

Public Health Briefs

Accuracy of Women's Self-Report of Their Last Pap Smear

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Abstract: We compared interview data and physician records on when women last had a Pap smear in a sample of 98 rural Black women. We found 20 per cent of women could not accurately report on whether a Pap smear had been done within three years (sensitivity = 0.95, specificity = 0.47). Source of gynecological care and perceived barriers to obtaining a Pap smear but not education were associated with inaccurate reports. Self-report may be a misleading measure of Pap smear screening in comparable groups of women. (*Am J Public Health* 1989; 79:1036-1037).

Introduction

Women's own report of when they have had Pap smears is frequently the only source of information for clinicians who care for them, public health workers responsible for screening programs, and epidemiologists doing research.¹ However, some studies suggest that women may not recall accurately when they last received cervical cancer screening.²⁻⁴ As part of a study examining patterns of Pap smear use among rural Black women, we assessed the accuracy of their recall of their last Pap smear and possible reasons for inaccurate self-report. We examined relations of source of care, educational level, and women's attitudes toward gynecological care to the accuracy of this recall.

Methods

We interviewed 149 Black women and reviewed records of their health providers in rural areas of three North Carolina counties. Approximately half the women were contacted by door-to-door canvassing of houses in low-income areas; the names of another third were provided by social workers in one county; the rest were friends and neighbors of the women referred by the social workers. During a structured, 30-minute home interview, two Black female interviewers asked the women about the date, place, and provider of their last Pap smear, their sources of medical care, attitudes toward gynecologic and preventive health practices, and perceived barriers to obtaining a Pap smear. After receiving informed consent from each woman, one of us (JAS) contacted providers by telephone to verify the women's reports on the date of their last Pap smear; a secretary or nurse provided the information after reviewing the woman's chart. We defined a

"recent" Pap smear as one done within the past three years, based on the American Cancer Society's recommendation during the study period.⁵

We included in the questionnaire 17 questions about barriers to Pap smear use. We used a principal components factor analysis in a promax rotation to identify clusters of items (factors) that were related to each other.⁶

Results

Of the 149 women interviewed, 51 were excluded because they had had a hysterectomy (n = 28), had no source of medical care (n = 6), or were not listed on the rosters of any of the providers they named (n = 17). Our final sample of 98 women who had both a self-report and a provider report ranged in age from 16 to 75 years (mean 35), and in education from less than six to 16 years (mean 10.8; 22 per cent ≤ 9 years, 21 per cent 10 or 11 years, 57 per cent ≥ 12 years); their mean family income was \$11,040 per year. Their demographic characteristics did not differ appreciably from 1980 census data for the three counties.

Women's self-reports correlated poorly with providers' reports on date of their last Pap smear (Table 1). Although there were errors in both directions, women usually overestimated how recently they had had a Pap smear. Using whether a Pap smear had been done in the past three years as a cutpoint, there was a 20 per cent error rate (Table 2). Women's self-report had a sensitivity of 95 per cent and a specificity of 47 per cent. Agreement between patient and physician was only fair (Kappa = 0.46).

As shown in Table 3, women seeing nurse practitioners were more likely to report accurately when their last Pap smear had been done than women seeing internists or family physicians. There were no clear differences in accuracy of reporting by age, income, education, or method of recruitment into the study.

Factor analysis identified two factors which we used to construct two variables involving six of the 17 potential barriers (the other 11 items showed no further discriminating

TABLE 1—Agreement between Provider and Women's Report of Number of Years since the Last Pap Smear

	Provider's Report					
	<1	1-2	3-6	≥ 7	Never	
<1	42	6	5	1	6	60
1-2	3	12	2		3	20
3-6	1	1	5	1		8
≥ 7	1			5		6
Never			1		3	4
	47	19	13	7	12	98

Pearson Correlation Coefficient = 0.496

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TABLE 2—Agreement between Provider and Women's Report of Pap Smear within Three Years

Women's Self-Report	Provider's Report		Total
	Recent Pap	No Recent Pap	
Recent Pap	63	17	80
No Recent Pap	3	15	18
Total	66	32	98

Self-Report: Sensitivity = 95%
 Specificity = 47%
 Positive predictive value = 79%
 Negative predictive value = 83%

TABLE 3—Percentage of Women Reporting Accurately by Type of Gynecologic Provider and Perceived Barriers

	N	Accurate Self-Reports %	OR	95% CI
Overall		80		
Gynecologic Provider				
Obstetrician/Gynecologist	15	87	1.00	*
Nurse Practitioner	27	93	1.90	0.24–15
Internist/Family Practice	41	68	0.33	0.06–1.68
Other	15	80	0.62	0.09–4.4
Pelvic examination beliefs				
Important**	30	67	0.34	0.13–0.91
Not important	68	85	1.00	*
Perceived trouble of examinations				
Important**	35	69	0.36	0.19–0.71
Not important	63	86	1.00	*
Recruitment method				
Door to door	46	76	1.00	*
Other	52	83	1.50	0.77–2.9

*Baseline

**Important = agreeing that at least two-thirds of the component items are important barriers to getting Pap smears.

ability). The "pelvic examination barriers" factor contained three items: not liking to be examined by a male; pelvic examinations being unpleasant; pelvic examinations being embarrassing. The 30 women who felt that at least two of three of these barriers were important reasons why women did not get regular Pap smears gave less accurate reports than other women did. The factor labeled "trouble getting examinations" contained three items: seeing a doctor takes a lot of time; not wanting "to look for trouble"; meaning to get a Pap smear but "just not getting around to it". The 35 women who felt that at least two of three of these barriers were important reasons why women did not get regular Pap smears gave less accurate reports of when their last Pap smear had been done than did other women.

Discussion

A limitation of these data is that providers' records are not necessarily the "gold standard" for when the last Pap

smear was done. It is possible that the medical record contained inaccurate data, or that dates were overlooked in the record review. If many Pap smear reports were overlooked, our estimate of the specificity of self-report would increase.

Women seen by internists and family physicians were least likely to report accurately about the recency of their last Pap smear. It may be that more of these women had pelvic examinations done for reasons other than Pap smears and either confused the term "pelvic examination" with "Pap smear" or assumed that a Pap was done routinely during every pelvic examination. Such confusion is important if women believe that they have had a Pap smear when they have not and may well prevent them from receiving one when they need it.

More than confusion, however, is involved; those women with inaccurate reports were also more likely to perceive significant logistical barriers to getting a Pap smear and to view pelvic examinations as embarrassing or unpleasant. Perhaps women with negative perceptions remember their last Pap smear more vividly. Vivid experiences are recollected as more recent, regardless of when they actually occurred and this may account for some of the inaccuracy of self-report.⁷

Somewhat surprisingly, a woman's educational level was not related to whether or not she recalled accurately when her last Pap smear had been done. Others also have found education to be unrelated to the accuracy of survey data.^{4,8}

Although one may not be able to generalize these results, they highlight the danger of relying exclusively on self-reports for determining when a woman last received a Pap smear.

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