

# “Fine feathers make fine birds” – non-medical students’ opinions on the dermatologists’ image in Poland: a cross-sectional study

Irmina Morawska<sup>1</sup>, Beata Bergler-Czop<sup>2</sup>

<sup>1</sup>Students’ Scientific Society, Department of Dermatology, School of Medicine, Medical University of Silesia, Katowice, Poland

<sup>2</sup>Department of Dermatology, School of Medicine, Medical University of Silesia, Katowice, Poland

Adv Dermatol Allergol 2022; XXXIX (1): 66–71

DOI: <https://doi.org/10.5114/ada.2020.100740>

## Abstract

**Introduction:** Medical professions are full of patterns and personal exemplars which determine norms of behaviour. Research works focused on the doctor’s image include not only perception of reality, but also patients’ subconscious expectations.

**Aim:** To get to know the students’ opinion on the image of dermatologists, to assess the public image of that profession and what factors have the biggest impact on that issue.

**Material and methods:** The study was conducted in a group of 1000 Polish, non-medical students (F = 817, M = 183) between 18 and 25 years old. The data were collected through an anonymous, author-designed, online questionnaire. The questionnaire was sent via Internet social media to students from 12 various non-medical fields of study.

**Results:** 51.6% of interviewees considered this profession as moderately prestigious. Only 18.9% of the respondents saw the image of the dermatologist created by the media as adequately presented. There is a statistically significant difference ( $p = 0.0006$ ) between the different age groups and the frequency of visits to the dermatologist. The median sum the respondents were able to pay for a specialist visit was 100 zloty (IQR: 70–150). The field of study ( $p = 0.002$ ) and place of residence ( $p < 0.001$ ) significantly influenced the amount they were able to spend.

**Conclusions:** In students’ opinion, factors such as medical experience and communication with the patient have the strongest influence on the image of this profession. The second strongest factor affecting the choice of a dermatologist is information acquired by word of mouth from other patients and family members, without any prior verification.

**Key words:** dermatologist, image, non-medical, student, doctor.

## Introduction

The public’s perception of the medical profession is the subject of continuous change. The physician’s image loses its uniformity to the extent that increasing knowledge and technical ability generate a multitude of different specialisations [1]. A high complexity arises from the accompanying necessary regulations with the professional image considerably varying across perspectives. Medical professions are full of patterns and personal exemplars which determine norms of behaviour. Research works focused on the doctor’s image include not only perception of reality, but especially patients’ subconscious expectations. “Image” is “a way of presenting and perceiving a given things or people” following the PWN Dictionary of the Polish Language [2]. However, while creation of the image

of the individual seems quite simple, for the professional group of dermatologists it is much more complicated. If one were tempted to mention the virtues of a doctor, it would certainly be necessary to point out: faithfulness and steadfastness in trust and keeping promises, keeping one’s benefits in check, intellectual honesty, compassion and care, courage, justice and prudence [3]. Undoubtedly, the expectations formulated with regard to doctors are particularly high. On the one hand, there are certain well-established patterns that have been developed within people by literature, school, and public opinion [3]. Thus, many trends, both historical and current, have contributed to the evolution of the image of the dermatologist. Better understanding of the role of the dermatologist may facili-

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**Address for correspondence:** Prof. Beata Bergler-Czop MD, PhD, Department of Dermatology, School of Medicine, Medical University of Silesia, 20/24 Francuska St, 40-027 Katowice, Poland, phone: +48 32 259 15 81, fax: +48 32 256 11 82, e-mail: [bettina2@tlen.pl](mailto:bettina2@tlen.pl)

**Received:** 6.09.2020, **accepted:** 18.09.2020.

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tate better interpersonal relationships between doctors and patients [4].

**Aim**

The aim of this study was to assess the level of students’ knowledge about dermatology profession, to get to know the students’ opinion on the image of dermatologists, to assess the public image of that profession, and to determine which factors have the biggest impact on that issue.

**Material and methods**

**Study population and definitions**

The study was conducted in a group of 1000 Polish, non-medical students (F = 817, M = 183) between 18 and 25 years old from 12 various non-medical fields in Poland in 2019. The data collection instrument employed was an online questionnaire, designed by the author specifically to capture the opinions of non-medical students. The survey was anonymous; no incentive has been offered. The questionnaire consisted of 28 questions divided into 2 parts: 5 general questions about respondents and 23 detailed questions about determinants of the public image of dermatologists with the majority rated on a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Space was provided at the end of the survey for the participants’ comments. The questions were partially derived from a survey on the perception of dermatology by the general population [5]. The online questionnaire was sent via Internet social media. Internet-based surveys have become more popular nowadays.

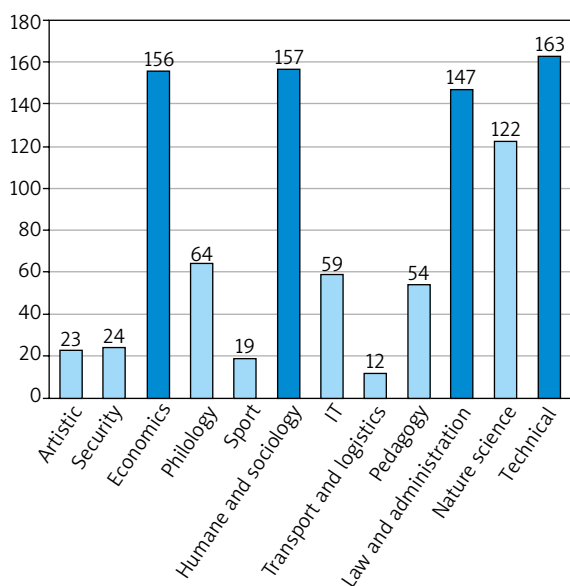
Indisputable advantages of Internet-based surveys concern not being dependent on arranging appointments, increased disclosure and decreased social desirability bias [6]. Previous findings show that Internet data collection methods are generally equivalent and may serve as an advantageous and reliable methodology [7].

**Statistical analysis**

Data were analysed using Statistica v.12.0.PL (Stat-Soft, Tulsa, OK, USA). Descriptive statistics (frequencies and percentages) are presented for demographic data and students’ opinions about functions and duties of a dermatologist (percent responses). Normality was verified using Shapiro-Wilk test. The differences between groups (males and females) were tested using the *t*-test. One-way ANOVA was applied to compare differences between non-medical students in different fields of study. Additionally, a post hoc least significant difference test was used to examine differences between different groups (fields of study). Finally, opinions about functions and duties of a dermatologist between males and females were compared with the Pearson  $\chi^2$  test. A *p*-value of less than 0.05 was considered as statistically significant for all of tests.

**Results**

The majority of the respondents were female (81.7%) and between the ages of 21–22 years. The age and sex distribution reflects the distribution among all non-medical students in Poland. Figure 1 displays characteristics of the respondents by fields of study. The great majority of answers came from technical studies (163 students), human-social studies (157 students), economic studies (156 students), law studies (147 students) and natural studies (122 students).

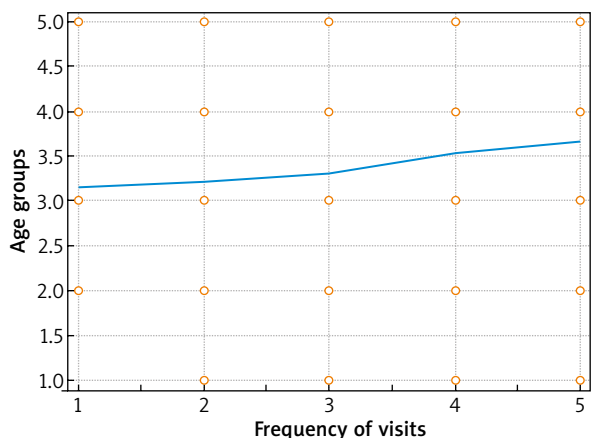


**Figure 1.** Characteristics of respondents by fields of study (n = 1000)

**Table 1.** Distribution of 10 skills and abilities important for dermatologists according to non-medical students

Variable	Female (n = 817)	Male (n = 183)	P-value
Trustworthiness	614	113	<b>0.001</b>
Communication skills	642	137	<b>0.006</b>
Knowledge and experience	790	143	<b>0.003</b>
Accuracy	802	83	<b>0.036</b>
Good at problem solving	680	135	<b>0.012</b>
Technical competence	395	101	<b>0.007</b>
Friendly	653	89	0.352
Sensitivity and compassion	780	130	<b>0.042</b>
Intelligence	678	120	0.573
Professional independence	567	93	0.076

*P* < 0.05 was considered as statistically significant (in bold).



**Figure 2.** Age groups and frequency of visits to the dermatologist. Age groups: 1 – < 18 years old, 2 – 19–20 years old, 3 – 21–22 years old, 4 – 23–24 years old, 5 – > 25 years old. Frequency of visits: 1 – once a month, 2 – once per 3 months, 3 – once per 6 months, 4 – once a year, 5 – less than once a year

Seventy percent of the interviewees knew at least one skin disease, particularly acne vulgaris (97.8%), psoriasis (89.4%) and atopic dermatitis (86.8%). Almost half of those surveyed turned out to have a trusted dermatologist to consult in the case of skin problems. Finally, among students who had visited a dermatologist at least once, 48.8% would recommend the dermatologist to a friend.

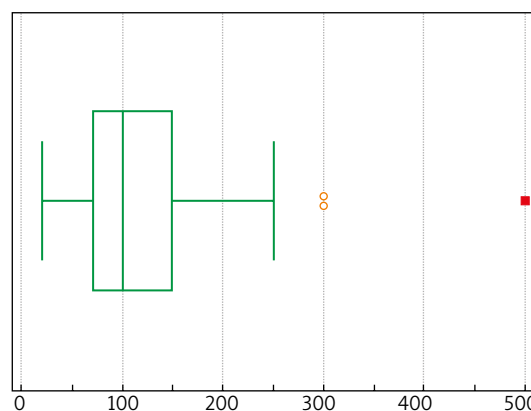
### Skills and abilities important for dermatologists

Table 1 displays the ranking of 10 skills and abilities that are considered important for dermatologists as attributed by Polish non-medical students. Findings analysed by sex indicated that male and female non-medical students ranked communication skills; knowledge and experience; and loyalty as most important. Concordance was found by gender of non-medical students for the two least important characteristics: sensitivity and compassion and professional independence. Almost half of those surveyed reported having a trusted dermatologist to consult in the case of skin problems and that they were looking for technical competence and loyalty.

Statistically significant differences between women and men were observed among most characteristics. Female students awarded higher rank to such skills and abilities of dermatologists as being good at problem solving, sensitivity and compassion, making good decisions, and intelligence in comparison with male students. The greatest gender-associated differences were found in the ranking of three characteristics: communication skills, being good at problem solving and knowledge and experience.

### Opinions about the dermatology profession

98.8% of respondents indicated correctly what the dermatology profession is, whereas 80.2% of them knew



**Figure 3.** Cost of specialist visit estimated by students (PLN), median: 100 (IQR: 70–150)

what venereology is, and only 39.5% pointed out that the dermatologist deals with venereology too. Statistically significant differences were found by field for the following statements:

- “the dermatologist also deals with venereology” (the difference between each field;  $p = 0.02$ );
- “the dermatologist’s work isn’t harmful” (the difference between each field;  $p = 0.03$ );
- “the public image of the dermatologist is created in an appropriate way” (the difference between artistic studies and human and sociology studies;  $p = 0.002$ );
- “it is important to have good knowledge of diseases” (the difference between technical studies and economic studies;  $p = 0.025$ ).

When analysed by sex, statistically significant differences were detected for the following statements: male students disagreed more strongly with the statement that the dermatologist’s work is stressful ( $p = 0.05$ ) and female students felt more strongly that it is important for the dermatologist to have good knowledge of diseases ( $p = 0.01$ ).

There is a statistically significant difference ( $p = 0.0006$ ) between the different age groups and the frequency of visits to the dermatologist displayed in Figure 2. The group aged > 25 years goes most frequently (64.6%) to the dermatologist. 100 zloty was the median sum estimated by respondents for a specialist visit (Figure 3). Finally, the field of study ( $p = 0.002$ ) and place of residence ( $p < 0.001$ ) significantly influenced the amount of money they were able to spend.

## Discussion

### Gender differences in dermatology

Dermatology has many faces and encompasses a variety of fields including medical dermatology, skin oncology and surgery, genetic and paediatric skin diseases, sexually transmitted diseases, allergic skin diseases and

aesthetic medicine [8]. Skin problems are strongly associated with increased social stigma. In previous reports stigmatization is described as the assignment of negative perceptions to an individual because of a perceived difference from the population at large. Skin conditions are frequently the reason for social rejection with a consequent negative influence on the personal and social life of patients [9]. In our study almost all of the female respondents claimed to have severe skin problems which significantly influenced their self-perception and self-confidence. It confirmed previous studies about gender differences in dermatology and their recognition in epidemiology and manifestations of various skin diseases. Males are generally more commonly afflicted with infectious diseases while women are more susceptible to pigmentary disorders, certain hair diseases, and particularly autoimmune as well as allergic diseases [8]. Previous studies revealed a positive correlation between better understanding of gender differences in human health and diseases and the development of novel concepts for prevention, diagnosis and therapy of skin diseases. The development of skin disease is influenced by various factors, such as socioeconomic status, age and gender [4]. These factors strongly influence the prevalence of skin diseases differing between age groups displayed in our study.

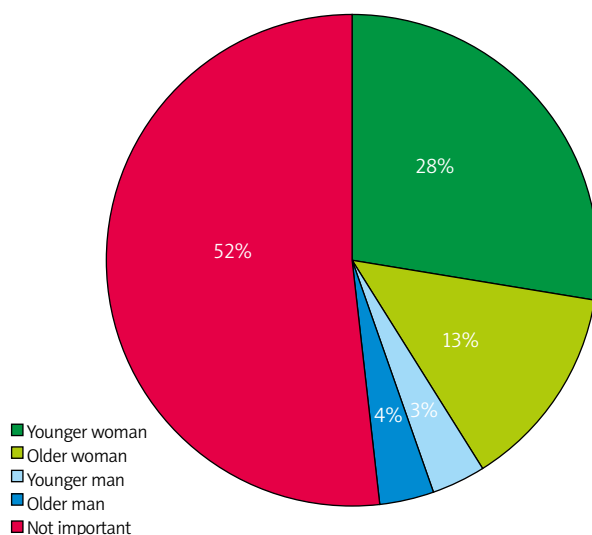
**Dermatologist’s image according to non-medical students**

Creating the image is a complex process dependent on how many factors are important for the people we want to reach. Undoubtedly, the image of an ideal doctor, i.e. a professional who puts the good of the patient over his own family and private life and over his own ambitions, is closest to the patient’s heart and expectations [3]. It is reflected in our study, where the most important features of the dermatologist indicated by respondents were accuracy (88.5%), communication skills (77.9%) and trustworthiness (72.7%). The scope of the image, in the broad sense, in the medical world also includes other elements: the doctor’s age and sex [3]. Interestingly, gender and age of the dermatologist did not play an important role for 52.1% of respondents (Figure 4), whereas 27.7% of the students preferred to go to a younger woman ( $p = 0.001$ ).

In Italy the general population has a wide-ranging understanding of skin diseases and the central role of dermatologists in skin care. Patients are looking for technical competence and loyalty, because these lead to a more trusted and satisfactory physician-patient relationship [10–13]. Similarly in our study in Poland, opinions about doctors have the greatest value and importance for patients. The choice of a specialist is mostly determined by the detailed reviews referring to specific health problems. This kind of review is very emotional. The patient’s level of trust in another, even an unknown, but satisfied

patient is very high. The patient’s emotional attitude to such an important topic as their own health is an ideal trigger to write an opinion about the doctor after the visit, especially if it was a long-sought specialist doctor who made an accurate diagnosis. As was mentioned earlier, other elements can be associated with the influence on the image of the chosen specialist, such as working at the university, flexible reception hours and distance to the clinic [8, 14, 15]. In our study, 95.2% of respondents indicated the information passed by word of mouth, acquired from other patients and family members, without any prior verification, as the second strongest factor affecting the choice of a dermatologist.

Ludriksone *et al.* assessed the opinion of medical students about the dermatology profession. Although the majority of them agreed with the statement that dermatology is important and skin diseases are frequent, the overall knowledge of dermatology is limited and the perception of dermatologists is dominated by inaccurate presumptions held by the general public [16]. Album *et al.* claimed that the prestige of medical specialities is ordered hierarchically, where immediate and invasive procedures conducted in the visible parts of the body (mainly the face) are given high prestige scores, especially where the typical patient is young or middle-aged [17]. The same situation appeared in our study, where non-medical interviewees considered the dermatology profession as moderately prestigious (51.6%,  $p = 0.01$ ) and only 18.9% of the respondents saw the image of the dermatologist created by the media as adequately presented. The reasons for confusion about the dermatology profession are multiple and complex. A lack of generally understood information about dermatology is one major source of misunderstanding among non-medical society. Multiple studies have suggested that dermatologists are



**Figure 4.** Non-medical students’ preferences regarding dermatologist’s gender and age

superior to non-dermatologists in managing skin diseases [18, 19]. However, it is still not known whether the public are convinced that dermatologists should be the primary caretakers for the skin [20]. Finally, Girolomoni claimed that the issues of who is taking care of skin diseases and how dermatology practice is perceived by the general population may be very important to health policy decisions [21].

In the research by Sharp *et al.* dermatology is known as a specialty that traditionally exhibits high levels of professional satisfaction, largely attributed to regular clinic hours and a lack of in-house calls [22]. To the question of whether the dermatologist's work conditions are harmful, 43.2% of our respondents said no ( $p = 0.03$ ), regardless of the field of study. The remaining 29.5% of respondents chose a positive answer. This may be influenced by the fact that nowadays the image of the dermatologist is also shaped by the prism of poorly understood professional solidarity [8]. Research focused on coronavirus disease 2019 (COVID-19) proved that even dermatologists have developed high stress due to the epidemic situation, comparable to non-dermatologists, despite being traditionally considered an outpatient speciality with minimum stress [22]. In our study respondents described the dermatology profession as a non-stressful specialty and they indicated only prescribing steroids as the major role of the dermatologist (85.6%). We expect that the perception of the dermatology profession will change after the pandemic. It seems that the economic crisis, difficult situation on the labour market and unemployment more and more often affecting young and educated people will influence the changes in the prestige of the medical professions, including earning opportunities.

#### Doctor-patient relationship establishment

The quality of a doctor-patient relationship plays a vital role in all fields of medicine, especially if it concerns skin diseases. It has been said that patients consider empathy to be very important in consultations, and show better treatment adherence and greater satisfaction with more empathy [23–25]. In the case of dermatology, this role is special, as it provides the foundation for the whole therapeutic process. The therapeutic process may be difficult and demanding, not only due to the type of symptoms of a skin disorder, but also because of the duration of the symptoms. The chronic nature of many conditions, as well as the relapse of low mood following relatively stable periods, discourages patients from continuing treatment [26]. The best way to increase the awareness of the non-medical public is to extend understanding of the respective roles between medical specialties, share knowledge, and increase respect and positive regard, which result in improvement of communication skills and finally better patient care.

This study has several limitations. First and foremost, there were different ways of understanding and inter-

pretation of questions, which resulted in incomplete filling in of the form with unconscious responses. We encourage national and international surveys to assess the current state of perception of dermatology in non-medical students as a basis for interventions to correct the inappropriate image of that specialty. This will be needed to recruit a sufficient number of motivated physicians for training in dermatology in order to meet the increasing demand of dermatology services within the young population [18].

#### Conclusions

The opinion of Polish non-medical students concerning skills and abilities needed for the profession of dermatology seems to promote professional duties associated with the therapeutic process rather than development of independence. Students of non-medical fields do not have sufficient knowledge about the dermatology profession. In students' opinion, factors such as knowledge, medical experience and communication with the patient have the strongest influence on the image of this profession. The second strongest factor affecting the choice of a dermatologist is information passed by word of mouth, acquired from other patients and family members, without any prior verification. The statistical analysis of the results of this study confirm previously observed conditioning of the perception of the dermatology profession, relative to gender and, to a lesser extent, non-medical students' years of study. Polish non-medical students hold high perceptions of dermatologists, mainly in terms of their professional reliability, good technical skills and such characteristics as being friendly and courteous.

#### Conflict of interest

The authors declare no conflict of interest.

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