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# Academia Open



*By Universitas Muhammadiyah Sidoarjo*

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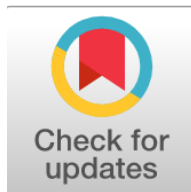
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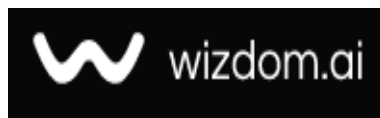
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## Pap Smear Performance Among Women in Basrah Cervical Screening

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### Abstract

**General Background:** Cervical cancer remains a leading cause of cancer-related mortality among women worldwide, particularly in developing countries where early detection programs are limited. **Specific Background:** The Papanicolaou (Pap) smear is a widely used, cost-effective screening method for detecting precancerous and cancerous cervical lesions. Despite its proven utility, misreporting and limited access continue to challenge accurate diagnosis in many regions. **Knowledge Gap:** There is limited data on the performance of Pap smear testing in Iraq, especially regarding sociodemographic factors influencing abnormal results. **Aim:** This study evaluates the performance of Pap smear tests among women attending the early detection cervical cancer screening center in Basrah and examines associations with sociodemographic characteristics. **Methods & Results:** A record-based cross-sectional study of 677 women from 2013–2015 showed 60.7% normal results, 18.8% LSIL, 4.3% HSIL, and 1–1.2% other abnormalities. Abnormal results were more prevalent in women aged 40 and above and were significantly associated with passive smoking, parity, and duration of marriage. **Novelty & Implications:** This study provides the first detailed insight into Pap smear performance in Basrah, highlighting population-specific risk factors that can guide targeted screening and early intervention strategies.

### Highlights:

- First evaluation of Pap smear performance in Basrah population.
- Abnormal results associated with age, parity, and passive smoking.
- Provides evidence for targeted cervical cancer screening programs.

**Keywords:** Pap Smear, Cervical Cancer, Screening Performance, Basrah, Women Health

## Introduction

Ten percent of cancer deaths in the US are from cervical cancer, which is the second most common cause of cancer death after breast cancer. [1] About 11270 new instances of cervical cancer were diagnosed in the US in 2009, and 4070 fatalities were attributed to the disease. [2].

Before the age of 35, half of women with cervical cancer receive a diagnosis. [3]. While the incidence is declining in industrialized nations, it is still increasing in emerging nations. [4] In developing nations, almost 80% of cervical cancer cases occur. [5]

The most popular and economical screening technique for cervical cancer detection is the Papanicolaou test, which has also proved successful in lowering the cancer's incidence as well as the rates of morbidity and death among women who have the disease. [6]. The incidence rates of cervical cancer have been reduced considerably with screening programs, which, in combination with HPV vaccination, may offer a promising way to lower the global burden of this disease [7].

Because cervical cancer has a lengthy pre-invasive phase, it can be avoided. [8] The Pap smear test is frequently used to diagnose cervical intraepithelial lesions, which typically show no clinical symptoms. [9] The sensitivity of cytology tests was 51% for detecting precancerous lesions, 47-62% for cervical intraepithelial neoplasia grades 1-2, and 59-60% for specificity. [10] Every year, almost 30% of new instances of cervical cancer are in women who had a Pap test, but the results were misreported as normal because of mistakes in sample, fixation, and interpretation. The resources required to perform the Pap smear as a screening method for cervical abnormalities are sometimes lacking in underdeveloped nations. [9] Due to the high incidence of cervical cancer, different methods have been pursued. Acetic acid Direct Visual Inspection (DVI) has been more popular recently. Patients will save money and time by using the DVI approach, which does not require laboratory facilities and yields results in a single visit. [9], in contrast to alternative methods. It had a sensitivity of 66-96% and a specificity of 64-98%. [11]

The risk of cervical cancer is high among 8.21 million women in Iraq who are 15 years of age or older. According to current estimates, 311 women receive a cervical cancer diagnosis each year, and 212 of them pass away from the disease. In Iraq, cervical cancer is the tenth most common type of cancer and the seventh most common among women aged 15 to 44. The estimated Age Standardized Incidence Rate (ASIR) /100000 women was 2.8. [12] While in Basra, cancer of the uterus and cervix ranked as the fourth female cancer over the period from 2005-2008, ASIR of cervical cancer was 5.4. [13]

## Methods

A record-based cross-sectional study involving the records of all women who attended the cervical cancer screening center in Basrah for a year, extending from 1st of January 2013, to 31st of December 2015. An agreement of the Ministry of Health and the Research Committee of the Basrah Health Directorate was obtained before starting the study. The study was carried out in the cervical cancer