
Royal College of Surgeons in Ireland - Medical University of Bahrain
RCSI
Knowledge of HPV infection and awareness of risk factors among University students in Bahrain
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October 2015
RCSI DEVELOPING HEALTHCARE LEADERS WHO MAKE A DIFFERENCE WORLDWIDE

Objectives

- To highlight the incidence and prevalence of cervical cancer on a national and international level
- To identify the risk factors surrounding cervical cancer etiology.
- To demonstrate the extent of HPV infection and awareness of cervical cancer risk factors among University students.
- To Identify the main barriers to women getting screened in Bahrain.

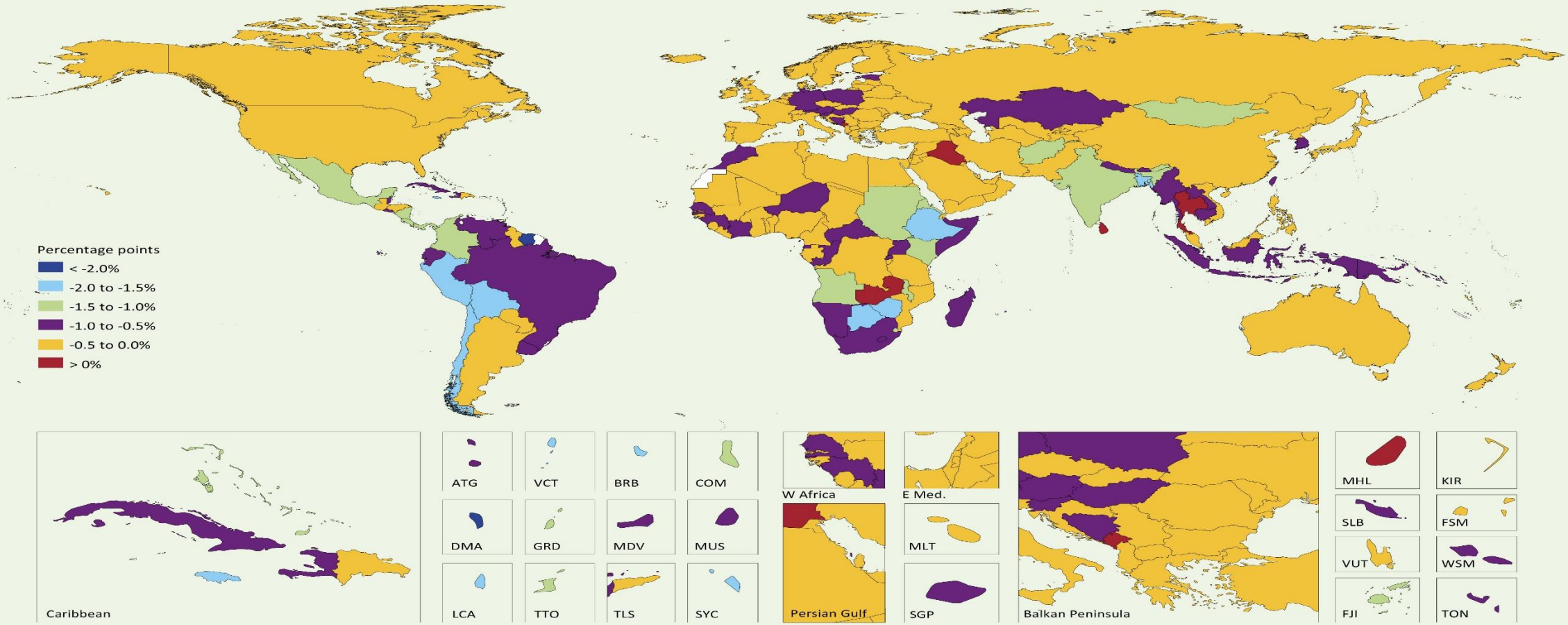


THE CHALLENGE AHEAD

PROGRESS AND SETBACKS IN CERVICAL CANCER

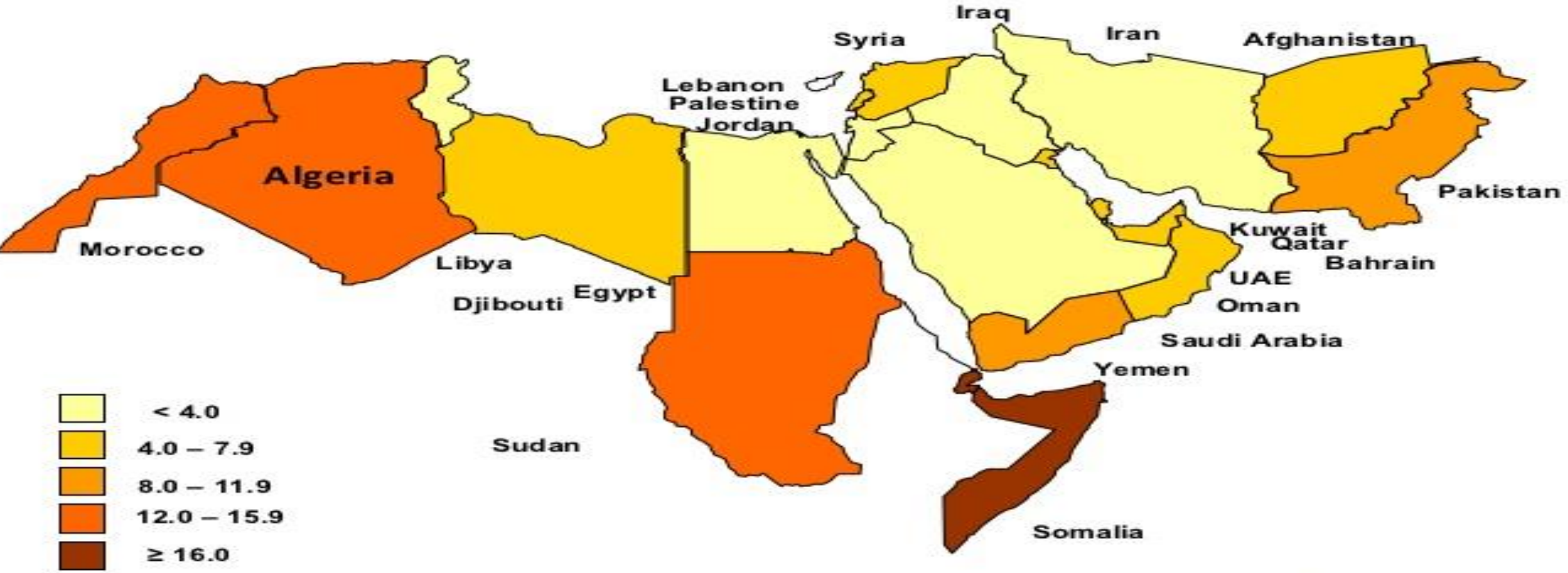
IHME

Change in the lifetime risk of death from cervical cancer, 1980 to 2010



www.healthmetricsandevaluation.org

Incidence of Cervical Cancer per 100,000 Females in Arab World



Map produced by Prof. Inas Elattar

Incidence of cervical cancer in GCC

- Cervical cancer ranked sixth in the GCC States women, however its incidence in the lowest rank worldwide.(1998-2005)

Qatar	8.4/100,000
Oman	7.8
Bahrain	6.5
UAE	5.9
Kuwait	4.5
KSA	2.2

GCC cancer incidence, 2009).

Incidence of cervical cancer in Bahrain

(estimated 2012)

Indicator	Bahrain	Western Asia	World
Annual number of new cancer cases	22	4,455	527,624
Crude incident rate	4.3	3.8	15.1
Age –standardized incident rate	5.9	4.4	14.0
Cumulative risk (%)at 75 years old	0.6	0.5	1.4

ICO Information Centre 2015

Cervical cancer mortality in Bahrain (estimation for 2012)

Indicator	Bahrain	Western Asia	World
Annual number of deaths	5	1,881	265,653
Crude mortality rate	1.0	1.6	7.6
Age-standardized mortality rate	1.9	1.9	6.8
Cumulative risk (%) at 75 years old	0.3	0.2	0.8

IC0 HPV Information center 2015

Key stats

- The HPV infection prevalence in Bahraini women was 9.8
- Cervical cancer **ranks as the 3**rd **cause** of female cancer in **Bahrain**.
- Cervical cancer is the **4**th **most common** female cancer in **women aged 15 to 44 years in Bahrain**.

ICO information center on HPV MARCH 2015

Etiology of Cervical Cancer

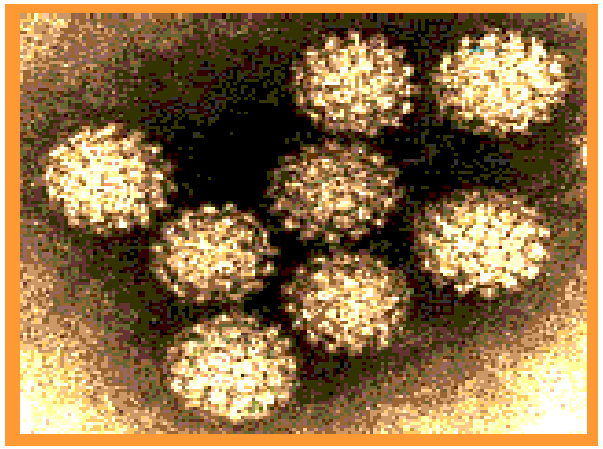
- Primary underlying cause of cervical cancer is infection with Human Papilloma Virus (HPV). Mostly due to sexual contact.

- Usually takes 10 to 20 years for precursor lesion caused by HPV (or dysplasia) to develop into invasive cancer (WHO, 2006).

- The spectrum of HPV- related genital disease ranges from external genital warts to cervical dysplasia and malignancy.

What is HPV?

- HPV is a common virus (the human papillomavirus)
- More than 100 type
- Some HPV types can cause genital warts
- Other types can infect a woman's cervix and lead to cervical cancer over many years



Risk Factors

❖Sexual contact

A women has a higher –than –average risk of developing cervical if she

- Has had multiple sexual partner
- Having sexual relation before the age of 18
- Unprotected sex

❖Smoking

❖Family history

❖Several pregnancy

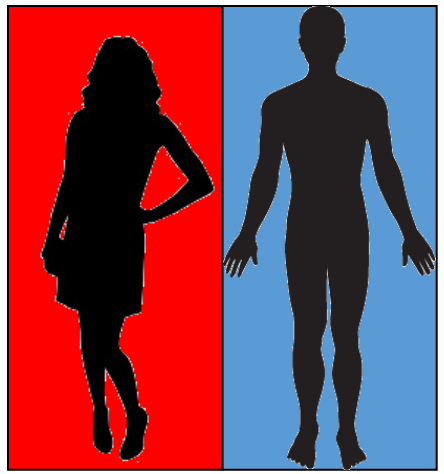
❖Weakened immune system

HPV related diseases in Male and Female

Female cancers:

- Cervix 100%
- Vulva 40%
- Vagina 40%
- Anus 90%
- Oro-pharynx 12%
- Other illnesses
- RRP (larynx wart in children) 100%
- Genital Wart 100%

HPV Attributable %



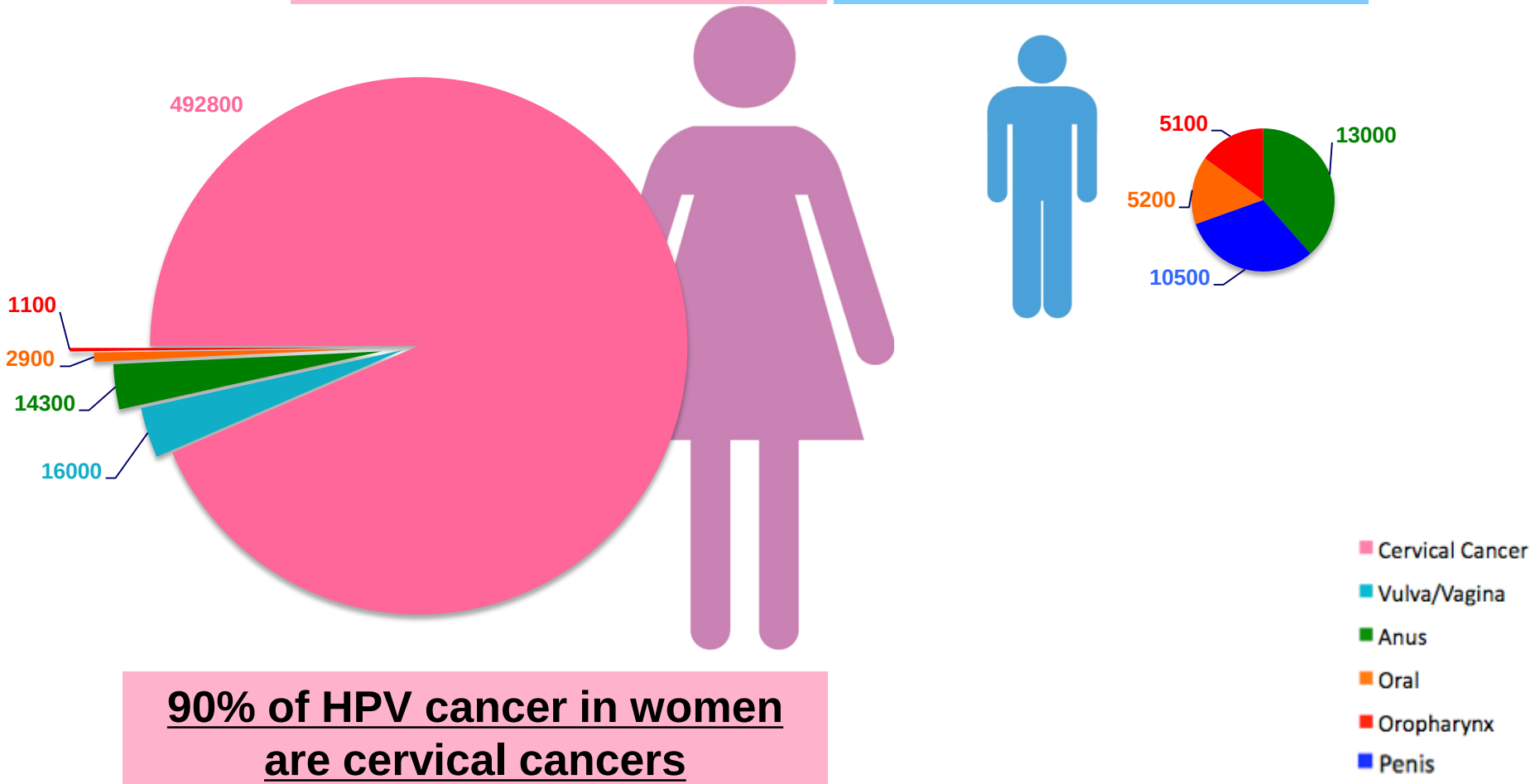
Male Cancers

- Anus 90%
- Penis 40%
- Oro-pharynx 12%
- Other illnesses
- RRP 100%
- Genital Wart 100%

HPV cancers
Highest burden in cervical cancer

HPV related cancer in women
527,100 cases WW/year

HPV related cancer in men
33,800 cases WW/year



90% of HPV cancer in women are cervical cancers

Adapted from Parkin DM, Bray F. Vaccine. 2006;24 Suppl 3:accessed 27.9.2015

Human Papillomavirus Vaccines



- HPV4 (Gardasil)
  - contains types 16 and 18 (high risk) and types 6 and 11 (low risk)
- HPV2 (Cervarix)
  - contains types 16 and 18 (high risk)
- Both vaccines are supplied as a liquid in a single dose vial or syringe
- Neither vaccine contains an antibiotic or a preservative, the vaccine is for both men and women

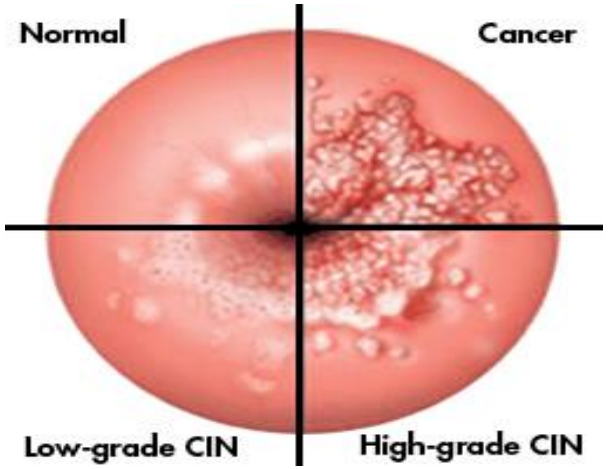


- **Female: Cervical, vaginal, vulvar Cancers and genital warts**

  Male: genital warts

Cervical cancer screening

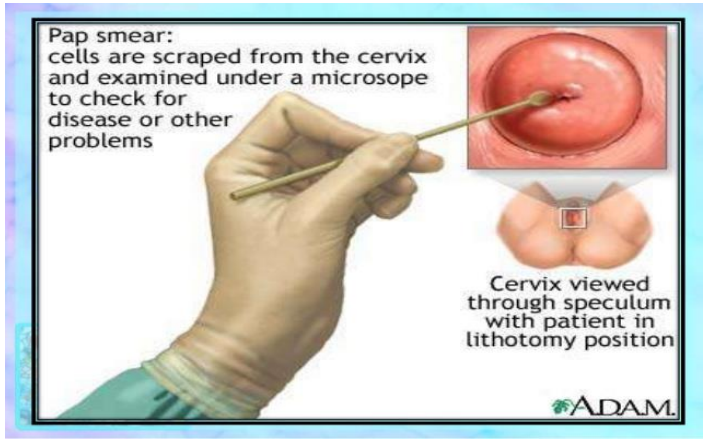
* **Cervical Cancer is the most preventable through screening and early vaccination**

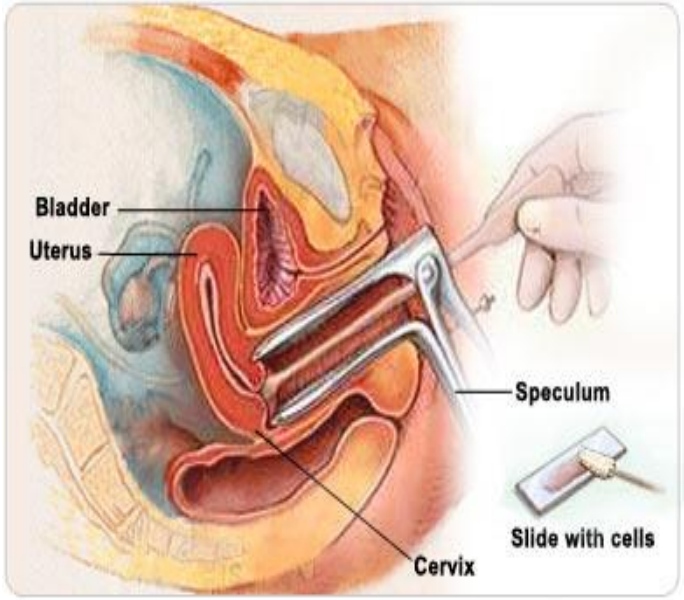


ASSESSMENT AND DIAGNOSTIC FINDINGS

PAP test

- Routine screening for cervical abnormalities can detect early-stage cancer and **precancerous** conditions that could progress to invasive disease. The process begins with a Pap test, also known as a Pap smear.





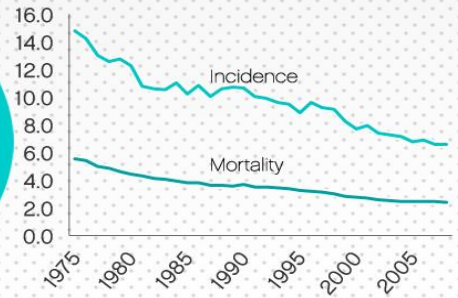
CERVICAL CANCER: A PREVENTION SUCCESS STORY

Much groundbreaking advancement has been made in the early detection and prevention of cervical cancer. A diagnosis of cervical cancer was once a death sentence; it is now a preventable and treatable illness.

The Prevent Cancer Foundation is proud to have played an important role in making cervical cancer preventable through funding cutting edge research, educating the public and supporting community outreach programs.

Declining Rate of Incidence & Mortality

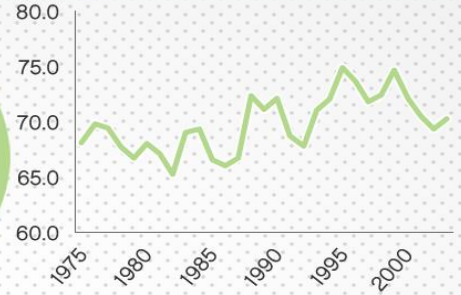
Death rate has declined by almost **70%** due to increased use of Pap tests



Rate per 100,000 women of all races and age-adjusted at year of diagnosis (incidence) and death (mortality)

Increasing 5-Yr Survival Rate

The 5-year survival rate is close to **75%** for women diagnosed with cervical cancer.



Percentage of women surviving 5-years subsequent to diagnosis of cancer

Death rate continues to decline by about **3%** each year due to increased screenings.

1905 Radical hysterectomies are used to treat cervical cancer patients, surgically removing the uterus, cervix and surrounding lymph nodes.

1928 Scientist George Papanicolaou develops the Pap test, the first-ever cancer screening test.

1943 The Pap test is introduced as part of routine testing, enabling doctors to detect and treat cervical cancer early.

1983-1984 Researchers discover that specific strains of human papillomavirus (HPV) are the likely cause of most cervical cancer cases.

Late 1990's The FDA approves two new liquid-based Pap tests that provide clearer samples for pathologists to more accurately review.

1999 The FDA approves a new DNA based test to better detect the high-risk strains of HPV that are known to cause cervical cancer.

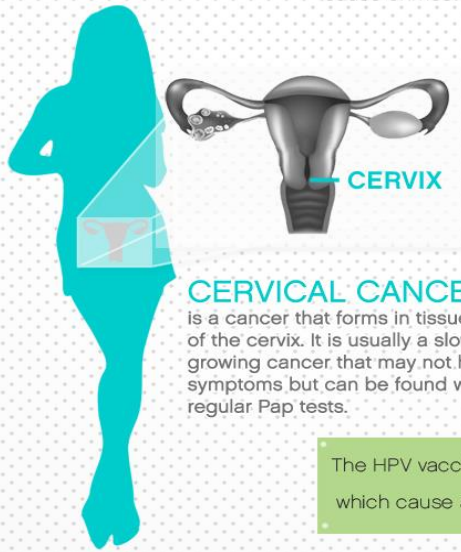
2006 The HPV vaccine is approved by the FDA for women aged 9 to 26. The vaccine prevents infection with two high-risk strains of HPV that are known to cause about 70 percent of cervical cancers.

2011 A CDC advisory committee recommends that boys also get the HPV vaccine, helping prevent the spread of the virus to women, and also protecting against anal, penile and oral cancer.

1900s 1920s 1940s 1960s 1980s 2000s

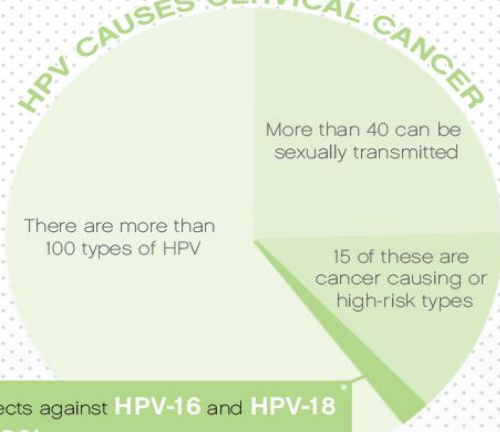
MAJOR RISK FACTORS

- Human papillomavirus (HPV)
- Intercourse at early age
- Multiple partners
- Lack of screening
- Smoking
- Weakened immune system (i.e. HIV)
- Overweight or obese
- Relatives with cervical cancer history



CERVICAL CANCER

is a cancer that forms in tissues of the cervix. It is usually a slow-growing cancer that may not have symptoms but can be found with regular Pap tests.



The HPV vaccine protects against **HPV-16** and **HPV-18** which cause about **70%** of cervical cancers worldwide.

This year, an estimated **12,170** women will be diagnosed with cervical cancer and a predicted **4,250** deaths of the disease.



Recommended age for **HPV VACCINATION** is girls aged 11 - 12.

Recommended age for **REGULAR SCREENING** is 21. Women under 21 should not be tested.

Infograph presented by prevent cancer FOUNDATION

SOURCE National Cancer Institute | CancerProgress.net

Prevention and treatment



When detected and managed at the very earliest stage, it has over a

93%

cure rate

F. Hoffmann-La Roche LTD :accessed 2015

The Intention of the study

- Assess University students knowledge and awareness of HPV infection and cervical cancer risk factors
- Evaluate students knowledge and awareness of cervical cancer preventive measure
- To identify if further training/education programme in cervical cancer risk factors and promote screening programme

Study Findings



Aim

Assess the knowledge of HPV infection and awareness of cervical cancer risk factors among RCSI-Bahrain University students

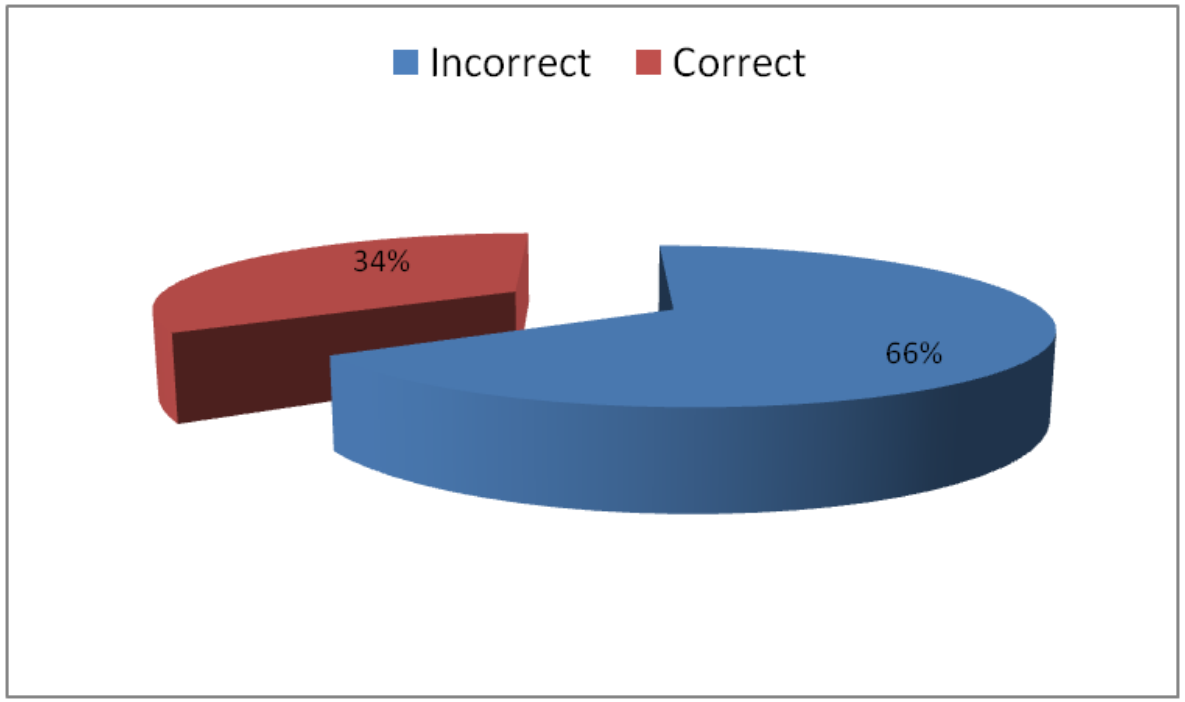
Number of participants = 192 female medical (n=44) nursing (n=148)

Response rate: 89%

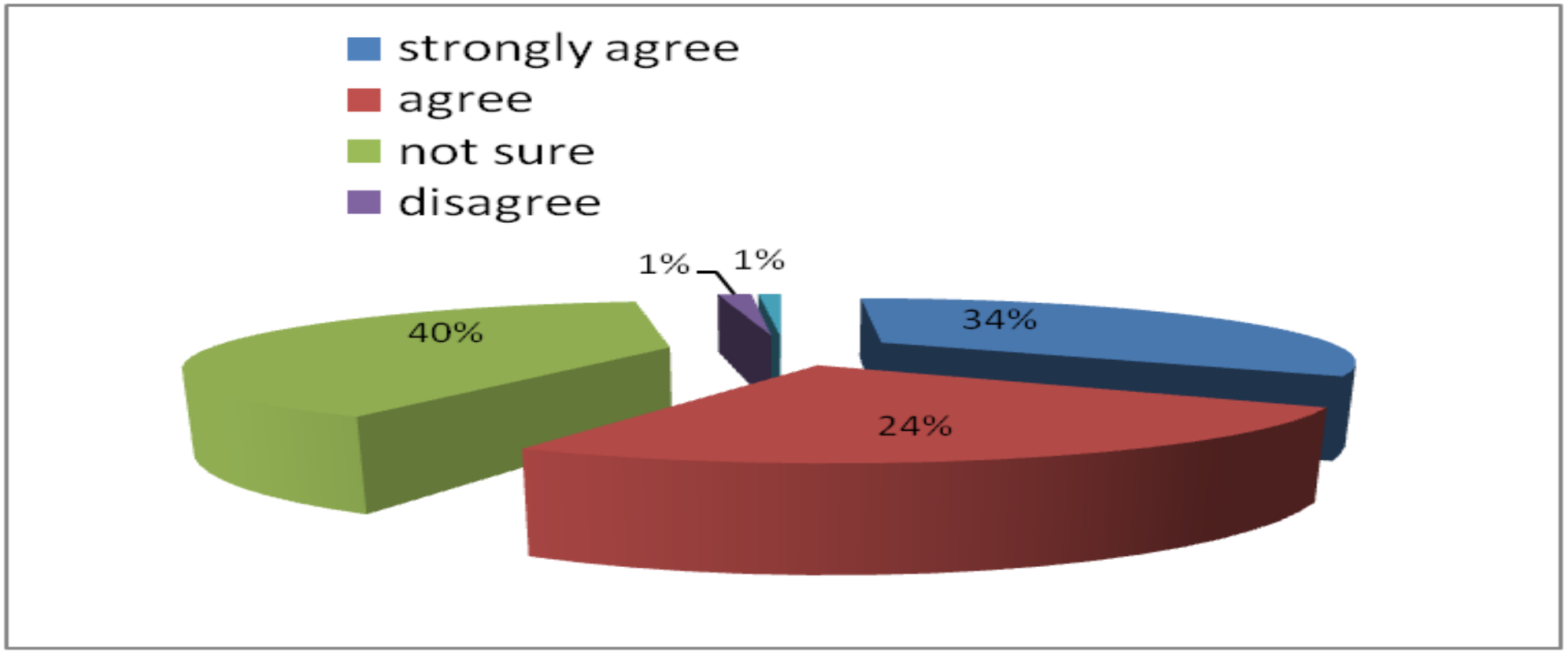
Research method: Cross –sectional

Quantitative data= Self –administered questionnaires

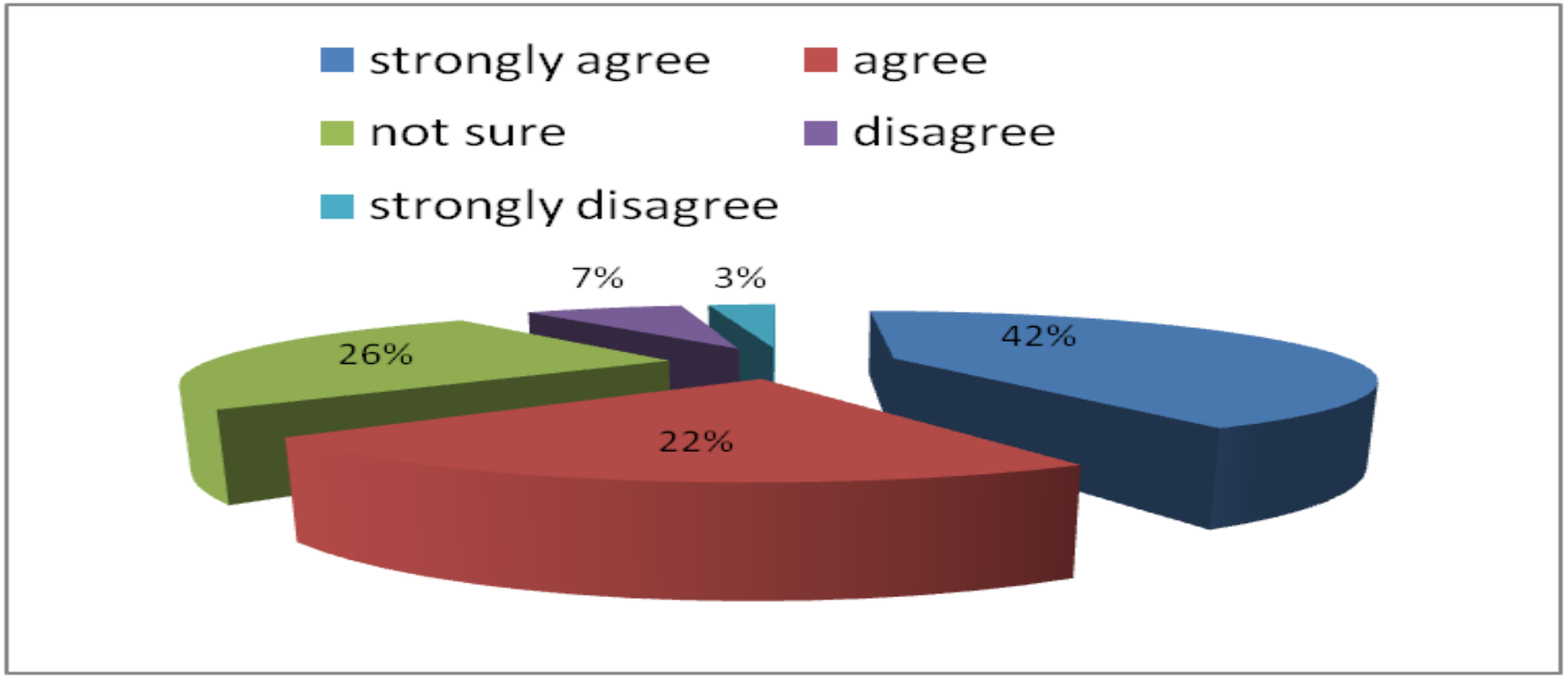
Date : June 2015



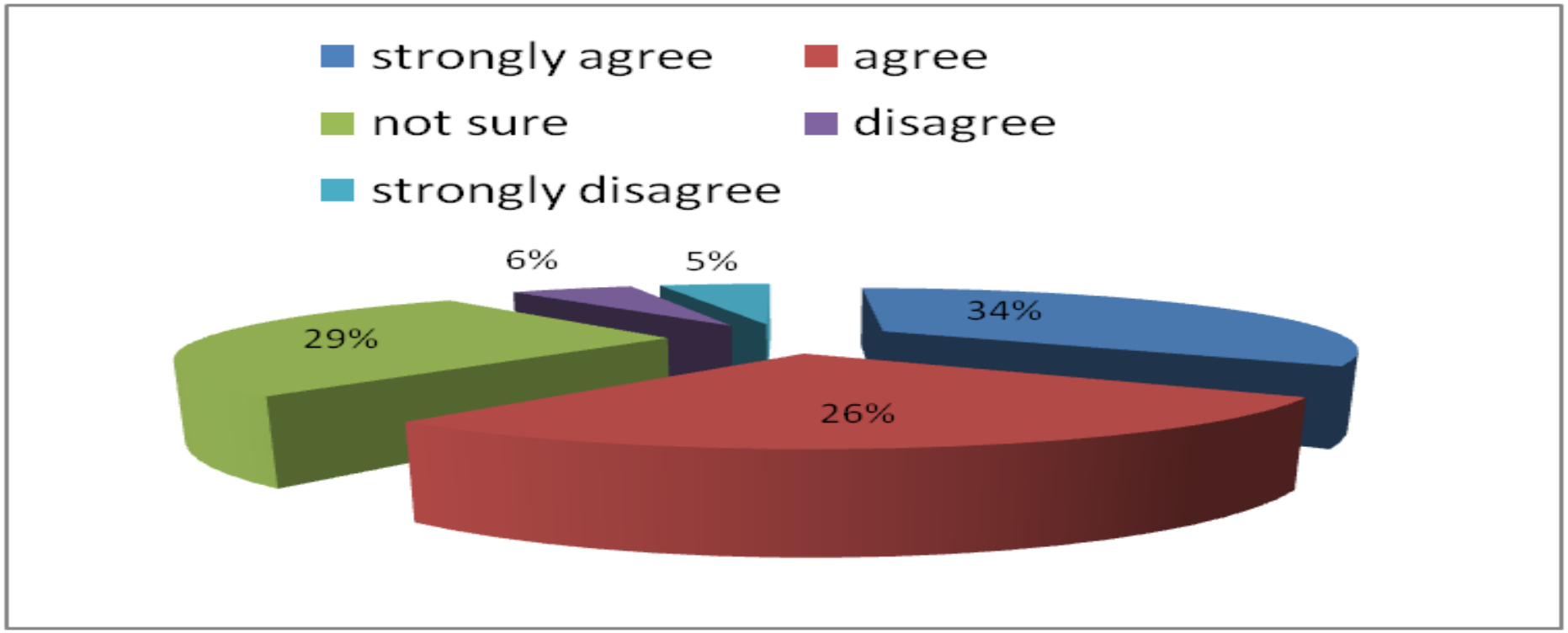
Cervical cancer is caused by a viruses that is spread sexually



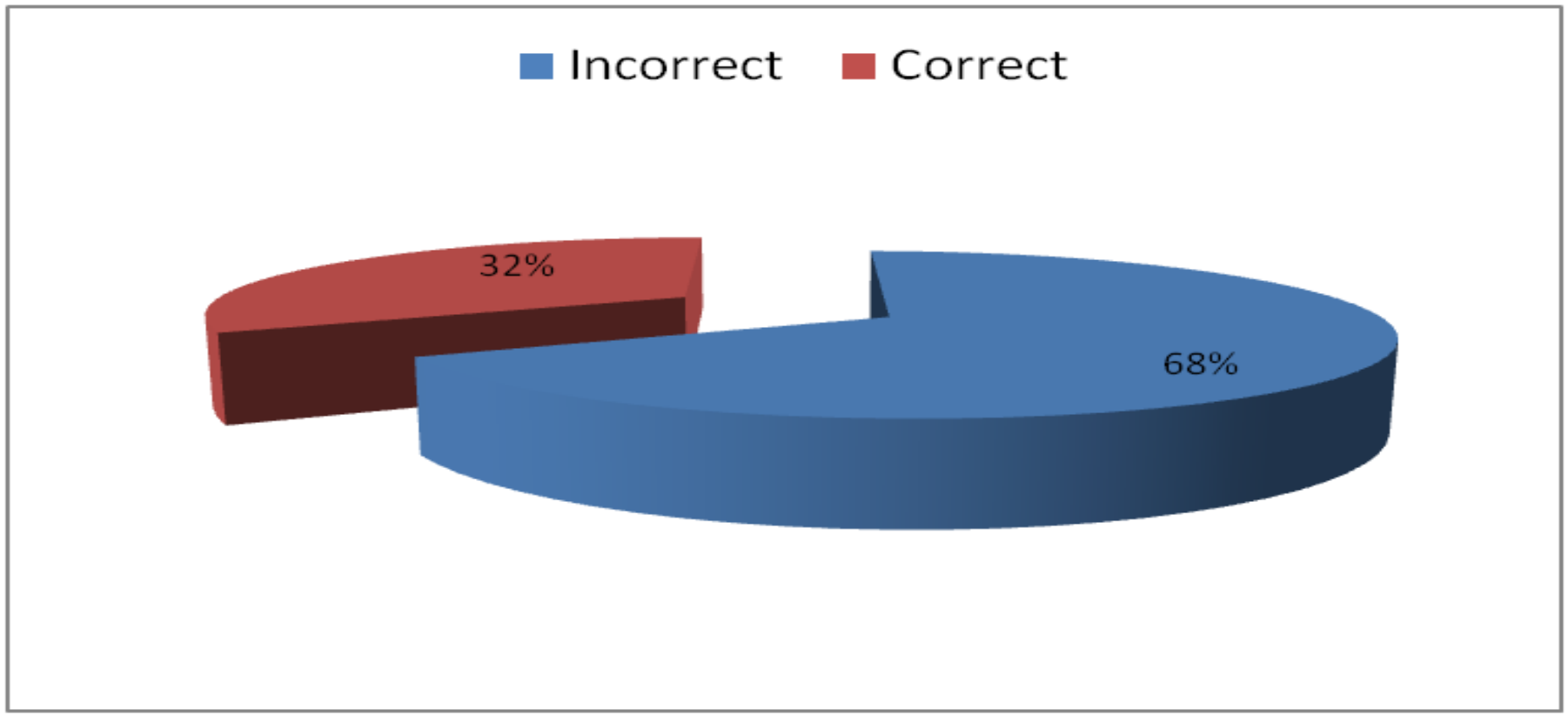
HPV (human papillomavirus) is a risk factor for cervical cancer



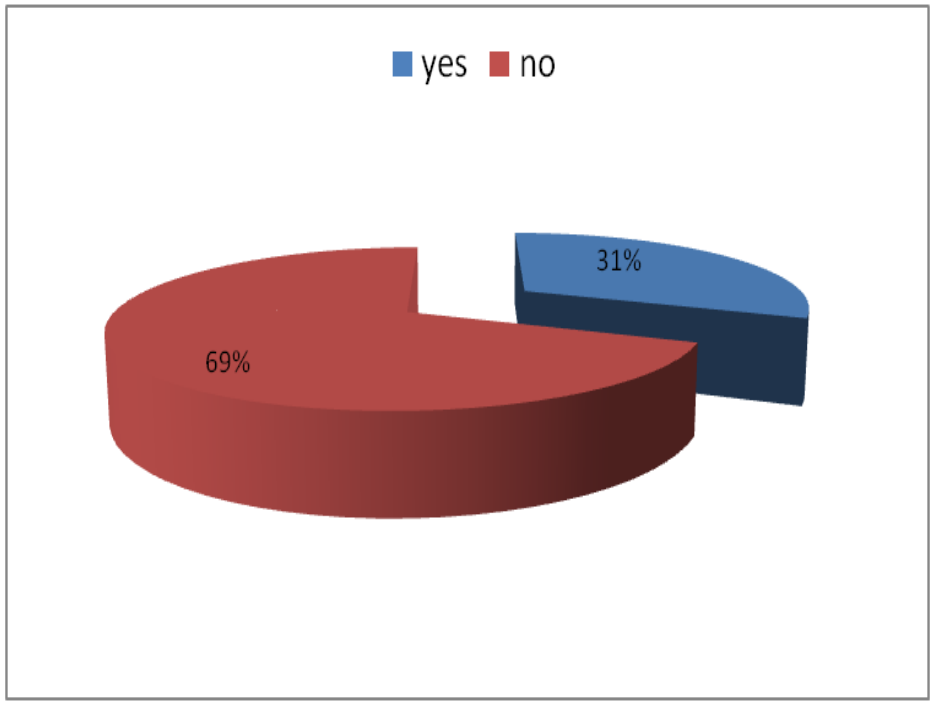
Having many sexual partners is a risk factor for cervical cancer

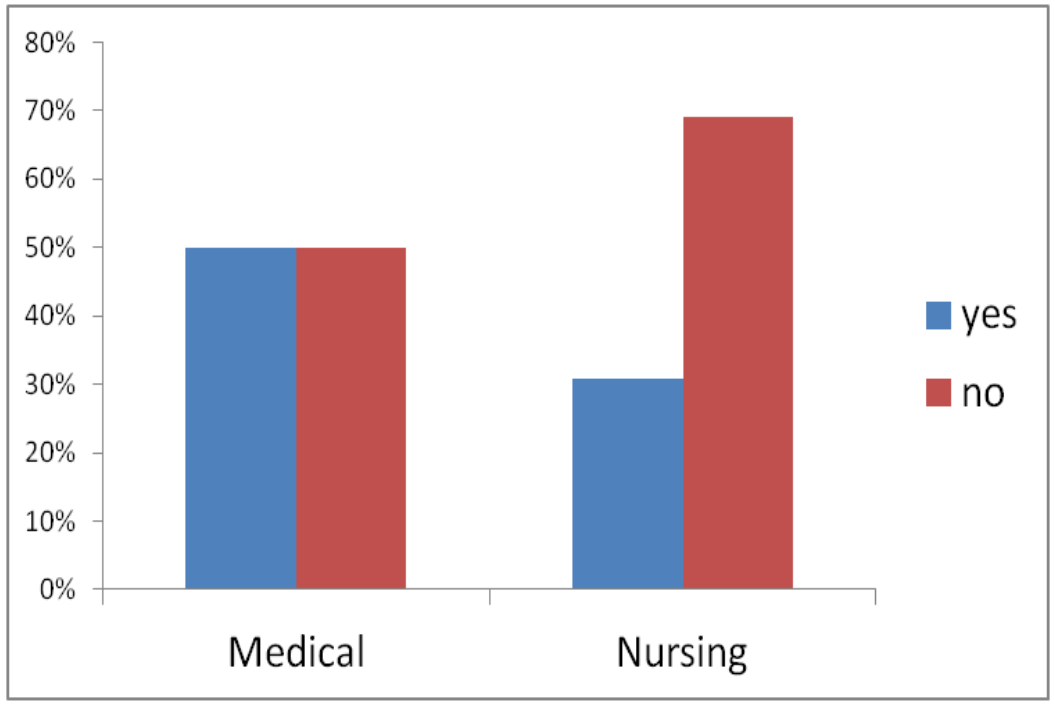


Having unprotected sex is a risk factor for cervical cancer



There is a vaccine that can prevent cervical cancer

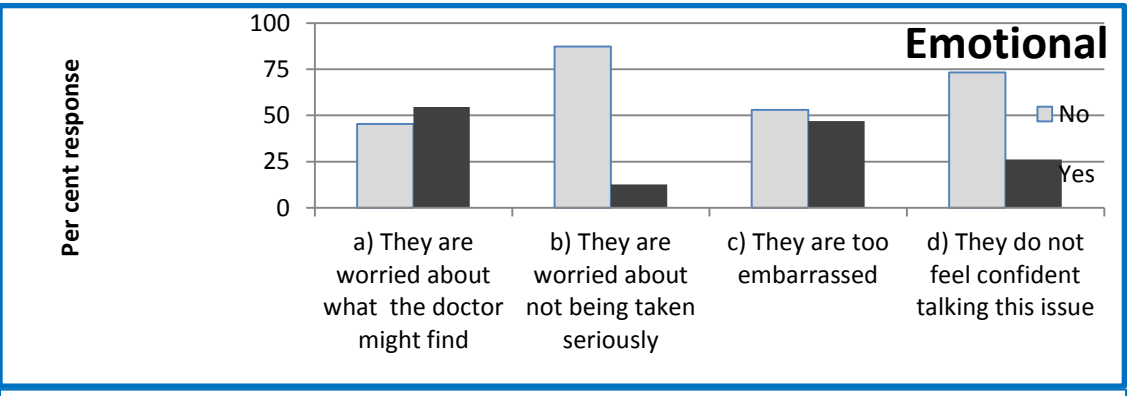


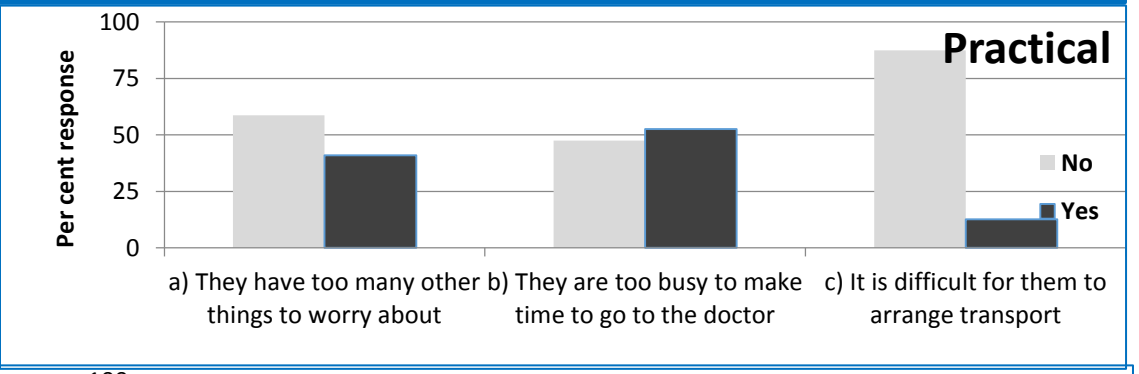


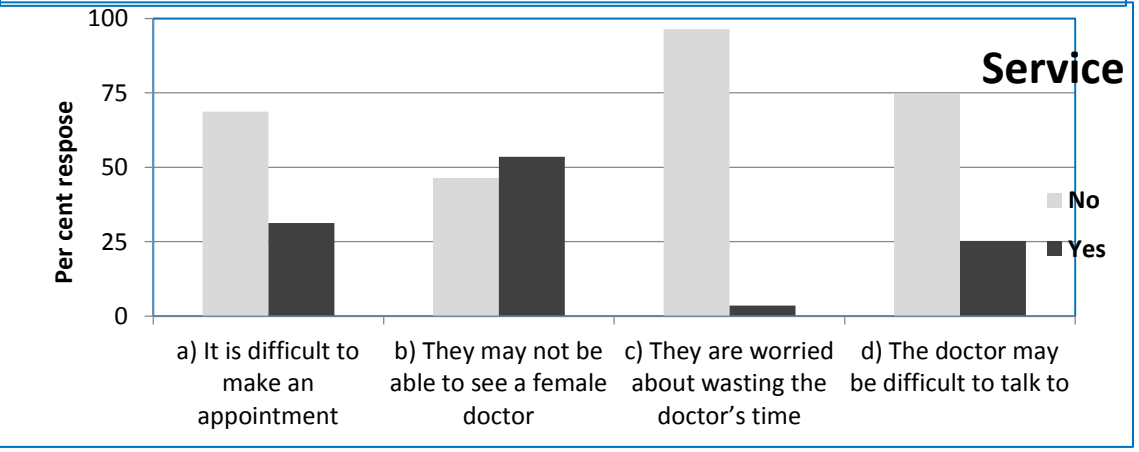
The odds ratio (OR) for not feeling they had knowledge for nursing students was:
2.97 (CI 95% 1.48 - 5.98).

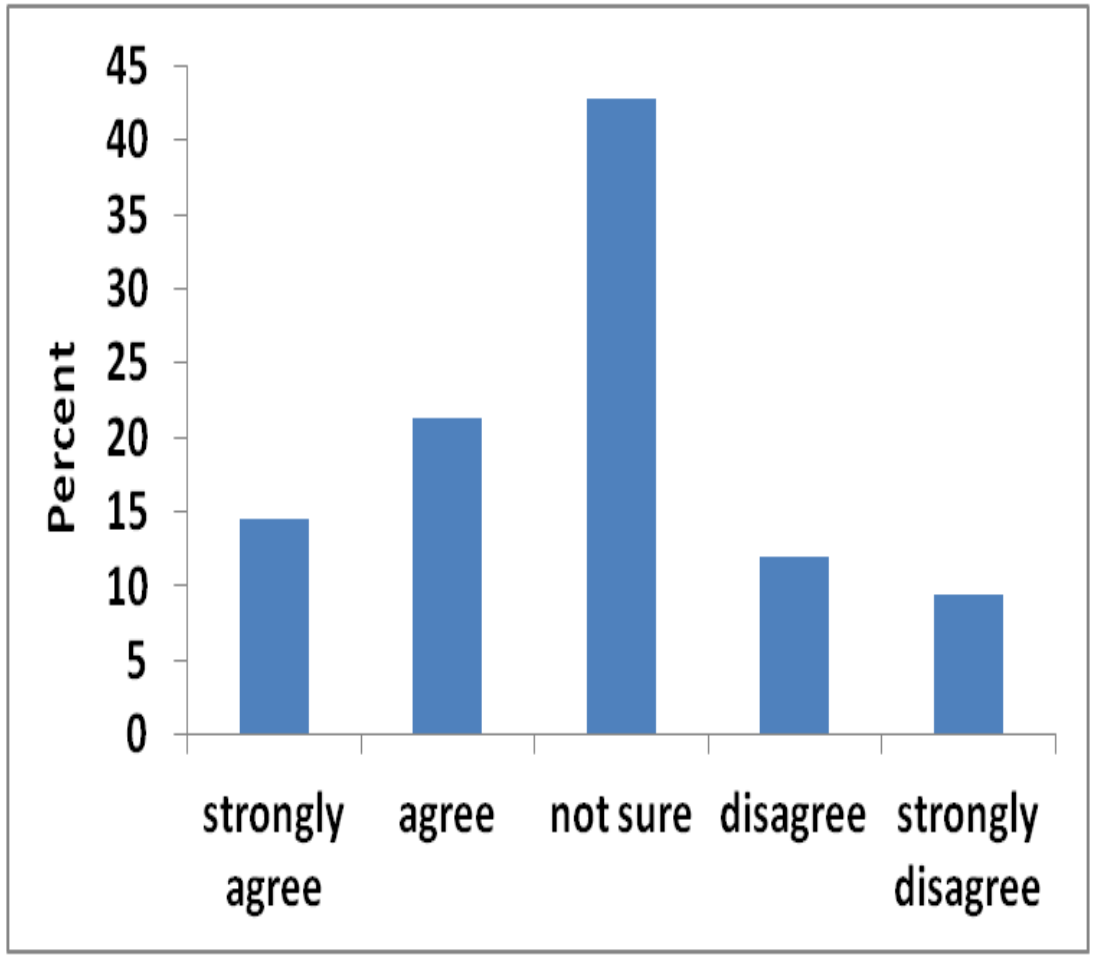
Do you feel you have adequate knowledge regarding cervical cancer?

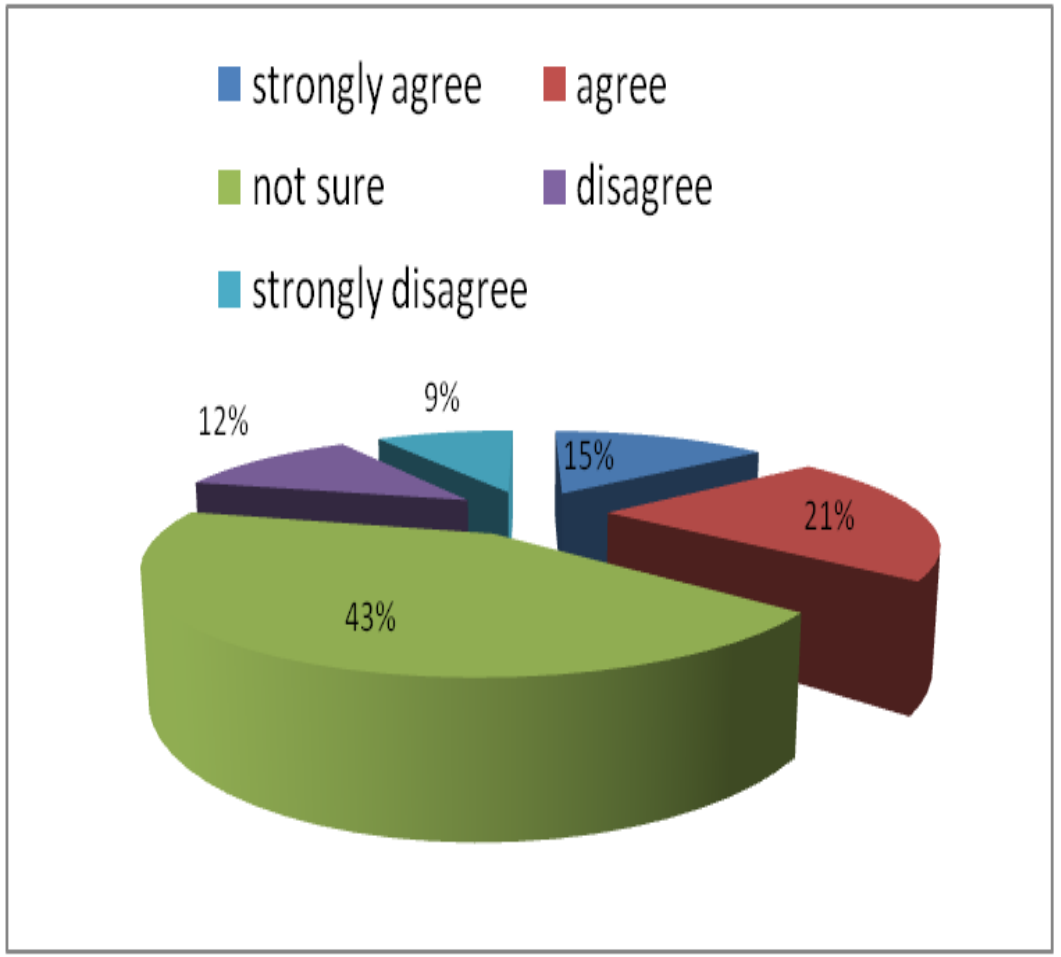
Barriers for a Pap smear test











Bahrain has a well established program for cervical cancer screening

Responsibility

Reduction of Cervical Cancer rate lies within our Hands.







Recommendations

- Students need better understanding of the aetiology and preventive methods of cervical cancer. Provide HPV infection educational programme in the university curriculum.
- University could launch cervical cancer awareness and screening.
- Campaign in the form of seminars workshops or lectures which can be organised in the university to increase students awareness.
- Identify the main barriers to women getting screened in Bahrain.
- Improved and increased prevention, awareness and screening programmes programmes at national and regional levels.
- Provide comprehensive primary care services and an efficient referral system to specialised health care services.

Conclusions

-Lack of knowledge and awareness of HPV Infection aetiology, risk factors and prevention of cervical cancer was evident in the present study

-Cervical Cancer requires global development strategies to decrease incidence and mortality

Prevention

- HPV Education -University curriculum
- Screening for early detection
- Encourage Follow up sessions!!!

Vaccination

- National programs-*Health promotion campaign on a local and national level*
- Lower cost or FREE vaccination
- Develop public health national screening programme
- ***Review HPV infection guidelines and regulations***

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Any questions?

