

# Prevalence of hemoglobin abnormalities in kindergartens of the city of Parakou (Benin) in 2013

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**ABSTRACT:**

**Introduction:** The hemoglobinopathy is a real public health problem in the world. The aim of this study is to determine the prevalence of children with abnormalities of hemoglobin in schools, especially kindergartens in the city of Parakou Republic of Benin.

**Methods:** This is a descriptive cross-sectional study, conducted in kindergartens in the city of Parakou in Benin republic and having concerned 690 children aged 2 ½ to 5 years. The hemoglobin electrophoresis was done using alkaline pH hydragel and the quantification of haemoglobin fractions were performed with Hyrys densitometer; in some cases the medium is reduced for precipitation test.

**Results:** Five types of Hb were identified: A, S, M, C and K probably Woolwich. Qualitative hemoglobinopathy was found in 31.45% of the study population. The Hb-S was the most frequent (16.52%) followed by hemoglobin C (15.65%). Hereditary persistence of hemoglobin F was associated with phenotypes AA, AC and SS in 1.16% of cases. The hemoglobinopathies were found in all the major ethnic groups in Parakou with a clear predominance among "*Lokpa*" (53.3%) and "*Adja*" (37.5%).

**Conclusion:** The hemoglobinopathy is a real public health problem in Parakou, it is necessary to establish or to legislate for mandatory testing for hemoglobinopathies at birth.

**Keywords:**

Hemoglobinopathies, screening, Benin