

# Knowledge, attitude and practices regarding cervical cancer and screening among women visiting primary health care in Qatar

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المعارف والمواقف والممارسات المتعلقة بسرطان عنق الرحم والتحرّي عنه بين نساء يراجعن الرعاية الصحية الأولية في قطر  
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الخلاصة: لا توجد معطيات حول معارف ومواقف وممارسات النساء القَطْرِيَّات حول هذا السرطان. من أجل ذلك أُجريت هذه الدراسة المستعرضة المبنيّة على المقابلات في عام 2008، وشملت 500 امرأة في خمسة من مراكز الرعاية الصحية الأولية في قطر، تم اختيارها عشوائياً لتحديد المعارف والمواقف والممارسات المتعلقة بسرطان عنق الرحم والتحرّي عنه. وقد أفاد أكثر من 85% من النسوة أنهم سمعوا عن سرطان عنق الرحم، و76% منهن أنهم سمعوا عن لطاخة بابانيكولاو. وقد كانت المعارف حول سرطان عنق الرحم أكثر بين النساء من الفئة العمرية 30-49 سنة، والموظفات، والمتزوجات لمدة أكثر من 15 سنة، والحاصلات على درجة جامعية، واللاتي ولدن أربع مرات، أو أجهضن ثلاث مرات. وقد أجرت حوالي 40% من النساء لطاخة بابانيكولاو مرة واحدة على الأقل، وكانت 85.5% من سائر النساء مستعدات لإجراء الاختبار إذا جرى إخبارهن بأن إجراءات الاختبار بسيطة ولا تسبب ألماً. أراد أكثر من نصف النساء إجراء الاختبار في عيادة المرأة المُعافاة في مركز الرعاية الصحية الأولية. على أن المعارف والمواقف والممارسات لم تكن كافية في النساء دون سن الثلاثين، ولا المتزوجات حديثاً، ولا الحاصلات على مستويات تعليمية منخفضة.

ABSTRACT There are no data on the knowledge, attitude and practices of Qatari women about this cancer. Therefore this cross-sectional interview-based study was conducted in 2008 among 500 women at 5 randomly selected primary health care centres in Qatar to determine their knowledge, attitude and practices regarding cervical cancer and screening. Just over 85% had heard of cervical cancer and 76% had heard about the Pap smear. Knowledge of cervical cancer was significantly greater among women aged 30-49 years, and those employed, married for > 15 years, with a university degree, or who had had 4 births or 3 miscarriages. Almost 40% had had a Pap smear test at least once and 85.5% of the rest would have a test if they were told that the procedure was painless and simple. Over half wanted the test to be done in the well-woman clinic at the primary health care centre. Knowledge and practice was inadequate among those under 30 years old, those recently married and those with a lower education level.

## Connaissances, attitude et pratiques des femmes consultant un centre de soins de santé primaires au Qatar en matière de cancer du col de l'utérus et de dépistage

RÉSUMÉ Il n'existe pas de données sur les connaissances, l'attitude et les pratiques des femmes qatariennes concernant ce cancer. Par conséquent, la présente étude transversale reposant sur des entretiens a été réalisée en 2008 auprès de 500 femmes dans cinq centres de soins de santé primaires sélectionnés aléatoirement au Qatar, pour déterminer leurs connaissances, attitude et pratiques en matière de cancer du col de l'utérus et de dépistage. Un peu plus de 85 % d'entre elles avaient entendu parler du cancer du col et 76 % du test de Papanicolaou. Les connaissances sur ce cancer étaient nettement supérieures chez les femmes âgées de 30 à 49 ans, ayant une activité professionnelle, mariées depuis plus de quinze ans, diplômées de l'université, ou qui avaient eu quatre accouchements ou trois fausses couches. Près de 40 % avaient effectué le test de Papanicolaou au moins une fois, et 85,5 % des femmes qui ne l'avaient jamais passé étaient prêtes à s'y soumettre à condition qu'il soit sans douleur et simple. Plus de la moitié des femmes interrogées souhaitait que le test soit réalisé au centre de soins de santé primaires, en consultation gynécologique de dépistage. Les connaissances et les pratiques en matière de cancer du col étaient insuffisantes chez les femmes de moins de 30 ans, les jeunes mariées et celles ayant un faible niveau d'études.

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## Introduction

Internationally, cervical cancer has been regarded as the third most common form of cancer among women after breast and colorectal cancer [1]. However, it is considered one of the most preventable cancers [2]. Population-based cervical smear screening programmes for cervical cancer have shown the effectiveness of screening in reducing mortality [3–6]. The risk factors for cervical cancer include early age at first intercourse and multiple sexual partners. A male consort who in turn has had intercourse with multiple women and smoking also confer significant risk. Research evidence has suggested that infection with human papilloma virus (HPV) significantly increases the relative risk for developing cervical cancer. HIV infection may also increase a woman's risk for cervical neoplasia [7].

Papanicolaou cytological testing (Pap smear) permits cervical lesions to be detected before they become cancerous, effectively reducing the incidence of cervical cancer by 75%–90% [8]. It is claimed that the majority of cervical cancer (theoretically up 90%) could be prevented if all women were offered and complied with high quality cytological screening programs [9]. Several institutes have recommended Pap smear screening for every sexually active woman, for instance, the American preventive services task force recommended Pap smears at least every 3 years for women who have been sexually active and have a cervix [9]. Although cervical cancer is the most common cancer of women in developing countries, it is estimated that only about 5% of women have been screened for the disease with Pap smears, compared to 40%–50% in developed countries [10]. The poor uptake of the cervical cancer screening may be attributed to the lack of communication between healthcare workers and patients regarding availability and benefits of the screening. In many

developing countries, women's knowledge of cervical cancer is very limited. It has been demonstrated that the vast majority of women in some African countries had not heard of cervical cancer and even more knew nothing about cervical screening [11,12]. In Qatar, where cervical cancer is responsible for 50% of diagnosed gynaecological cancers [13], there is no previous study that has assessed the knowledge, attitude and practices regarding cervical cancer among females of reproductive age. Therefore we aimed to collect information concerning knowledge, attitude and practices towards cervical cancer and the Pap smear test.

## Methods

In this cross-sectional study we recruited 500 females attending 5 primary health care centres which had been randomly selected by simple random sampling from a list of 21 health centres in Qatar. The participants were selected by systematic random sampling by choosing every 10th adult female visiting the health centre for any reason, medical or non-medical during November and December 2008.

Data collection was done during November and December 2008 using a validated questionnaire that was adopted from previous studies [12,14,15]. The questionnaire was translated into Arabic and then translated back to English by a different person to assess validity. It was pilot-tested in a sample of 40 women who were not part of the study sample to ensure cultural acceptance and level of validity and degree of repeatability ( $\kappa = 0.85$ ). The questionnaire consisted of 20 items that addressed personal data and question about knowledge, attitudes and practices with regard to cervical cancer screening. Personal data included age, education level, marital status, parity, number of miscarriages, occupation status, husband's education and duration of marriage. Knowledge

and beliefs about cervical cancer and screening were tested with the following items: whether the respondent had ever heard of cervical cancer, had ever heard that Pap smear is used to detect cervical cancer, knew the risk factors that may lead to cervical cancer, knew the early detection of cervical cancer leads to better treatment and whether it is possible to cure this cancer. The respondent's attitude was ascertained with the following items: whether they had ever had a Papanicolaou smear, if they were told that the smear test was a simple, painless procedure and could lead to early detection and treatment of cervical cancer, would they like to have one, where they would prefer to have the smear test. The questionnaire was administered through face-to-face interviews with females assigned to the study and with the support of a receptionist, a patient care assistant and a physician for explanation, especially for illiterate women and for any unclear questions.

Data were entered into SPSS, version 14. The knowledge score was calculated by adding all positive responses of 7 items, each item was assigned 1 for a positive response and 0 for no response and all 7 items were included in the score. The mean score for knowledge was calculated comparing demographic characteristic by 1-way analysis of variance post hoc (Bonferroni) test for multiple comparisons. *P*-value < 0.05 was considered statistically significant.

## Results

The study included 500 women; the mean age was 42.2 (standard deviation 7.2) years. Over 35% had parity  $\geq 4$  times. Table 1 shows demographic data for the participants. Over 80% had heard about cervical cancer and about three quarters had heard about the Pap smear (Table 2). The main source of information about the Pap smear was relatives and friends (21.6%). Sexually

**Table 1 Sociodemographic characteristics of the women participating in the study**

Characteristic	No.	%
<b>Age (years)</b>		
20-29	158	31.6
30-39	176	35.2
40 ≥	166	33.2
<b>Education level</b>		
Illiterate	16	3.2
Primary	20	4.0
Preparatory	44	8.8
Secondary	131	26.6
University or equivalent	289	57.8
<b>Marital status</b>		
Married	441	88.2
Never married	31	6.2
Divorced	16	3.2
Widowed	12	2.4
<b>Parity</b>		
Nullipara	100	20.0
1	62	12.4
2	64	12.8
3	84	16.8
≥ 4	190	38.0
<b>No. miscarriages or voluntary terminations of pregnancy</b>		
0	339	67.8
1	87	17.4
2	29	5.8
≥ 3	45	9.0
<b>Employment status</b>		
Employed	246	49.2
unemployed	254	50.8
<b>Husband's education</b>		
Illiterate	35	7.0
Primary	26	5.2
Preparatory	57	11.4
Secondary	118	23.6
University or equivalent	264	52.8
<b>Duration of marriage (years)</b>		
Not married	23	4.6
1-5	134	26.8
6-10	103	20.6
11-20	127	25.4
> 20	113	22.6

The mean knowledge score was significantly higher among women aged 30–49 years, those who had a university degree, were employed, had been married for more than 15 years, had parity ≥ 4, or had had ≥ 3 miscarriages ( $P < 0.05$ ) (Table 3). Of the 500 women who participated in this study, 197 (39.4%) had had a Pap smear at least once in their life. The majority of women (85.5%) said they would have a Pap smear if they were told that the procedure was painless and simple. More than half would prefer the test to be done in the well-women clinic at the primary health care centre (Table 4).

## Discussion

This survey provides baseline information for planning a cervical cancer prevention programme in Qatar. It is well known individuals' knowledge and beliefs about the cause and significance of a particular illness are interconnected with their healthcare-seeking behaviours [14]. The results showed a deficiency in knowledge about cervical cancer as well as low Pap smear uptake, which was surprisingly common among the educated women. Such findings have been reported by a number of previous studies in Arab communities. For example in the United Arab Emirates, a study of knowledge, attitude and practice among female school teachers in Sharjah has shown that, although the teachers had good knowledge about the Pap smear test, they were not commonly practising it [15]. In Jordan, the knowledge of cervical cancer and the Pap smear test was inadequate in less-educated and older patients [16]. Of the women who had previously had the test, 95.4% had opportunistic testing. Around 95% of the sample had never had the test. In Kuwait, a 2008 study showed that about 52% of women had adequate knowledge about cervical cancer screening [17].

Apart from inadequate knowledge, it is well known that the most frequently

transmitted disease was ranked first as a risk factor for cervical cancer (24.8%). About two-thirds of the participants (62.4%) believed that the Pap smear can detect cancer before the appearance of symptoms and around two-thirds (64.8%) believed that the Pap smear could improve treatment outcome.

**Table 2 Knowledge and beliefs of the women about cervical cancer risk and prevention**

Knowledge/belief item	No.	%
<b><i>Have you ever heard about the Pap smear?</i></b>		
Yes	382	76.4
No	118	23.6
<b><i>Where did you hear about the Pap smear for the first time?</i></b>		
Relatives, friends	108	21.6
Gynaecologist	95	19.0
Mass media (newspaper, internet, television)	80	16.0
Family physician	72	14.4
Nurse	20	4.0
Other	125	25.0
<b><i>Know about the cervical cancer</i></b>		
Yes	426	85.2
No	74	14.8
<b><i>Knowledge of the risk factors which can lead to cervical cancer</i></b>		
Sexually transmitted disease	124	24.8
Smoking	54	10.8
Multiple partners	34	6.8
Early age of marriage, < 18 years	31	6.2
Marriage to man with other women	24	4.8
Diet	13	2.6
<b><i>Is it possible to detect cervical cancer with the Pap smear before symptoms appear?</i></b>		
Yes	220	44.0
No	312	62.4
<b><i>Is early detection of cervical cancer good for treatment outcome?</i></b>		
Yes	188	37.6
No	324	64.8
<b><i>Is it possible to cure cervical cancer?</i></b>		
Yes	176	35.2
No	412	82.4
	88	17.6

reported reasons for not having a recent Pap smear were belief that it might be painful, followed by embarrassment, not being referred by a health professional, and fear of having positive results [15,16]. In the present study, the poor level of knowledge was related to illiteracy and unemployment, which also indicates educational status the majority of employed women in Qatar are educated. This relation between education and knowledge has been reported in previous studies in Arab and Hispanic women [17–20]. The study also shows that the level of knowledge was higher the longer the marriage and in those

with greater parity. In agreement with other studies from Arab countries [17], Latin and Asian communities [20–22], our study showed that women > 50 years had poor knowledge about cervical cancer and screening; in fact most of the illiterate women in Qatar are in this age group. More interestingly, we found that even young women, 20–29 years, had poor knowledge even though this group is educated. One of the significant finding in this study was that the majority women got their knowledge about cervical cancer screening from their social network (relatives and friends) rather than physicians or the media.

This can be attributed to the absence of a well organized cervical cancer screening programme, which would include mass media awareness and practice guidelines encouraging family physicians to advise their patients to have a smear test. The well women clinic, however, provides the Pap smear test in most of the primary health centres in Qatar. Another possible factor is the fear and embarrassment that may be associated with cervical cancer screening; this does not encourage women and health care workers to discuss the issue. We found that most of our participants preferred to have the test at the well

**Table 3 Mean (SD) knowledge scores of the women according to sociodemographic characteristics**

Characteristic	Mean (SD) knowledge score	P-value
<b>Age (years)</b>		< 0.01
20–29	4.37 (2.24)	
30–39	5.42 (1.71)	
40–49	5.53 (1.76)	
50–60	4.89 (2.25)	
<b>Education level</b>		0.01
Illiterate	3.69 (2.24)	
Primary	4.30 (2.27)	
Preparatory	5.20 (...)	
Secondary	4.96 (1.93)	
University or equivalent	5.22 (2.07)	
<b>Marital status</b>		0.899
Married	5.08 (2.02)	
Never married	4.90 (2.10)	
Divorced	5.19 (1.28)	
Widowed	4.75 (2.34)	
<b>Parity</b>		<0.01
Nullipara	4.61 (2.26)	
1	4.82 (2.01)	
2	4.37 (2.35)	
3	5.40 (1.88)	
≥ 4	5.47 (1.68)	
<b>No. miscarriages or voluntar terminations of pregnancy</b>		0.001
0	4.84 (2.13)	
1	5.30 (1.71)	
2	5.53 (1.71)	
≥ 3	6.00 (1.41)	
<b>Husband's education</b>		0.327
Illiterate	4.80 (2.22)	
Primary	4.92 (1.87)	
Preparatory	5.47 (1.36)	
Secondary	4.86 (2.04)	
University or equivalent	5.12 (2.01)	
<b>Employment status</b>		< 0.01
Employed	5.54 (1.81)	
Unemployed	4.61 (2.09)	
<b>Duration of marriage (years)</b>		0.001
Not married	4.83 (2.30)	
1–5	4.54 (2.20)	
6–10	4.85 (1.98)	
11–15	5.60 (1.41)	
> 15	5.70 (2.01)	

SD = standard deviation.

women clinician the primary health care centre rather than a gynaecology clinic in a hospital. This can give more encouragement for primary health care providers to market for well women clinics as the ideal setting for any national cervical cancer screening programme. A possible explanation for this positive attitude is the easy access to the primary care clinics.

It has been estimated that only about 5%–10% of women in developing countries [11,21–24] have been screened for cervical cancer with a Pap smear compared to 40%–50% in developed countries [23]. In our study almost 40% of the women had had at least 1 Pap smear, approaching the level of developed countries. This is even greater than the 23.8% in a Kuwaiti study [17]. Most women in this study, however, stated that they would have the test if they have been told that it was painless. These beliefs about cervical cancer and the smear test have been documented as determinants of an individual's participation in cancer screening [18,25].

Other factors that can increase Pap smear uptake such as the presence of sexually transmitted diseases and a positive family history of cervical cancer were not investigated as many women in our culture consider this information confidential and sensitive, although such information is valuable and is known to affect screening utilization [26].

In conclusion, our results show that there was inadequate knowledge and practice among certain women groups, especially those under 30 years old, recently married, and those with low education level. However, women in Qatar have a positive attitude towards cervical screening services although they need to have reassurances that can reduce the barriers to having a test.

A well organized cervical cancer screening programme providing the Pap

**Table 4 Attitude and practice of women toward cervical cancer screening**

Attitude/practice item	No.	%
<b>Have ever had a Pap smear done?</b>		
Yes	197	39.4
No	303	60.6
<b>If you were told that a Pap smear is simple ,painless and good for early detection of cervical cancer, would like to have one?</b>		
Yes	429	85.8
No	71	14.2
<b>Where would you prefer to have this test done?</b>		
Well women clinic in the primary health care centre	277	55.4
Gynaecology clinic in hospital	108	21.6
Private clinic	39	7.8
No preference	76	15.2

smear test through primary health care services is recommended: this should include raising awareness of women regarding risk factors, and overcoming barriers to having the test such as fear and embarrassment.

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### ***Cancer survival in Africa, Asia, the Caribbean and Central America***

Population-based cancer survival rates offer an important benchmark for measuring a health care system's overall effectiveness in the fight against cancer. While this type of information on high-resource countries is readily available, *Cancer survival in Africa, Asia, the Caribbean and Central America* presents in-depth cancer survival data from 27 population-based cancer registries in 14 low- and middle-resource countries.

The striking inequalities in cancer survival between countries and within countries described in this volume are largely related to the differences in general awareness, availability of early detection practices, trained human resources, diagnosis and treatment and the development and accessibility to cancer services, as well as, to a lesser extent, to issues of data quality and reliability.

The differences in cancer survival reported in populations observed between and within countries studied in this volume provide valuable insights for future planning and investment by governments in primary prevention activities, early detection initiatives and tertiary care to achieve meaningful cancer control.

The calendar period of registration of incident cases for the present study ranges between 1990 and 2001. Data on 564 606 cases of 1-56 cancer sites from different registries are reported. Data from 11 registries were used for eliciting survival trends and 17 registries for reporting survival by clinical extent of disease. Besides chapters on every registry and general chapters on methodology, database and overview, the availability of online comparative statistics on cancer survival data by participating registries or cancer site in the form of tables or graphs is an added feature.

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