



ABSTRACTS: VOLUME 8, SPECIAL ISSUE {8th Undergraduate Conference}

ADHERENCE TO CHILDHOOD VACCINATION SCHEDULES AND ITS BARRIERS AND ASSOCIATED FACTORS AMONG CAREGIVERS IN GAZA DURING THE WAR: A CROSS-SECTIONAL STUDY

Samar Alshorbaji¹, Yazid Abu Sheha¹, Aya Obaid¹, Lina Okasha¹, Ali Abu Sweireh¹, Yazan Abu Daqqa¹, Meram Mohammed Ali Azzani², Ayda Helles¹

Supervisors: Dr. Meram Mohammed Ali Azzani², Dr. Ayda Helles¹

¹ Faculty of Medicine, Al-Azhar University, Gaza, Palestine

² Public Health Medicine Department, Faculty of Medicine, Universiti Teknologi MARA (UiTM), Selangor, Malaysia

Abstract

Background: The ongoing armed conflict in Gaza has severely disrupted the healthcare system, creating major challenges to the delivery and utilization of essential health services, including routine childhood immunization. Extensive damage to health infrastructure, population displacement, insecurity, and transportation barriers have significantly limited access to vaccination services. Despite historically high immunization coverage prior to the war, these disruptions have increased the risk of missed and delayed vaccinations, thereby increasing children's vulnerability to vaccine-preventable diseases. In such fragile settings, adherence to vaccination schedules is no longer determined solely by caregiver knowledge or attitudes, but is increasingly shaped by conflict-related barriers and shifting sociodemographic conditions.

Objectives: This study aimed to assess the prevalence of adherence to childhood vaccination schedules among caregivers in Gaza during the war, as well as its associated barriers and sociodemographic factors.

Methods: A cross-sectional study was conducted among 475 caregivers of children aged 0–24 months across multiple governorates in Gaza. Data were collected on sociodemographic characteristics, vaccine-specific adherence, overall vaccination adherence, and perceived barriers. Adherence was defined as each vaccine dose being administered within the recommended schedule, allowing a maximum delay of 30 days. Bivariate analysis using Pearson's chi-square test was employed to examine associations between adherence and explanatory variables.

Results: The overall vaccination adherence rate was 73.6% (n = 348/473). While adherence to birth doses remained high (BCG: 97.3%; Hepatitis B: 96.8%), a marked longitudinal decline ("adherence decay") was observed, with adherence decreasing from 80.9% to 55.6%, and reaching approximately 10% at the 18-month booster stage. Child age group was the strongest predictor of non-adherence (p < 0.001), with the steepest decline occurring between the 0–6-month (93.6%) and 7–12-month (54.5%) groups. Additional



factors significantly associated with lower adherence included place of residence ($p = 0.013$) and current housing status ($p = 0.021$), with Southern Gaza and public shelters showing the lowest rates. Among non-adherent caregivers, access-related barriers—such as long distances, lack of transportation, and damaged roads—were the only barrier cluster significantly associated with non-adherence ($p = 0.005$). Notably, all non-adherent caregivers ($n = 125$) emphasized the importance of childhood vaccination.

Conclusion: Despite extreme challenges, caregivers demonstrate strong positive attitudes toward childhood vaccination. However, a significant immunity gap is emerging among children aged 7–24 months, posing an urgent public health risk. Immediate implementation of mobile vaccination units, age-specific catch-up campaigns targeting the 7–24-month group, and conflict-resilient digital immunization systems is essential to prevent further deterioration in population health.

Keywords: Vaccination adherence; Childhood immunization; Gaza conflict; Access barriers; Conflict-affected settings; Public health emergencies.