

# Distribution of the ABO and Rhesus Blood Groups in a Population of Namibian Blood Donors-Implications of Blood Transfusion

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## BACKGROUND

The distribution of ABO and Rh blood groups varies from one population to another attributable to underlying geographic, genetic and ethnic diversity. Despite the presence of a large number of blood groups, these two (2) blood groups play a major role in modern medicine, anthropology and genetic research. We conducted a study to determine the distribution of ABO and Rh blood groups among blood donors in a population of Namibia.

## METHODS AND MATERIALS

We carried out a retrospective cross sectional study among 809 Namibian blood donors aged between 16 to 65 years from the Namibia Blood Transfusion Services in Windhoek, Namibia. Data were extracted from the blood bank's database using systematic random sampling from all participants whose blood samples were tested using a slide agglutination test.

## RESULTS

More donors were young adults in the age group 17-31 years. Blood group O was found to be widely distributed (54%, n=445), followed by A (22.2%, n=180) and B (21.9%, n=177). Blood group AB had the least frequency (1.1%, n=9). Rhesus positive individuals were 92.3% (n=747). Ethnicity had an influence on both the ABO ( $p<0.001$ ) and Rhesus blood group type ( $p<0.001$ ), while gender had no influence on either the ABO ( $p=0.984$ ) nor Rhesus ( $p=0.888$ ) blood group types.

## CONCLUSION

The distribution of ABO in both Rh positives and Rhesus negatives was O>A>B>AB. We also found that ethnicity had a significant effect on the distribution of both ABO and Rhesus-D blood groups.

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