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Evaluation of Attitudes to Learning Doctor-Patient Communication Skills in 427 Postgraduate Doctors Using the Communication Skills Attitude Scale (CSAS) Questionnaire

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Background: Effective communication between doctors and patients is crucial for improving healthcare quality and ensuring patient safety. This study aimed to evaluate attitudes to learning doctor-patient communication skills in 427 postgraduate doctors, using the self-reported 26-item communication skills attitude scale (CSAS) questionnaire.

Material/Methods: The study was conducted online between October 2023 and May 2024 via the LimeSurvey platform, with 427 physicians (response rate: 21.35%) participating in specialist courses at the Centre of Postgraduate Medical Education in Warsaw. The survey used the Communication Skills Attitude Scale (CSAS), including 26 items divided into positive and negative affect scales. Responses were scored on a 5-point Likert scale, with negative attitude scale items reverse-scored, for a maximum score of 130 points. Descriptive statistics and sociodemographic analysis explored factors influencing attitudes.

Results: Most participants (55.5%) were under 30 years of age, and 70% were women. Women demonstrated significantly more positive attitudes ($M=52.53$, $SD=8.65$) than men ($M=50.65$, $SD=9.74$; $P=0.048$). Physicians aged 41 to 50 years showed the most positive attitudes ($M=55.78$, $SD=6.48$), although age differences were not statistically significant ($P=0.129$). Divorced or separated participants had the highest scores ($M=58.00$, $SD=6.08$; $P=0.010$), while those with longer professional experience had more negative attitudes ($P=0.004$).

Conclusions: Sociodemographic factors, including sex, marital status, and professional experience, influenced attitudes toward learning communication skills. Training programs should consider these factors, to better meet the needs of diverse healthcare professionals.

Keywords: **Health Communication • Physician-Patient Relations • Education • Quality of Health Care**

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Introduction

In the 21st century, the traditional paternalistic model of the doctor-patient relationship has transitioned toward a more collaborative and partnership-based approach. While doctors retain their expertise advantage, patients, empowered by easily accessible scientific research and online health information, bring new challenges to the physician's role [1]. This evolving dynamic necessitates that clinical knowledge be complemented by strong social competencies, particularly in psychology and communication [2]. Patient feedback on doctor-rating platforms consistently highlights the critical importance of communication and interpersonal skills in healthcare interactions.

Numerous studies have demonstrated the pivotal role of effective communication between doctors and patients in the treatment process as contributing significantly to therapeutic success [3-6]. The World Health Organization (WHO) also underscores the essential role of communication in healthcare, including doctor-patient interactions and interdisciplinary team communication. In its Global Action Plan on Patient Safety 2021-2030: The Road to Eliminating Avoidable Harm in Healthcare [7], the WHO emphasizes that improving communication skills is fundamental for delivering safe, high-quality care. This includes training healthcare professionals in active listening and effective communication, both with patients and within teams, to achieve the best outcomes in diagnosis and treatment.

One key concept associated with doctor-patient cooperation is "compliance", defined as adherence to medical recommendations, particularly regarding medication use [8]. Studies indicate that nearly 50% of patients with chronic diseases fail to follow prescribed medical recommendations [9]. Non-adherence is often assessed using thresholds, such as $\geq 80\%$ proportion of days covered, categorizing patient medication use as adherent or non-adherent [10]. Factors contributing to poor adherence include complex treatment regimens, inadequate patient involvement in treatment planning, and communication barriers, such as insufficient discussions about adverse reactions.

Research highlights that better therapeutic outcomes are achieved when doctors engage in motivational dialogue and actively involve patients in therapy planning [11]. As patients increasingly seek active participation in the treatment process, the need for enhanced communication skills among healthcare professionals becomes evident. Developing these skills is a growing challenge for medical education systems, at both the undergraduate and postgraduate levels. In Poland, this challenge is particularly significant due to recent educational reforms.

Beginning in the 2024/2025 academic year, new standards will mandate that Polish medical universities introduce compulsory

courses on communication with patients and teamwork skills for doctors, dentists, pharmacists, nurses, midwives, laboratory diagnosticians, physiotherapists, and paramedics [12]. Previously, such courses were offered on an optional basis. While these changes are a step forward, implementing them presents organizational and substantive challenges. Furthermore, Poland's medical self-government has highlighted the lack of postgraduate training in essential soft skills, such as communication and stress management, within specialization programs [13].

Existing research on communication skills training has primarily focused on medical students, with over 5600 articles indexed in PubMed (keywords: communication skills, medical students). Fewer studies address attitudes toward learning communication skills among doctors in specialization training (residents), with approximately 4400 articles available on PubMed (keywords: communication skills, residents).

In Poland, most studies explore the attitudes of medical students, leaving a significant gap in understanding the perspectives of doctors during specialization training. To address this gap, this study used the Communication Skills Attitude Scale (CSAS), developed by Rees et al [14], a validated tool widely used to measure attitudes toward learning communication skills. This tool is recognized for its robust psychometric properties and has been adapted into multiple languages, including Polish [15,16], enabling cross-national and cross-disciplinary comparisons.

Therefore, this study aimed to evaluate attitudes to learning doctor-patient communication skills in 427 postgraduate doctors, using the self-reported 26-item CSAS questionnaire.

Material and Methods

Ethical Consideration

This study was approved by the Bioethics Committee at the Centre of Postgraduate Medical Education in Warsaw (No. 197/2023, dated May 24, 2023). Participants completed the survey voluntarily and anonymously. They did not receive any form of compensation for their participation. Participants were informed that their data would be used solely for research purposes.

Study Design

In this study, a cross-sectional design was employed using a web-based survey. This report has been prepared in accordance with the STROBE guidelines (adapted for cross-sectional studies) and follows the CHEERIES recommendations for reporting web-based research [17,18].

Setting and Participants

The study was conducted online between October 2023 and May 2024. The survey was administered via the LimeSurvey platform [19], licensed to the Centre of Postgraduate Medical Education (CMKP), Warsaw, Poland. The link to the survey was sent directly to the email addresses of 2000 physicians enrolled in mandatory specialization courses organized by the CMKP. These courses, provided by CMKP, a public entity responsible for most of the postgraduate medical training in Poland, focused on substantive medical issues rather than communication skills. The survey was presented as an optional component, available for voluntary completion by the participants. A total of 427 physicians responded, resulting in a response rate of 21.35%.

To ensure participant anonymity and confidentiality, no identifying information was collected during the survey. The LimeSurvey platform was configured to anonymize all responses, and data were stored on a secure server managed by CMKP. Access to the data was restricted to the research team, and all analyses were performed on de-identified datasets. Participants were informed about the anonymous nature of the survey and the use of their responses solely for research purposes, as outlined in the informed consent form presented at the start of the survey.

The methods of distribution involved emailing a unique survey link to the participants. Reminder emails were sent to increase participation, ensuring that responses remained anonymous even after multiple invitations.

The data acquisition process involved collecting responses directly through the LimeSurvey platform, which automatically aggregated and anonymized the data for analysis.

Variables and Data Sources

In this study, we used the CSAS, a standardized tool developed by Rees et al to measure attitudes toward learning communication skills [14]. To ensure cultural and linguistic appropriateness for our sample of physicians, we used the Polish version of the CSAS, which had been translated and validated by Panczyk et al in a study involving registered nurses [15]. This rigorous adaptation process guaranteed the tool's suitability for the Polish medical context.

The CSAS is widely recognized as one of the most effective tools for assessing attitudes toward communication skills. Originally designed for medical students, it has been adopted across various disciplines and regions due to its strong psychometric properties and availability in multiple language versions. This versatility makes it suitable for cross-national and cross-disciplinary comparisons in medical education.

The questionnaire includes 26 statements addressing the importance of communication skills in professional practice, evaluated on a 5-point Likert scale (1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree). It is divided into 2 subscales: the Positive Affect Scale (PAS) and the Negative Affect Scale (NAS), each containing 13 statements. Responses are scored by summing the PAS items and the reverse-scored NAS items, resulting in a maximum possible score of 130 points.

In this study, the survey examined various aspects of communication skills among physicians in Poland. Key areas included whether physicians view communication as a crucial tool in their professional work and if they believe strong communication skills are essential for being a good doctor. The questionnaire explored their interest in developing communication skills, considering them as vital as expanding professional knowledge.

Additional items assessed physicians' willingness to dedicate time to learning communication skills and whether they found such learning engaging. Respondents were also asked if they had initially regarded learning communication skills as a good idea when they began their medical training. Furthermore, the survey included statements about the challenges of admitting problems with one's communication skills and whether prioritizing communication training for psychology students over medical students was appropriate.

By leveraging this comprehensive approach, the study provided nuanced insights into physicians' attitudes toward learning communication skills, highlighting potential areas for enhancing communication training programs to better meet the needs of medical professionals.

Respondents also completed a demographic section, providing information on key sociodemographic characteristics, such as age, sex, education, marital status, and place of residence. This information enabled an analysis of the relationships between sociodemographic variables, professional background, and attitudes toward communication skills training among physicians.

Study Size

The sample size was calculated based on the total number of physicians with a valid medical license who have not yet obtained a specialization, namely residents. The data on the number of physicians was obtained from the Signal Information of the Central Statistical Office of Poland dated November 22, 2022 [20]. The population of physicians meeting the criteria above amounted to 52 733. The sample size was calculated assuming a 95% confidence interval, a 5% margin of error, and a fraction of 0.5. The calculations were performed using a calculator available at <https://www.naukowiec.org/dobor.html> [21].

As a result of this analysis, the minimum required sample size was determined to be 381 respondents.

Statistical Analysis

For data analysis, responses from the CSAS were scored using standard procedures. Scores for the PAS and NAS were calculated separately, with NAS responses reverse-scored before summing. Descriptive statistics were generated to summarize participant demographics and attitudes.

The analysis of the results from individual questions involved recoding and summing responses according to a predetermined key. All assumptions for statistical tests were thoroughly checked before analysis. Statistical tests were used, including *t* tests for independent samples and ANOVA for comparisons across multiple groups. The analysis was conducted using Statistica 13.3 software, under a CMKP license. A significance level of $P < 0.05$ was established to determine the statistical significance of the comparisons made.

Results

Characteristics of the Study Group

The participants were diverse in terms of age, sex, marital status, place of residence, professional experience, specialization, and workplace. The largest group consisted of young doctors under the age of 30 years, representing 55.50% (237 people), indicating a significant involvement of the younger generation in the study. Women dominated the study population, accounting for almost 70% (297 people) of the respondents.

Most participants (63%) were married or in a partnership. Regarding residence, the majority lived in very large cities (39.11%), while only 8.20% resided in rural areas. Most respondents had up to 5 years of professional experience (65.81%), highlighting the involvement of early-career doctors. A similar trend was observed for workplace location, with most working in large cities. The most common specializations were internal medicine (15.46%), family medicine (9.84%), and pediatrics (8.90%).

PAS Results

Women achieved an average PAS score of 52.53 (SD=8.65), while men scored 50.65 (SD=9.74), indicating significantly more positive attitudes toward learning communication skills among women ($P=0.048$). In terms of age, PAS scores were as follows: under 30 years, $M=51.49$, $SD=8.60$; 31-40 years, $M=51.92$, $SD=9.80$; 41-50 years, $M=55.78$, $SD=6.48$; and over 50 years, $M=52.93$, $SD=10.62$. Although these differences

were not statistically significant ($P=0.129$), the 41-50 age group showed the highest scores, suggesting more positive attitudes in this group. Regarding marital status, individuals who were separated or divorced had the highest average PAS scores ($M=58.00$, $SD=6.08$), compared with married/partnered individuals ($M=52.67$, $SD=8.70$) and single individuals ($M=50.42$, $SD=9.47$). These differences were statistically significant ($P=0.010$), indicating more positive attitudes among those separated or divorced. In terms of residence, respondents from large cities (101 000-500 000 inhabitants) had an average PAS score of 52.02 (SD=10.79), while those from very large cities (over 500 000 inhabitants) scored 51.59 (SD=8.29). Respondents from small towns (up to 100 000 inhabitants) averaged 52.85 (SD=7.80), and those from rural areas scored 51.46 (SD=6.67). These differences were not statistically significant ($P=0.768$).

Physicians with less than 5 years of experience had a mean PAS score of 51.63 (SD=8.87), while those with 5 to 10 years of experience had a mean PAS score of 51.05 (SD=10.84). Physicians with 11 to 20 years of experience had a mean PAS score of 54.06 (SD=6.73), and those with more than 20 years of experience had a mean PAS score of 54.68 (SD=7.67). These differences were not statistically significant ($P=0.124$). Analysis of PAS scores in the context of the respondents' workplace also revealed minimal differences that were not statistically significant (Table 1). The analysis of PAS results in the context of specialization showed different attitudes toward learning communication skills.

NAS Results

Women achieved an average NAS score of 45.83 (SD=7.46), while men scored 44.48 (SD=7.56), although these differences were not statistically significant. In terms of age, NAS scores were as follows: under 30 years, $M=45.19$, $SD=6.47$; 31-40 years, $M=44.68$, $SD=8.70$; 41-50 years, $M=49.85$, $SD=7.38$; and over 50 years, $M=48.27$, $SD=7.67$. These differences were statistically significant ($P=0.004$), indicating more negative attitudes toward learning communication skills among older age groups, particularly those aged 41 to 50 years. Regarding marital status, separated or divorced individuals had the highest average NAS scores ($M=49.86$, $SD=7.06$), compared with married/partnered individuals ($M=45.74$, $SD=7.02$) and single individuals ($M=44.64$, $SD=8.26$), although these differences were not statistically significant ($P=0.101$). In terms of residence, respondents from large cities (101 000-500 000 inhabitants) had an average NAS score of 45.52 (SD=8.92), while those from very large cities (over 500 000 inhabitants) scored 45.21 (SD=6.84). Respondents from small towns (up to 100 000 inhabitants) averaged 45.59 (SD=6.61), and those from rural areas scored 45.57 (SD=6.02), with no statistically significant differences ($P=0.976$).

Table 1. Positive Attitude Scale score according to sociodemographic and professional variables.

		Mean	SD	P value
Sex	Female	52.53	8.65	0.048
	Male	50.65	9.74	
Age	Up to 30 years	51.49	8.60	0.129
	31-40 years	51.92	9.80	
	41-50 years	55.78	6.48	
	Over 50 years old	52.93	10.62	
Marital status	Single	50.42	9.47	0.010
	Separated/divorced	58.00	6.08	
	Marriage/partnership	52.67	8.70	
Residence	Very large city (over 500 000 inhabitants)	51.59	8.29	0.768
	Large city (101 000-500 000 inhabitants)	52.02	10.79	
	Small town (up to 100 000 inhabitants)	52.85	7.80	
	Village	51.46	6.67	
Professional experience	Up to 5 years	51.63	8.87	0.124
	5-10 years	51.05	10.84	
	11-20 years	54.06	6.73	
	Up to 20 years	54.68	7.67	
Primary health care	No	51.68	8.83	0.249
	Yes	52.87	9.63	
Outpatient specialist care	No	51.98	9.08	0.894
	Yes	51.80	8.67	
Hospital emergency department	No	51.90	9.05	0.701
	Yes	52.49	8.81	
Hospital	No	52.67	10.08	0.402
	Yes	51.77	8.73	
Workplace	Very large city (over 500 000 inhabitants)	51.25	8.15	0.484
	Large city (101 000-500 000 inhabitants)	52.54	9.28	
	Small town (up to 100 000 inhabitants)	52.64	8.58	
	Village	53.67	6.66	

Professional Experience

Physicians with less than 5 years of experience had a mean NAS score of 45.35 (SD=7.07), while those with 5 to 10 years of experience had a mean of 43.79 (SD=8.72). Physicians with 11 to 20 years of experience had a mean of 46.33 (SD=7.26), and those with more than 20 years of experience had a mean

of 49.95 (SD=7.36). These differences were statistically significant ($P=0.006$), indicating more frequent negative attitudes among physicians with longer professional experience. Analysis of NAS scores in the context of the respondents' workplace, similarly to the PAS scale, showed minimal and insignificant differences (**Table 2**).

Table 2. Negative Attitude Scale score according to sociodemographic and professional variables.

		Mean	SD	P value
Sex	Female	45.83	7.46	0.087
	Male	44.48	7.56	
Age	Up to 30 years	45.19	6.47	0.004
	31-40 years	44.68	8.70	
	41-50 years	49.85	7.38	
	Over 50 years old	48.27	7.67	
Marital status	Single	44.64	8.26	0.101
	Separated/divorced	49.86	7.06	
	Marriage/partnership	45.74	7.02	
Residence	Very large city (over 500 000 inhabitants)	45.21	6.84	0.976
	Large city (101 000-500 000 inhabitants)	45.52	8.92	
	Small town (up to 100 000 inhabitants)	45.59	6.61	
	Village	45.57	6.02	
Professional experience	Up to 5 years	45.35	7.07	0.006
	5-10 years	43.79	8.72	
	11-20 years	46.33	7.26	
	Up to 20 years	49.95	7.36	
Primary health care	No	45.65	7.42	0.237
	Yes	44.64	7.77	
Outpatient specialist care	No	45.45	7.47	0.802
	Yes	45.16	7.87	
Hospital emergency department	No	45.39	7.61	0.828
	Yes	45.67	6.47	
Hospital	No	44.92	9.10	0.482
	Yes	45.55	7.03	
Workplace	Very large city (over 500 000 inhabitants)	45.12	6.71	0.812
	Large city (101 000-500 000 inhabitants)	45.89	7.95	
	Small town (up to 100 000 inhabitants)	45.59	6.74	
	Village	46.00	7.21	

CSAS Results

The analysis of CSAS scores revealed sex differences in attitudes toward learning communication skills. Women achieved an average CSAS score of 98.36 (SD=14.28), while men had an average score of 95.13 (SD=15.56; $P=0.037$), with the higher scores for women indicating they had more positive attitudes

toward learning communication skills than did men. Age also influenced CSAS scores, with the highest scores observed in the 41-50 age group ($M=105.63$, $SD=12.69$) and those over 50 years ($M=101.2$, $SD=17.01$). Younger respondents, under 30 years old, had an average CSAS score of 96.68 ($SD=13.44$), and those aged 31 to 40 had an average score of 96.59 ($SD=16.37$). Higher CSAS scores among older respondents

Table 3. Communication Skills Attitude Scale score according to sociodemographic and professional variables.

		Mean	SD	P value
Sex	Female	98.36	14.28	0.037
	Male	95.13	15.56	
Age	Up to 30 years	96.68	13.44	0.015
	31-40 years	96.59	16.37	
	41-50 years	105.63	12.69	
	Over 50 years old	101.20	17.01	
Marital status	Single	95.05	15.48	0.013
	Separated/divorced	107.86	11.60	
	Marriage/partnership	98.41	14.18	
Residence	Very large city (over 500 000 inhabitants)	96.80	13.60	0.875
	Large city (101 000-500 000 inhabitants)	97.54	17.70	
	Small town (up to 100 000 inhabitants)	98.44	12.32	
	Village	97.03	11.16	
Professional experience	Up to 5 years	96.98	14.01	0.020
	5-10 years	94.84	18.43	
	11-20 years	100.40	11.52	
	Up to 20 years	104.64	13.34	
Primary health care	No	97.33	14.70	0.917
	Yes	97.51	14.93	
Outpatient specialist care	No	97.43	14.80	0.834
	Yes	96.96	14.40	
Hospital emergency department	No	97.30	14.81	0.730
	Yes	98.15	14.19	
Hospital	No	97.59	17.70	0.877
	Yes	97.32	13.87	
Workplace	Very large city (over 500 000 inhabitants)	96.37	13.28	0.553
	Large city (101 000-500 000 inhabitants)	98.43	14.92	
	Small town (up to 100 000 inhabitants)	98.23	13.62	
	Village	99.67	13.50	

suggested more positive attitudes toward learning communication skills in these age groups. Regarding marital status, separated or divorced respondents had the highest average CSAS scores ($M=107.86$, $SD=11.60$), indicating the most positive attitudes. Married/partnered individuals had an average score of 98.41 ($SD=14.18$), while single respondents averaged 95.05 ($SD=15.48$, $P=0.013$). CSAS scores were similar across

different places of residence, with respondents from very large cities (over 500 000 inhabitants) averaging 96.80 ($SD=13.60$), those from large cities (101 000-500 000 inhabitants) averaging 97.54 ($SD=17.70$), small towns (up to 100 000 inhabitants) averaging 98.44 ($SD=12.32$), and rural respondents averaging 97.03 ($SD=11.16$). These differences were minimal and not statistically significant.

Respondents with more professional experience showed more positive attitudes toward learning communication skills. The highest mean CSAS values were achieved by physicians with more than 20 years of experience ($M=104.64$, $SD=13.34$) and those with 11 to 20 years of experience ($M=100.40$, $SD=11.52$). Physicians with up to 5 years of experience had a mean CSAS value of 96.98 ($SD=14.01$), and those with 5 to 10 years of experience had a mean CSAS value of 94.84 ($SD=18.43$, $P=0.020$).

Analysis of CSAS scores in the context of respondents' workplace revealed minimal differences. Physicians working in primary health care had a mean CSAS score of 97.51 ($SD=14.93$), while respondents not working in primary health care had a mean CSAS score of 97.33 ($SD=14.70$). In outpatient specialist care (AOS), mean CSAS scores were similar between those working in outpatient specialist care ($M=96.96$, $SD=14.40$) and those not working in outpatient specialist care ($M=97.43$, $SD=14.80$). Respondents working in the emergency department had a mean CSAS score of 98.15 ($SD=14.19$), while those not working in emergency department had a mean CSAS score of 97.30 ($SD=14.81$). In the case of working in hospitals, respondents who worked in hospitals had a mean CSAS score of 97.32 ($SD=13.87$), while those who did not work in hospitals had a mean score of 97.59 ($SD=17.70$). Overall, these differences were minimal and not statistically significant; no statistically significant differences were observed (Table 3).

Analysis of CSAS scores in the context of specialization revealed significant variation. The highest mean CSAS scores were achieved by specialists in laboratory diagnostics ($M=118$), pediatric surgery ($M=111$), geriatrics ($M=110$), and cardiac surgery and medical rehabilitation ($M=108$). High scores were also noted in diabetology ($M=107$), dermatology and venereology ($M=106.25$), vascular surgery ($M=106$), and conservative dentistry with endodontics ($M=106.67$). Lower mean CSAS scores were noted in gastroenterology ($M=66$), thoracic surgery ($M=75$), forensic medicine ($M=68$), and rheumatology ($M=79$).

Discussion

The results of this study provide valuable insights into the attitudes of Polish physicians toward learning communication skills, while revealing differences depending on the sociodemographic characteristics of the respondents. One of the key findings of the study is the more positive attitude of women toward learning communication skills. This result is consistent with previous studies, which indicated that women in medical professions are more likely to show greater emotional involvement and empathy in relationships with patients [22,23], which can translate into their more positive attitudes toward developing these competences.

On the other hand, men, although they did not differ significantly from women in CSAS scores, had lower scores in PAS and NAS, which indicated more ambivalent attitudes toward the need to learn communication. A possible explanation for this phenomenon can be the difference in approach to interpersonal relationships and traditional social expectations regarding gender roles in medical professions.

Surprisingly, physicians aged 41 to 50 years showed more positive attitudes toward learning communication skills, which is contrary to some previous studies that suggested that younger physicians were more open to developing in this area [24]. One possible explanation for this phenomenon is that older physicians with more professional experience may have become more aware of the importance of effective communication in improving the quality of patient care. Their more positive attitudes may be due to practical experiences, in which inadequate communication led to misunderstandings or problems in treating patients. On the other hand, longer professional experience was also associated with more negative attitudes on the NAS scale. This suggests that, despite being aware of the value of communication skills, senior doctors may feel resistance to formal education in this area, perhaps because they believe that their skills acquired in practice are sufficient. This phenomenon indicates the need for more flexible and tailored training programs for senior doctors that take into account their experience and potential resistance to traditional teaching methods.

In another study using the CSAS, medical students, residents, and tutors did not differ on the PAS. Residents scored higher than medical students on the NAS ($P<0.01$). Women scored higher on the PAS ($P<0.05$) and lower on the NAS ($P<0.01$) than men on all subsamples. Respondents viewed communication skills training as an essential component of clinical practice and agreed on the need to learn it [25].

The results of our study did not show significant differences in attitudes toward communication training based on place of residence or place of work. It can be assumed that regardless of the region or type of medical facility, physicians have similar needs and challenges in communicating with patients, which suggests that training programs can be largely universal and implemented in different contexts without the need for significant modification depending on location.

The significant differences in attitudes toward communication training among physicians of different specialties may be due to the nature of their daily work and the intensity of patient contact [26]. Specialists such as pediatric surgeons or geriatricians, who often have to conduct difficult conversations with patients and their families, may appreciate the importance of communication skills more. Physicians working in

fields such as forensic medicine or gastroenterology may perceive communication training as less relevant to their daily practice. These results indicated the need to differentiate educational programs depending on the specialty, so that they are more adapted to the specific challenges that physicians face in their work.

Our study, indicating a generally positive attitude toward learning communication skills, is consistent with the results of studies conducted, among others, in Portugal, where residents also expressed strong positive attitudes toward the importance of these skills. The online survey (consistent with the Portuguese version of the CSAS) included demographic data and open-ended questions. Interestingly, Portuguese residents, despite a more positive attitude toward communication itself, had more ambivalent attitudes toward the process of learning these skills. In Portugal, similar to in our study, attention was drawn to the need to strengthen training in this area, especially in postgraduate education, and the important role of clinical supervisors in promoting these skills was emphasized [27].

On the other hand, the attitude toward learning communication skills was also examined among nurses who took the specialization examination in spring 2017 in Poland [15] (an adapted CSAS questionnaire was used). According to researchers from Poland, a positive attitude toward communication skills does not always guarantee the need to learn these skills; therefore, further research should look for factors that mediate between a positive attitude toward communication skills and the need to learn them.

The scientific literature indicates that communication skills tend to decline over time unless they are regularly reviewed and practiced [28]. Therefore, optimizing communication skills learning requires not only frequent training but also a shift in attitudes toward communication education. Physicians must recognize the value of these skills, and their use, training, and teaching in clinical practice should be supported, rewarded, and integrated into daily professional activities.

Polish researchers have reviewed communication curricula and provided recommendations for improving medical communication training at the undergraduate level in Poland [29]. They suggest that the development of highly competent communication skills should span the entire medical school curriculum, incorporating theoretical and practical aspects. Communication skills should be taught in diverse settings, including inpatient, outpatient, and medical simulation environments. These recommendations align with findings from international studies, which indicate that exposure to real clinical situations is crucial for recognizing deficiencies in communication skills. For example, surgical and family medicine residents reported that analyzing video recordings of their interactions with patients

was more effective for improving communication than simulated patient sessions or role-playing exercises [30].

Similar findings were reported by researchers at the University of Pittsburgh Medical Center, where even brief communication training sessions significantly improved patient satisfaction. This demonstrates that even small-scale interventions can positively impact care quality, suggesting the need for widespread, regular training for physicians at all career stages [31]. Positive effects of communication skills training have also been documented across individual specialties, such as pediatrics, orthopedic surgery, and neurology, where improved communication directly influenced patient outcomes and doctor-patient relationships [32-35].

Mandatory communication skills training early in a doctor's career brings long-term benefits. For instance, in Denmark, since 2004, first-year residents have been required to attend a 3-day communication skills course. Respondents reported that these courses prepared them for difficult conversations, such as delivering bad news or dealing with challenging patients [36]. These findings highlight the importance of structured, formal training programs as a foundation for developing communication competencies.

The attitudes of medical students toward learning communication skills are also worth examining. Researchers in South Korea have emphasized that medical schools should focus on improving patient-centered care by fostering positive attitudes toward communication learning. Factors such as academic years, sex, and empathy were identified as key influences on students' attitudes, and educational programs should emphasize building empathy and reinforcing positive attitudes [37].

Similarly, researchers in India have highlighted the critical role of communication skills in the success of medical professionals, advocating for the introduction of communication training at the earliest stages of medical education [38]. In another study, medical students, residents, and tutors showed no significant differences on the PAS. However, residents scored higher on the NAS ($P<0.01$), indicating more ambivalence. Women consistently scored higher on the PAS ($P<0.05$) and lower on the NAS ($P<0.01$) than did men across all subsamples, a trend confirmed by our findings [25].

A study conducted at the Jubilee Mission Medical College and Research Institute found that communication training sessions were most effective when participants were aware of their communication gaps. The ability to listen and convey clear messages was identified as a common shortcoming, emphasizing the importance of tailoring training to address these specific deficiencies [39].

Researchers in Poland have similarly analyzed soft skills development among senior medical students, revealing insufficient time and resources devoted to teaching these essential competencies [40]. This reinforces the need for more structured training to bridge the gap between theoretical knowledge and practical application.

Our study provides information on the attitudes of Polish physicians toward learning communication skills, while accounting for demographic and specialization-related differences. Similar to findings from other countries, we identify a pressing need to strengthen formal training programs, particularly in real clinical settings where practical applications of communication skills are most valuable [41]. Differences in attitudes based on sex, specialization, and experience underscore the necessity of tailoring these programs to physicians' diverse needs [42].

To address these differences, current communication training programs should incorporate adaptive elements that align with varying attitudes and requirements. For example, training for senior physicians could focus on leveraging their extensive experience while addressing potential resistance to traditional methods. Conversely, programs for early-career doctors might emphasize foundational skills and introduce them to the long-term benefits of effective communication. Regular, structured training sessions at all stages of medical education should also include case-based learning, real-life simulations, and reflective practices, such as video analysis of interactions, to enhance engagement and retention.

By integrating these strategies, communication training programs can become more inclusive, effective, and aligned with the diverse needs of medical professionals. This tailored approach will not only improve attitudes toward communication learning but also strengthen doctor-patient relationships and overall healthcare quality.

Study Limitations

Despite efforts to gather comprehensive data, the study can be subject to several biases. One potential source of bias is selection bias, as the sample was drawn exclusively from physicians participating in mandatory courses organized by the Centre of Postgraduate Medical Education in Poland. This specific group may have different attitudes toward communication skills than do physicians not engaged in these courses. Additionally, since the survey was offered as an optional

component, there may have been self-selection bias, with only those particularly interested in communication skills choosing to respond. This could lead to an overrepresentation of participants with positive attitudes toward communication training. Furthermore, the reliance on self-reported data could introduce response bias, as participants might provide socially desirable answers rather than their true opinions. These factors should be considered when interpreting the findings, as they can influence the generalizability of the results to the broader population of physicians.

Conclusions

The conducted study highlights the diverse attitudes of Polish doctors toward learning communication skills and emphasizes the influence of sociodemographic factors on these attitudes. The findings suggest the need for a tailored and differentiated approach to communication education among physicians, addressing variations in sex, marital status, and professional experience.

To increase the effectiveness of communication training programs, special attention should be directed toward groups that may face barriers to engagement, such as men and physicians with longer professional experience, who were identified as less open to formal communication training. These programs should be customized to meet the unique challenges and needs of each group, fostering greater participation and acceptance.

Further research should explore the underlying reasons for differences in attitudes across medical specialties and investigate interventions that can address negative perceptions of communication training. Additionally, evaluating the long-term impact of tailored communication programs on clinical practice and patient outcomes will provide valuable insights for improving medical education.

By addressing the specific needs of diverse physician groups, communication training can become a more effective tool for enhancing doctor-patient relationships and improving the quality of healthcare delivery.

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