An Implementation for Integration of Cervical Smear Screening with Family Planning Services in the District of Diyarbakir Province of Turkey 2001

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ABSTRACT

Context: Cervical smear screening may have an important influence on early detection and prevention of cervical cancer morbidity and mortality and should be widely introduced particularly into primary health care settings.

Objective: We tried to integrate cervical cancer screening programme with a family planning service in a family planning clinic.

Design: Volunteer women, who can speak the local language, were assigned to educate residential women on cervical cancer and to refer them to a family planning clinic. All nurses working in the family planning clinic were trained on how to perform cervical smear.

Setting: The study was conducted in Huzurevleri district of Diyarbakir-Turkey.

Participants: The Pap test results of 503 women who gave informed consent and attended the family planning clinic for cervical smear test were the participants of the study. Women's practices and previous Pap test history were also discussed.

Main Outcome Measure: To examine the effect of factors influencing Pap test history frequency tabulates, chi-square and logistic regression analyses were performed.

Results: Within one year, 503 Pap test were investigated. Although 361 women (71.8%) attended clinic previously, only 37 women (7.4%) had a Pap test. Illiteracy and history of induced abortion were the factors affecting Pap test usage. Adjusted odds ratio for illiterate women, who had not had a Pap test before, was 2.80 (95% CI: 1.3-6.3) and for women who had never induced abortion was 3.88 (95% CI:1.3-12.0).

Conclusion: Integration of cervical cancer screening with family planning services may avoid missed opportunities. Especially illiterate women should be reached because of their risks.

Key words: cervical cancer screening, family planning clinic, Pap test, risk factors.

INTRODUCTION

Cervical cancer is one of the most comon malignancies that affect women worldwide, and is estimated to kill some 200,000 women annually (1). Since no other cancer screening reduces the mortality rate as much as cervical cancer, mass screening programs, in which women have had cervical smear tests at least once every three to five years, have proven effective in reducing cervical cancer mortality and morbidity rates (2). Pap tests could easily be used by health care workers in areas with limited resources. There are some successful examples for implementation of cervical cancer screening programs by using nurses or midwives (3,4). In Diyarbakir province, a large city of south-eastern Turkey with insufficient health facilities, we implemented a cervical cancer screening programme. The aim of the programme is to integrate the family planning services with cervical cancer screening and include nurses in the implementation. This program should be a pilot study for primary health care planners. In this article, we present the results of the cervical smears that were taken from a district of the Diyarbakir province by trained nurses.

MATERIAL & METHODS

By the year 1996, a community based family planning and counseling project was implemented in the Huzurevleri district of Diyarbakir province, Turkey. Although the exact number of residents is not available the estimated population size of the district is 100,000. The project was supported by the European Committee, and the initial aim of the project was family planning. A well designed family planning clinic was built in the region. Fifteen women were assigned to reach the residential women who cannot speak Turkish. Women who were high school graduates and who were speaking both Turkish and the local language as well as volunteer women were selected from the same region. The volunteer women were educated about family planning. After the project implementation had started, the project committee decided to integrate the cervical

cancer screening with the family planning education. By the year 2000, cervical screening started. All assigned volunteer women were educated about cervical cancer and asked to call the residential women to the family planning clinic for a Pap test. Messages were given to volunteers, and they were requested to give the same messages to residential women: Cervical cancer is one of the leading causes of death of women; Cervical cancer is preventable; Cervical cancer screening is easy and cheap; Every women should be screened every 3-5 years; In our family planning, cervical cancer screening is available. Volunteer women visited and interviewed the residential women in the street group by group on the topic of cervical cancer. Five hundred and three women attended our clinic for cervical screening in one year. All women were informed about what kind of procedure would be held. Most of the women who attended were familiar with family planning. Therefore 503 women may not reflect the general structure of residential women.

Fourteen nurses who were assigned to the family planning clinic were educated and participated in the study and completed a week-long competency-based training course focussing on "how to take a Pap test correctly". Practice regarding the procedure on pelvic models took place prior to working with patients. Then, during the first few months of the project, the nurses received additional training in the work setting.

The trained nurses took a Pap test for all eligible women attending the family planning clinic. Women were eligible to participate in the study if they were 18 years of age or older. All Pap tests were investigated by a pathologist assigned to the University Hospital. Any woman who was judged to be CIN II or higher than CIN II based on the Pap test results was offered colposcopy. Cervical biopsy was carried out as indicated on the basis of the colposcopy findings. Women with CIN I or higher grades were advised to re-screen annually, whereas lower grades advised to re-screen every 3 years periodically. Although the price was nearly 20 US dollars in Diyarbakir state Hospital, in our clinic, they paid 3.5 US dollars per cervical smear.

During the study period, 503 women's Pap tests were taken and investigated. Women were interviewed about their age, education level, fertility history, contraceptive usage, health insurance, employee status and smoking. Women's phone numbers and addresses were also recorded for communication and advise for the treatment if necessary.

Statistical Analysis:
To examine the effect of factors influencing Pap test history frequencies, crude odds ratios were calculated and chi square analyses were used. Multiple logistic regression models were used to calculate adjusted odds ratios and 95% Confidence Intervals (CI). P values below 0,05 were accepted as significant.

RESULTS

Volunteer women visited residential women and invited them to a family planning clinic for Pap test, but very few of them attended the clinic. In a one-year period, only 503 women's Pap tests could be investigated. Some demographic properties of the women are shown in Table 1. The ratio of adolescent marriages was 64% and the ratio of high parity was 40.8% among 503 women. Sixty-nine percent of the women had never induced abortion. IUD was the most frequently used contraceptive method (52.1%), and traditional methods were used by 6.8% of the women. Almost 71.8% (361 women) of the 503 women were familiar with a family planning clinic. Twenty-eight percent of the women had never attended the family planning clinic previously.

Factors associated with previous Pap test are investigated in Table 2. According to univaried analyses, illiteracy, having no social security, not being employed and having more than 2 induced abortions were the factors associated with previous Pap test usage. Almost 96% of the illiterate women, 95% of those without health insurance and 93% of unemployed women had never had a Pap test. Women with more than 2 induced abortions were more likely to have had a Pap test with respect to women who had never induced abortion (odds ratio : 0.18, 95%CI: 0.06-0.58). This difference was statistically significant (p= 0,0003). Although most of the women attended a family planning clinic before (71.8%), only 7.4% of them had a Pap test.

After adjusting for all variables in the logistic regression model, two characteristics were found to be significantly associated with those having never used Pap test (Table 3). Illiteracy remained as the strong factor. Illiterate women were at greater risk than literate women (odds ratio: 2.80, 95% CI : 1.3-6.3). Women who had never induced abortion were at 3.9 (1.3-12.0) times at risk with respect to those who had never used a Pap test. Age was not a significant factor associated with use of a Pap test, but as the age increases, Pap test usage seems to increase.

In Table 4, the results of the Pap tests are shown. The most frequently screened result was infection reaction. Totally, 54.3% of the women were diagnosed to be normal. In 3 (0.6%) women, CIN-I, and in 2 (0.4%) women, CIN-II were detected, while chronic cervical squamous metaplasia was diagnosed in 7 (1.4%) women. Two women diagnosed as CIN-II were referred to colposcopy; CIN-II was confirmed by colposcopy. Women with CIN-I and higher grade were advised to re-screen annually.

Table 1: Demographic determinants of women attendeding family planning clinics for cervical smears, Huzurevleri-Diyarbakir, Turkey 2001.

	n	**%**
Mean age (std.dev.)	32.45 (7.31)	
Age at first marriage younger then 19 (%)	325	64.6
Number of births		
No births	9	1.8
1-2 births	149	29.6
3-4 births	140	27.8
5-6 births	103	20.5
More than 6 births	102	20.3
Induced abortions		
0	347	69.0
1	98	19.5
2	32	6.4
More than 2	26	5.1
Spontaneous abortions		
0	389	77.3
1	81	16.1
More than 1	33	6.6
Still birth		
0	484	96.2
1	13	2.6
More than 1	6	1.2
Contraceptive usage		
Not using	128	25.4
Intra Uterin Device	262	52.1
Pill	28	5.6
Condom	44	8.7
Tubal ligation	7	1.4
Coitus interrupts or other traditional methods	34	6.8
First time attended family planning clinic	142	28.2

Table 2: Sociodemographics and other factors of women associated with previous Pap smear, Huzurevleri-Diyarbakir, Turkey 2001.

	Pap smear history (n: 503)			
	Never had a Pap test (%)	**Had at least once (%)**	**p**	**Crude odds ratios (95% CI)**
Age (years)				
18-24	61 (96.8)	2 (3.2)	0,72	1
25-29	104 (93.7)	7 (6.3)	0,37	0.49 (0.07-2.68)
30-34	135 (92.5)	11 (7.5)	0,23	0.40 (0.06-2.01)
35-39	91 (91.0)	9 (9.0)	0,14	0.33 (0.05-1.73)
40-44	46 (90.2)	5 (9.8)	0,14	0.30 (0.04-1.87)
Older than 45	29 (90.6)	3 (9.4)	0,20	0.32 (0.03-2.52)
Illiterate	260 (95.9)	11 (4.1)	0,002	2.98 (1.44-6.18)
Without health insurance	235 (95.1)	12 (4.9)	0,03	2.11(1.1-4.3)
Have no relatives or friends with malignancy	376 (92.4)	31 (7.6)	0,64	0.83 (0.3-2.1)
Have no gynecologic complains	76 (92.7)	6 (7.3)	0,98	1.00 (0.4-2.5)
Not employed	444 (93.3)	32 (6.7)	0,02	3.15 (1.1-8.9)
Induced abortion				
0	329 (94.8)	18 (5.2)	0,004	1
1	88 (89.8)	10 (10.2)	0,07	0.48 (0.20-1.17)
2	29 (90.6)	3 (9.4)	0,32	0.53 (0.14-2.40)
More than 2	20 (76.9)	6 (23.1)	0,0003	0.18 (0.06-0.58)
Not using contraceptive methods actually	143 (92.9)	11 (7.1)	0,90	1.0 (0.5-2.2)
Total	**466 (92.6)**	**37 (7.4)**		**503**

Table 3: Adjusted odds ratios of factors influencing Pap smear, calculated by logistic regression, Huzurevleri-Diyarbakir, Turkey 2001.

	Adjusted odds ratios (95% CI)	**P**
Age (years)		
18-24	1	0.85
25-29	2.15 (0.3-16.2)	0.45
30-34	1.03 (0.2-5.1)	0.97
35-39	0.85 (0.2-3.9)	0.83
40-44	0.75 (0.2-3.5)	0.72
More than 45	0.69 (0.1-3.5)	0.66
Illiterate	2.80 (1.3-6.3)	0.009
Without social security	1.56 (0.7-3.4)	0.52
Have no relatives or friends with malignancy	1.53 (0.6-3.9)	0.37
Have no gynecologic complains	1.09 (0.4-2.8)	0.84
Not employed	1.65 (0.5-5.2)	0.35
Induced abortion		
More than 2	1	0.13
2	2.58 (0.5-12.5)	0.23
1	2.53 (0.8-8.2)	0.12
Had never	3.88 (1.3-12.0)	0.01
Not using contraceptive methods actually	0.91 (0.4-2.0)	0.53
Total	**503**	

Table 4: Results of the Pap smears Huzurevleri-Diyarbakir, Turkey 2001.

	N:503 (%)
Normal	273 (54.3)
Infection/reaction	213 (42.3)
Senile	5 (1.0)
CIN-I	3 (0.6)
CIN-II	2 (0.4)
Chronic cervical squamous metaplasia	7 (1.4)

Table 5: Risk factors for cervical cancer among women attendeding family planning clinics Huzurevleri-Diyarbakir, Turkey 2001.

Risk Factors	**N: 503 (%)**
Early age at marriage (earlier than 16^{th})	195 (38.8)
Smoking	117 (23.3)
Genital wart	4 (0.8)
Multiple sex partner	No data
Contraceptive pill usage	28 (5.6)

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