French People and Skin Diseases

Results of a Survey Using a Representative Sample

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Objective: To evaluate, from the patients' viewpoint, the prevalence, management, and impact of main dermatologic disorders in France.

Design: Survey conducted from March 28 to May 6, 2002, with the Sofres Taylor Nelson Institute on 10000 households using 1 questionnaire per household.

Setting: General community.

Patients: A total of 25441 subjects from 10000 households determined to be representative of the French population and regularly surveyed by the Taylor Nelson Sofres Institute.

Main Outcome Measures: Estimation of the prevalence of skin disorders by the French population.

Results: Of the 10000 households, 7466 (74.7%) returned the questionnaire, which was completed for 18137 (71.3%) of the 25441 subjects. Of those, 15742 reported having had skin problems since birth, or, by extrapolation, 86.8% (47.29 million) of the French population; 7841 reported having had skin problems in the past 24 months, or, by extrapolation, 43.2% (23.53 million) of the French population; and 28.7% said that their skin problems impaired their daily life. However, 61% of the sample were satisfied with their dermatologist.

Conclusion: This survey of perceived health status in France highlights both the prevalence of skin disorders and the underestimation of the effects of dermatologic disorders in public health. A majority of the French population is satisfied with the care supplied by dermatologists.

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In dermatology, a good public health policy requires not only epidemiological data but also an assessment of the population's viewpoint on the burden of skin disorders. Such an assessment, however, is not available in most countries. The preparation of the 20th World Congress of Dermatology held in July 2002 in Paris provided the community of French dermatologists, represented by the French Society of Dermatology and the organizing committee of the congress, to conduct a large survey among the French population in April 2002. It was conducted with the Taylor Nelson Sofres Institute, which has developed high-quality surveys for various medical specialties for more than 20 years.1-9 Of course, the reliability of the general public's diagnosis of skin disorders is questionable. Several published studies have shown that internists and family physicians do not reliably diagnose cutaneous illnesses.10-12 So, how good is an untrained person? This study does not claim to have epidemiological value; rather, our scientific purpose was, through the head of the family, to evaluate the population's viewpoint on the prevalence, management, and impact of main dermatologic disorders.
METHODS

QUESTIONNAIRE

A panel of experts in the fields of dermatology, public health, and epidemiology, and on the impact of skin diseases on quality of life (P.W., S.B.-G., J.-J.G., J.-C.R., and J.R.) developed a questionnaire in collaboration with a polling expert from the Taylor Nelson Sofres Institute (S.R.). This questionnaire was designed to be understood by most people. Skin disorders were referred to by their most familiar names. Some names were expected to be easily identified, and it was assumed that others would be recognized by patients who had been treated by a physician for the corresponding disorder. The list included acne, abnormal skin reaction to any substance applied on the skin (contact dermatitis), abnormal skin reaction attributed to a drug (drug eruption), skin cancer, hair loss or alopecia, blotchy complexion (erythema and telangiectasia), chronic itching, eczema, erysipelas, a suspect mole, a large birthmark, a cold sore (herpes simplex type 1), dermatitis due to any product used at work (occupational dermatitis), athlete’s foot, greasy skin, dry skin, psoriasis, face redness with flaking skin (seborrheic dermatitis), brown spots on the face, leg ulcer, urticaria, warts, and vitiligo. Briefly, the questions addressed the following matters:

1. Has the subject experienced any skin problems since birth?

2. Is he/she having now, or has he/she had in the last 2 years any of the disorders on the list provided?

3. What was the most burdensome skin problem he/she ever had?

4. How burdensome was this skin problem? How long was it so?

5. Was treatment received for a skin problem during the past 24 months? Was school or work time lost during the same 24 months? Was the patient hospitalized for his/her skin disorder?

6. Was a general practitioner, a dermatologist, or another specialist consulted during the past 24 months for this skin problem? If yes, what was the number of medical visits?

7. Was he/she satisfied with the visit(s)?

8. Was he/she advised about his/her skin problems by a pharmacist, a cosmetologist, or close relatives?

9. In his/her opinion, was the treatment for the skin problem effective?

10. Did he/she have associated diseases such as hypertension, diabetes, asthma or other chronic respiratory disease, heart disease, or arthritis during the same period?

11. How burdensome did he/she consider it to be?

12. In comparison with other health conditions, was his/her skin problem a minor or a major problem?

SURVEY

The survey was conducted from March 28 to May 6, 2002. The questionnaire was mailed to 10 000 households (25 441 subjects). This sample was based on data extracted from Enquête Emploi 2001 (Employment Survey 2001) published by the National Institute of Statistics and Economic Studies,11 the official agency that takes the census of the French population. The sample was determined after interview or response to a mailing, and proportional quota sampling was used to make it representative of standard French households.14-16 The quota unit was the household, and quotas were based on the following characteristics: geographic area and living environment category (urban/rural), housing category, age of the head of household, size of the household, and socioprofessional category of the head of household. This 10 000-household sample is regularly surveyed by the Taylor Nelson Sofres Institute, generally once per month, and health status is a common subject (6-8 times/y). Participating in the Taylor Nelson Sofres Institute sample is not paid. Nevertheless, the loyalty of the polled sample is regularly encouraged by small rewards (eg, a subscription to a journal, games, lottery tickets, a birthday card to each head of household, or direct telephone access to an array of consumer services; moreover, a gift is addressed yearly to each good respondent). The usual response rate of 60% to 75% rises to 70% to 75% when the topic is health. There was 1 form per household and the questionnaire was filled out by the head of household for each member of the family. The head of household is the person responsible for purchases, generally the mother; he or she was asked to represent the viewpoint of each family member. The responding households were compared with the households of the French population at large. As some strata were underrepresented or overrepresented, adjustments were made for the sex, age, and socioprofessional category of the head of household and for geographical area and living environment (urban/rural) to reflect the French population. After adjustment, it was possible to extrapolate from this sample of respondents to the entire French population the prevalence, management, social impact, and effects on individuals lives of the most common dermatologic disorders. Because nonprobability sampling designs did not allow to compute standard errors, confidence intervals were not calculated.

RESULTS

STUDY POPULATION

Of the 10 000 households contacted, 7466 (74.7%) returned the questionnaire, which was completed for 18 137 (71.3%) of 25 441 individuals. Table 1 summarizes the characteristics of responding and nonresponding households and the sociodemographic characteristics of the 18 137 surveyed subjects representative of the French population. Nonresponding heads of household were more likely to be farmers, shopkeepers, from the countryside, and to live alone.

The excellent questionnaire returns allowed us to extrapolate the sample results to the French population. Of the responding subjects, 15 742 reported having skin problems since birth—by extrapolation, 86.8% (47.29 million) of the French population.

Moreover, 7841 subjects reported having or having had skin problems in the past 24 months—by extrapolation, 23.54 million individuals (43.2% of the French population). Each subject reported an average of 2.2 skin problems for the past 24 months. Table 2 summarizes these estimates.

CARE PROVIDERS FOR SKIN DISEASES IN FRANCE

Of the 7841 subjects who reported to be having or to have had skin problems in the past 24 months, 55.5% had consulted at least 1 physician: a general practitioner (25.2%; 2.1 visits per subject), a dermatologist (36.3%; 2.3 visits per subject), or another specialist (5.8%; 2.3 visits per subject). Additionally, 25.6% were advised by a pharmacist, 10.9% by a cosmetologist or a hairdresser, and 22.1% by their close family.

Of the subjects who reported to have had at least 1 skin problem in the past 24 months, 26.7% exclusively...
sought the advice of a dermatologist. Extrapolation of our data to the French population shows that 15.8% of the French population (8.60 million) consulted a dermatologist in the past 24 months. The number of visits provided by dermatologists during the same period was 19.07 million.

Medical visits for skin problems resulted in treatment in 63.6% of cases. This treatment was judged permanently effective by 28.4% of subjects and temporarily effective by 59.4%. Of the 2863 subjects who consulted a dermatologist, 61% were satisfied. However, 44.5% of the subjects who had skin problems did not consult a physician; these were more likely to be manual workers and to live in the countryside. Interestingly, their skin disorders were not different from those reported by subjects who consulted a physician (data not shown).

SOCIAL AND PERSONAL IMPACT OF SKIN DISORDERS

Of the 7841 subjects who reported to be having or to have had skin problems in the past 24 months, 1% took time off work or school and 0.8% were hospitalized—by extrapolation, 0.43% (235360 individuals) and 0.35% (188288 individuals) of the general population, respectively. Moreover, 28.7% of the subjects said that their skin problems impaired their daily life and 20.6% said that these problems continually troubled them. The following tabulation summarizes the burden of the most frequent skin disorders on the daily lives of subjects who reported having a single one:

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Subjects Declaring It Burdensome, No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic itching</td>
<td>137 (42.0)</td>
</tr>
<tr>
<td>Contact dermatitis</td>
<td>83 (37.1)</td>
</tr>
<tr>
<td>Drug eruption</td>
<td>82 (34.4)</td>
</tr>
<tr>
<td>Urticaria</td>
<td>36 (30.8)</td>
</tr>
<tr>
<td>Eczema</td>
<td>390 (27.8)</td>
</tr>
<tr>
<td>Psoriasis</td>
<td>179 (27.2)</td>
</tr>
<tr>
<td>Fungal infection</td>
<td>221 (22.2)</td>
</tr>
<tr>
<td>Acne</td>
<td>624 (21.5)</td>
</tr>
<tr>
<td>Cold sores</td>
<td>351 (16.0)</td>
</tr>
<tr>
<td>Warts</td>
<td>377 (15.1)</td>
</tr>
<tr>
<td>Dry skin</td>
<td>251 (14.1)</td>
</tr>
<tr>
<td>Hair loss</td>
<td>106 (10.9)</td>
</tr>
<tr>
<td>Red spots and flaking skin on the face</td>
<td>50 (10.9)</td>
</tr>
<tr>
<td>Suspect mole</td>
<td>131 (7.9)</td>
</tr>
<tr>
<td>Brown spots on the face</td>
<td>69 (5.3)</td>
</tr>
<tr>
<td>Greasy skin</td>
<td>58 (0.7)</td>
</tr>
</tbody>
</table>

Table 1. Sociodemographic Characteristics of the Responding and Nonresponding Households of the Survey Sample and of the French Population

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Responding Households (n = 7466)</th>
<th>Nonresponding Households (n = 2534)</th>
<th>Survey Subjects (n = 18 137)</th>
<th>French Population† (n = 54 481 394)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Female 51.4</td>
<td>51.4</td>
<td>Male 48.6</td>
<td>48.6</td>
</tr>
<tr>
<td>Age groups, y</td>
<td>0-2 2.5</td>
<td>2.6</td>
<td>3-11 10.9</td>
<td>11.2</td>
</tr>
<tr>
<td>Age groups, y</td>
<td>12-17 7.7</td>
<td>7.9</td>
<td>18-24 9.3</td>
<td>9.2</td>
</tr>
<tr>
<td>Age groups, y</td>
<td>25-34 14.5</td>
<td>14.3</td>
<td>35-54 29.0</td>
<td>28.7</td>
</tr>
<tr>
<td>Age groups, y</td>
<td>55-74 18.6</td>
<td>18.4</td>
<td>≥75 7.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Socioprofessional categories</td>
<td>Farmer 1.2</td>
<td>2.7</td>
<td>Shopkeeper, craftsman, business owner 3.4</td>
<td>7.3</td>
</tr>
<tr>
<td>Living environment</td>
<td>Greater Paris area 16.0</td>
<td>16.1</td>
<td>Rural areas 22.8</td>
<td>29.1</td>
</tr>
<tr>
<td>Living environment</td>
<td>Towns of 2000-20 000 inhabitants 17.1</td>
<td>16.6</td>
<td>Cities of 20 000-100 000 inhabitants 14.4</td>
<td>9.1</td>
</tr>
<tr>
<td>Living environment</td>
<td>Cities of &gt;100 000 inhabitants 29.7</td>
<td>16.1</td>
<td>No. of persons in the household</td>
<td>1 23.6</td>
</tr>
<tr>
<td>No. of persons in the household</td>
<td>2 38.4</td>
<td>17.2</td>
<td>3 15.2</td>
<td>16.1</td>
</tr>
<tr>
<td>Sociodemographic Characteristics</td>
<td>4 15.2</td>
<td>7.7</td>
<td>≥5 7.6</td>
<td>2.7</td>
</tr>
</tbody>
</table>

*Values are given as percentages of the corresponding categories. Empty cells indicate not applicable.
†Data extracted from Enquête Emploi 2001.
Some subjects reported having a nondermatologic disease (hypertension, diabetes mellitus, asthma or other chronic respiratory disease, heart disease, or arthritis) as well as a skin disorder. The following tabulation provides their evaluation of the burden of their skin disorder compared with that of their other disease; values are the numbers of responding subjects in each category:

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Minor Problem</th>
<th>Major Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eczema (n=206)</td>
<td>52</td>
<td>48</td>
</tr>
<tr>
<td>Itching (n=155)</td>
<td>69</td>
<td>31</td>
</tr>
<tr>
<td>Warts (n=59)</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Acne (n=153)</td>
<td>89</td>
<td>29</td>
</tr>
<tr>
<td>Cold sores (n=102)</td>
<td>81</td>
<td>19</td>
</tr>
<tr>
<td>Psoriasis (n=123)</td>
<td>62</td>
<td>38</td>
</tr>
</tbody>
</table>

The most commonly associated nondermatologic disorders were chronic respiratory disease (asthma) in children and chronic respiratory disease, hypertension, and diabetes in adults (data not shown).

We conducted a large survey describing the perception by the French population of its skin disorders using the quota method, which allows for quick data collection. To implement the quota method, recent reliable statistical data are required. In France, the sample provided by the Taylor Nelson Sofres Institute, based on data from the National Institute of Statistics and Economic Studies, gives a good representation of the French population with the exception of prisoners, soldiers and their families, persons living in religious communities, and persons without a permanent address. Although the quota sampling method ensures that the sample will be representative of the population for specified criteria or strata, it may not be representative for other important criteria. It is not randomly selected, which can lead to bias. As with all other nonprobability sampling methods, it is necessary to assume that the persons selected are similar to nonselected ones, but one must take into account this reservation.

Most of the French population (86.8%) reported having experienced at least 1 skin disease since birth, and nearly half of the population reported having had 1 skin disease during the past 2 years. We did not expect this declarative questionnaire to provide a measurement of the actual prevalence of skin diseases, as, even for well-defined diseases, there are discrepancies between the prevalence obtained by self-reports and by medical examination. The declarative prevalence±SE of ulcers of the leg and foot in a randomized elderly population in Gothenburg, Sweden, was 2.15%±0.42% by self-report and only 1.02%±0.29% after medical examination. A community survey of skin diseases carried out in Lambeth, a town near London, England, used first a screening questionnaire and then a clinical examination. In this study, 14% of subjects answering that they had 1 or more skin disorders had no detectable skin lesion and 13% of subjects answering that they were free of any skin disorder had skin lesions. By reference to the medical criterion of diagnosis on examination, a study based—like...
the present study—on perceived health is expected to collect a proportion of false-negative and false-positive answers. These discrepancies probably depend on the disease. For example, the prevalence of psoriasis from self-reports tends to be overestimated in our study compared with studies using other methods in other countries.\(^{19,22}\) The comparison is still more difficult with atopic dermatitis/eczema because “eczema,” as patients understand this word, may refer to a variety of disorders. For disorders in which the subjective and objective definitions are not very different, as in the case of leg ulcer, the prevalence in our study, 0.43%, was similar to the findings of epidemiological studies in other European countries.\(^{23-26}\) More specific questions regarding each disorder would have probably improved the reliability of the answers.

The 5 most frequent disorders reported by the French subjects were acne, eczema, cold sores, athlete’s foot, and warts. It is noteworthy that in a recent survey conducted at a dermatologists’ office in France,\(^ {27}\) most of these disorders were also on the list of the 10 disorders most commonly treated by dermatologists: warts, acne, nevi, atopic dermatitis, malignancies and premalignancies, fungal infection, and psoriasis. These 10 disorders are also the most commonly treated by American dermatologists.\(^ {28}\)

Only in the First National Health and Nutrition Examination Survey did trained dermatologists examine a representative sample of the US population to establish the prevalence of dermatologic disease in the early 1970s,\(^ {29}\) and there are no recent data. As in our study, 72% of the dermatologic disorders recorded were in the following categories: acne and related diseases, fungal infection, malignant and benign tumors, seborrheic dermatitis, psoriasis, atopic dermatitis, warts, vitiligo, and herpes simplex type 1.

Our study confirms the now well-known impact of skin disorders on personal life—ie, on quality of life. This study shows that 28.7% of the French people having at least 1 skin disorder reported that it caused real impairment, which was said to be permanent in 20.6% of cases. According to the survey subjects, the most impairing skin problem was by far chronic pruritus. One of the problems in assessing quality-of-life impairment due to skin disease is to rate it by comparison with a reference, ie, a nondermatologic disease.\(^ {30,31}\) In our survey, about one third of the subjects having both a skin disease (acne, pruritus, eczema, herpes simplex type 1, mycosis, psoriasis, or warts) and a disease known to interfere with quality of life (diabetes, asthma or other chronic respiratory insufficiency, heart disease, or arthritis) reported their skin disorder as their major problem.

This survey gives interesting indications about health care in France. In the past 4 months, a high proportion of the general population has seen a dermatologist, rather than a general practitioner, for a skin disorder. However, it must be stressed that the public also turned to pharmacists and nonmedical professionals such as cosmetologists or hairdressers. The types of advice sought from these other professionals were probably different, but it was not possible to clarify this point from our data.

Although 61% of patients reported to have been satisfied with their dermatologists’ care, they often regretted its temporary efficacy. Patient satisfaction toward dermatologists has been evaluated in a few studies.\(^ {32,33}\) In a recent Italian study, 60% of 395 outpatients reported to be completely satisfied 3 days after their visit.\(^ {33}\) This study suggests that the overall satisfaction is increased by the physician’s ability to give explanations and to show empathy for the patient’s condition. Dermatologists apparently succeed in establishing good relationships with their patients, especially with those who have clinically severe lesions. It has been shown that many patients prefer dermatologic specialists to generalists as primary caregivers for diseases of the skin because of their efficacy and, therefore, the money and time that patients save.\(^ {34}\) This satisfaction rate is similar to rates concerning other specialists.\(^ {34,35}\)

Nevertheless, patient satisfaction with dermatologists must be balanced by the common opinion that the efficacy of dermatologic treatments is limited in time.

Finally, our study suggests that the social costs of skin disorders in France are important in terms not only of number of medical visits, but also of time off school or work and of hospitalization. Almost all French people believe that they have had at least 1 skin disorder in their lifetime, and many consult dermatologists. According to our estimation, dermatologists provided nearly 20 million (19.07 million) office visits in the past 24 months. These data are close to those from the French national health care database, which estimates the number of reimbursed visits to have been more than 10 million in 1998, and from a 1-day survey in France, which, by extrapolation, estimated the number of visits to dermatologists to have been 12 to 14 million in 2000.\(^ {27}\) Beside office visits, 235,360 French subjects took time off work or school, and 188,288 were hospitalized for a skin disease in the 2 years prior to our study. Although different health care and social systems may have different effects on the number of medical visits, time off work, and hospitalization in other countries, the high social impact of skin disorders is certainly a constant feature.

In conclusion, our results highlight the high prevalence of skin disorders in France and stress how much the consequences of dermatologic disorders, even the most benign ones, are underestimated.

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Information about the Société Française de Dermatologie can be found at http://www.sfermato.org.

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According to this survey based on self-rated health, 43% of the French population experienced skin diseases in the previous 24 months. The most frequent self-reported diagnoses (acne, eczema, herpes simplex type 1, athlete’s foot, and warts) were among the top 10 dermatological diagnoses obtained from other surveys of dermatology practices in France and in the United States (Lukasiewicz E, Martel J, Roujeau JC, Flahault A. Dermatology in private practice in France and in the United States. Arch Dermatol. 2001;137:1261-1265). Fleischer AB Jr, Feldman SR, Bradham DD. Office-based physician services provided by dermatologists in the United States in 1990. J Invest Dermatol. 1994;102:93-97)

The method used in this study (a survey based on quota sampling) is largely used for market and opinion research, and its main advantages are that it is less expensive than many other sampling methods, provides a quick response, and does not need a sampling frame, ie, the list of all potential respondents. Quota sampling has some similarity to stratified sampling, with strata constructed according to the structure of the general population by age, sex, or social class, for example. The selection of respondents within strata is determined by the interviewer and, therefore, is not random. This selection method can introduce substantial bias. More information about surveying techniques are available at: http://www.cems.uwe.ac.uk/~pwhite/SURVEY2/nodes60.html. Accessed September 30, 2003.

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