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Conflicts of interest

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Allergies in Germany – prevalence and perception by the public

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Summary

Background: During the recent decades allergies have become more frequent all over the world. However, it is unclear how important the topic of allergies is for the general German population and how appropriately patients with allergies are treated.

Patients and methods: A telephone survey was performed on a representative random sample of $n = 1,004$ adults in Germany. The survey was performed by the Forsa Institute for Social Research and Statistical Analysis, Berlin, Germany, in the period from 31 January to 2 February 2012.

Results: Of the interviewees 52 % responded that the topic of allergies concerned them; in 33 % actually an allergy had been diagnosed by a physician. The proportion of allergies in the population correlated with the level of school education and was higher among people with a higher educational status. No differences in allergy rates were found between Eastern and Western Germany. Among allergic persons, 53 % reported to be burdened by their allergy, 48 % suffered from impaired performance because of their allergic symptoms. Among people suffering from pollen allergy, only 28 % received sublingual immune therapy, with which 70 % were satisfied. While 58 % practiced self-medication, only 21 % of the allergic persons were treated with anti-allergic drugs during their allergy flares.

Conclusions: Allergic diseases are a common, often burdensome problem in the German population, but nevertheless the medical treatment of people affected is still insufficient. The proportion of patients receiving sublingual immune therapy as causal treatment is comparatively low. Active steps are needed to improve the utilization behavior of patients, e. g. to take advice of an allergy specialist.

Introduction

The prevalence of allergic diseases increased in western civilisation since several decades [1]. This includes inhalative allergies [2], contact allergies [3, 4] and atopic dermatitis. Increased prevalence rates are observed in both children and adults [2, 5, 6]. In the management of allergic diseases qualified diagnostics, guideline-compliant treatment as well as specific preventive measures are all of high importance [7, 8, 9, 10, 11, 12, 13, 14]. In Germany, it is the responsibility of the allergologists to perform, accompany and coordinate these measures. At present, about 7,500 physicians with the additional qualification “allergology” are registered in Germany [15]. Due

to the high prevalence of allergic diseases, allergologists can initially just play a guiding role in diagnostics and therapy and accompany treatment of severely affected patients only. In order to avoid unnecessary morbidity, further medical complications and additional costs early recognition, diagnostics and management, if indicated, of allergic diseases in the general population is essential. For this purpose, knowledge of important allergic symptoms in the population is required. Moreover, the public needs to be informed about the importance of early, qualified allergological care and be prepared to utilize these services.

In this context this study revealed the level of knowledge about and the extent of allergic diseases in the population

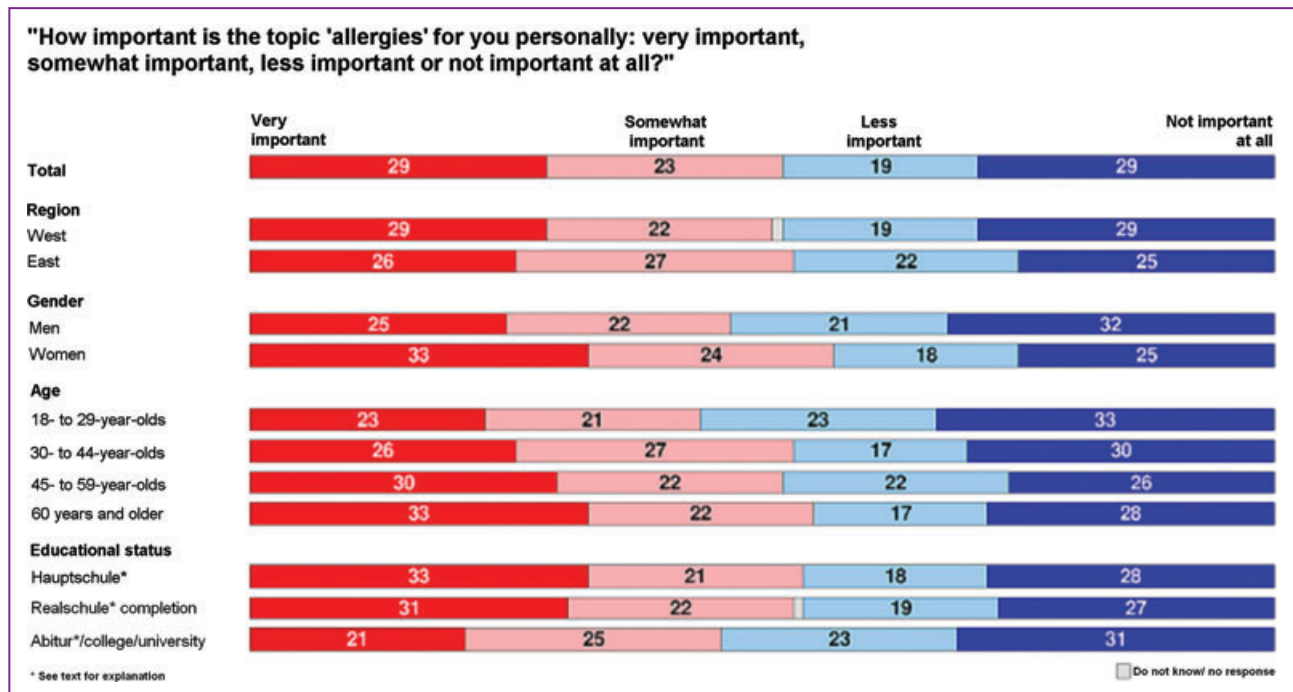


Figure 1 Relevance of the topic “allergies” among the participants (n = 1,004).

on a representative normal random sample. Among the patients with diagnosed allergies previously performed treatments were also to be investigated.

Patients/ material and methods

To clarify these questions, the Forsa Institute conducted a structured survey on a representative random sample of German adults (n = 1,004 persons). The survey method corresponded to a previously published study on the perception of skin cancer in the German population [16]. The survey was performed in the time period from January 31st to February 2nd 2012.

The selection of the random sample was performed according to age, gender, religion and educational status using a demographic key. Thus, the distribution of the sociodemographic characteristics reflects the nationwide statistical average.

Target group status was clarified by filter questions on age and insurance status “statutory health insurance”. Demographic variables recorded were gender, educational status (“Hauptschule” [German secondary general school], “Realschule” [German intermediate secondary school], “Abitur” [academic highschool diploma]/ “Studium” [academic studies]) as well as the area of residence (eastern or western Germany).

In the second part of the survey, persons with diagnosed allergies were filtered and asked specific questions on the diagnostics and therapy of their allergies. In a further filter step,

participants with pollen allergy were interviewed on previous treatment with specific immunotherapy (SIT) and other therapies.

Both a monivariate, descriptive analysis of the entire random sample and subgroup analyses were performed. Classification criteria for this purpose were the variables allergy, age, gender, educational status and area of residence.

Results

For more than half of the participants (52 %) allergies are – independent of age and educational status – a topic of personal importance. In comparison to men, women more often stated that allergies are of great personal significance (57 % vs. 47 %) (figure 1).

In one-third of the interviewees (33 %) an allergy had already been diagnosed by a physician or other therapist (figure 2). Allergies affect all age and population groups, with the allergy rate being higher in participants with a higher education status.

The difference in allergy prevalence rates between western and eastern Germany shown in several studies before the German reunification [17, 18] could no longer be found in this survey.

With respect to the age of the interviewees, the highest proportion of participants with at least one allergy was observed in the age group of 30- to 44-year-olds (42 %).

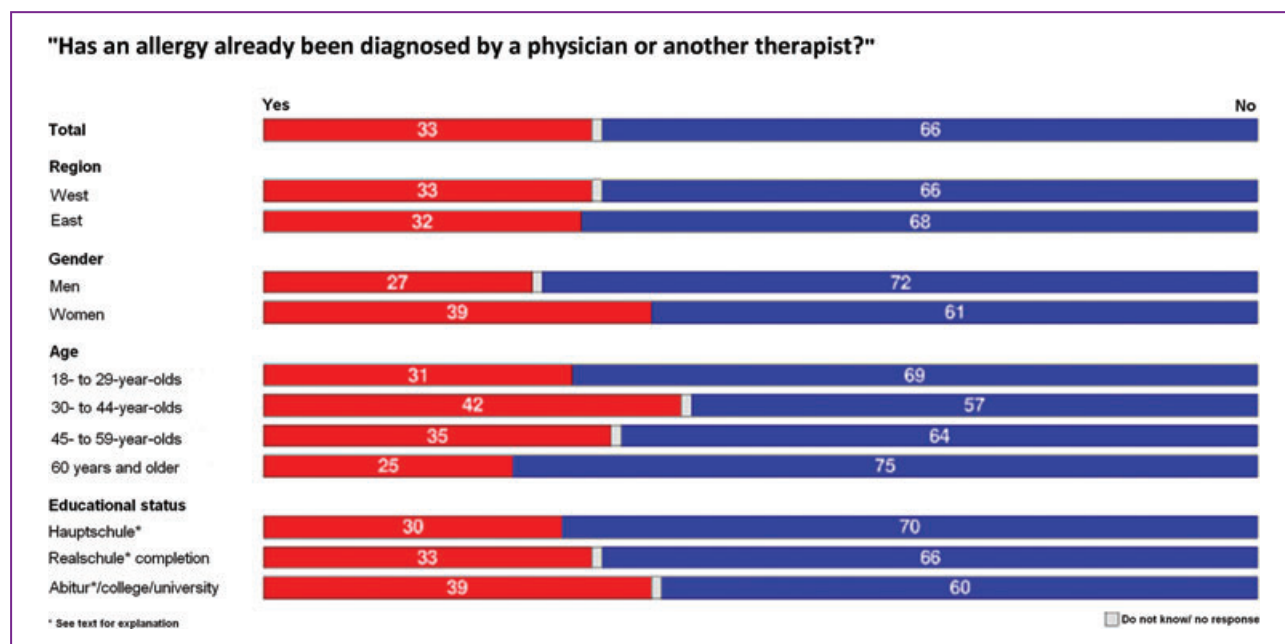


Figure 2 Prevalence of allergies among the participants (diagnosed by a physician or other health care provider, n = 1,004).

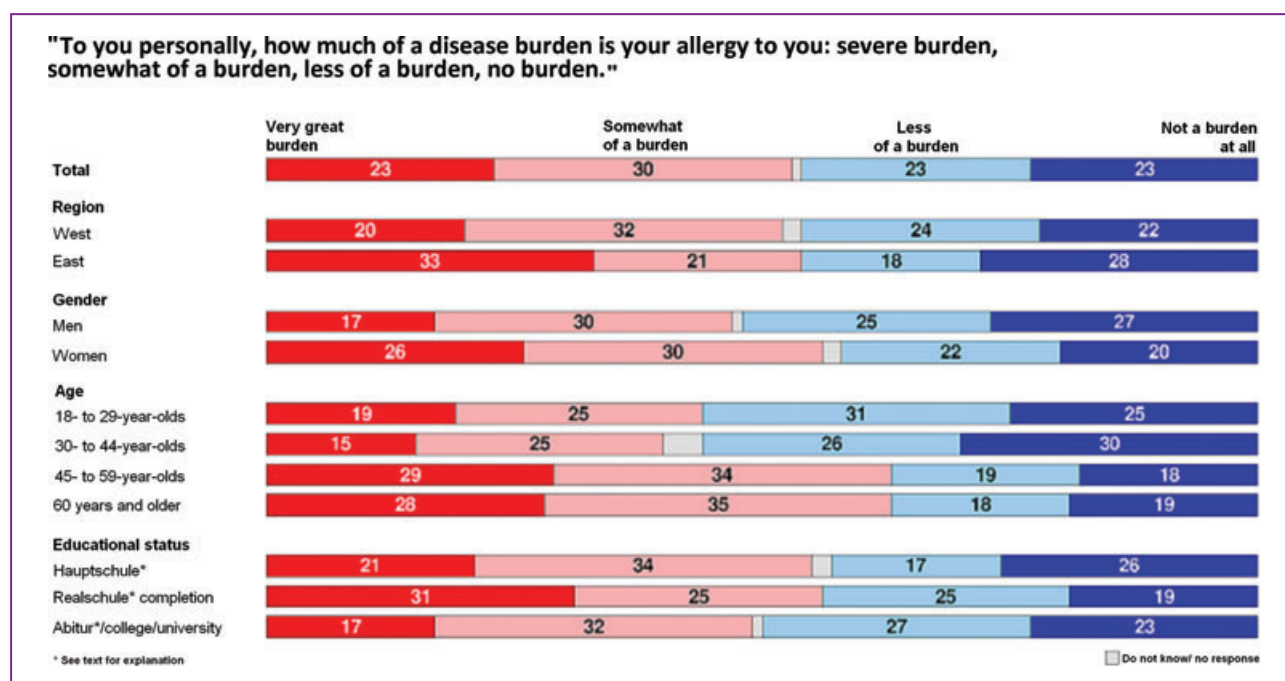


Figure 3 Allergy-related individual burden of disease (n = 331).

Among those affected by allergies more than half of the participants (53 %) perceive their allergy as burden. In general, participants aged >45 years more often perceive their symptoms as an individual burden compared to younger patients. Women more frequently experi-

enced their allergy as a burden than men (56 % vs. 47 %) (figure 3).

48 % of the interviewees are limited in their productivity due to their allergy. Again, women more often complain about a loss of productivity (51 % vs. 44 %).

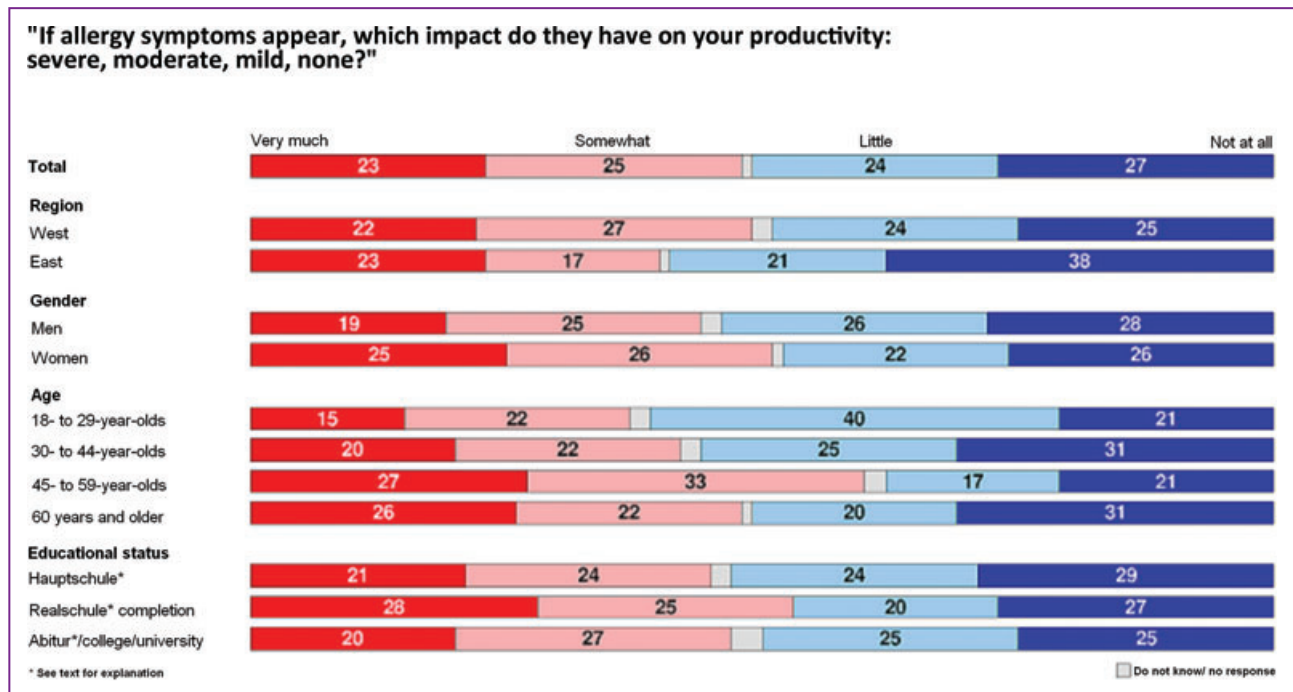


Figure 4 Allergy-related loss of productivity (n = 331).

Only 27 % of those affected report no loss of productivity due to their allergy symptoms (figure 4).

Of the interviewees 70 % are or were treated by a physician, mostly the general practitioner (45 %). By far, the most frequently consulted specialist was the dermatologist (41 %); hence, dermatologists are especially important regarding allergologic diagnostics and initiation of therapeutic measures (figure 5).

A causal therapy of the allergy in form of specific immunotherapy is being or was performed in only 28 % of the patients with pollen allergy. Of those, 70 % claimed to be satisfied with the results of this type of treatment (figure 6).

The use of anti-allergic medications is still insufficient for a share of the patients. Regardless of hyposensitization, less than one-fourth (21 %) of the patients with diagnosed allergies showing allergy symptoms report of having received medication for their allergy in the past 12 months (figure 7).

Almost 60 % self-treat their allergy with over-the-counter drugs or by avoiding allergy triggers consciously (figure 8). Overall, women actively treat their disease symptoms more frequently than men (figures 7 and 8).

Discussion

The aim of the present study was to record the importance and the understanding of allergic diseases in the German general population and to characterize patients affected by

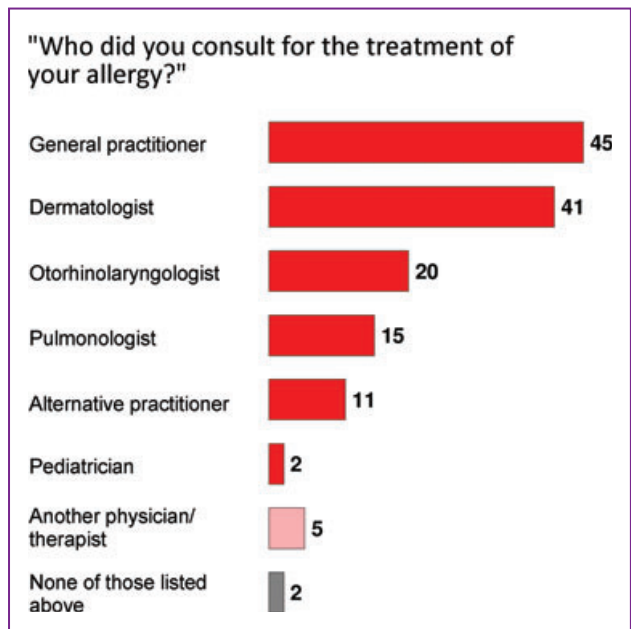


Figure 5 Health care providers (n = 233, multiple answers possible).

allergies. The methodology selected was a survey of a representative sample of the population conducted by the Forsa Institute; this approach is methodically standardized and has been validated in several studies [16].

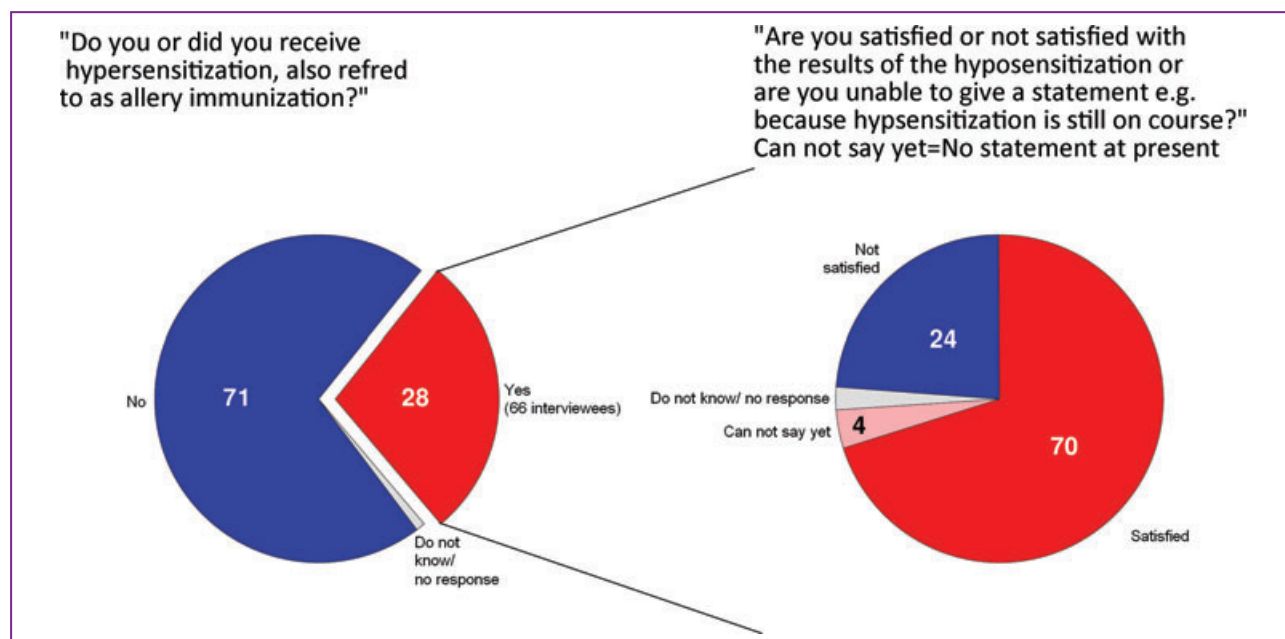


Figure 6 Rate of patients with pollen allergy receiving hyposensitization (n = 233) (on the left); satisfaction with hyposensitization (n = 66) (on the right).

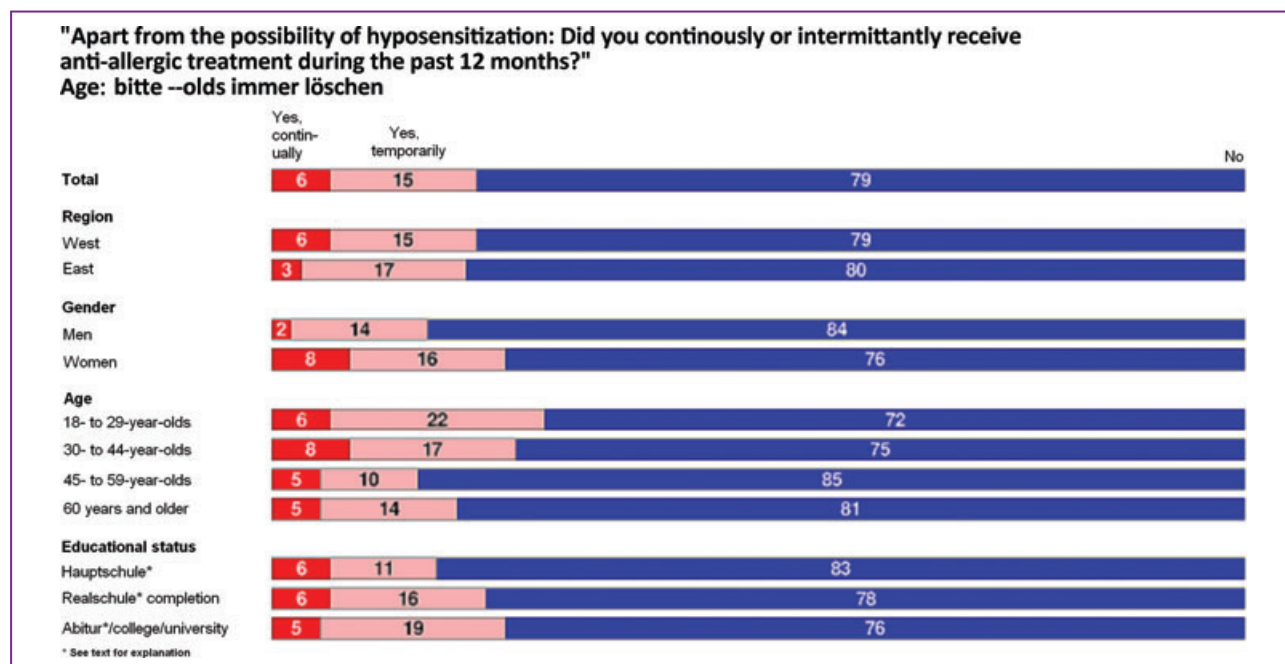


Figure 7 Medical treatment for allergy during the past 12 months (n = 331).

The prevalence of allergic diseases of about 33 % in this study compares well to other published studies in Germany. According to the results of the Federal Health Survey 1998 up to 40 % of the adult population have or had an allergy at least once [19]. Among 90,800 adult workers a prevalence of all

allergies and intolerances reactions of 41 % – among this about 35 % with type I or type IV sensitizations – was found [20]. Thus, allergies reach the level of an endemic disease in Germany. The highest percentage of participants with at least one allergy was found in this as well as in the study on adult

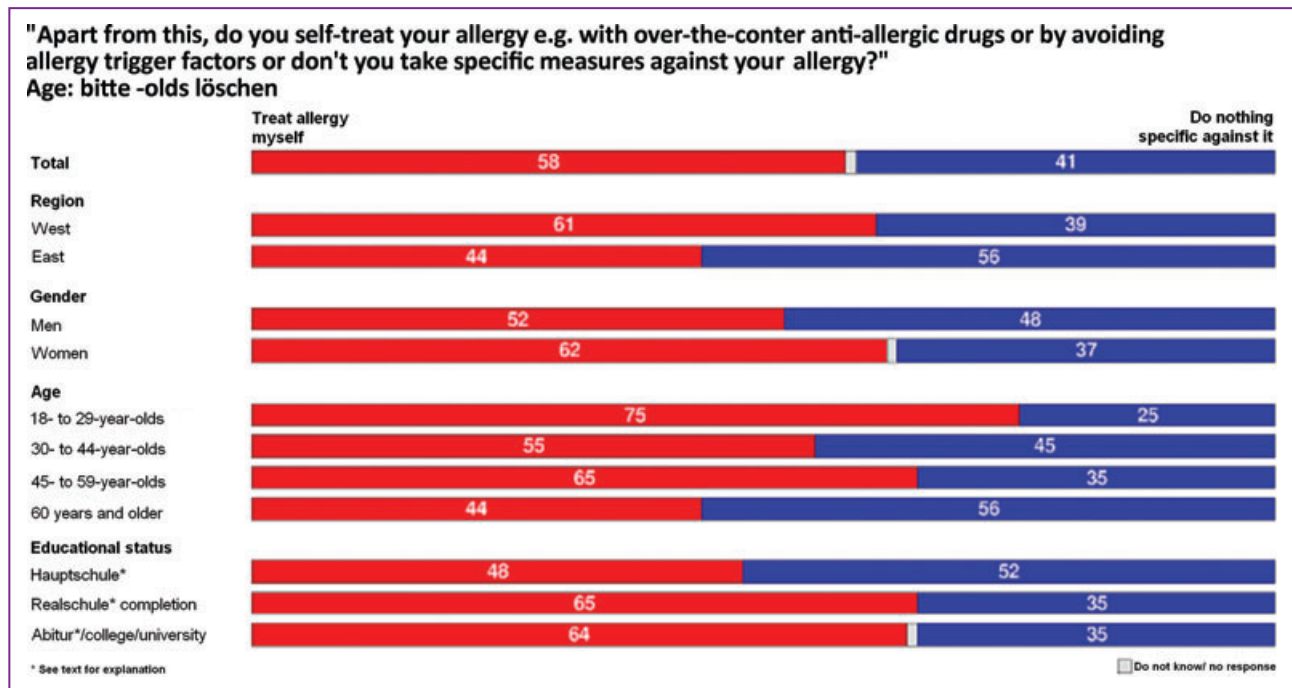


Figure 8 Allergy self-medication (n = 331).

workers in the age group of 30- to 44-years or 31- to 40-years (42 % or 46 %, respectively). This might indicate that the peak incidence is already exceeded at this age. The slightly lower prevalence of allergies in this study of 33 % vs. 40 % in the studies cited above may be interpreted as follows: if participants were asked in general to report the presence of an allergy this might result in lower figure as if patients were questioned on the presence of specific allergic diseases. Furthermore, the workers' study explicitly includes allergic sensitizations.

The results of the survey also show that the adult population is sufficiently aware of allergies and that those affected often perceive allergies as an important disease burden. Despite this affected patients use health services, including physicians and even medical specialists, only reluctantly. Prescribable anti-allergic drugs or even the causal allergy therapy (immunotherapy) are still rarely applied. To date, the majority of the patients use self-medication. This may be due to a lack of information and/or lack of financial resources.

Limitations of the present study include the self-description of the participants. Clinical statements can therefore not be verified. The question on previous treatments were answered from the participants memory. While high external validity in the terms of representativity can be assumed, limited internal validity due to potential failures in the participants memory cannot be excluded.

In order to improve the situation of those affected by allergic diseases, allergologic care in Germany needs to be

strengthened and the population needs to be continually informed about the necessity of early detection of allergies by the allergologist. This represents the only feasible way to initiate causal treatment in time. For this purpose, adequate financial compensation and improved general conditions are essential stimuli to meet the health care mandate.

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