Living with Acne

A Study of Adolescents' Personal Experiences

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Key Words

Acne treatment · Psychology · Compliance

Abstract

Background: Acne can have important psychological repercussions. **Objectives:** We studied adolescents' perceptions of acne, in a nonmedical context. **Methods:** Between November 2004 and January 2005, a questionnaire was presented to adolescents calling a youth helpline. It focused on perceptions of acne and, among callers with personal experience of acne, its severity and treatment. Callers were divided into those with acne, those having had acne and those never having had acne. **Results:** The questionnaire was completed by 1,566 callers. It showed that 51% of respondents with acne did not seek medical help; acne has as big a psychological impact as some far severer diseases; many respondents with no history of acne said they were very worried that they would develop this skin disorder. **Conclusions:** This study underlines the major psychological impact of acne. Young people need to be informed that acne can be treated.

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Acne is the leading reason for visits to a dermatologist [1]. It affects more than 80% of adolescents and can have important psychological repercussions [2–5]. Two studies [6, 7] have recently been carried out in France on patients' perceptions of acne: one by dermatologists in the school environment [6] and the other in dermatologists' offices [7]. Other studies have used quality-of-life scales to measure the subjective impact of acne [2, 4, 5, 8]. However, all these studies were done within the context of the doctor-patient relationship, which may have influenced the respondents' answers.

The present study took place in the adolescents' normal environment, with no medical connotations. It was conducted in collaboration with a not-for-profit association, Fil Santé Jeunes (FSJ; Youth Health Helpline), which provides a free and anonymous health-oriented telephone service for young people throughout France. The survey focused on perceptions of acne among young people, including those who had never had acne.

Methods

Characteristics of FSJ Users

Created in 1995, FSJ is reserved for people between the ages of 12 and 25 and is supported by the French authorities (National Institute for Prevention and Health Education, Social Affairs Department, in partnership with the Ministry of Health and the School for Parents and Educators). The calls are handled by 35

The 7 authors compose a working group specializing in acne, called the Groupe Expert Acné (GEA). This group received funding from Galderma International for this study.

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staff who are trained in counseling young people. The calls are strictly anonymous. In 2005, an average of 913 calls were handled each day, for a total of about 340,000 calls. Slightly more than three quarters of callers were female. The callers' average age was 16.5 years, and female callers tended to be younger than male callers (mean ages 16.2 and 18.1 years, respectively). The calls were compatible with the population density in France, 78.4% coming from the provinces and 21.6% from the Paris region (Ile de France). Most callers were of school age. The callers' principal preoccupations were matters relating to sexuality and contraception (38%), interpersonal relationships (23%), personal physical aspect (19%), distress (15%) and social problems (5%).

Questionnaire

A questionnaire was drawn up jointly by the GEA and FSJ. It was designed for three distinct subpopulations: callers who had acne, callers who had previously had acne and callers who had never had acne.

The questionnaire focused on three aspects, namely the severity of acne, the management of acne and the callers' subjective perception of acne. The questions dealing with perceptions of acne were formulated with reference to quality-of-life scales [9]. Part III of the questionnaire was adapted, to make it easier for adolescents to understand, by FSJ, from the validated French translation of the Cardiff Acne Disability Index (CADI) [8], a scale measuring the psychological impact of acne.

The questionnaire was first tested on 150 adolescents for its acceptability, feasibility and clarity. The validated questionnaire was then proposed to all FSJ callers at the end of the phone session, whatever the reason for the call, unless the caller was highly distressed or suicidal. The study took place between November 2004 and January 2005.

Statistical Analysis

The statistical analysis was primarily descriptive. For inter-group comparisons, Student's *t* test was used for quantitative variables and the χ^2 test for qualitative variables.

Results

The questionnaire was presented to 8,723 callers, of whom 1,570 agreed to participate and 1,566 (18%) completed the questionnaire (fig. 1).

The sex ratio of the respondents (79.4% girls and 20.6% boys) was similar to that of general FSJ callers. The respondents' mean age was 16.1 years (range 10–37 years), and their sociological distribution was also similar to that of general FSJ callers (fig. 2).

Of the 1,566 respondents, 711 (45%) had acne, 307 (20%) had previously had acne, and 548 (35%) had never had acne.

Current and previous acne sufferers therefore represented 65% ($n = 1,018$) of the respondents. The prevalence of acne was identical in the two genders ($p = 0.94$). In contrast, it varied with age, from 60% between 12 and 15

Fig. 1. Flow chart of the study population.

Fig. 2. Comparative sociological profiles of respondents and all callers to FSJ.

years, to 43% between 15 and 18 years and 23% over 18 years ($p < 0.0001$, fig. 3).

Current and Previous Acne Sufferers

Of the 1,018 respondents who had or had had acne, 51% described their acne as mild, 31% as moderate and 18% as severe. This distribution did not differ according to gender ($p = 0.69$) or age ($p = 0.09$).

Fig. 3. Stated frequency of acne according to age.

Fig. 4. Stated treatments according to the perceived severity of acne (respondents with current or previous acne, n = 1,018).

Only 1 in 2 acne sufferers (48%) said they had consulted a doctor for this reason. Of these, 77% had consulted a dermatologist. The likelihood of consulting a doctor rose with the perceived severity of acne ($p < 0.0001$).

The decision to consult was made by the adolescent in 53% of cases. When other persons played a role, it was the mother in 58% of cases.

In response to the question 'Have you ever been treated (for acne), either currently or previously?', 29% of respondents replied 'No', 41% said they had followed a medical prescription, 10% said they had sought advice from a pharmacist, 16% took treatment on their own initiative, and 4% had other or no answers. The frequency of medical prescriptions increased with the perceived severity of acne ($p < 0.0001$; fig. 4): 37% of respondents with mild acne received no medical treatment, compared to 15% of respondents with severe acne.

Girls were more likely than boys to be treated for acne (72 vs. 65%; $p = 0.03$). The most frequently cited reason for not seeking treatment was that the respondent saw no reason for it (73%); other reasons included low priority (8%) and cost (4%; fig. 5).

Perception of Acne among Sufferers

Nearly half the acne sufferers (48%) said their daily lives were affected. This proportion varied with the perceived severity (39% for mild acne, 52% for moderate acne and 67% for severe acne; $p < 0.0001$).

The answers to our adapted version of the CADI showed that the perceived severity of acne correlated with

Fig. 5. Stated reasons for not consulting a doctor (percentage of all adolescents with acne who did not consult, n = 489).

the feelings it provoked (fig. 6) and with its impact on daily life (fig. 7).

Perception of Acne among Nonsufferers

Among the 548 callers who had never had acne, 53% said they were very disturbed by the idea of having acne, while 62% considered acne a problem, and 42% thought acne was an obstacle to making friends.

Relative to respondents who had a personal experience of acne, those who had never had acne had a more negative perception of its impact on relations with friends ($p < 0.0001$) and on romantic relationships ($p < 0.0001$); they also thought that having acne was worse than in reality ($p < 0.0001$; fig. 8).

Discussion

This survey was based on statements made by young people between 12 and 25 years of age who called a general youth helpline. We chose this population for three main reasons. First, FSJ callers, with an average of 16.1 years, are representative of the general population of individuals with acne, the prevalence of which peaks between 12 and 18 years [7]. Moreover, young people call the helpline from all over France, including both urban and rural areas, and the yearly number of callers represents a significant proportion (2.1%) of the general population of the same age. The sample participating in our survey was therefore probably representative of the general population of acne sufferers in France. Second, the potential influence of healthcare professionals and the medical environment on the respondents' answers was eliminated in our survey, as the young people answered the questionnaire in their usual setting. Finally, parental influence was also minimized. Parents often accompany their children to medical consultations, and their presence may influence their children's responses to this type of questionnaire.

It is also important to note that the questionnaire was administered by professionals with training and experience in dealing with telephone calls from adolescents, ensuring that the information they collected was of optimal quality.

The main limitation of this study is that it exclusively involved young people calling a general youth helpline. The association that runs the helpline has analyzed the user population, and the most frequent reasons for calling are family problems (single-parent family, absentee parents, poor parental support) and problems at school

Fig. 6. Feelings about acne according to its perceived severity (respondents with current acne, $n = 711$).

(e.g. absenteeism, repeating a school year). It should be noted that the helpline staff did not present the questionnaire to callers who were particularly upset or suicidal. A second limitation is that only 18% of the young people to whom the questionnaire was presented agreed to answer. However, this proportion is similar to that of two previous studies conducted by FSJ (one on contraception in 2000 and the other on relationships with parents in 2001; 20% uptake rate) using the same type of methodology.

This telephone survey provides interesting new information on the characteristics of young people with acne and on the perception of acne by the general population of young people.

The prevalence of active acne among respondents was 45%. Between November and December 1996, a group of dermatologists [6] conducted an epidemiological survey of acne in secondary schools throughout France. They questioned and then examined 913 adolescents aged between 11 and 18 years. Of these, 52% said they had acne (a proportion similar to that found in our study) but medical examination showed that the real figure was considerably higher (72%). A similar discrepancy has been found in other studies [8], reflecting the gap between the dermatologists' clinical definition of acne and young people's own perception of the disorder. This is probably because not all the skin lesions taken into account by dermatologists are particularly visible. In contrast, the stated frequency of severe acne in our survey (18%) was in keeping with that found by dermatological examination (15%)

Fig. 7. Impact of acne on daily life according to its perceived severity (n = 711).

Fig. 8. Perceived impact of acne among sufferers and nonsufferers.

[6]. Thus, adolescent acne sufferers and dermatologists have similar perceptions of 'severe acne'.

With regard to treatment, 51% of the respondents with a personal experience of acne stated that they had never sought medical help. The reasons varied, but 73% of the young people concerned said they saw no need to seek

treatment. This underlines the need to inform young people of existing treatments for acne, and the risk of permanent scarring. Three quarters of the respondents who had sought medical attention said they had chosen to consult a dermatologist.

About half the acne sufferers who had sought medical help said they had done so on their own initiative, without being advised to do so by friends or family members. This apparent wish of many acne sufferers to take personal charge of the problem has not previously been reported. Mothers nonetheless played an important role: when another person intervened, it was the mother in 58% of cases. The role of friends and family members diminished with the respondents' age: among respondents who sought medical advice, 50.4% of those under 14 did so on their own initiative, compared to 74% of those over 18.

Surprisingly, 70% of the respondents who had been prescribed treatments said they adhered closely to the prescription. Two recent surveys showed lower levels of adherence: 56% in a study of 396 patients [10] and $64.7 \pm 24.0\%$ in a study of 687 patients [11]. However, it is noteworthy that adherence was assessed by doctors in these latter two studies, whereas our survey was simply based on the patients' claims. This would suggest that patients have a less strict definition of adherence than doctors and illustrates the importance of doctor-patient dialogue in achieving high levels of adherence and correct use of treatments.

This study also shows that about half of all acne sufferers find that their skin disorder has significant repercussions on their daily lives, confirming the abundant literature on this subject [7]. However, contrary to previous studies, we found that the impact of acne on daily life was proportional to its severity as perceived by the patient. This difference is probably related to the fact that severity was not objectively evaluated by a dermatologist, contrary to other studies [12]. In our survey, the patients themselves assessed the severity of their acne, introducing a subjective factor in the evaluation.

Regarding the impact of acne on quality of life, our results are difficult to compare with those other studies using the CADI scale. Indeed, the questions of the French CADI were adapted for this survey to be more compatible with teenagers' language. The answers nonetheless correlated with the severity of acne, confirming the impact of acne on quality of life, as shown in other studies using the CADI scale [8].

Another original aspect of this survey is that we also analyzed the perception of acne by young people with no personal experience of acne, something that has never previously been done. We found that young people with no history of acne were worried by the possibility that they might one day develop it. More than half of them said they were afraid of acne. They considered that acne

must be a major source of discomfort. Paradoxically, they had an even more negative perception of the personal impact of acne than respondents with personal experience of acne.

FSJ has previously studied the psychological impact of illnesses more serious than acne among 227 adolescents (insulin-dependent diabetes in 28% of subjects, cancer in 13%, epilepsy in 12%, psychiatric disorders in 10%, cystic fibrosis in 9%, others in 18%) with an average age of 16 years (55% girls, 45% boys), of whom 55% were hospitalized and 80% were under treatment. Surprisingly, the psychological impact of acne among our respondents was as significant as that of more serious illnesses: 58.2% of patients with acne felt lonely, while 53.5% of patients with other health disorders felt uneasy. Likewise, 56.5% of acne patients felt anxious, while 56.4% of patients with other disorders felt anxious or sad. The results of these two surveys are comparable, as both study populations were composed of young people who spontaneously called FSJ. A literature review by Mallon et al. [13] gave similar results. In a study of 111 acne patients with an average age of 23 years, the psychological impact was measured with the SF-36 quality-of-life questionnaire. Acne (SF-36 score = -7.4) had a psychological impact similar to that of asthma (-6.3), epilepsy (-5.3), lumbago (-6.9), diabetes (-9.5) and rheumatic pain (-4.6). Only coronary heart disease had a much stronger impact (-21.8) [unpubl. data]. The impact of acne on quality of life, and the importance of treating it, is underlined by the integration of this subject in a web-based continuing education program for dermatologists in Italy [14].

In conclusion, this survey of perceptions of acne among young people, designed to rule out any potential influence of the medical environment, shows that a significant proportion of acne sufferers (more than half) do not seek medical attention. Acne has a major impact on sufferers' well-being and quality of life, and, of particular interest, adolescents with no personal experience of acne have a very negative perception of it. Finally, young acne patients and doctors have different perceptions of the severity of acne and different concepts of adherence to treatment.

The Acne Survey Questionnaire is available on request from the corresponding author.

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