



Perception of Dermatology and Dermatologists Among Medical Students

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A recent population-based study in Germany reported that 82% of the general adult population had consulted a dermatologist in the past, with 25% having a dermatological problem requiring treatment (1). This highlights the high prevalence of dermatological disorders and, consequently, the importance for all medical graduates to develop basic knowledge of dermatological conditions regardless of the medical field in which they are planning to specialize. Nevertheless, in the ranking of diseases based on their importance and, consequently, the prestige of medical specialities, dermatology is frequently ranked one of the lowest specialities (2). The factors contributing to this perception are unknown. As the career decisions of medical students are influenced by their attitudes towards medical specialities (3), we aimed to assess how medical students perceive dermatology and whether a perception-shift would be observed following a dermatology training module.

METHODS AND RESULTS

The study was conducted from April through July 2017 at the University Hospital of Jena, Jena, Germany. All 4th-year medical students undertaking their 12-week dermatology training module were asked to complete a questionnaire on the first day of the curriculum (baseline) and again at the end of the curriculum (follow-up). Participation was voluntary. To ensure confidentiality, no identifying information was collected. The dermatology training module consisted of a lecture series and 2 half-day small-group bedside teaching sessions in the dermatology wards and outpatient clinics.

The questionnaire consisted of 70 items, with the majority rated on a 5-point Likert scale – strongly agree, moderately agree, neutral, moderately disagree, and strongly disagree. The following topics were covered: (i) perception of skin disorders; (ii) attitude towards dermatologists; (iii) students' view on the dermatological curriculum. The questions were partially derived from a recent survey on the perception of dermatology by the general population (1).

Statistical analyses were carried out using IBM SPSS® software, Version 20. Non-parametric tests were used to compare baseline and follow-up differences. The significance level for all statistical testing was set as $p \leq 0.05$.

A total of 182 of 260 students responded to the baseline questionnaire (70% response rate), and 237 to the follow-up questionnaire (91% response rate). The majority of students agreed or strongly agreed to dermatology being important for non-dermatologists (70.9% at baseline and 75.2% at follow-up), while an overall tendency towards neutral was observed for the statement “dermatology is interesting” at baseline and follow-up.

The results on perception of skin diseases, dermatologists, dermatology curriculum by medical students at baseline and follow-up are summarized in **Figs 1, 2, S1 and S2**¹.

The highest agreement at baseline and follow-up was observed for: (i) skin diseases being frequent, mentally burdensome and disfiguring; (ii) dermatologists primarily treating with topical products, frequently performing cosmetic procedures and having a varied work compared with other specialities; (iii) dermatologists having a high level of expertise for skin diseases in general, atopic dermatitis/psoriasis and skin cancer; (iv) examination-relevant knowledge, diagnostic tools in dermatology and treatment options for skin diseases being important aspects for the students.

In contrast, the highest disagreement at baseline and follow-up was observed for: (i) skin diseases being contagious, incurable and socially caused; (ii) dermatologists primarily treating surgically, having a high status among physicians of other specialities and having much more time for their patients compared with physicians of other specialities; (iii) dermatologists having a high level of expertise for male infertility, proctology and mucous membrane diseases; (iv) information on starting a dermatology practice, support concerning job search and international relations in dermatology being important aspects for the students. No overall significant shift of the perception of dermatology/dermatologists was observed following training in dermatology.

DISCUSSION

The overall greatest agreement concerning skin diseases was shown for the statement “skin diseases are frequent”, with further increase following the training module. The 2nd and 3rd most frequently associated aspects with skin diseases were the mental burden and the disfigurement they may cause. Nevertheless, the majority of students tend to categorize dermatological conditions as harmless. This con-

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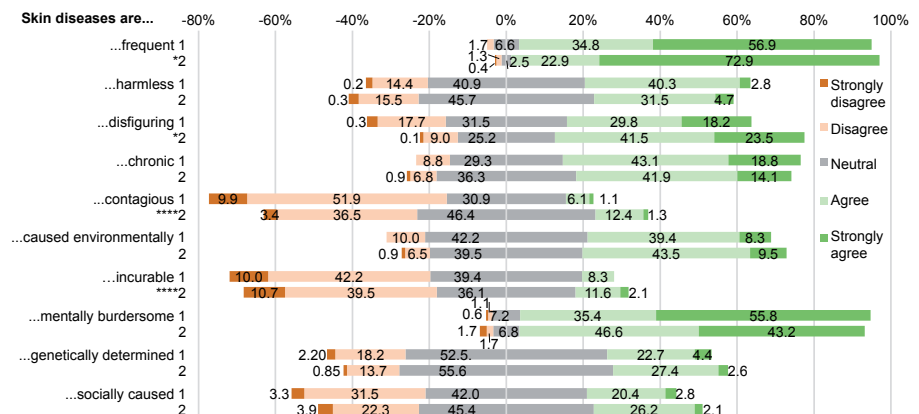


Fig. 1. Percentage of agreement/disagreement by respondents regarding skin diseases at (1) baseline and (2) follow-up. Significance was determined using χ^2 tests (* $p < 0.05$, * $p < 0.001$, **** $p < 0.0001$).**

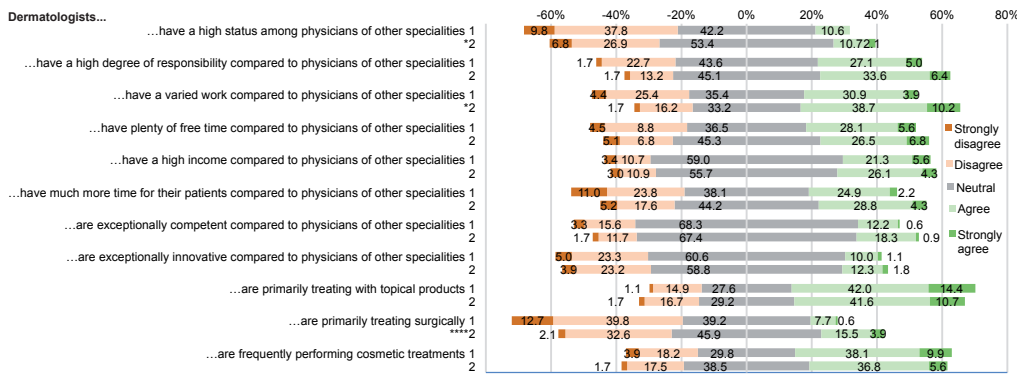


Fig. 2. Percentage of agreement/disagreement by respondents regarding dermatologists at (1) baseline and (2) follow-up. Significance was determined using χ^2 tests (* $p < 0.05$, *** $p < 0.001$, **** $p < 0.0001$).

curs well with the fact that most dermatological conditions lack acuity/lethality, on the one hand, and also lack highly technologized treatment options on the other, which, in turn, are proposed to be associated with a higher importance and prestige perception of a medical speciality (2). Concordantly, most students in our study felt that dermatologists were not enjoying a high status among physicians of other specialities nor being exceptionally competent or innovative. However, more students tended to agree with the statement “dermatologists have a high degree of responsibility”.

Regarding the competencies of dermatologists, the agreement ratings in our study were mostly congruent with those reported for the general German population with the highest agreement rates for competence in skin diseases in general, atopic dermatitis/psoriasis and skin cancer and, on the other hand, the lowest agreement for male infertility, proctology and mucous membrane diseases (1). Interestingly, the greatest disparities of attributed competency levels between medical students in our study and those reported in the general population were seen for: (i) skin diseases in children; (ii) genital diseases/sexually transmitted infections; and (iii) venous diseases with considerably more agreement by medical students to dermatologists having high competence levels in these fields (1). This highlights the broader perception of the dermatology spectrum by medical students in contrast to the general population in Germany. Interestingly, the image of dermatologists as primarily performing cosmetic and topical treatment seems to be universal and was also found in our study (4, 5). Regarding the dermatology curriculum, the priority of the students was exam-relevant knowledge and basic dermatological skills.

This study implies that, although the majority of students agree with dermatology being important and skin diseases being frequent, the overall interest in dermatology is limited and the perception of dermatologists is dominated by inaccurate presumptions held by the general public. Despite being exposed to clinical issues regarding diagnosis and treatment in an academic teaching hospital during their training, and despite internet-based technologies available to them during the module (6–9), no overall significant shift in the perception of dermatology/dermatologists was observed following training in dermatology. A possible explanation might be a consolidated opinion or even prejudice regarding dermatology and dermatologists. This is supported by the mostly congruent

perception of the surveyed medical students in our study and data previously reported for the general German population (1). A longer dermatology training might result in a more significant shift in perception. Aspects of dermatological innovations, e.g. constantly developing targeted therapies, should be stressed in the dermatological curriculum. While the dermatological curriculum in Germany is broader than in many countries, e.g. including dermatological surgery, dermatovenereology and allergology, this does not seem to change the students' inaccurate perception of the field.

This study has several limitations: a small sample size, students of one academic year of a single university only, and no individual matching of baseline and follow-up responses. We encourage national/international surveys to assess the current state of perception of dermatology in medical students as a basis for interventions to correct the inappropriate image of the 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 in an ageing population.

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