POLSKI
PRZEGLĄD CHIRURGICZNY
2015, 87, 9, 453–458

10.1515/pjs-2015-0087

DE GRUYTER OPEN

COMFORT TURING DIGITAL RECITAL EXAMINATION – PATIENT PREFERENCE*

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The sex and age of the physician performing the digital rectal examination (DRE) procedure is one of the parameters influencing patients' comfort. It is postulated that the stress related to DRE during admission to the surgical ward may affect the compliance.
The aim of the study was to characterize patients' preferences according to their sex, age, socioeconomic status and according to DRE-related variables.
Material and methods. Patients admitted to the Department of General and Colorectal Surgery at Medical University in Łódź between October 2014 and June 2015 were asked to complete a questionnaire regarding their sex, age, ethnic background, socioeconomic status and preference for a physician performing the DRE during admission to the surgical ward.
Results. The study enrolled 225 patients, 52% (n=117) women and 48% (n=108) men. Most patients 73.3% (n=244) expressed no preference for sex of the physician performing the DRE during admission, while 22.7% (n=51) preferred a same-sex physician. Analysis showed that the age, female sex, lower education status, small amount of comorbidities and number of hospitalizations, and no previous colonoscopy experience were all associated with preference for a same-sex physician.
Conclusions. In our study most patients expressed no preference for sex of the physician performing the DRE during admission to the surgical ward. However, over one-tenth of patients reported such preferences. Most of these patients preferred a same-sex physician. It is important to offer these patients the choice of physician performing the DRE. Addressing patients' preferences may improve the atmosphere in the clinical environment, reduce stress, and facilitate better treatment.
Key words: digital rectal examination, patient preferences, comfort of examination

Digital rectal examination (DRE) is a simple, but important and integral part of physical examination of a patient. DRE is of utmost importance for the assessment of anatomical structures such as anal canal, rectum, perirectal area, prostate and vagina and for examination of function of the anal sphincter and spinal cord (1, 2). Previous studies have demonstrated that 1/4 of colorectal cancers are located in the rectum and can be reached by a finger (3). As many as 1/3 of prostate cancers can be detected manually by digital rectal examination and thus omission of this basic examination may result in delay of diagnosis, disease progression and poorer prognosis of the patient (4). Evaluation of the digital rectal examination is very important in the prostate cancer, where the tumor usually develops in the periphery of this organ and can be detected by the digital rectal examination. Adequate digital rectal examination provides information that significantly contribute to proper clinical evaluation and choice of adequate therapeutic management.

Patients undergoing digital rectal examination are often subjected to stress related to this

* source of funding: statutory funds of Department of General and Colorectal Surgery, Medical University in Łódź

examination. It has negative effect on patient's comfort as well as his/her attitude towards the treating physician. Patient-doctor relations and mutual trust with regard to decision making have a very important effect on the final therapeutic effect (5). The studies have suggested that the attitude towards the physician who performs the examination depend, among others, on patient's socioeconomic status including his/her education status and age (6). Additional factors affecting subjective stress related to the examinations include sex of the physician who performs the examination and his/her professional experience. Discomfort and pronounced stress may result in delay of the recovery process and even result in detrimental outcome (7).

The aim of the study was to characterize patients' preferences for the physician who performs the digital rectal examination according to their sex, age and socioeconomic status.

MATERIAL AND METHODS

The study enrolled patients aged 18 to 80 years who were hospitalized at the Department of General and Colorectal Surgery at Medical University of Łódź between October 2014 and June 2015. The study was conducted according to ethical principles provided in the Declaration of Helsinki. The study was approved by the Ethics Committee of the Medical University (RNN/81/15/KB) and all its active participants provided their written consent before inclusion in the study.

All patients qualified for the study underwent full medical examination at the time of their admission to the Department, including the digital rectal examination. Furthermore the patients were asked to complete an anonymous questionnaire.

The anonymous questionnaire completed by patients qualified to the study included 15 closed single-choice questions and 2 open questions. The questions related to sex, age, ethnic background, socioeconomic status, religious practices of the patients and their detailed preferences for a physician who performs the digital rectal examination. Only fully completed questionnaires were included in the analysis.

The data collected in the study were analyzed using a statistical software STATISTICA 12.5 (StatSoft Inc., USA). The analyzed results were expressed as means ± standard deviations for continuous variables and numbers and percentages for categorical variables. Normality of distribution of the tested quantitative parameters was verified using Shapiro-Wilk test. The tested groups were compared using Student's t-test (or non parametric Mann-Whitney's tests, depending on variable distribution) and χ^2 test (of Fisher's exact test). When more than two variables with normal distribution and different variations were compared, analysis of variances ANOVA was used; otherwise and with categorical variables Kruskal-Wallis test was used. Levene's test was used to test homogeneity of variances. Logistic regression was used to analyze relations between selected dependent variables and preference of independent variables that were significantly associated in univariate analysis ($p<0.05$). In all analyses $p < 0.05$ was considered significant.

RESULTS

The study enrolled 262 patients who were hospitalized at the Department of General and Colorectal Surgery and provided written consent to take part in the study. The final analysis included 225 patients who fully and correctly completed the anonymous study questionnaire.

The analyzed group included 117 women (52.0%) at mean age of 50.4±14 years and 108 men (48%) at mean age of 51.6±14.4 years. Table 1 present detailed characteristics of demographic data and basic parameters assessed in the study in qualified patients with analysis of differences between the gender groups.

Most patients (n=165, 73.3%) expressed no preference for sex of the physician performing the examination, while 51 subjects (22.7%) preferred a same-sex physician and only 9 patients (4%) a different-sex physician. Forty five women (20%) versus 15 men (6.7%) expressed their preference for the physician performing the examination ($p<0.001$).

Among subjects who expressed their preference for the physician performing the examina-

Table 1. Characteristics of the study subject according to sex

		Women (n=117)	Men (n=108)	p
Age		50,4±14	51,6±14,4	0,762
Education	primary	25,6% (n=30)	9,3% (n=10)	0,002
	secondary	59% (n=69)	63% (n=68)	
	higher	15,4% (n=18)	27,8% (n=30)	
Comorbidities	0	53,8% (n=63)	58,3% (n=63)	0,793
	1	41,9% (n=49)	38% (n=41)	
	≥2	4,3% (n=5)	3,7% (n=4)	
Cause for admission	intestinal malignancy	35,1% (n=41)	31,5% (n=34)	0,140
	inflammatory bowel disease	14,5% (n=17)	25% (n=27)	
	other	50,4% (n=59)	43,5% (n=47)	

tion, 42 women (82.4%) preferred to be examined by a same-sex physician, and 9 men by a male physician (60.0%) (p=0.002) (fig.1).

The stepwise design of logistic regression demonstrated that the following features affected preference for sex of the physician performing the digital rectal examination: female sex, younger age, lower education status, lower number of comorbidities, and no previous colonoscopy experience. Table 2 presents detailed results of this analysis.

Among women, the most common response (38.5%) to the question regarding age of the examining physician was middle age. Among men, the most common response (60%) was that the age did not matter (p<0.001) (fig. 2). 53.4% of patients undergoing colonoscopy before enrollment to the study did not express any preference for age of the physician performing the digital rectal examination, while 39.0% of the subjects with no previous colonoscopy experience preferred a middle aged physician (p=0.022).

The analysis demonstrated that 44.4% of patients without a history of hospitalization preferred the digital rectal examination to be performed by a physician with several years of clinical experience, while 53.6% of patients with a history of multiple hospitalizations did not express any preferences for the age of the examining physician (p=0.003).

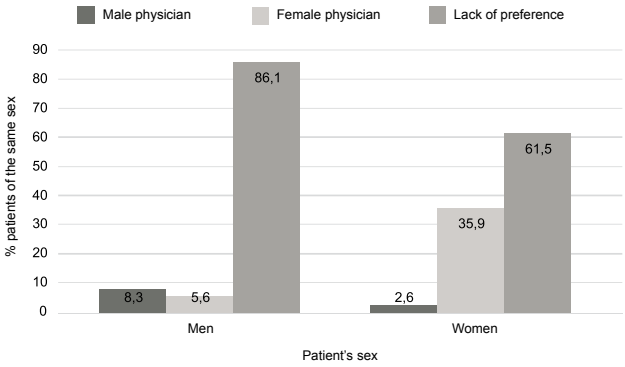

Fig. 1. Patients' preferences for sex of a physician performing the digital recital examination

No effect of ethnic background or religious practices by the patients on detailed preferences for the physician performing the digital rectal examination were found in this study (p=0.892 and p=0.567, respectively).

DISCUSSION

Physical examination and medical history are integral parts of the therapeutic process.

Table 2. Factors affecting patients' preferences for sex of a physician performing the Digital recital examination

	Lack of preferences	Preferences	OR (CL 95%)
Age	53,7±14,8	43,4±8,6	0,94 (0,90-0,97)
Female sex	61,5% (n=72)	38,5% (n=45)	3,15 (1,33-7,45)
Male sex	86,1% (n=93)	13,9% (n=15)	0,32 (0,13-0,75)
Lower education status	40% (n=16)	60% (n=24)	0,12 (0,06-0,27)
No history of colonoscopy	53,3% (n=41)	46,7% (n=36)	0,07 (0,02-0,21)
Comorbidities	81,8% (n=81)	18,2% (n=18)	0,25 (0,10-0,63)

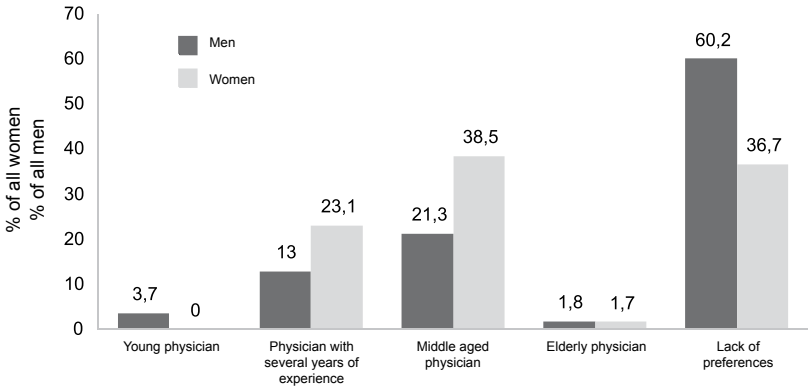

Fig. 2. Preferences for age of a physician performing the digital rectal examination according to patient's sex

The basic medical examination also includes procedures relevant for the therapeutic process that can require intimacy and be embarrassing for the patients. Such examinations include gynecological, urological examination and digital rectal examination. The digital rectal examination provides assessment of anatomical structures such as anal canal, rectum, perirectal area, prostate and vagina and function of the anal sphincter and spinal cord. Usually physicians focus on technique of the examination, its adequacy and pathologies that can be found during this examination. However, in our medical practice we usually neglect patient's view and his/her subjective preferences for the person performing the examination in a situation that requires intimacy and can be stressful for the patient.

Previous studies have demonstrated that patients' preferences for their attending physician depend on their sex, education status, age, religious beliefs and socioeconomic status. Sex of a physician conducting the therapeutic process is important for as many as 1/3 of patients (8, 9, 10).

Based on previous data we would like to emphasize a significant effect of stress related to intimate medical procedures on patient-doctor relations (11). As far as we know, no study has evaluated patients' preferences for a physician performing the digital rectal examination.

In our study 26% of the subjects expressed their preference for sex of the physician performing the examination: 22.7% preferred a same-sex physician, while only 4% preferred a different-sex physician. Among the study subjects, 20% of women and 6.7% of men expressed their preference for sex of the physician performing the examination. Many factors may have contributed to such results, including a general psychological aspect.

The digital rectal examination is a special part of the physical examination; despite the fact that it is not difficult from the technical point of view, it may be associated with many problems related to lack of adequate experience (12). Often the digital rectal examination is indispensible in some clinical cases. Despite this, medical students and young and inexperienced physicians tend to neglect this examination and regard it as redundant. Thus benefits and methods of its performance should be emphasized as early as during the medical undergraduate training. During the training an emphasis should be put on patient's comfort during the examination so that future physicians should be able to perform the digital rectal examination in a manner most comfortable and least stressful for the patients. This ensures the highest level of the physician-patient relation, which can be of utmost importance for the successful therapeutic process (13).

The current studies increasingly commonly emphasize psychological aspects of therapy. A quarter of patients undergoing certain endoscopic examination of lower gastrointestinal tract paid attention to a sex of the physician performing the examination in the Lahat et al. study; most of them preferred a same-sex physician (14). This study indicated that with subsequent endoscopic examinations, sex of the physician performing the examination seemed to be less and less important for the patients. We also found in our study that

larger number of previous hospitalizations that included digital rectal examination resulted in reduction of preference for sex of the examining physician. The same research group headed by Lahat speculated that patient's preference for sex of a physician were more pronounced when intimate procedures were performed. According to most recent reports, 34% of women preferred a female obstetrician (15). A similar rate was found for breast surgery (30%) (16). Despite the fact that men belong to a group with less pronounced preferences for sex of a physician, in a study conducted by Kerssens et al. as many as 64% of men preferred a male physician for examination of the perineal area. In our study we did not confirm this observation, since only 6.7% of males expressed their preference for sex of the examining physician; 60% of them preferred to be examined per rectum by a male physician.

Studies conducted in the United States demonstrated that patients with lower education status and deeply religious subjects more often pay their attention to sex of a physician (17). United States are a multicultural country where religion and racial issues play a more important role in the daily life. However, irrespective of religious beliefs, the most common patients' preference was the wish to be examined by a same sex physician, in particular if these examinations involved regions commonly regarded as intimate. Our study has also demonstrated that lower education status is an important factor for expressing preferences for sex of a physician performing a digital rectal examination; however we did not observe effect of expressed religious beliefs by patients.

CONCLUSIONS

In our study majority of patients did not express their preference for sex and age of physicians performing digital rectal examination. However, for a quarter of patients, physician's sex was important and most commonly they preferred a same sex physician. It is worth mentioning that men regarded age of their physicians as less important. Furthermore most of the patients who had a history of multiple hospitalization, did not express their preference for physician's age, while patients without a history of previous hospitalizations preferred the digital rectal examination to be performed by a physician with several years of experience. Maybe multiple contacts with the health care system make the patient more focused on his/her complaints.

If we pay attention to patients' choices, we can improve patients' comfort during the digital rectal examination and reduce stress related to this intimate examination. Awareness of patients' preferences and their adequate addressing by a physician who schedules the digital rectal examination can have significant effect on further cooperation and understanding between a physician and a patient. Care of patient's psychological feelings can have a significant effect on patient's confidence in the treatment scheduled by a physician and on its efficacy in a further perspective.

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Received: 19.08.2015 r.
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