

Prevalence and Risk Factors of Urolithiasis Among the Population of Saudi Arabia: A Cross-Sectional Study

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ABSTRACT

Diets in the Gulf region contain three times more oxalate and less calcium than in Western countries, increasing the risk of kidney stones. This study aims to assess how well people in Saudi Arabia understand kidney stones, including their causes, symptoms, prevention, and treatment options. This is an online survey study that was conducted in Saudi Arabia between November 2024 and January 2025. The questionnaire tool examined public awareness and perception of renal stone disease: symptoms, risk factors, prevention, and treatment. Multiple logistic regression was performed to identify predictors of good knowledge. A total of 524 patients were included in the analysis. Around 7.4% of the participants reported previous history of urolithiasis. Only (181, 34.5%) had a family history of the condition. The total mean score for the sample was 9.85 ± 2.18 out of 15, indicating a moderate level of knowledge, which was attained by 41% of the sample. Individuals working in the medical fields had significantly higher odds (odds ratio (OR) = 1.66, 95% confidence interval (CI): 1.10-2.49, $p = 0.015$) compared to those in other occupation. Additionally, having other conditions was significantly associate with higher odds (OR = 2.62, 95% CI: 1.38-5.01, $p = 0.003$). The findings suggest moderate public awareness of renal stone disease in Saudi Arabia, with significant gaps in recognizing risk factors and prevention strategies. Sociocultural influences, occupational background, and prior health experiences play a role in shaping knowledge, while persistent myths highlight the importance of culturally tailored education. Leveraging digital platforms, community networks, and healthcare professionals can help reduce the growing burden of urolithiasis.

Keywords: Kidney stone; Prevalence; Risk Factors; Urolithiasis

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