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THE KNOWLEDGE, ATTITUDE AND PRACTICE OF PAP SMEAR AMONG LOCAL SCHOOL TEACHERS IN THE SHARJAH DISTRICT.

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Abstract

Objective: The purposes of this study was to determine the level of knowledge and attitude of the target population concerning cervical cancer and methods of its early detection, and to address where the target population would prefer to do the pap smear test and what factors influence women's participation in the screening programme.

Design: It is a cross-sectional descriptive and analytic study using a detailed questionnaire.

Setting: 18 schools in Sharjah City (UAE) were chosen randomly during January 2001

Subjects: This study was applied to female married school teachers in Sharjah City (UAE). 350 teachers were participated in the study.

Results: This study showed that although the teachers have a good knowledge about papanicolaou smear tests, they are not commonly practicing it. Overall, the most frequently reported reasons for not having a recent pap smear were belief that it might be painful, followed by embarrassment. This study clearly demonstrates that there are no statistical relationships between age, husbands' education and marriage duration and the women's knowledge and attitude. The majority of the women who participated in the study want the pap smear test to be done in the gynecology clinic in the hospital and 86% of them prefer a gynecologist to perform this test, while only 3% would would prefer it to be performed by a family physician. The major source of information about papanicolaou smear tests has been delivered via the gynecologist, which represents 53.5% whereas information distributed through the family physician represent 3.6% only.

Conclusion: Efforts to increase coverage in cervical screening programs needs to be directed towards medical practitioners as well as towards women. Long term education programs should be made available to motivate the female population in the UAE. In addition, training should be supplied to GP's and primary care physicians to encourage optional screening.

Introduction

Invasive cervical cancer is the second most common cancer in women worldwide, but 80% of cases occur in developing countries, (1) and although readily detectable in its pre-malignant stage, cervical cancer remains the fifth most common cancer in the UK (3). In 1998, it was reported that 12,800 women in the United States developed cancer of the uterine cervix, and 4,800 women died of the disease. (2). Cancer in general represents a major global health problem and has emerged recently as a health problem of increasing proportion in the UAE. (13). In 1991, cervical cancer deaths among females represented 6.4% of all death due to cancer in general. 20% of the deaths among UAE women was due to cancer of the cervix (13). In 1992, cervical cancer was the 4th in rank among the cancer deaths in females. Cancer of the cervix ranks sixth in cancer mortality in U.S. women. (4)

Cancer of the cervix refers to the invasine stage of the disease (international classification of diseases 180). Squamous cell carcinoma is the most frequent histological type of cervical caner. Adenocarcimona is less common and would seem less preventable by screening. Precancerous lesions are classified according to cytological and histological changes, which include dysplasia (CIN grades I-III) and carcinoma in site (CIS).

Known risk factors include early age at first intercourse and multiple sexual partners. A male consort who in turn has had intercourse with multiple women also confers a significant risk. Carcinoma of the cervix is more common in women who smoke. Also common in women who are immunosuppressed, especially those who have undergone renal transplantation, this may be mediated by the human papilloma virus (HPV) (6). A case control study suggested that HPV does significantly increase the relative risk for developing cervical cancer. HIV infection may increase a women's risk for cervical neoplasia. (6)

It is claimed that the vast majority of cervical cancers (theoretically up 90%) could be prevented if all women were offered and complied with high quality cytological screening programmes. A national cervical screening programme was established in the United Kingdom in 1964. (8)

Pap smear screening has a specificity of approximately 99%, its better for high grade and invasive lesions. The test is less specific for low grade CIN over-diagnosis of these lesions is common, and is in part due to the tests inability to distinguish low-grade CIN from HPV infection. The sensitivity of pap smear screening has been reported to range from 40 to 70 percent. The generally accepted false negative rate is 15-25%. Due to the long period associated with the precursor lesion (CIN), this false negative rate does not compromise screening strategies as long as smears are performed frequently enough. (6)

The frequency of screening is also influenced by the sensitivity of the test, making certain assumptions about the underlying incidence of cancer, it has been estimated that in Western countries screening a women every 5 years between the ages 20 and 64 confers 84% protection against invasive cancer. Increasing the frequency of screening to 3 yearly enhances here protection to 91%, and annual screening brings it up to 93%. The remaining 7% represent either missed cases due to a lack of sensitivity of the test, or rapidly growing cancers, which will pass through the pre invasive stage within 1 year. (6)

The United States preventive services task Force recommended papanicolaou smears at least every 3 years, for women who have been sexually active and have a cervix. The American Cancer Society states that all women who have been sexually active should have annual papanicolaou tests and pelvic examinations. After three or more consecutive negative smear results, the papanicolaou smear can be performed less frequently at the discretion of the physician. (5)

The factors reducing the participation of women in the cervical screening programme are:
* Poor awareness of the indications and benefits of the cervical smear test.
* Lack of knowledge of cervical cancer and its risk (Factor's).
* Fear of embarrassment, pain or cancer.
* Lack of female screener's or convenient clinic times.
* Anxiety caused by receiving an abnormal cervical smear result.
* Poor understanding of cervical screening procedures; and
* A need for additional information.

The general aim of this survey is to assess the knowledge of the Sharjah married female teachers of considering the pap smear as a routine examination.

Objectives

1. Estimate the level of knowledge of the target population, concerning cervical cancer and its method of early detection.
2. To determine the acceptance of the Sharjah married teachers of considering the pap smears as a routine examination.
3. To examine factors influencing women's participation in the screening programme.
4. To determine where the target population would prefer to do the test and by whom and how extend family physician can play a role in screening for cervical cancer.

Hypothesis

The following hypothesis were tested:

1. The school teachers as an elite group of women, should have a good level of knowledge about cervical cancer and papanicolaou smear.
2. The greater the knowledge about cervical cancer and pap smear tests the more papanicolaou smear screening is practiced.
3. The higher the husband education level the more papanicolaou smear screening is practiced.

Materials and Methods

Study Population: This study was applied on married school teachers in Sharjah City. The total numbers of the chosen schools were 18 schools and 350 teachers participated in the study.

Study Design and data collection procedure:

There are two components of the research:

1. Cross - sectional descriptive.
2. Cross - sectional analytic.

Data collection took place during January 2001.

Questionnaires were distributed to the subjects in 18 schools in Sharjah city.

Respondents filled out the questionnaires, which were collected one week after distribution. The response rate was 70%.

Sampling techniques:

1. Female school teachers in city.
2. Educated level.
3. UAE nationals.
4. Married.

Instrument
The questionnaire used was a self administered questionnaire. Consisting of 12 items that addressed demographic data and questions about knowledge of, altitude toward, and practice of papanicolaou smear screening.

Demographic data included age, Husband's education and duration of marriage.

Knowledge about papanicolaou smear was tested with the following items:

(1) Whether the respondent had ever heard of cervical cancer.
(2) Whether the respondent had ever heard of the papanicolaou smear is used to detect cervical cancer;
(3) Whether the respondent knew that early detection of cervical cancer leads to better treatment;
(4) Is it possible to cure this cancer.

The Knowledge Index classified women in to three groups: "good" for those who correctly answered all knowledge item; "average" For those with at least one wrong answer and "poor" For those with wrong answers for all items.

The respondents' attitude was ascertained with the following items:

- Whether they ever had a papanicolaou smear; where they prefer to have a papanicolaou smear, and by whom they prefer to do this test for them (e.g. GP, gynecologist, doctor, other).

Analysis
Frequency distributions were used to present the characteristics of the studied women population. Cross tabulations were conducted to test. For the hypothesized effects of demographic data on the knowledge of, attitude towards and practice of papanicolaou test screening.

The person co efficient X^2 was calculated and the significance level was set at p 0.0001. The analysis was carried out with use of SPSS version 10.02.

Results
The target population was supposed to be 1638 teachers (total UAE married female teachers in Sharjah) distributed in 48 schools, in Sharjah. However, the chosen schools were 18 and those who participated in the study were 350 teachers.

Table 1 describes the characteristics of the studied female population, the age range is 20-59 years. The most common age range is 30-39 years, representing 47% of the studied population. 29.1% of marriages have a duration of 11-15 years.

The husbands education level is between "does not read or write" and "University level or equivalent". 59.1% of them are University level or equivalent.

Table 1. the characteristics of the studied women

Age	Number	Percentage
20-29	72	20.57
30-39	165	47.14
40-49	83	23.71
50-59	30	8.57
Duration of marriage		
(1) 5 years	94	26.88
(2) 6-10	75	21.42
(3) 11-15	102	29.14
(4) 20	26	7.42
Husband's education		
(1) Does not read or write	2	0.57
(2) Primary	11	3.14
(3) Preparatory	34	9.71
(4) Secondary	96	27.42
(5) University or equivalent	207	59.14

Table 2 shows no relation between the knowledge score and the teacher's age P = 0.315.

Table 2. the distribution of women by their knowledge score about (cervical cancer and papanicolaou smear) and by their age.

Knowledge Score	Age			
	20-39	**%**	**40-59**	**%**
Poor	2	0.57	0	0
Average	35	10	18	5.14
Good	200	57.14	95	27.14

Table 3 illustrates that women who are married to highly educated husband's are highly knowledgeable, but it did not reach the statistically significant p 0.001.

Table (3): The distribution of women by their knowledge score about (cervical cancer and papanicolaou smear) and by their Husband education.

Knowledge Score	Husband's Education									
	1	%	2	%	3	%	4	%	5	%
Poor	0	0	0	0	0	0	0	0	2	0.57
Average	1	0.28	0	0	3	0.85	14	4	35	10
Good	1	0.28	11	3.14	31	8.85	82	23.42	170	48.57

1. Does not read or write
2. Primary
3. Preparatory
4. Secondary
5. University or equivalent

Table 4 highlights that there is no relation between the knowledge score and the duration of marriage.

Table 4. The distribution of women by their knowledge score about (cervical cancer and papanicolaou smear) and by their husbands' education.

Knowledge Score	Duration of Marriage									
	1	%	2	%	3	%	4	%	5	%
Poor	1	0.28	1	0.28	0	0	0	0	0	0
Average	14	4	13	3.71	12	3.42	7	2	7	2
Good	79	22.57	61	17.42	90	25.71	46	13.14	19	5.42

1. 5
2. 6-10
3. 11-15
4. 16-20
5. 20

Table 5 surprisingly shows the percentage of women who had not undergone a papanicolaou smear test, increase significantly among the who have scored good and average ($p = 0.0001$).

Table 5. The distribution of women by their knowledge scores about (cervical cancer and papanicolaou smear) and by their attitudes towards papanicolaou smear (If they ever had a papanicolaou smear).

Knowledge Score	Attitude Towards papanicolaou smear			
	Yes	%	No	%
Poor	0	0	2	0.57
Average	10	2.85	43	12.28
Good	140	40	155	44.2

Table 6 shows the percentage of women who had not undergone a papanicolaou smear test increases significantly among the women who are married to an educated husband ($p = 0.002$), it showed that 52.4% of women who are married to highly educated husband (secondary, University) did not practice the papanicolaou smear test in their life while only 34% of them have had at least one papanicolaou smear test in their life. So the husband's education did not affect the attitude of women towards the papanicolaou smear test.

Table (6): The Association between husband education and women attitude toward papanicolaou smear.

Husband education	Attitude toward papanicolaou smear			
	Yes	%	No	%
1.	1	0.28	1	0.28
2.	9	2.57	2	0.57
3.	21	6	13	3.71
4.	46	13.14	50	14.28
5.	74	21.14	134	38.28

1. Does not read or write
2. Primary
3. Preparatory
4. Secondary
5. University or equivalent

In this survey it has been shown that no relation exists between the teachers' age group and their attitude towards the papanicolaou smear test, ($p = 0.92$) as shown in Table 7.

Table 7. The Association between women age practice towards the papanicolaou smear.

Age	Attitude toward papanicolaou smear			
	Yes	%	No	%
20-40 years	102	29.14	136	38.85
41-59 years	49	14	64	18.28

The study showed clearly that most of the women who participated in the study want the pap smear test to be done in a Gynecological Clinic in the Hospital and 91% of them prefer a gynecologist to perform this test while only 3% would prefer it to be performed by a family physician, as shown in table (8 & 9).

Table 8. Shows where the studied women want to take their papanicolaou smear test.

Where to take pap smear	Total	%
PHCC	11	3.49
WWC	17	5.39
Obstetrics and Gynecology	287	91.11

Table 9. Shows who do the study women to perform Pap smear test for them.

Who to do pap smear	Total	%
Family Physician	9	2.85
Obstetrics. & Gynecology Dr.	270	85.71
MCH Dr.	19	6.03
Private Dr.	17	5.39

As for the source of information about papanicolaou smear. The Gynecologist doctor ranks first (53.55) Followed by family and friends which represent 22.7%, then newspaper, television and internet which represent 18% and family physician and nurses are ranked last with percentages of 3.6% and 2.1% respectively.

Knowledge about the risk factors associated with cervical cancer were also studied. The risk multiple partners is ranked first (50%), followed by STD risk, which represents 13% of the studied population. Early age of marriage, other factors (diet, hereditary) are ranked last with percentages of 6% and 5% respectively.

The reasons for refusing a pap smear include that the women who believe it might be painful (representing 42% of the studied population), followed by embarrassment which represents 36.1%, then the belief they are healthy (17%), and the last reason that their husband refuses (representing 5.5% of the studied population).

Discussion

The percentage of school teachers who have a good knowledge about cervical cancer and papanicolaou smear test as a screening test is (84%) compared to those who have average to bad knowledge (15.6%).

With closer analysis of the results between decade age groups, there was no difference in the knowledge between the (20-39) year old group and older age group. This is expected because they are both elite groups (highly educated groups).

So the relationship between knowledge on one hand and practice of papanicolaou smear screening on the other hand has not confirmed the second hypothesis (The greater the knowledge about cervical cancer and pap smear tests the more papanicolaou smear screening is practiced).

The result of the study supported the first hypothesis in terms of the relationship between educational level and knowledge about papanicolaou smear and cervical cancer. Similar results were found in Arevian and Noreddine who report that education is the most important predictor of knowledge about papanicolaou smear test. But surprisingly, majority of that knowledgeable group did not have a papanicolaou smear test even once in their life (Table 1-5).

Women in general throughout their lives have more frequent contact with health care services particularly at the level of primary care. The high prevalence, long mean duration of a symptomatic detectable disease, and availability of a high specific screening test make cervical cancer screening an important task for all primary care providers.

In this survey the majority of women (91.11%) want the screening of cervical cancer to be carried out by the Gynecological Doctor in Hospitals (Gynecological Clinic); which will contribute unnecessary increase the load in the Hospitals. Where as only 3% of women who participated in the study would prefer the screening of cervical cancer to be performed by a primary care physician.

The major source of information about papanicolaou smear test have been delivered through the gynecological doctor which indicate that the primary care physician has no role in providing the information about cervical cancer and its detection by the papanicolaou smear screening. This may be attributable to a lack in the screening programme in U.A.E. So programmes are required to train primary care physicians about the technique of taking a sample to avoid any sampling error and comprehensive educational programmes about cervical cancer and papanicolaou test screening should be implemented through the mass media and primary health doctors.

A number of studies have attempted to determine what factors are associated with not participating in the screening for cervical cancer. One study about papanicolaou smear screening among urban South Western American Indian women showed that the limited access to health care and lack of knowledge about the procedure were important barriers to papanicolaou smear use. Another study, done among Korean-American women,

showed that the most frequently cited reason for not having had a pap smear test was absence of disease symptoms.

Other studies showed that the most frequently reported reason for not having a recent papanicolaou smear was procrastinating or not believing it was necessary.

One of the objectives of this study was to explore why some women do not have a papanicolaou test. Given the least proportion (10.2%) of women in this study who reported they were refusing to have a pap test, there is clearly a need for such knowledge. The anticipated embarrassment of having a test and that is a painful procedure were two major barriers identified in his study, which represent 36.1%, 41.6% respectively.

16.6% of women had reported reason for not having a pap test believed they are healthy.

Feeling shy may be due to cultural influence and presumably has its basis in the women's experiences and in some other general attitudes. Clinicians need to acknowledge this as an important factor for some women, and make efforts to help overcome this when discussing cervical screening and taking the test. For some women, however it may be that familiarity with their clinician is a cause for embarrassment. To encourage cervical screening among this group it may be necessary to set up services where confidentiality is assured.

Conclusions

From the obtained data the following conclusions can be drawn:

1- The majority of respondent have had a good knowledge about pap smear but they are not practicing it very well.

2- The major source of information about papanicolaou smear test is the Gynecologist.

3- Majority of women prefer to have their papanicolaou smear in Gynecology Clinic and would prefer the gynecologist to perform this procedure for them rather than the family physician.

Long term education should be started to provide the needed information, then impose positive external values, motivate the women population and facilitate taking pap smear through the primary health care centers in all Emirates because these clinics have the ability to spread the positive knowledge, attitude and practice. A clear policy is required to educate primary care physicians how to perform optimal screening.

References

1- Holland W.W. & Stewart S. Screening in adult women, Screening in health Care. Nuffield provincial Trust, 1990.pp155-172

2- Sachs B.P. & Beard R. & Papiernik. E & Russell C. Screening for cancer in Women. Cancer of the uterine cervix. Reproductive health care for women and Babies. New York oxford Tokyo OXFORD University Press 1995. pp 110-17

3- Goroll A.H., may L.A., Mulley A.G., and Primary care medicine. Office evaluation and management of the adult patient. Screening for cervical cancer 1995.pp588-90

4- Guest C, Griffith. E, Lowis S.V., Moulding N. et 21, cervical cancer sceening. Epidemiology and detection of cervical cancer. Implementation the national screening policy. Australian family physician 1996 Nov. 25 (11) 1722-28

5- Richard F. Bakemeier, Linda U., Krebs, James R Murphy, Zhonymin Shen, Thad Ryals. Et. Al., attitude of Colorado Health professionals toward breast and cervical cancer screening in Hispanic women journal of national cancer institute Monographs, 1995, 18:95-100.

6- Arevian M, Noureddine S, Kabakian T, et. al. A survey of knowledge, attitude, and practice of cervical screening. Among Lebanese / American women Jan./ Feb. 1997,45 (1) :16-22.

7- Fylan F, teal, screening for cervical cancer: a review of women's attitudes, knowledge, and behaviour, British Journal of general practice, Aug. 1998, 48: 1509-14

8- Branoff R, Santi K, Campbell J.K., Roetzhein R, Oler M, et. al., A family practice residency cervical screening project: perceived screening barriers, clinical research and methods. Fam. Med 1997; 2a (2) 11a-23

9- Stevens S.A., Cockburn J, Hist. S., Bappsci, Jolley D, et. al., An elevation of educational outreach to general practitioners as part of a state wide cervical screening program. American journal of public health: July 1997, 87(7): 1177-81

10- Soloman TG. Gottlieb NH. et. al., Measures of American Indian tradionality and its relationship to cervical cancer screening, Health care for women International 1999 Sep. / Oct. 20 (5): 493-504.

11- Foster P, Anderson C.M., et. al., Reaching targets in the national cervical screening programme: are current practice unethical? Journal of medical ethics 1998; 24: 151-57.

12- Khanna N, Phillips M.D., et. al., Adherence to care plan in women with abnormal papanicolaou smears: A review of barriers and interventions, Journal of American Board of Family practice 2001 14 (2): 123-130.

13- Annual Report 1992, Ministry of health, U.A.E 1992.
United Arab Emirates, Ministry of Health

View Questionnaire on next page

Knowledge Attitude and practice of Pap smear among local School teachers in Sharjah District

*** Age Years:**

*** Level of Education of your husband:**
1- Does not read or write
2- Primary
3- Preparatory
4- Secondary
5- University or equivalent

*** Total Duration of marriage:**
1) 1-5 years
2) 6-10 years
3) 11-15 years
4) 15-20 years
5) < 20 years

(1) Have you ever heard about pap smear (taking a sample from the cervix).

1- Yes
2- No

(2) If Yes, from where or whom did you get to know about this cancer?

1- Family / Friends
2- Your Family physician Dr.
3- You're Gynecology Dr.
4- Nurse
5- News paper, Television. & Internet
6- Others ( )

(3) Have you ever had a pap smear?

1- Yes
2- No

(4) Have you ever heard of cervical cancer?

1-Yes
2-No

(5) What do you think the risk factors which can lead to cervical cancer?

1- Early age of marriage (>18)
2- Multiple partners
3- Smoking
4- STDS
5- Diet
6- Others ( )

(6) Is it possible to cure this cancer?

1- Yes
2- No

(7) Is it possible to detect cervical cancer before symptoms appear by pap smear?

1- Yes
2- No

(8) Is early detection of cervical cancer good for treatment outcome?

(9) If you were told that pap smear test is simple, painless procedure & good for early detection & treatment of cervical cancer, would you like to have one?

1- Yes (go to question # 11)
2- No (go to question # 10)

(10) If No, Why?

1- It may be painful.
2- I feel shy
3- I am healthy
4- My husband would not agree
5- Others ( )

(11) If Yes, where do you like to have your pap smear taken?

1- Primary health care center.
2- Well women clinic in the hospital
3- Obstetric and Gynecology clinic in the Hospital.

(12) Who do you prefer to perform this test for you?

1- Family physician / GP.
2- Gynecologic Dr.

3- Maternal & child health Dr.
4- Private Dr.
5- Nurse