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OBSTETRICS & GYNAECOLOGY

Cervical cytology screening — knowledge, attitudes and practice in a peri-urban settlement

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Aim. To determine the knowledge, attitudes and practice of women living in peri-urban settlements with regard to screening for cervical cancer.

Method. A community-based questionnaire survey of 165 women living in a defined area of Khayelitsha, a peri-urban settlement on the outskirts of Cape Town.

Results. Two hundred households were visited, with a response rate of 84%. Median age of respondents was 27.5 years. The majority of interviewees were married (53.3%), unemployed (61.5%), had an educational status of standard 4 or less (58.1%) and had been living in Cape Town for 4 years or more (64.3%). The median parity was 2 (range 0 - 11). Most interviewees were currently using contraception (52.4%). One-third (35.4%; 95% CI 28.1 - 42.7%) of interviewees had heard of the Pap smear. Of these women, most had obtained their information from the midwife obstetric unit (MOU), and this was the most commonly reported facility where Pap tests were known to be done. The majority of interviewees did not regard the test (or the prospect thereof) as embarrassing (88.4%), painful (89.1%) or harmful (90.9%), and indicated that they would have the test done (89.1%). The most important reason for choice of where the test should be done was proximity to place of residence (83.9%). More than one-third of interviewees reported having had a Pap test (37.2%; 95% CI 29.8 - 44.8%). The most common reason for not having had a test was that the interviewee had never heard of it (81.3%). Most had undergone the test at a MOU (65.6%), where it had been part of an antenatal work-up (80.3%). Fewer than half of the interviewees who had undergone a test knew the result of their test.

Conclusion. The antenatal, obstetric and family planning services in the area have been effective, to a limited extent, in providing information and conducting screening. However, these services are missing many opportunities to fulfil this function, and knowledge and practice of cervical cytology screening in this community are poor. With the implementation of a rational policy for screening in this area there is the potential to achieve good coverage.

S Afr Med J 1996; **86:** 1185-1188.

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The importance of cervical cancer as the leading cause of death from neoplasms among women in South Africa[1] and the proven effectiveness of organised cervical cytology screening programmes elsewhere[2-7] have led to calls for the improvement of such services in this country.[8-11] At least one attempt to enhance cervical cytology screening in South Africa has failed, partly due to the target population's lack of awareness of the service and its relevance.[12] This failure highlights the internationally recognised need for appropriate educational programmes to improve the uptake of screening.[13] South African studies on knowledge, attitudes and practice of cervical screening have been largely hospital- or clinic-based and lack detailed enquiry into specific aspects of knowledge, attitudes and practice.[14-16] As a result, the information required for planning and implementation of cervical cytology screening programmes is deficient. This study aimed to gather information on the knowledge and practice of, and attitudes to, cervical cytology screening among women in a defined area of Khayelitsha, a large poverty-stricken peri-urban settlement on the outskirts of Cape Town.

Method

A series of free-attitude interviews with key informants, including nursing and medical staff living and working in Khayelitsha and a convenience sample of 15 women resident in Khayelitsha, was used to develop a structured questionnaire. After further development of the questionnaire in a series of workshops for training the locally resident interviewers, and after translation, back translation and pretesting, the questionnaire was administered in a community-based survey in early 1991. The study area was Harare (Khayelitsha, Cape Town), which consists of site-and-service shack housing, with an estimated 3 000 - 3 400 households. The study population included women aged 15 - 65 years who were resident in the area at the time of the study. A random sampling procedure was used to identify 200 sites, and all women resident at each housing site were interviewed. All interviewees were given a detailed explanation about the purpose of and the procedure associated with a Pap test after it had been ascertained that the interviewee had heard of Pap tests. This allowed information on attitudes to screening to be gathered from the whole sample and not only those who initially reported having heard of Pap tests.

Analysis was undertaken with PC/SAS software. The dependent variables were: (*i*) respondent had heard of the Pap test; and (*ii*) had undergone a Pap test and each was included in a multivariate model (backward selection) to determine an association with the following independent variables: (*i*) persons per room; (*ii*) employment status; (*iii*) personal income; (*iv*) education; (*v*) marital status; (*vi*) duration of residence in Cape Town; (*vii*) age; (*viii*) parity; and

(*ix*) history of use of contraception. Criteria for inclusion in the model were either: (*i*) variables with a relative risk of 1.5 or more on bivariate analysis; or (*ii*) variables that were *a priori* deemed likely to be confounders.

Results

A total of 165 women were interviewed at 178 sites; 22 sites were vacant or unoccupied at 3 repeated visits. The reported average number of women in the target age range per occupied site was 1.1, indicating that 20 potential subjects were missed, and resulting in an estimated response rate of 84%. There were no refusals.

The median age of women interviewed was 27.5 years (range 15 - 62 years). The majority of interviewees were married (53.3%), unemployed (61.5%), and had an educational status of standard 4 or less (58.1%). The median duration of residence in Cape Town was 5 years (range 0 - 40) and the median duration of residence in Khayelitsha was 3 years (range < 1 - 8). Over 80% of women had been born in the Eastern Cape (former Transkei or Ciskei), and over 70% regarded one of these places as their home. The median total weekly income per site was R100 (range R0 - R400), and the median personal weekly income of interviewees was zero (range R0 - R200).

Most interviewees were currently using (52.4%) or had previously used (22.0%) contraception. The median parity was 2 (range 0 - 11) and most interviewees had been pregnant within the past 4 years (65.3%). The most common source of recent obstetric care was the midwife obstetric units (MOUs) (55.1%), followed by hospitals and clinics outside Cape Town (23.1%) and hospitals in Cape Town (12.2%); 4.3% reported having had no obstetric care during their last pregnancy.

One-third (35.4%; 95% CI 28.1 - 42.7%) of interviewees said that they had heard of the Pap smear (or screening for cervical cancer). Of these women, most had obtained their information from the MOU, and this was the most commonly reported facility where Pap tests were known to be done (Table I). The majority of interviewees said that they did not regard the test (or the prospect thereof) as embarrassing (88.4%), painful (89.1%) or harmful (90.9%), and that they would undergo the test (or undergo it again in the case of those who had previously had one) (89.1%) (Table II). More than one-third of interviewees reported having had a Pap test (37.2%; 95% CI 29.8 - 44.8%).

Over 70% of interviewees believe cervical cancer to be a disease of women under 35 years old. Having many sexual partners was the most commonly perceived risk factor for cervical cancer (52.1%). Other perceived risk factors were : (*i*) becoming sexually active at a young age (37.2%); (*ii*) not using condoms (29.1%); (*iii*) having a curse put on one (21.2%); and (*iv*) using contraception at a young age (27.9%). Half of the interviewees believed that women with cervical cancer could be cured. The majority believed that they themselves were vulnerable to developing cervical cancer (70.3%), but almost half (45.5%) had a fatalistic attitude in this regard. Almost all (99.4%) would seek treatment if they believed they had cervical cancer, and most would undergo hysterectomy if this were indicated (83.0%). Ten per cent of women would consult a traditional or faith healer if they suspected they had cervical cancer, almost half would consult a private practitioner (46.1%) and

Table I. Knowledge of screening for cervical cancer

	No.	%
Heard of the Pap smear	58	35.4
Source of information (for those who had heard)*		
MOU	34	58.6
Hospital	10	17.2
Friend	2	3.4
Relative	1	1.7
School	0	0
Radio	6	10.3
TV	0	0
Other (unspecified)	5	8.6
Purpose of the Pap test*		
Don't know	16	27.9
To find if you have cancer	15	25.9
To prevent cancer	10	17.2
To find cancer or infection (including AIDS)	16	27.6
Other (unspecified)	1	1.7
With regard to the result*		
You can get the result immediately	11	19.0
You must return to the clinic	15	25.9
The clinic will contact each woman	17	29.3
Don't know how to get the result	15	25.9
Doctor/nurse recommendation for frequency of test*		
Each year	21	36.2
Every 3 years	9	15.5
With each pregnancy	9	15.5
Three times in a lifetime	3	5.2
Never	13	22.4
Don't know	4	6.9
Age to initiate screening*		
15 years	15	25.9
25 years	29	50.0
50 years	7	12.1
When she starts having sex	2	3.4
When she starts using contraception	2	3.4
At first pregnancy	3	5.2
Age to stop screening*		
Between 30 and 40 years	5	8.6
Between 40 and 50 years	11	19.0
At menopause	3	5.2
After 60 years	28	48.3
After last pregnancy	9	15.5
When contraception is stopped	2	3.4
First reported facility where Pap test known to have been done*		
Day hospital	13	22.4
MOU	29	50.0
Private doctor	2	3.4
Family planning clinic	14	24.1

* Denotes that figures refer to those who had heard of the Pap smear.

Table II. Attitude to screening for cervical cancer

	No.	%
Do not find the test (or prospect thereof) embarrassing	146	88.4
Do not believe the test is (would be) painful	147	89.1
Do not believe the test to be harmful	150	90.9
Believe the test is important	156	94.5
Intend to have the test done (again)	147	89.1
Would have the test done locally in Khayelitsha rather than elsewhere	148	90.8
Most important reasons for choice of facility		
Close to home	135	83.9
Close to work	6	3.7
Staff treat you well	8	5.0
Do not have to wait long	4	2.5
Cost	6	3.7
Other (unspecified)	2	1.2
Preferred person for conducting test		
Male doctor	18	11.1
Female doctor	82	50.6
Sister/nurse	51	31.5
Other (unspecified)	11	6.8
Desire to know more about Pap smears/ cancer of the cervix	159	97.0
Partner/spouse's attitude to interviewee having the test? (for those who have a partner/spouse)		
He doesn't know about the test	15	18.6
He doesn't mind if I have the test or not	37	45.6
He thinks I should have the test	26	32.0
He is against my having the test	1	1.2
Other (unspecified)	2	2.4

the rest would attend a hospital or day hospital. The majority of interviewees believed cervical cancer to be an important local health problem (57.9%).

Women who had been resident in Cape Town for more than 3 years (RR 3.5; 95% CI 1.7 - 7.3) or who had used contraception (RR 3.9; 95% CI 1.6 - 9.7) were more likely to have heard of the Pap test than those who had not. Women who had used contraception were also more likely to have had a Pap test than those who had not (RR 3.2; 95% CI 1.4 - 7.6), and married women were more likely than unmarried women to have had a Pap test (RR 2.1; 95% CI 1.1 - 4.2).

Discussion

The percentage of women who had not heard of the Pap test (64.6%) is 2 - 4 times higher than that reported in studies from the USA, the UK and Italy,[17-21] and 10% higher than that found in a study in Khayelitsha.[16] However, the figure is considerably lower than that reported in a study in Johannesburg (95.5%).[14] The fact that almost one-quarter (23.6%) of the interviewees initially said they had not heard of Pap tests, but realised that they had undergone the test after a detailed explanation of the procedure, raises concern about the transfer of information at the time of the procedure. Without a good understanding of the reasons, possible consequences, and need for follow-up, women are unlikely to benefit fully from the test. Having heard of the Pap test indicates that the woman has some concept of the test, although she may or may not have undergone the test. Not having heard of the Pap test or screening indicates no understanding or, at best, a poor understanding of cytological screening, whether she had undergone the test or not.

The MOUs, the most common source of knowledge about the Pap test (60%) and the most frequently identified sites at which women knew the Pap test could be done (48%), have to some extent been successful in transmitting information on Pap tests. However, considering that 84% of women in the sample had been pregnant at least once, many are passing through the obstetric services without having gained an understanding of Pap tests. Only 40% of the women who had been pregnant said that they had heard of Pap tests, which indicates a high level (60%) of missed opportunities during their antenatal and obstetric care. The level of missed opportunities to inform women of Pap smears at family planning clinics is also very high, with 58.2% of women who were currently using, or had previously used, contraception reporting that they had not heard of Pap tests. In addition, while the optimal age for screening awaits clearer definition, obstetric and family planning services are missing opportunities for *taking* Pap smears.

Over one-quarter (27.6%) of the women who had heard of Pap tests did not know what the test was for, and only 17.2% identified the strictly correct purpose of the test (to prevent cancer of the cervix). This figure is in line with those reported in studies from the USA and UK (11 - 30%),[17,18,22] but is considerably lower than that reported (36% - 59%) in a survey of canning workers in the Western Cape.[5] This may be because women in stable employment have better access to health services, e.g. an occupational health nurse, and a better understanding of the procedure. The lack of understanding of the availability of results reflects the quality of information, education and communication. The need for follow-up is vital to the success of a screening programme and should be emphasised in all messages relating to Pap tests. The case for the use of mass media, especially radio broadcasts, is supported by radio's having been the second most common source of information (10.3%).

Women reported inconsistent information on the frequency with which they should have the Pap test, the time at which to stop and the time at which to initiate screening. The information was also impractical in terms of cost-effectiveness and capacity of the services. In many cases (22.4%) the test had not been recommended. The failure of health workers to provide practical, cost-effective and consistent recommendations to women reflects the absence of a consistent and appropriate policy on screening.

Fears about embarrassment, pain or harm do not present a major barrier to the participation of women in a cervical screening programme in this community, in contrast to studies from the UK which showed these attitudes to be important potential barriers to women attending for Pap tests.[17,23,24] The findings that over 90% of women would

attend a facility in Khayelitsha rather than elsewhere, and that 76.4% would attend one of the three facilities in Khayelitsha where screening is currently available, indicate that services in Khayelitsha are both acceptable and geographically accessible. Proximity of a facility to home was the most common reason given for choice of where the procedure should be conducted (83.9%). Existing facilities in Khayelitsha, and new facilities in Harare itself, could therefore be utilised effectively in a screening programme.

The proportion of women in this sample who reported having had a Pap test (37.2%) is considerably lower than the figure reported in studies from the UK and Italy,[17,20,21,24] and is also about half of that reported in the study of canning workers in the Western Cape.[8] However, it is consistent with the figure for the subgroup of non-workers in the latter study. The figure is slightly lower than that reported (44%) in a previous study in Khayelitsha,[16] but more than 10 times greater than that reported among black women in a Johannesburg hospital obstetric ward in 1984.[14]

Eighty-two per cent of those who had undergone the test had done so either at a MOU (65.6%) or at a family planning clinic (16.4%). However, parity was not independently associated with having had a Pap test, whereas history of contraception was. This suggests that the relatively small number of women who reported having undergone the test at a family planning clinic rather than a MOU underemphasises the role of the family planning clinics in screening. Considering that 83.6% of women who had undergone the test did so while pregnant (73.8%), or because the clinic or hospital staff had recommended that they have the test (9.8%), it is probable that many women become aware of the test in the process of undergoing the test. This indicates that MOU and family planning clinic staff are effective, to a limited extent, in taking Pap tests.

The major barriers to improving screening coverage in this community are: (*i*) failure of the services to provide adequate and consistent information to women; (*ii*) failure to develop and implement a consistent, co-ordinated and cost-effective policy; and (*iii*) the community's poor socio-economic circumstances (the above two points are only partly the result of this). The deficiencies in the services referred to in (*i*) and (*ii*) above should be seen in the light of a general shortage of resources for primary health care services, and a high workload imposed by other health problems which may be given greater priority than cervical cytology screening. A cervical cytology screening programme in this area should emphasise the following components: (*i*) an educational programme directed at women in the target age range. The programme should utilise mass media and a wide range of health workers; (*ii*) implementation of a consistent, cost-effective policy on screening in the services in the area. This should incorporate a motivational component for staff in these services. Particular attention should be paid to follow-up of women with abnormal results.

This study was funded by the Anglo-American Chairman's Fund. We would like to thank Nancy Isenberg for her assistance with the questionnaire design and processing and the fieldwork, Linda Mgqamqo for co-ordinating the fieldwork, and the five interviewers, Nosiseko Dlakavu, Catherine Macingwane, Hilda Ntanyana, Zanyiwe Maneli and Mary Mohapi.

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Accepted 18 July 1995.