

Attitudes of Women and Men Physicians

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Abstract: Attitudinal data obtained from interviewing random samples of women and men physicians in metropolitan Detroit indicated that women were generally more liberal and egalitarian than men. Older women were more liberal/egalitarian than older men while younger men were closer in attitudes to younger women. Within specialties, women and men physicians frequently held similar attitudinal scores; however, controlling for age, sex accounted for more variation than did specialty. A weighted combination

of variables which together most significantly discriminated between age and sex subgroups pointed to a sensitivity dimension. This was stronger in the women; yet men demonstrating a similar sensitivity were found in almost every age and specialty grouping. Although younger men physicians are less conservative than older men physicians, both younger and older women physicians demonstrated strong liberalism/egalitarianism. (*Am J Public Health* 69:1133-1139, 1979.)

The attitudes of physicians have been the focus of a considerable body of research. A number of studies have investigated the political affiliation and philosophy of physicians,¹⁻⁴ frequently looking at the relationship of these variables to medical practice.⁵⁻⁹ Several have examined attitudes regarding various types of government involvement in medical care¹⁰⁻¹² and a national health insurance program.¹³⁻¹⁴ Surveys have probed physician attitudes about family planning, contraception and abortion,¹⁵⁻²¹ patient-physician relationships,²² prepaid group practice,²³ sexual assault,²⁴ women in medicine,²⁵ and a variety of other medical concerns.²⁶⁻³⁰ However, most studies have not been analyzed with sex as a variable, or there were but few women sampled.

In recent years there has been a growing interest in exploring the attitudes of women physicians. Such research has tended to focus upon sex specific subjects, e.g., women physicians' educational experiences in a male dominated profession³¹ or their perceptions of the female role.³² Steinmann and Fox³³ compared attitudes of women and men physicians, but limited their attention to the perceptions of both

groups concerning ideal feminine roles. Haycock and Weiss-Schwartz³⁴ queried women physicians about a variety of relevant medical and personal issues, but have no comparable data from male physicians.

The present paper used full random samples of both men and women physicians and probed general as well as medical and personal attitudes.

Methodology

Sampling Procedures

This paper is part of a larger study entitled "Practice and Life Patterns of Women and Men Physicians" conducted in the Detroit, Michigan metropolitan area in 1974 and 1975. Only physicians who had been awarded a medical degree but were not classified as interns or residents, who resided or worked in the Detroit tricounty area, and who were born in the United States or were graduated from a medical school in this country were included in the universes from which the two physician samples were drawn. Separate random samples of 105 women and 165 men physicians were drawn from a list of physicians with Michigan addresses maintained by the Michigan State Medical Society using the American Medical Association (AMA) Physician Master file. Those who had died, were incapacitated, had moved, or could not be located, were removed from the sample leaving 97 women and 139 men. Ten per cent of the women and 25 per cent of the men refused to be interviewed. Access to an additional 12 per cent of the men was blocked by a secretary, nurse or spouse (none of the woman physicians had such gate-keepers). There were no significant differences between

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the male or female physicians interviewed and the respective universes from which the two samples were drawn in terms of years of birth or choice of specialty.

Instruments*

Professional interviewers administered a 207-item questionnaire, obtaining data on family and educational history, household composition and responsibilities, medical training and work status, community and professional activities as well as numerous indicators of attitudes.

The main measures used in the study included items reflecting the following characteristics: Medical Politics, Medical Feminism, Political Position, Egalitarianism, Individualism, Role Isolation and Discrimination in Medicine. For most attitude measures, five response categories were used, ranging from strong agreement to strong disagreement and including a neutral point. On the one scale that did not have a neutral category, mathematical adjustments were made so that means would be comparable. Responses reflecting conservative vs. liberal positions were coded so that low values represented conservative scores and high values represented liberal scores.

Combinations of measures (four subscales, three main scales and two individual items) were included in the discriminant analyses.³⁵⁻³⁶ Groups used in exploratory discriminant analyses included full samples, partial samples and four subgroups (women under age 50, men under age 50, women over age 50, and men over age 50).

Statistical Procedures

The data were analyzed using contingency tables and chi square as well as analysis of variance, factor analysis, and stepwise discriminant analysis. Throughout this paper, any finding reported as significant had less than a .05 level of probability of having occurred by chance.

Results

Selected Characteristics of the Samples

General characteristics of the two samples are summarized in Table 1. The men physicians were older than the women. Although the age distribution of men and women over age 50 did not differ, the reverse was true for those who were less than age 50 (Table 2). Four times as many men were Republican as were Democrat, while equal numbers of women identified with each party. Sixty per cent of the women were Protestant as compared with 35 per cent of the men.

There was a tendency for the men physicians to assess their social class higher than did the women physicians. This is of particular interest when one notes that the women physicians had fathers who were significantly better educated than were the fathers of the men physicians. In addition, more of the women physicians' fathers and mothers were professionals.

Eighty-four per cent of the women and 96 per cent of the men were engaged in medical work at the time of survey with

TABLE 1—Selected Characteristics of the Samples

Variables	Women Physicians (N = 87)	Men Physicians (N = 95)	p ≤
% Married at time of survey	67	94	.01
% Never married	23	2	.01
% Divorced at time of survey	6	0	.05
% Previously divorced	12	10	NS
% Married to physician	36	2	.01
% Married to non-physician professional	29	4	.01
Mean number of children (of those with children)	2.5	3.2	.01
Mean education of father	14.4 years	12.7 years	.01
Mean education of mother	13.1 years	12.2 years	.01
Mean education of spouse	18.5 years	15.2 years	.001

more women (51 per cent) than men (39 per cent) in primary care specialties. Only 7 per cent of the women were not working for reasons related to the traditional female role. Detailed descriptions of the work patterns and productivity of the women and men physicians in this study have been published previously.³⁷⁻³⁸

The male physicians had a much higher median income than did the females with nearly one-half of the men, but only 17 per cent of the women, reporting annual incomes of \$60,000 or more. An analysis of variance using only data from physicians working full time was performed with income the dependent variable. Specialties, salaried vs. private practice, and sex were entered as independent variables with age as a covariate. The covariate and all main effects accounted for significant amounts of variation in income. Much of the discrepancy between male and female income could be attributed to age, some to specialty, some to salaried employment vs. private practice. However, the difference least likely to have occurred by chance was related to the sex of the physician.

Main Scale Analyses

Table 3 lists mean scores on the main attitude measures included in study. With the exception of Individualism,

TABLE 2—Age Distributions of Physicians

Physicians Under Age 50			Physicians Over Age 50		
Age	Women	Men	Age	Women	Men
30-34	13 (27.1)	2 (5.4)	50-54	13 (33.3)	18 (31.0)
35-39	15 (31.3)	9 (24.3)	55-59	8 (20.5)	9 (15.5)
40-44	12 (25.0)	10 (27.0)	60-64	8 (10.3)	12 (20.7)
45-49	8 (16.7)	16 (43.2)	65-69	4 (10.3)	9 (15.5)
	48 (100.1)	37 (99.9)	70-74	4 (10.3)	4 (6.9)
			75 +	2 (5.1)	6 (10.3)
				39 (100.0)	58 (99.9)
X ² = 10.996 3 df. sig. p < .02			X ² Not Significant		

(Percentages do not add to 100 because of rounding.)

*See Appendix for details

TABLE 3—Mean Scores and Standard Deviations on Five Scales

	Women		Men		P ≤
	\bar{X}	SD	\bar{X}	SD	
Medical Politics	3.198	.602	2.900	.615	.001
Medical Feminism	3.824	.815	3.375	.684	.01
Political Position	3.283	.483	3.004	.491	.001
Individualism	2.840	.640	2.763	.499	NS
Egalitarianism	3.100	.336	2.950	.320	.01

women physicians scored significantly higher (more "liberal") than the men.

Men physicians were more conservative than women on Medical Politics with men less likely to support PSROs and more likely to oppose decreasing medical care costs for the consumer. More men also endorsed the AMA but the difference was not significant. Women in surgery and internal medicine scored significantly more liberal on Medical Politics than did men in the same specialty groups but those women were also significantly younger. Analyses of variance indicated that variation on this measure was associated more with sex than age.

On Medical Feminism, women were more apt to favor part-time internships and special recruitment programs than were the men, but maternity leaves in medical school schedules and retraining programs after absences were equally favored by both sexes. Responses did not differ greatly by age or political preference, but for women physicians Jewish respondents were most, and Protestants least, supportive of special efforts on behalf of women.

The men and women did not differ on the majority of items used to measure conservatism. Militarism, nuclear defense, patriotism and capital punishment items generated much more support from the men than from the women, however. Most of those items were combined in a factor analysis to create a subscale we called "Militarism and Capital Punishment" (See Appendix). Women whose lifetime medical productivity was equal to that of the majority of the men were significantly more conservative on this subscale than were the less productive women, although they still scored at a much less conservative level than did the men.

With respect to Egalitarianism, both men and women Republicans scored lowest while Democrats scored highest. However, Republican women were significantly more egalitarian than Republican men. Jewish women respondents were the most egalitarian and Catholic women the least, while among the men, those with no religious affiliation scored highest and Protestants scored lowest. Slightly more than one-fourth of the male physicians accepted a stereotypical view of women as negatively emotional, and 61 per cent did not agree that day care centers should be provided so any woman who wants to hold a job can do so. In contrast, 10 per cent of the women agreed with the stereotype and 70 per cent supported day care.

On all of the above measures, the women physicians had significantly more liberal or egalitarian scores even after age effects were removed by analysis of covariance. However, when we divided the samples at age 50, differences related to age emerged (Table 4). When analyses of covariance were performed on the scores for physicians under age 50 eliminating the effects of age, men were more conservative only on Medical Feminism.

Women and men in the same specialties were strikingly close on scores of main scales. Looking at the relationships of specialty and sex while removing effects of age via analyses of covariance, we found that only on Political Position did specialty groups account for a significant amount of variation, but age and sex were also significant. Sex accounted for variation on Medical Politics and Medical Feminism. On Egalitarianism, after the highly significant effects of age were removed, neither sex nor specialty was important.

Measurement of Role Isolation and Discrimination in Medicine indicated that women physicians were more likely to feel different from others of their sex than were men physicians, but the majority of both groups denied such feelings. Both women and men under age 50 reported more Role Isolation than did the older respondents. The majority of respondents in both samples felt women patients were "seldom" or "never" discriminated against, but many more women than men said it happened "sometimes" or "often". In contrast, many more men than women said that women physicians and medical students were treated preferentially.

Findings and Interpretation of the Discriminant Analysis

Since the age distribution of the men and women differed and since attitudes varied by age, several discriminant

TABLE 4—Mean Scores of Younger and Older Physicians on Five Scales

	Under Age 50					Over Age 50				
	Women		Men		P ≤	Women		Men		P ≤
	\bar{X}	SD	\bar{X}	SD		\bar{X}	SD	\bar{X}	SD	
Medical Politics	3.184	.621	2.887	.678	.05	3.214	.609	2.908	.582	.05
Medical Feminism	3.883	.806	3.358	.665	.01	3.820	.845	3.329	.695	.01
Political Position	3.313	.455	3.146	.466	NS	3.246	.518	2.910	.487	.01
Individualism	2.844	.657	2.749	.492	NS	2.835	.627	2.771	.507	NS
Egalitarianism	3.174	.312	3.044	.318	NS	3.010	.345	2.892	.309	NS

TABLE 5—Summary Table for Discriminant Analysis

Variables	Group Means				Univariate F df 3,170	Standardized Discriminant Function Coefficients		Correlation between Variables & Linear Composites	
	Women Under Age 50	Men Under Age 50	Women Over Age 50	Men Over Age 50		FUNC 1	FUNC 2	FUNC 1	FUNC 2
Religiosity/ Moral Censorship	3.85	3.83	3.74	3.60	1.41				
Militarism/ Capital Punishment	2.78	2.52	2.79	2.12	9.65	0.35	0.46	0.72	0.31
Welfarism	3.34	3.35	3.50	3.19	1.09	-0.18	-0.04	0.18	0.24
Stereotypic Sexism	3.39	3.22	3.28	2.97	9.31	0.45	-0.13	0.74	0.03
Medical Feminism	3.88	3.39	3.85	3.37	6.26	0.17	0.49	0.55	0.44
Role Isolation	2.99	2.78	2.47	2.51	3.69	0.14	-0.55	0.37	-0.51
Medical Politics	3.18	2.87	3.25	2.94	3.61	0.05	0.44	0.36	0.50
Success Alone	2.06	1.88	1.97	1.97	.26				
Discrimination, Women Patients	2.19	1.71	1.68	1.28	10.33	0.39	-0.59	0.75	-0.25

Discriminant Function	Eigenvalue	Relative Percentage	Canonical Correlation	Functions Derived	Wilks' Lambda	Chi Square	DF	Significance
				0	0.6440	73.714	21	0.000
1	0.34861	70.31	0.508	1	0.8685	23.619	12	0.023
2	0.10832	21.85	0.313	2	0.9626	6.392	5	0.270
3	0.03890	7.85	0.194					

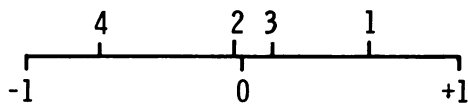
analyses were done varying the definition of groups entered. When the full male and female samples were used with age as one of the discriminating variables, a strong liberalism/conservatism dimension emerged with men conservative and women liberal. When groups of men and women over and under age 50 were entered into the analysis, similar dimensions emerged with women always more liberal. Entering four groups (women under age 50, men under age 50, women over age 50 and men over age 50), also produced a con-

servatism/liberalism dimension which in addition interacted with variables related to sexism.

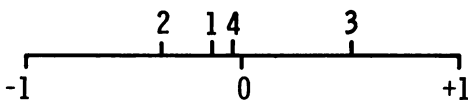
Variables used and findings are shown in Table 5. Two dimensions were significant for explaining the variance in the data. (See Appendix) The first dimension reflected what we have called "Gender Role Sensitivity", a rejection of sexual bias and opposition to traditional gender role expectations. The second was called "Receptivity" as it pointed to an openness to innovative medical and educational policies as well as a lack of estrangement between the physician and others of the same sex (Figure 1 and Table 6).

We computed a new variable from the unstandardized coefficient of the first function and used this as a dependent variable in analyses of variance while examining its relationship to age, sex and specialty. Specialty ($p = .007$) and sex ($p = .000$) accounted for significant amounts of variation in Gender Role Sensitivity, but age ($p = .063$) did not. Table 7 shows the cell means on Gender Role Sensitivity for men and women physicians in different age categories. The vari-

Function 1 (Gender Role Sensitivity)



Function 2 (Receptivity)



Groups:

- 1. Women under 50
- 2. Men under 50
- 3. Women over 50
- 4. Men over 50

FIGURE 1—Pictorial Representation of Centroids in Reduced Space

The lines represent the dimensions in space as defined by each function. The points indicate mean scores for each group.

TABLE 6—Centroids of Groups in Reduced Space

	Function 1	Function 2
Group 1 Women Under Age 50	0.63931	-0.16739
Group 2 Men Under Age 50	-0.02979	-0.35150
Group 3 Women Over Age 50	0.19264	0.54623
Group 4 Men Over Age 50	-0.66091	-0.01688

TABLE 7—Cell Means for Gender Role Sensitivity by Age

Age (years)	Women	Men	Totals
Mean Scores	1.019	.725	.872
30-39	1.043	.979	1.001
40-49	1.119	.763	.941
50-59	1.032	.704	.868
60-64	.915	.773	.844
65+	.813	.475	.644

able is related to age by definition (the combination of variables that most distinguished between the younger than age 50 women and the older than age 50 men) yet the distribution of scores are of interest. Moving from older to younger categories of women, we found a progressively higher mean score except for the youngest age group but all age groupings of women exhibited high Gender Role Sensitivity. Among the men, on the other hand, there was a very dramatic difference between the youngest and oldest age groupings, with men over 65 markedly lower than any other group.

Table 8 shows the distribution of cell means on Gender Role Sensitivity and the mean age for specialty groupings. Across almost all specialties, the women are more sensitive than are the men. Also, the rank order of specialties on this dimension is similar for men and women except for the placement of obstetrics/gynecology. The low ranking of general and family practice is probably related to the high mean age of physicians in that category. Almost identical mean scores are found in women and men surgeons.

Most men scored low on Gender Role Sensitivity compared with the women, but a small number of men scored high. Curious to know more about these men, we divided all male respondents into two categories, those who scored above and below 1.15, an arbitrary cutting point. There were no significant differences between the 14 sensitive men and all other men physicians on educational or occupational

backgrounds of parents, income, race, religious preference, or the proportions who were in private practices rather than salaried. The only significant finding was that fewer Gender Role Sensitive men were Republican. High scoring men were found in every specialty as grouped in Table 8 and in every age category below 65 years.

Discussion

Even when variation accounted for by age was removed, the attitudinal differences between the full samples of men and women physicians remained significant with the women generally more liberal. One might expect that women physicians would be similar to men physicians in general attitudes and socio-political orientation inasmuch as both groups undergo a lengthy period of professional socialization. However, we found few indications that women physicians assimilated attitudes from those dominant in their profession. The relationship of Gender Role Sensitivity and specialty groups does suggest the importance of socialization within specialties although it could reflect selection to a specialty. Also, the most highly productive women were more conservative in "Militarism and Capital Punishment" so that the women who behaved most like the men paralleled their attitudes in this regard.

Men physicians holding attitudes which reflected Gender Role Sensitivity were found in almost all age and specialty categories. Within specialties, mean scores of men and women were sometimes remarkably alike. In the surgery grouping, for example, although there were but few women, the scores of men and women were virtually identical (significance of $f = .99$). This might be related to barriers around and selection from within the surgical specialties. In discussing specialty choice, several women singled out surgery as an area that they felt was closed to them. One can hypothesize that the few women who entered this field were either similar to those permitting them to enter or readily adapted.

TABLE 8—Cell Means for Gender Role Sensitivity Scores and Age* by Specialty of Women and Men Physicians

Specialty	Gender Role Sensitivity			Age		
	Women (N)	Men (N)	Totals	Women (N)	Men (N)	Totals
Pediatrics	1.366 (17)	1.025 (3)	1.315	45 (23)	49 (4)	45
Pathology, Radiology						
Anesthesiology	1.026 (13)	.925 (6)	.994	51 (14)	57 (10)	54
Medicine	.998 (16)	.871 (17)	.933	42 (18)	57 (22)	47
Psychiatry	.966 (10)	.831 (7)	.910	57 (10)	47 (7)	53
Obstetrics— Gynecology	.946 (9)	.894 (4)	.930	53 (9)	54 (4)	53
Surgery	.579 (5)	.576 (22)	.577	40 (5)	53 (31)	51
General and Family Practice	.511 (5)	.568 (14)	.553	61 (6)	60 (16)	60
Total N	75	73		85	94	
Group Means	1.019	.725	.876	46	51	49

*Age is rounded to the nearest year.

The range between scores of men and women physicians was greater in pediatrics than in surgery and both groups of pediatricians were more sensitive than were surgeons. There is no comparable barrier around the specialty of pediatrics and sensitivity may be more functional in pediatrics than it is in surgery. Whether women are attracted to the sensitivity of pediatrics or whether they enter it because it is relatively barrier-free cannot be determined from our data.

Does the fact that women physicians hold more liberal and sensitive attitudes than do men mean that the women doctors bring special qualities to the practice of medicine? Some authors have reported that women students indicated more concern for the psychological as well as physical aspects of illness,³⁹ and more sensitivity to relationships, values, feelings, and ethical issues⁴⁰ than men students. Hammond,⁴¹ however, emphasizes that although sensitivity may be easier for women to express, it is not limited to women and should be thought of as "human sensitivity". In a similar vein, Colombotos⁸ notes that institutional and self-selection could encourage the more nurturant men and the less nurturant women to enter medicine; and Haar, Halitsky, and Striker⁴² emphasize that women could become less compassionate while in training for their male-dominated profession to prove themselves worthy. Even if women hold attitudes that indicate sensitivity, their behavior may not express these since institutional norms are more powerful than individual attitudes. On the other hand, if men physicians both hold stereotypes and deny that discrimination occurs, their behavior toward women, including women health workers⁴³⁻⁴⁴ and patients, might reflect these.

The women physicians we studied were more accessible to the public, more liberal, more egalitarian, more likely to be providing primary care, and more sensitive than men physicians. As women continue to enter the medical profession in larger numbers, perhaps the public may find more of the caring qualities it seeks in physicians.

We have no way of knowing from our data whether the younger and older men physicians reported different attitudes because they were socialized in different eras, because they responded differently to questions during a particular historical period, or because more traditional attitudes are adopted as people age or remain longer in a field. Since younger men physicians, as a group, were significantly more egalitarian and liberal than the older ones, one is encouraged to think they may help to effect basic changes within medicine.

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APPENDIX

I. Description of Measures

A. Main Scales

1. Medical Politics

Three items of liberalism/conservatism in the context of medical politics comprised this instrument: support for the AMA, opposition to the general idea of PSROs, and opposition to reducing costs for patients were considered conservative.

2. Medical Feminism

Four responses were combined to tap dimensions of support or opposition toward special efforts on behalf of women: special recruitment programs, retraining programs, part-time internships, and maternity leaves.

3. Political Position

Seven complete subscales of the Comrey-Newmeyer Radicalism-Conservatism⁴⁵ scale were used to elicit responses on dimensions of religiosity, pacifism, welfarism, moral censorship, capital punishment, service to country and racial tolerance. All items in these Comrey scales were factor analyzed for our samples uncovering three subscales. Items loading highly on the first (Religiosity/Moral Censorship) included religious conservatism and censorship of books or movies that would offend traditional morality. Statements

about warfare, the preparation and development of weapons, and the execution of murderers loaded highly on the second (Militarism/Capital Punishment). Finally, two items about government involvement in welfare uniquely loaded in the third subscale (Welfarism), which is identical to Comrey's.

4. Egalitarianism

A 28-item scale developed and validated by Dempewolff⁴⁶⁻⁴⁷ was administered to the women to assess attitudes about equality in occupations, domestic decision making and responsibilities, and appropriate gender role behavior. Since we anticipated that the men would not be tolerant of the full instrument, a random one-half of the items were presented to them. In factor analysis of these items, one subscale (Stereotypic Sexism) emerged which dealt with the capabilities of women to control their emotions enough to be successful and the appropriateness of their participation in competitive positions or in powerful political office.

5. Individualism

To measure individualism and collectivism, seven items were combined. These included reactions to statements about satisfaction or success from working alone, individual vs. collective efforts to overcome race and sex discrimination, and the effectiveness of individual vs. group efforts in effecting social change.

B. Role Isolation and Discrimination in Medicine

Two inquiries probed the extent to which physicians feel their professional role isolates them from others of their same sex ("You feel you are different from other men/women because you are a physician," and "Other men/women feel a barrier between you and them because you are a physician"). Scoring on these two items was combined as a measure of role isolation.

Three items addressed sex discrimination in medicine. The first asked respondents if they think women patients experience discrimination. Two others asked if women physicians and women medical students are discriminated against or are given preferential treatment. These responses were not combined into a summary measure, but were considered as individual items with high values indicating perception of discrimination.

Readers wishing to know exact wording of items are asked to write the senior author.

II. Discrimination Analysis

A. Measures and Procedures Used

Included in the discrimination analysis were: 1) four subscales (Religiosity/Moral Censorship, Militarism/Capital Punishment, Welfarism, and Stereotypic Sexism) produced by our factor analysis, 2) three main scales (Medical Feminism, Medical Politics and Role Isolation), and 3) two individual items: "Success is something each individual must work for by himself" and "In general, do you think women patients are discriminated against because they are women?"

Since we were interested in exploring further the meaning of the first and most important function produced by the discriminant analysis, the unstandardized coefficient was

used to compute a new variable, i.e., the score for each respondent on the dimension. Distributions of this variable were than examined along with age and specialty.

B. Description of Dimensions

The first dimension or linear composite represented by the group centroids we termed Gender Role Sensitivity. The variables most important for predicting group membership along this dimension were sensitivity to Discrimination toward Women Patients and rejections of Stereotypic Sexism and of Militarism/Capital Punishment. In addition, Medical Feminism was a moderate contributor.

After all the variation in the data explained by the first

function was controlled for, analysis of the residuals uncovered a second interesting dimension we called Receptivity. The two variables contributing most strongly to the second linear composite are low Role Isolation and liberal Medical Politics. Again, Medical Feminism is a modest contributor.

Nearly one-half of both women physicians' groups (48 percent of the younger, and 46 percent of the older group), somewhat fewer young men (43 percent) and nearly two-thirds of the older men (64 percent) were correctly predicted by this analysis. For every group, predicted group memberships were much higher than the probabilities of being correctly predicted by chance.

Smithsonian Search for Public Health Artifacts

The Smithsonian Institution's Museum of History and Technology is conducting a nationwide canvass, the objective of which is to identify, locate and collect important artifacts related to the history of public health in America. In this way the rich material culture and important memorabilia of American public health will be properly preserved, documented and displayed within the national museum.

The kinds of objects to be collected are many and varied. A partial listing would include:

- vaccination and immunization materials: syringes, vaccinators, shields, vaccines, sera, anti-toxins, toxins, campaign literature (posters, flyers, placards, buttons), sputum containers
- diagnostic kits (blood and urine testing, cancer detection, disease identification)
- bacteriology equipment from public health laboratories: incubators, filters, autoclaves, centrifuges, culture bottles, slides, microscopes for bacterial counts and pollution detection
- public health inspection kits, milk testing apparatus, field kit for inspection of foodstuffs
- water and sewage testing apparatus, chlorinators, fluoride testers, air sampling devices
- quarantine signs, placards and flags; public health warnings, fumigators, disinfectants
- public health uniforms and medals
- memorabilia of well known public health workers
- equipment for health and safety of workers
- public health audiovisuals (films, recordings, photographs), regulations, trade catalogs

Any health agency or individual who has such objects or knows of their whereabouts please contact Dr. Ramunas Kondratas, Room 5000, Medical Sciences Division, National Museum of History and Technology, Washington, DC, 20560. Artifacts should not be sent to the museum. Instead a description of the object, and preferably a photograph if it is three dimensional, should be sent along with the correspondent's address and telephone number. Dr. Kondratas will get in touch with the correspondent.

The public health movement has played a most important role in safeguarding our nation's health and has contributed significantly to medical progress in our country and the world. Your cooperation in documenting that achievement will be gratefully appreciated.