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### Serological Profiles of SARS-Cov-2 among Adult Outpatients and Caregivers of a Family Medicine Clinic in Northern Nigeria

*Profils Sérologiques du Sars-Cov-2 chez les Patients Adultes Externes et les Soignants d'une Clinique de Médecine Familiale dans le Nord du Nigeria*

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#### ABSTRACT

**BACKGROUND:** Serological evaluation is essential for investigating the extent of COVID-19 in the studied population and evaluating the potential effectiveness of serum antibodies as a protective factor against future disease.

**OBJECTIVE:** The study aimed to provide data on the seroprevalence and pattern of immune response to SARS-CoV-2 infection and the associated factors among outpatients and their caregivers.

**METHODS:** A cross-sectional study involving 208 patients and caregivers who presented at the Family Medicine Clinic. A structured self-administered questionnaire was used to collect data on sociodemographic and COVID-19-related factors. The SARS-CoV-2 antibodies were assayed with the Realy Tech Rapid Test Device. Inferential statistical analyses were used to determine the associations between SARS-CoV-2 antibody outcomes and other variables.

**RESULTS:** The ages of the participants ranged from 18 to 80 years, with a mean age of 38.87± 11.82 years and with female preponderance. The crude prevalence of anti-SARS-CoV-2 seropositivity was 20.7% (95% CI=1.14-1.28); of which 17.1% was for IgG, 2.9% for IgM, and 0.7% for both IgG and IgM. The overall corrected prevalence was 20.3%. The only identified predictor of anti-SARS-CoV-2 seropositivity in this study was the previous family history of COVID-19 infection (OR=36.548, CI=1.371-74.364, p=0.032).

**CONCLUSION:** The identified predictor and other important outcomes will be useful in forming strategies for the prevention and management of COVID-19 infection. **WAJM 2023; 40(9): 950–955.**

**Keywords:** Serological profile, SARS-CoV-2, Outpatients, Caregivers, and Northern Nigeria.

#### RÉSUMÉ

**CONTEXTE:** L'évaluation sérologique est essentielle pour déterminer l'étendue du COVID-19 dans la population étudiée et évaluer l'efficacité potentielle des anticorps sériques en tant que facteur de protection contre une maladie future.

**OBJECTIF:** L'étude visait à fournir des données sur la séroprévalence et le profil de la réponse immunitaire à l'infection par le SRAS-CoV-2 et les facteurs associés chez les patients ambulatoires et leurs soignants.

**MÉTHODES:** Il s'agit d'une étude transversale portant sur 208 patients et soignants qui se sont présentés à la clinique de médecine familiale. Un questionnaire structuré auto-administré a été utilisé pour recueillir des données sur les facteurs sociodémographiques et liés au COVID-19. Les anticorps anti-SRAS-CoV-2 ont été dosés à l'aide du dispositif de test rapide Realy Tech. Des analyses statistiques inférentielles ont été utilisées pour déterminer les associations entre les résultats des anticorps anti-SRAS-CoV-2 et d'autres variables.

**RÉSULTATS:** Les participants étaient âgés de 18 à 80 ans, avec un âge moyen de 38,87± 11,82 ans et une prépondérance féminine. La prévalence brute de la séropositivité anti-SARS-CoV-2 était de 20,7 % (IC à 95 % = 1,14-1,28), dont 17,1 % pour les IgG, 2,9 % pour les IgM et 0,7 % pour les IgG et les IgM. La prévalence globale corrigée était de 20,3 %. Le seul facteur prédictif identifié de la séropositivité anti-SARS-CoV-2 dans cette étude était les antécédents familiaux d'infection par COVID-19 (OR=36,548, CI=1,371-74,364, p=0,032).

**CONCLUSION:** Le facteur prédictif identifié et d'autres résultats importants seront utiles pour élaborer des stratégies de prévention et de prise en charge de l'infection par COVID-19. **WAJM 2023; 40(9): 950–955.**

**Mots-clés:** Profil sérologique, SRAS-CoV-2, patients externes, soignants et nord du Nigeria.

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Abbreviations: AKTH, Aminu Kano Teaching Hospital; AOR, Adjusted Odd Ratio; COVID-19, Coronavirus Disease 2019; FMC, Family Medicine Clinics; IgG, Immunoglobulin G; IgM, Immunoglobulin M; RNA, Ribonucleic Acid; RT-PCR, Reverse-transcription Polymerase Chain Reaction; SARS-CoV-2, Severe Acute Respiratory Syndrome Coronavirus 2; UK, United Kingdom; USA, United State of America; WHO, World Health Organisation.