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**PREVALENCE OF ASYMPTOMATIC BACTERIURIA AND ASSOCIATED
FACTORS AMONG PREGNANT WOMEN IN NAIROBI CITY COUNTY,
KENYA**

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*Prevalence of asymptomatic
bacteriuria and associated*



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DECLARATION

This research thesis is my original work and has not been presented for a degree award in any other University or for any other award.

Signature Date: ... 22nd March, 2023

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We confirm that the work reported in this thesis was conducted by the candidate under our supervision as the University Supervisors.


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ABSTRACT

Asymptomatic Bacteriuria is an infection of the urine due to bacteria that causes no signs or symptoms of urinary tract infection and is known to affect 2% to 15% of pregnancies. ASB is the second most common cause of maternal death in pregnant women after anaemia. Primary clinical forms of urinary tract infection are asymptomatic Bacteriuria (ASB), pyelonephritis, and cystitis, which, if left untreated, may result in severe fetal and maternal complications, including pyelonephritis, low birth weight fetus, preterm labour, or fetal mortality. The purpose of the study was to establish the extent of ASB, knowledge, and major-related factors in pregnant women attending ANC in selected Embakasi Central sub-county hospitals. Data on ASB was unavailable in DHIS; hence there was a need to fully elucidate the prevalence of asymptomatic Bacteriuria to develop treatment guidelines that can fully manage asymptomatic Bacteriuria and formulate policies for the Nairobi County government on the same. The research was Nairobi County facility-based empirical and descriptive cross-sectional study. Purposive sampling was done for Embakasi central sub-county due to its high prevalence of UTI compared to other sub-counties in Nairobi County. The researcher applied cluster and random sampling, with a sample size of 369 people recruited. Urine culture of randomly selected ANC women, KII, and questionnaires were used in data collection. Data was cleaned, coded, and entered into SPSS Version 24. Descriptive and inferential statistics (t-test and chi-square) were derived from quantitative data. Thematic analysis was done for qualitative results. The prevalence of ASB among expectant mothers in Embakasi central sub-county, Nairobi County, was 21.5%, with 11.2% of them being in the first trimester. The primary causative bacteria organisms of ASB isolated in the study were *E. coli* at 48%, followed by *S. aureus* at 28%. The expectant women mean it was 26 years (Range=18-41, SD=5). The occurrence of ASB was significantly higher in the first trimester compared to the other trimesters ($\chi^2=18.07$, $df=2$, $p=0.000$, OR = 8.880, 95% CI [3.736, 21.106], $p=0.000$). The prevalence of ASB was significant among Christians compared to Muslim women ($df=1$, $p=0.0020$). This study found a significant link between knowledge of ASB and ASB prevalence, with women who have never heard of ASB being more vulnerable ($\chi^2=51.078$, $df=1$, $p=0.000$, OR = 13.332, 95% CI [5.119, 34.724], $p=0.002$). It was established that families with more members were significant to ASB (OR = 0.742, 95% CI [0.563, 0.978, 8.756], $p=0.034$). However, the type of toilet, availability of toilet, and frequency of toilet cleaning were not significantly linked to ASB. Perceived cost and availability of screening services were found to significantly influence ASB among the expectant women surveyed ($\chi^2 = 9.376$, $df = 1$, $p = 0.002$, OR = 3.743, 95% CI [1.600, 8.756], $p=0.002$). In the present study, past history of ASB screening, taking enough water, history of UTI and pre-eclampsia were not linked to ASB prevalence. The prevalence of ASB was higher among those who had never received health education on ASB than those who had been taught about ASB. This suggested a strong link between health education and the occurrence of ASB. In this study, past history of ASB screening and amount of water taken was not associated. This study recommends routine urine culture, improvement of knowledge on ASB, and health education to reduce ASB prevalence.