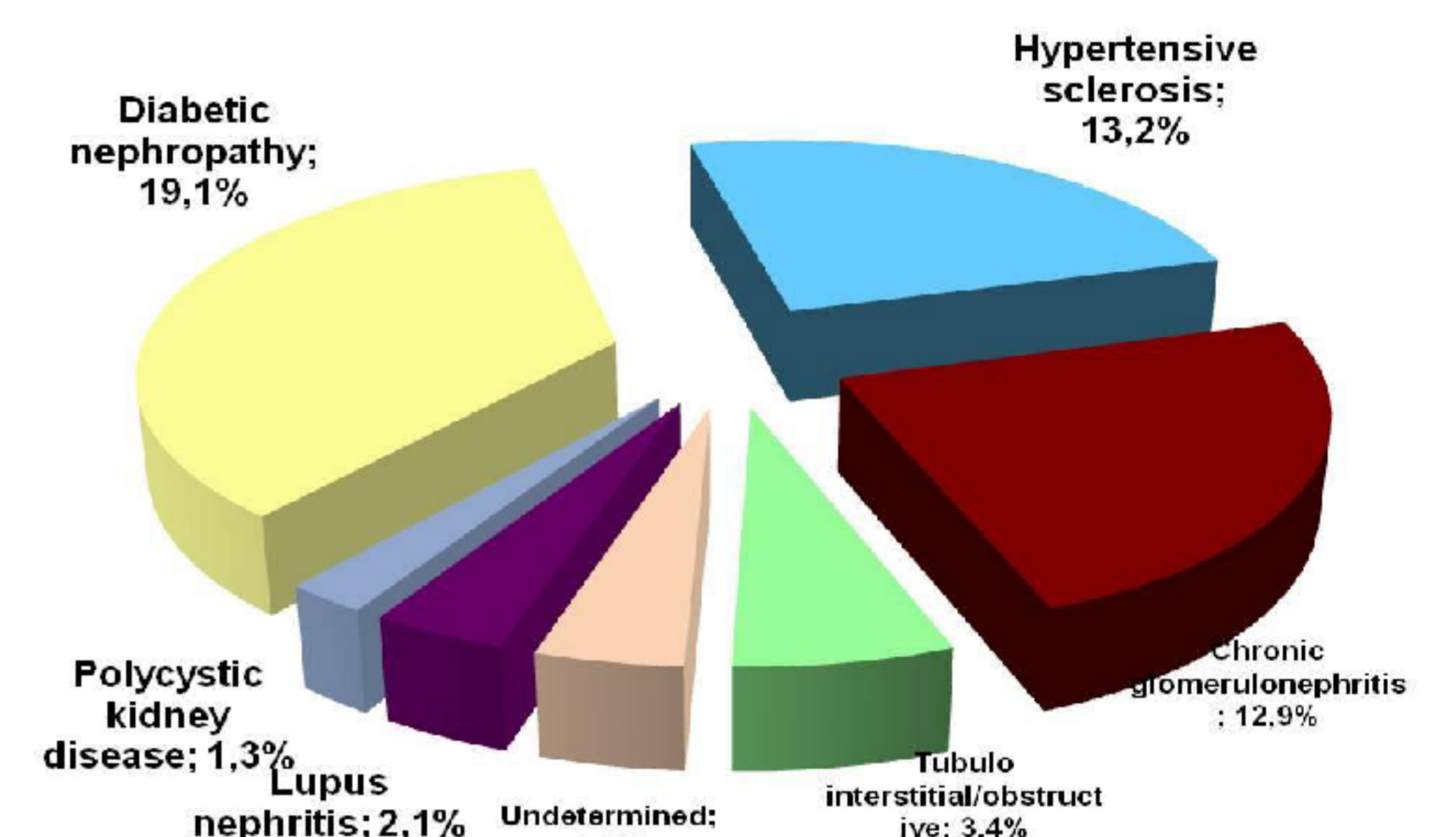


Fig 3: Pathophysiology of CKD forms

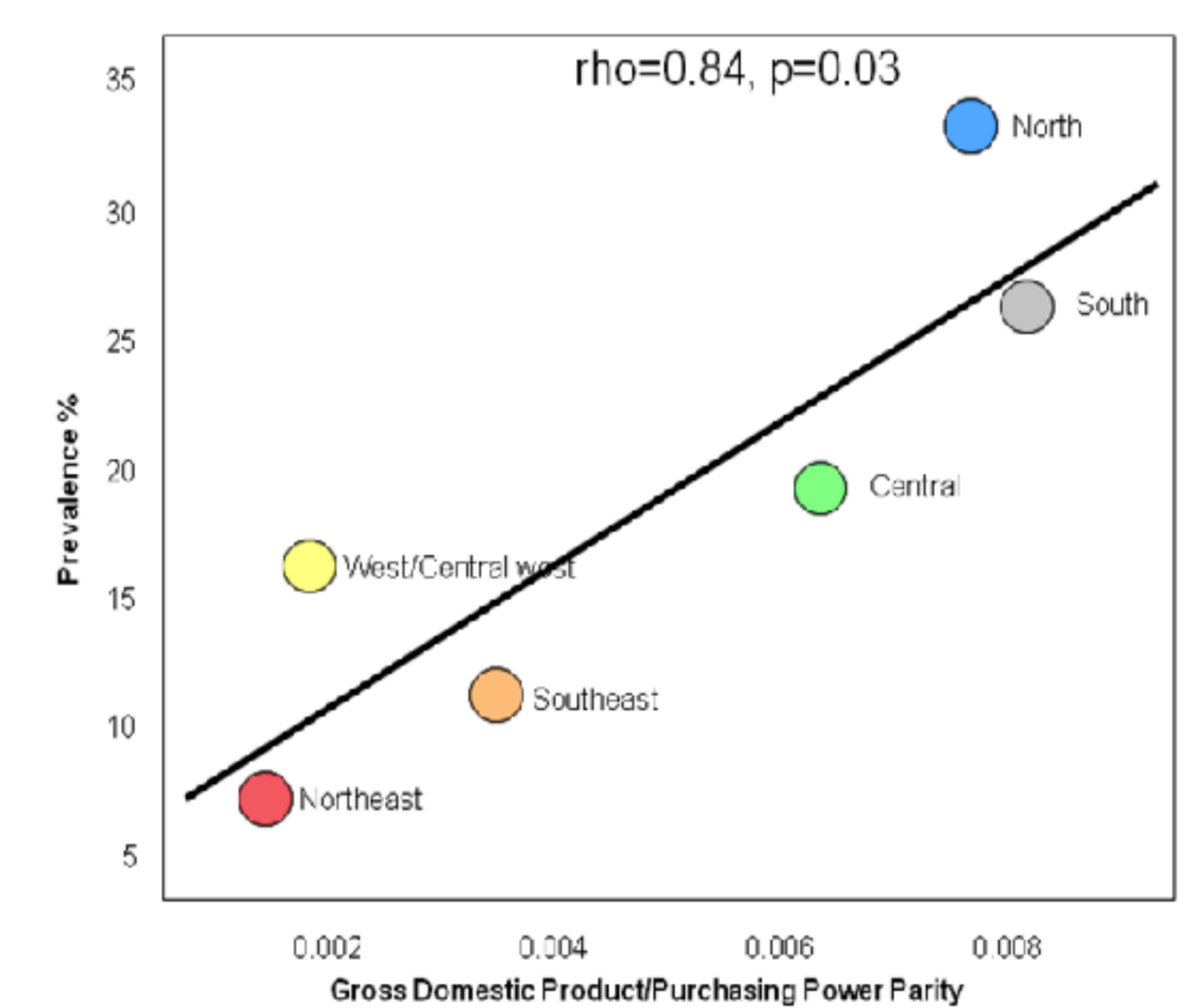


Fig 4: Correlation between CKD prevalence and GDP

CONCLUSION

The prevalence of CKD is higher in the North and South African regions as compared to the remaining areas of the continent. The prevalence of CKD in the six main geographical areas of Africa parallels the GDP in African countries. This parallelism points to environmental risk factors brought about by affluence as the dominant risk factor for CKD in the African continent

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