

## ABSTRACT

**Background:** Immunisation is a process of making an individual resistant to infections by administering specific vaccines. Currently immunisation coverage is very high in the country although vaccine acceptance issues are reported from across the globe and also within the country.

**Objective:** To describe childhood vaccine acceptance and contributory factors with perceived solutions among caregivers of children under five years attending outpatient department (OPD) in Lady Ridgeway Hospital (LRH)

**Methods:** A hospital based descriptive cross sectional study was conducted enrolling 405 caregivers of children 5 years or less attending to OPD of LRH using the systematic random sampling technique. A pre-tested interviewer administered questionnaire was used for data collection. The SPSS version 26 was used for data analysis. Chi square test with 'p' value < 0.05 was used to determine associations with statistical significance.

**Results:** Out of all caregivers 97.3% had vaccinated their children with all the vaccines recommended for the children's age according to the EPI schedule with immunisation coverage of 100% for all the vaccines except for JE and DPT4+OPV4 vaccines (95.9% and 98.7%). In 46.2% of the children in the study sample at least one vaccine was given delayed. Age appropriateness of immunisation was above 80% for all the vaccines in the EPI schedule except for DT5+OPV5 vaccine. The proportion of caregivers who have chosen to vaccinate their children only from the private sector was 6.2%. Having only one child in the family ( $p = 0.014$ ), age of the caregiver being less than thirty years ( $p = 0.031$ ), highest educational attainment of the caregiver above G.C.E. A/L ( $p = 0.006$ ) and having good knowledge on vaccine acceptance ( $p = 0.013$ ) were the factors that were associated with age appropriateness of immunisation with statistical significance. Age of the caregiver more than 30 years old ( $p = 0.001$ ), mother being the caregiver ( $p = 0.001$ ) highest educational attainment of the caregiver above G.C.E. A/L level ( $p = 0.001$ ) were the factors that were associated with age appropriateness of immunisation with statistical significance. Attitudes of the caregivers were associated with mother being the caregiver ( $p = 0.001$ ) and caregiver being unemployed ( $p = 0.0465$ ) in a statistically significant manner. The commonest source of information on

immunisation was PHM (84.7%) and least common source of information was web sites (3.2%) Majority of the caregivers were satisfied with the service provided by the PHM. Caregivers need of more information on vaccines, and vaccination and AEFI. They also want the doctors to be more involved in childhood immunisation activities and avoid missed opportunities on immunisation for illnesses and they also perceive that healthcare staff need to be more polite during vaccination service provision.

**Conclusions and recommendations:** The current study revealed that although immunisation coverage is high, age appropriateness of immunisation was not as high as immunisation coverage. Recommend remedial measures to minimise delays in immunisation especially with the COVID 19 pandemic situation in the country and also awareness programmes which deliver proper health messages to caregivers using innovative methods and newer technologies. Also we recommend behavioural ethics to be included in training programmes of public health staff and medical officers in the curative care to be more involved in childhood immunisation activities for opportunistic vaccination during health care provision in other diseases.

**Keywords:** Vaccine Acceptance, contributory factors, perceived solutions, under five years