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SOCIETY'S KNOWLEDGE ABOUT PROSTATE CANCER: A CROSS-SECTIONAL STUDY

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Summary

Background. Prostate cancer is one of the most common cancers among Polish men, and Europe is characterized by the highest morbidity rate, as compared to other continents. It is a serious public health issue, and society's knowledge about it allows for early detection and the initiation of treatment.

Material and methods. 117 respondents took part in the study. An original questionnaire specifically designed for the study was utilized, comprising metrics and questions concerning prostate cancer, including anatomy, function, risk factors, prevention, treatment methods, and side effects. Additional questions focused on associations with prostate cancer and perceptions surrounding the disease.

Results. The results indicated that 79.49% of participants had an average level of knowledge, 1.71% exhibited a high level of knowledge, and 18.80% possessed a low level of knowledge about prostate cancer. A statistically significant correlation was observed between the level of knowledge, education, and the occurrence of prostate cancer in a close relative.

Conclusions. It is imperative to continuously monitor society's knowledge about prostate cancer, considering factors that may influence it. Researchers are advised to develop a standardized questionnaire to accurately gauge knowledge levels. Ongoing education for men and their families about prostate cancer is crucial for enhancing societal awareness and facilitating early detection.

Keywords: prostate cancer, prostate, knowledge, society, disease

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Introduction

Prostate cancer is the most commonly diagnosed cancer among men in over half of the countries worldwide, with 112 out of 185 countries reporting an estimated 1.4 million new cases in 2020. It is also the primary cause of cancer-related deaths among men in a quarter of the global nations, specifically in 48 out of 185 countries [1]. Europe and Asia report significantly higher numbers of new prostate cancer cases, with 93,173 and 22,421 respectively, and incidence rates of 33.5% and 26.5%. In contrast, non-developed regions such as Africa and Oceania have much lower incidence rates, at 6.6% and 1.6% respectively. Recent statistical analyses suggest that the global disparities in prostate cancer incidence may predominantly stem from over-screening practices in developed nations. Research indicates that approximately 20% to 40% of prostate cancer cases in the United States and Europe were detected through prostate-specific antigen (PSA) testing [2].

Additionally, preventive measures apart from PSA include a rectal examination [3]. In most cases, prostate cancer does not manifest symptoms and can develop slowly; it is often detected during preventive examinations. The link between lower urinary tract symptoms and prostate cancer, especially clinically significant prostate cancer, is unclear [4]. Symptoms of advanced prostate cancer may encompass unintended weight loss, a frequent urge to urinate, the presence of blood in urine or semen, and discomfort in the lower back, hips, or pelvic area [5].

The main factor for incidence is age, as the risk is higher in men over 60 years old. A family history of prostate cancer, especially in the first-degree prostate cancer, increases the risk of developing this disease by 2.5 times, especially if a father or brother has had the condition [1]. The estimated proportion of prostate cancer linked to hereditary factors ranges

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from 5% to 15% [6].

Prostate cancer prevention focuses on reducing modifiable risk factors, such as a balanced diet, physical activity, maintaining an appropriate body weight, and avoiding addictions, especially cigarettes, which entails leading a healthy lifestyle. Additionally, preventive measures include testing the PSA in every man over 50 years old and conducting a rectal examination [3]. In most cases, prostate cancer does not manifest symptoms and can develop slowly; it is often detected during preventive examinations.

The choice of treatment method is mainly influenced by the stage of the disease, but also by many factors unrelated to the disease itself, such as the patient's age, general condition at the time of diagnosis, and comorbidities. There are several decision-making models regarding the treatment path, but each is individually tailored to the patient. Surgery and radiotherapy are the primary treatments for localized disease. In cases of recurrent or metastatic disease, standard medical treatment primarily involves androgen deprivation therapy, androgen signaling inhibition and chemotherapy [7]. Localized low-risk prostate cancer may be qualified for active surveillance, minimizing the risks associated with overtreatment. For localized intermediate and high-risk disease, prostatectomy and definitive radiation therapy are considered the gold standards [8].

In 2022, the Polish National Cancer Registry reported that prostate cancer was the most prevalent cancer among males, experiencing the highest increase in incidence rates, as compared to all other male cancers. In that year, prostate cancer ranked second in terms of morbidity, accounting for 23.3% of new cancer cases. Conversely, it ranked third in mortality, contributing to 10.9% of cancer-related deaths. The morbidity rate among older men was 27%, while the mortality rate was 13%. Since 2016, prostate cancer has consistently been the most common cancer in men and has shown the most significant rise in incidence, especially over the past decade. However, the mortality rate for prostate cancer has been on the rise since 2004

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[9]. In Europe, the situation of prostate cancer morbidity and mortality is very similar. It is estimated that in 2020, prostate cancer represented 23.2% of all newly diagnosed cancer cases in men across the EU-27 countries, and accounted for 9.9% of all cancer-related deaths among men. It made it the most common cancer in men and the third leading cause of cancer death in men [10]. A prevalent and concerning issue is the late diagnosis of a significant number of Polish patients, as nearly 25% of newly diagnosed cases currently present with metastases. In other European nations, an average of 380 men per 100,000 are affected by prostate cancer. In Poland, the figure stands at approximately 320 patients. In 2018, Poland ranked 12th out of 41 European countries in terms of the prostate cancer incidence rate (per 100,000 people). Poland is the only country in European Union that reported an increase in mortality in the area during the five-year period from 2015 to 2020, with a rise of 18% [11]. According to certain Polish authors, the 5-year relative survival rate for prostate cancer is lower than the European average, which may be attributed to the advanced stage of the disease at the start of treatment and potentially delayed initiation of treatment [12]. Forty-six percent of Polish men and women are unable to identify any preventive cancer screenings. Sixty-four percent of those surveyed do not participate in routine preventive cancer screenings. Thirty-six percent of respondents are unaware of where they can access preventive cancer screenings in their local area [13]. Twenty-six percent of participants are certain that cancer is a fatal diagnosis, while twenty-two percent hold the belief that it is a contemporary illness that was not present in earlier times [14]. Unfortunately, almost 16% of men have never been to a urological appointment, and 45% appoint less often than once a year. Only 48% of men and 46% of women know the correct size of the prostate, while 39% of women and 48% of men understand its function [15]. The findings highlight the issue of inadequate knowledge regarding the prostate and the performance of preventive testing among men.

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Unfortunately, the statistics regarding prostate cancer in Poland are concerning and show an increasing trend, as highlighted by research conducted over the past years and decades. Even more troubling are the beliefs and attitudes of individuals about cancer, prevention, and treatment. Despite numerous preventive programs and health campaigns, there remains a significant gap in knowledge about cancer. Before implementing any measures, it is important to evaluate the current level of awareness. Given that prostate cancer is among the most common cancers and has one of the highest mortality rates, we have decided to assess the public's knowledge about the disease.

Aim of the work

The main aim of the study was to assess the level of society's knowledge about prostate cancer.

Material and methods

Study design

It is a cross-sectional study. Participation in the study was voluntary and anonymous, and respondents were informed of this before taking part. Participants consented to the study before the questionnaires were administered. The inclusion criteria were consent to participate and the completion of the survey. The exclusion criteria were a lack of consent and incompleteness of the questionnaire.

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Data collection and statistical procedure

Data was being collected for three months, from January to March 2023. The questionnaires were made available in both online and paper versions, and then responses were collected in Excel spreadsheets. The online version was created in Google Forms and made available through social media. Paper forms were primarily distributed in various medical facilities, and respondents threw them into special boxes. Statistical analysis was performed using the Statistica 13.3 program. Multiple regression analysis was conducted to investigate the relationship between several predictors, which in our study include sociodemographic factors such as age, gender, education, place of residence, marital status, professional activity, and occurrence of disease, and the dependent variable, which is the level of knowledge. Before using regression analysis, Spearman correlation was utilized to investigate the relationships among predictors, leading to the removal of those that exhibited strong correlations with other variables. The elimination was essential to uphold methodological integrity, as one of the key assumptions of the regression model is the independence of observation errors, meaning there should be no correlation present. The significance level was set at p=0.05.

Tools

The original questionnaire consisted of 35 questions, including 10 questions from the sociodemographic section and 25 questions related to the prostate and prostate cancer. Questions about prostate cancer encompass key areas such as prostate anatomy and its function, risk factors for prostate cancer, age-related enlargement, the role of genetics in prostate cancer, the relationship between benign prostatic hyperplasia and prostate cancer, treatment methods and side effects after them, preventive methods, morbidity and mortality related to prostate

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cancer, the age at which cancer most commonly occurs, screening tests, how malignancy is diagnosed, and there are a few questions regarding respondents' feelings, such as what they fear due to prostate cancer and what associations they have with it. Cronbach's alpha for the questionnaire was 0.71, and according to George and Mallery, it is an acceptable level of reliability [16].

The level of knowledge was calculated by summing the points for the correct responses to 23 questions about the prostate and prostate cancer. In the multiple-choice questions, respondents could receive a point for each correct answer (3 questions). Respondents could score between 0 and 30 points, and the level of knowledge was categorized into the following ranges: 0 points – no knowledge; 1-10 points – low level of knowledge; 11-20 points – medium level of knowledge; 21-30 points – high level of knowledge.

Characteristics of the studied group

The study involved 117 respondents, including 75 women (64.10%) and 42 men (35.90%). The mean age was 43.48 years (±15.80), the mean age of men was 53.17 years (±15.71), and the mean age of women was 38.05 years (±13.09) (Table 2). Most of the respondents lived in cities with 150,000 to 500,000 inhabitants (23.08%), had a higher education, such as a bachelor's degree, master's degree, PhD, or professorship (65.81%), and were professionally active (70.94%). Only two men did not undergo preventive tests (4.76%), while 32 men (76.19%) did, and their mean age was 58.09 years (±13.15). Half of the men (38.10%) were healthy, with a mean age of 52.44 years (±13.71), while the rest (16 men) were either sick or undergoing diagnostics, with a mean age of 63.75 years (±10.04). Additionally, 18 men (42.86%) reported having either a current disease or a disease in the past, indicating that two of them had a disease in the past. Furthermore, 46.15% of respondents reported

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knowing a male with prostate cancer in their environment. Details are presented in Table 1.

Table 1. Sociodemographic characteristics of the studied group

Sociodemographic characteristics	N	%
Gender		
Female	75	64.10
Male	42	35.90
Place of residence		
Village	23	19.66
City up to 50,000	25	21.37
City 50-150,000	22	18.80
City 150-500,000	27	23.08
City over 500,000	20	17.09
Education		
Higher education (bachelor's, master's, PhD, or professorship)	77	64.17
Other than higher (secondary, vocational, primary education)	40	33.33
Marital status		
In relationship	84	71.79
No relation	33	28.21
Professional activity		
Working	83	70.94
Studying	15	12.82
Retired	19	16.24
Occurrence of cancer among close relatives		
Yes	54	46.15
No	52	44.44
Do not know	11	9.40
Performing preventive tests by men		
Didn’t perform	2	4.76
They didn’t perform, because they are too young	8	19.05
They performed and they are healthy	16	38.10
They performed and are sick or undergoing diagnostics	16	38.10
Current or past history of prostate cancer		
Yes	18	42.86
No	24	57.14

Results

The studied group scored an average of 14.03 points (±4.14 points), indicating that their knowledge was at an average level, the group of men and women scored similarly (14.00 and 14.05 points). The lowest score was 3 points, while the highest score was 21 points. None of the women had a high level of knowledge; most of them (82.67%) had a medium level. In contrast, 4.67% of men had a high level of knowledge, while most of them (73.81%) had a medium level. Additionally, 18.80% of all respondents had a low level of knowledge. Details are presented in Tables 2 and 3.

Table 2. Descriptive statistics of age and scores

Age / Score	N	M	Me	Min.	Max.	SD	Sk.	Kurt.	CI -95.00%	CI 95.00%
Age (men)	42	53.17	56.00	24.00	77.00	15.71	-0.14	-1.40	12.93	20.03
Age (women)	75	38.05	37.00	20.00	78.00	13.09	0.63	-0.13	11.28	15.60
Age (total)	117	43.48	40.00	20.00	78.00	15.80	0.43	-0.85	40.59	46.37
Score (men)	42	14.00	14.00	6.00	21.00	4.22	-0.44	-0.68	3.47	5.38
Score (women)	75	14.05	15.00	3.00	20.00	4.12	-0.88	0.19	3.55	4.91
Score (total)	117	14.03	15.00	3.00	21.00	4.14	-0.71	-0.18	13.28	14.79

Notes: N – number of people; M – mean; Me – median; Min – minimum; Max – maximum; SD – standard error; Sk – skewness; Kurt. – kurtosis.

Table 3. Numerical and percentage distributions of knowledge levels

Knowledge level (women)	N	%
Medium	63	82.67
Low	13	17.33
Knowledge level (men)	**N**	**%**
High	2	4.76
Medium	31	73.81
Low	9	21.43
Knowledge level (total)	**N**	**%**
High	2	1.71
Medium	93	79.49
Low	22	18.80

Correlation analysis

Correlation analysis using the Spearman test between the independent variables (predictors) revealed strongly correlated predictors. The following variables were excluded: age, gender, place of residence, professional activity, and current history of prostate cancer. The exclusion was necessary to maintain methodological correctness because one of the regression model's assumptions is the lack of correlation between predictors. By excluding the variables, education, the occurrence of prostate cancer among close relatives, and marital status—significant for further analysis—were retained. Details are presented in Table 4.

Table 4. Correlation analysis

Predictors	Age	Gender	Education	Place of residence	Marital status	Professional activity	Occurrence of disease
Gender	0.434***	-	-	-	-	-	-
Education	-0.387***	-0.400***	-	-	-	-	-
Place of residence	0.079	0.113	-0.155	-	-	-	-
Marital status	-0.282*	-0.034	0.171	0.050	-	-	-
Professional activity	0.022	0.124	-0.205*	0.061	0.096	-	-
Occurrence of disease	-0.363***	-0.976***	-0.347***	-0.120	-0.019	-0.092	-
Occurrence of prostate cancer among close relatives	-0.192*	0.062	-0.038	0.203*	-0.014	0.150	-0.082

Notes: * $p<0.05$, ** $p<0.01$, *** $p<0.001$.

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Variance analysis

The result of the F test is statistically significant and indicates that sociodemographic factors have a statistically significant impact on knowledge about prostate cancer (F=4.631; *p*=0.004). Details are presented in Table 5.

Table 5. Variance analysis

Model	SS	df	MS	F	*p*
Regression	217.427	3	72.476	4.631	0.004
Rest	1768.436	113	15.650	-	-
Total	1985.863	-	-	-	-

Notes: SS – sum of squares; df – degrees of freedom; MS – medium square; F – test; *p* – significancy.

Regression analysis

Statistical analysis showed a significant impact of education on the knowledge level about prostate cancer. The regression coefficient was 0.200; t=2.221; *p*=0.028. It means that for each unit increase in education, the knowledge level increases by 0.200. There was also a significant impact of the occurrence of prostate cancer among close relatives on the knowledge level. The regression coefficient was -0.233; t=-2.620; *p*=0.010. It means that not having a close relative with prostate cancer, in comparison to having one, caused a decrease in the knowledge level by 0.233 points. Details are presented in Table 6.

Table 6. Regression analysis

Model	β	B	SE	t	*p*
Constant	-	17.083	1.503	11.367	<0.001
Education	0.200	1.739	0.783	2.221	0.028
Marital status	-0.152	-1.387	0.825	-1.681	0.095

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Occurrence of prostate cancer among close relatives	-0.233	-1.479	0.565	-2.620	0.010

Notes: B – non-standardized coefficient; SE – standard error; β – standardized coefficient; t – test; *p* – significancy.

Match model

The corrected coefficient R^2=0.086 means that the regression model explains 8.6% of the variability in knowledge levels within the studied group. Details are presented in Table 7.

Table 7. Match model

Model	R^2	Corrected R^2	Standard error
Knowledge level	0.109	0.086	3.956

Apprehensions and associations

Prostate cancer is primarily associated with urination disorders, pain and suffering, and erectile dysfunction. Almost half of the participants claimed that prostate cancer is only a man's problem. Details are presented in Figure 1.

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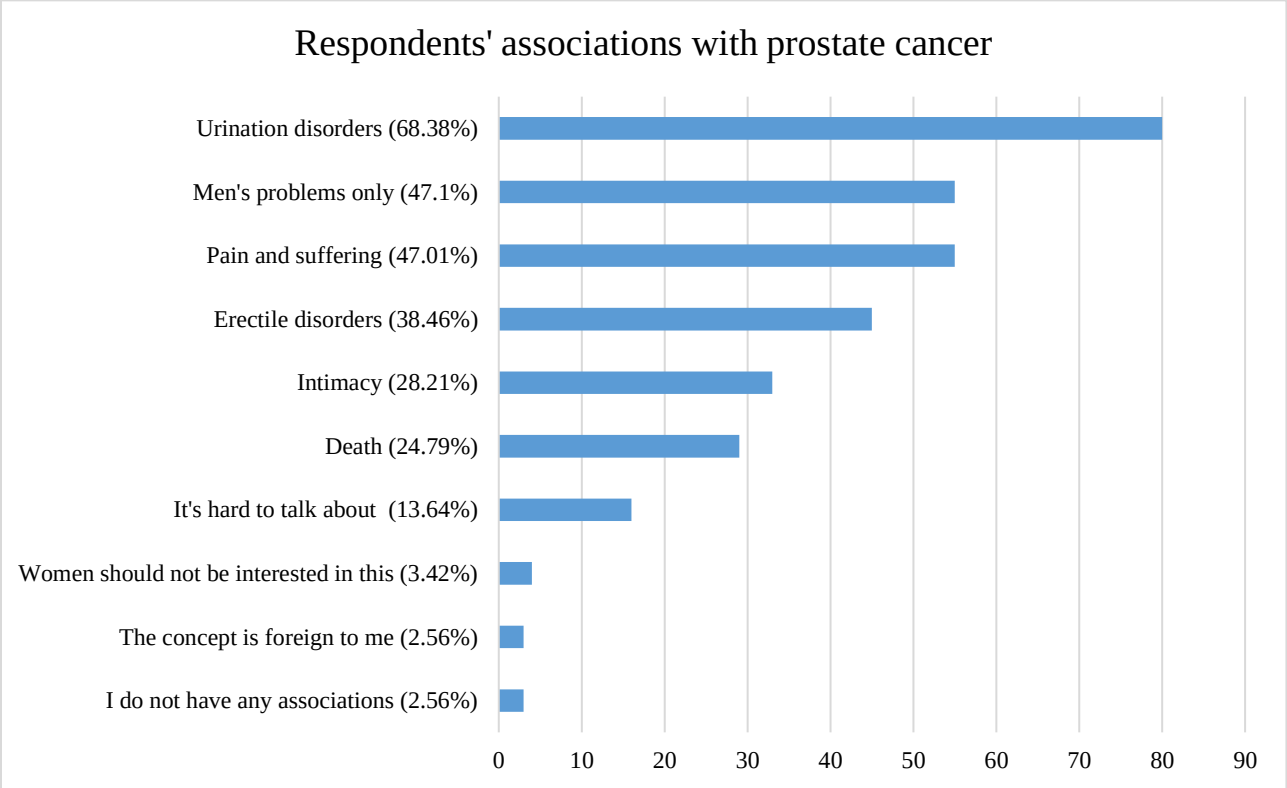

Figure 1. Respondents' associations with prostate cancer

In relation to prostate cancer, patients, or individuals who know someone with prostate cancer, mostly have apprehensions related to death, pain, helplessness, and treatment failure. The smallest percentage of the surveyed group was afraid of surgery (8.55%) and rejection by others (1.71%), while 2.56% of respondents claimed that they had no apprehensions. Details are presented in Figure 2.

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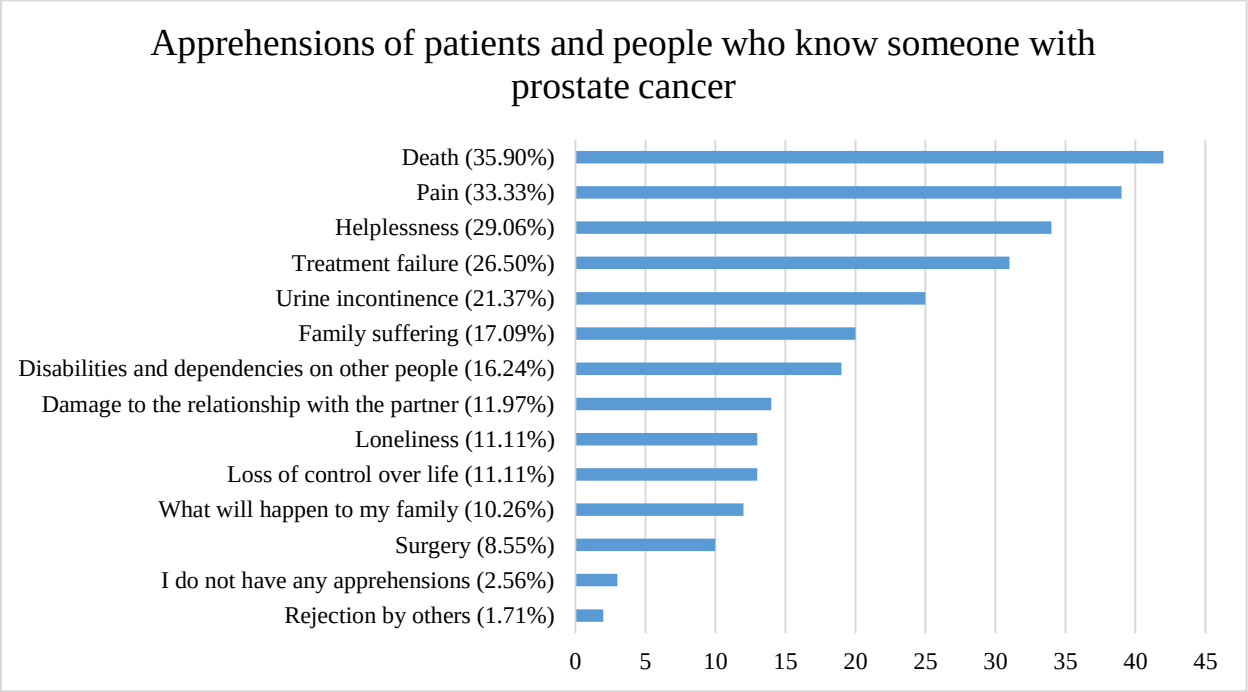

Figure 2. Apprehensions of patients and people who know someone with prostate cancer

Discussion

The knowledge of the studied group was at a medium level, with an average score of 14.03 points. There was no significant difference in knowledge levels between men (14.00 points) and women (14.05 points). Notably, none of the women demonstrated a high level of knowledge, while 4.67% of men did. Unfortunately, up to 18.80% of all respondents displayed a low level of knowledge. Factors such as education and the occurrence of prostate cancer among close relatives significantly influenced knowledge levels. Prostate cancer is primarily linked to issues such as urination disorders, pain, suffering, and erectile dysfunction. Nearly half of the participants believed that prostate cancer was solely a concern for men. Those affected by prostate cancer, or who know someone with it, often expressed fears related to death, pain, helplessness, treatment failures, and urinary incontinence. The smallest percentage of respondents expressed concerns about surgery and rejection by others.

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So far, researchers have not created a unified tool that allows for a reliable determination of the level of knowledge about prostate cancer [17]. In 2004, Weinrich et al. [18] and in 2011 Capik et al. [19] created questionnaires that assessed knowledge only about screening tests for prostate cancer. It shows that there is general lack of standardized questionnaire assessing the knowledge level about prostate cancer and each attempt to assess knowledge about prostate cancer requires creating an own questionnaire. We wanted to assess the knowledge about prostate cancer, not only knowledge about screening tests and as a result, we developed our own questionnaire to assess general knowledge about prostate cancer, including prostate anatomy, its functions, treatment methods, and side effects, rather than just screening tests.

Researches among Polish men by Chmielewski et al. [20] and Alothman et al. [21] in Saudi Arabia showed a low level of knowledge about prostate cancer. Additionally, Schulman et al. [22] indicated low awareness of prostate cancer among men in six European countries. Prostate cancer awareness was higher among Germans in contrast to Italy, Spain, and France [22]. Ehwarieme et al. [23] showed a high level of knowledge among respondents in Nigeria, which was consistent with the findings of Musalli et al. [24] in Saudi Arabia . Wiafe et al. indicated that women had a moderate level of knowledge about prostate cancer, but their knowledge about prevention was low [25]. In our own study, 79.49% of respondents had a moderate level of knowledge, which is confirmed by studies from the USA conducted by Wiafe et al. [25]; however, the outcome is higher than the study among Saudi Arabian and Polish men but, unfortunately, lower than that among Nigerians. The variation in knowledge levels can be attributed to several factors. The diversity of the findings may stem from the respondents' samples, their social conditions, the quality of their education, and the accessibility of information about prostate cancer within their communities.

Parker et al. demonstrated a significant relationship between the respondents' factors—such as age, educational level and history of prostate cancer and other cancers—and their level

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of knowledge [26]. The research by Wiafe et al. assessed the knowledge level about prostate cancer among women, finding that education and financial status correlated significantly with knowledge level [25]. Chmielewski et al. demonstrated a correlation indicating that individuals with lower levels of education were more likely to be “non-participants” in preventive testing. In contrast, respondents with higher education were more inclined to acknowledge the effectiveness of preventive measures [20]. In the present study, education also had a significant impact on the knowledge level. The occurrence of the disease among close relatives was an additional predictor , while marital status did not impact knowledge. The correlations may be explained by the fact that individuals with higher education are more likely to acquire knowledge from various fields, particularly those directly related to their lives and circumstances. They tend to read extensively and know how to identify reliable sources of information. Furthermore, they are more inclined to lead a healthy lifestyle and take care of their own health as well as that of their loved ones. They are also significantly less likely to harbor prejudices against health-related initiatives, understanding the importance and objectives of such actions. Conversely, individuals who have had a close relative diagnosed with cancer possess life experiences that compel them to learn more about the disease, motivating them to educate themselves in the area to avoid facing the same health challenges.

Taylor et al. in their study showed that 85.9% of participants were preventively examined for prostate cancer, and 3.7% had positive results in the per rectum examination [9]. Makungu et al. described that 16.7% of respondents were tested for prostate cancer before, and none tested positively, 59% of them were tested using transrectal ultrasound. 89.4% of all participants were willing to have prostate cancer screening in the future [27]. In the study of Adewoye et al. 81.8% of participants were not tested to prostate cancer and 53.6% of them do not plan testing in the future [28]. A study in Bahrain indicated that 60.8% of men over 50 years old had never been screened for prostate cancer, which may result from a lack of education and

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dedicated health programs [29]. In the author's current study, 76% of men had undergone preventive tests in the past, and half of them had positive results indicating prostate cancer. However, 19.05% did not take the test because they were too young for it. In comparison to the men in Makungu et al. [27], and in Adewoye et al. [28] and study in Bahrain [29], a higher percentage of men in Poland undergo preventive tests. However, in the study by Taylor et al. [17], more men were examined, and a lower percentage of them had positive outcomes from the per rectum examination, although men with PSA tests were not included . More than a quarter of Polish respondents (27%) link a healthy lifestyle to preventive screenings [14], but according to Sosnowski et al., nearly 30% of men do not view regular prostate examinations as a means of preventing complications and facilitating early treatment [30]. The low participation in preventive tests among males may stem from their attitudes and beliefs regarding cancer. The findings indicate that only a small proportion of men engage in preventive screenings and recognize the necessity of consulting a doctor when symptoms arise. Many believe prevention is ineffective, resulting in a high percentage of men seeking medical attention only after metastasis has occurred, leaving little opportunity for effective treatment. Additionally, one reason for the situation may be that men avoid appointing a urologist because 36% fear a cancer diagnosis, while 33% feel ashamed or embarrassed about their symptoms and the examination process. It includes discomfort from pain (18%), rectal examinations (26%), and cystoscopy through the urethra (25%). Nearly 22% believe that the appointment is stressful [15]. The feelings of shame and embarrassment necessitate the introduction of actions in the early stages of human development to reinforce the idea that urological appointments are a normal part of life and to enhance the understanding of the urologist profession.

In the Ehwarieme et al. study [23], 19.7% of participants admitted to having prostate cancer among family members and in the Makungu et al. study it was 18.2% [27]. In our own study, twice as many respondents than in the Ehwarieme et al. [23] and Makungu et al. [27]

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study (46.15%) knew men who had prostate cancer or were then sick, which confirms that a prostate cancer occurrence is very frequent in Poland and is increasing year to year, as the Polish National Cancer Registry confirms in their research. On the other hand, prostate cancer among African males may be underestimated, because of the poorly developed health care and lack of widely available preventive tests.

Chronic diseases cause changes in world and life perception, as well as an appreciation for life [31]. Disease acceptance involves detecting and understanding the limits and losses caused by illness [32]. The influence which the disease has on the sick person and their family, may explain the wide apprehensions that respondents indicated, such as fear of family suffering and the possibility of damaging relationships. The oncological patients and their relatives need to reconcile with mortality of the disease and that the treatment is never in one hundred percent effective and some side effects are tough to predict that why they can feel helplessness and fear death and pain. In the study, participants mostly chose fear of pain and suffering, as well as treatment failure. Patients with prostate cancer experienced symptoms that are common among patients with other types of cancer, such as pain, fatigue, and treatment complications. Additionally, among men with prostate cancer, there is often a low perception of their sexuality and attractiveness. Body image and sexual dysfunction are among the especially important and specific areas of life for men with prostate cancer that they must deal with [33]. The aspects reflect respondents' apprehensions regarding relationship damage or family suffering.

Despite the epidemiological researches, there is still a lack of reliable studies about erectile dysfunction in Central and Eastern Europe. The frequency of erectile dysfunction among populations in different parts of the world varies and ranges from 3 to 76.5%. Przydacz et al. showed that only 16.1-23.4% of respondents with erectile dysfunction sought medical help [34]. Due to a report about men's health only 1% of respondents know that urologist is a doctor who deals with prostate and its diseases, while 2/3 of women reckoned urologist as the

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most important specialist for men, but only 1/3 of men had the same reckon [15]. The findings, along with the connections to prostate cancer identified in the current study, may contribute to the belief that prostate cancer is exclusively a men's issue. However, men often do not know where to seek assistance because they do not view urologists as the appropriate specialists for the concern. Consequently, they are frequently left to navigate the challenge on their own, seeking help without clear guidance.

Conclusions

In the near future, a standardized questionnaire should be created to assess knowledge about prostate cancer, allowing for a fair comparison among different groups in the society. The Cancer Awareness Measure (CAM), created in the United Kingdom, examines the public's attitudes, awareness, and behaviors regarding key topics in early diagnosis, screening, and prevention. The measure may serve as a basis for creating a standardized questionnaire that focuses solely on prostate cancer.

Education for men and their families should be present at every stage of their lives to increase awareness of prostate cancer, preventive measures, and early symptoms. The first group should include children at schools; they should be informed about prevention during classes and at some health events. Children should learn about anatomy and the basics of a healthy lifestyle. Additionally, teenagers should know the basic information about prostate cancer, examinations, etc. Education among the young generation is necessary to teach them to talk about the genitourinary system and its dysfunctions, and to also decrease the shame of going to the doctor. The second group to educate is men (adults), and unfortunately, the group is tougher to reach. They should be educated by general practitioners and nurses during appointments (regardless of the reason for the appointment), and doctors should conduct

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preventive rectal exams and PSA tests. Dedicated advertising campaigns should be made on TV, or partnerships should be formed with employers to organize educational meetings or display posters, etc.

Limitations

The main limitation of the study was the lack of a standardized questionnaire in the area and the usage of non-standardized one, which caused difficulties in comparing our results with those of other research. Another limitation was the small sample size and the disproportion between women and men in the studied group. In future research, it is recommended to examine a larger sample and ensure a proportional division of the group into women and men.

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