The aim was to analyse use of psoriasis care and expectations from a gender perspective in a psoriasis population. The study is based on questionnaire data from 1060 subjects. The response rate was 74%. The relation between care consumption and studied variables was measured using regression and chi-square analysis. Care consumption was strongly influenced by age, quality of life, income and joint symptoms. Men visited a dermatologist more often, while women visited a general practitioner and treated themselves topically more frequently. Important expectations among both women and men concerned the receiving of professional care and amelioration, while more women wanted to be treated politely. Expectations were fulfilled, except those regarding amelioration, especially among men. Awareness of gender differences is important among professionals. In order to decrease such differences decision-makers should provide for a maintained specialized care as well as a local health care system of high standard. 

Key words: expectations; gender; income; joint symptoms; psoriasis care consumption; quality of life.

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Margaretha Uttjek, Dermatology and Venereology, Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden. E-mail: margaretha.uttjek@dermven.umu.se

Psoriasis has approximately the same prevalence among men and women (1). Regarding differences between women and men in perceived quality of life (QoL) (2), there are studies in psoriatic patients showing both a difference (3) and no differences (2, 4, 5). Joint symptoms are a strong indicator for an impaired QoL (5, 6), and joint pain is more frequent among women than men (7). No doubt there are gender differences in the use of systemic drugs for psoriasis. For example in the USA (8) as well as in the Nordic countries (9) large differences have been reported in the use of retinoids. This is probably explained by the teratogenic effect of this drug. While methotrexate (MTX) is restricted for use in women in the USA (8), no gender-specific pattern was seen in the Nordic countries (9). In the latter study most topical treatments and alternative medicines were found to be used more often by women while men had a higher use of calcipotriol, PUVA and non-PUVA phototherapy (9).

Gender-related data on the socio-economic characteristics of psoriasis patients in comparison with the general population are lacking (10). In the aforementioned study of different Nordic patient populations no differences between the countries were reported with regard to marital status, but there were differences in terms of educational background and employment status, although with no reference given to the general population (9).

In an effort to improve the quality and availability of psoriasis care in the county of Västerbotten, a project was initiated in May 1997. The project includes studies of (i) economic and social consequences of the disease, (ii) determinants of perceived QoL, and (iii) views of the patients, professionals, administrators and politicians on how psoriasis care can be improved.

In a previous paper focusing on perceived QoL we reported that a large extent of the skin disease and joint symptoms were the strongest risk indicators for impaired QoL (5). Other risk indicators were withdrawal from medical treatment due to distance to treatment facilities and also, among women, withdrawal from treatment due to cost. In addition, some age groups had a higher impairment of QoL. Distance to treatment facilities strongly influenced both QoL and choice of treatment (5).

The aim of this study was to analyse care consumption and expectations from a gender perspective in a psoriasis population.

MATERIALS AND METHODS

Study population

The study population was described in detail in a previous paper (5). The study base was formed by all persons with diagnosed psoriasis and/or members of the Swedish Psoriasis Association (SPA) in the county of Västerbotten. Of 1737 patients registered, 30 could not be contacted. A questionnaire was mailed to 1707 subjects in May 1997. After two reminders the response rate was 74% (n=1255). Out of these 1255 respondents 195 were excluded as they denied having psoriasis; some of them were probably supporting members of the SPA. Therefore the results are based on 1060 completed questionnaires.
A drop-out analysis with respect to demographic characteristics was performed. A valid comparison of clinical data could not be performed, but we conclude that the non-participation had not induced any significant selection bias with respect to sex, age, and living area (5).

This study was approved by the Regional Research Ethics Committee.

Questionnaire

The questionnaire contained 62 questions about demographics, economic and social status, symptoms, treatment, cost of treatment, utilization of psoriasis care, withdrawal from treatment due to distance or cost, the patients’ expectations of the medical care and how these expectations have been met. There were also questions about perceived QoL, and extent of the disease as expressed on a sketch showing the maximum area of the skin involved during the last year and the past month.

Variables under study

Social and economic factors. Some social and economic factors were chosen from the questionnaire, guided by the aim of the project, such as income, marital and employment status and occupation. Gender and age were natural, independent factors. Almost the same number of respondents of each gender answered the questionnaire, and they spanned an age range from 9 to 99.

Treatment and cost. All visits made by a patient to the local health care centre and to a private or public dermatological or rheumatological clinic during 1995 and 1996 were totalled in one outcome variable named care consumption.

Withdrawal from treatment due to cost strongly influences QoL among women (5). Thus a patient’s own total cost, above the limit of cost for all patients (due to the health insurance system), for treating his or her psoriasis was totalled in a second variable.

Visiting a medical social worker formed a third variable. A medical social worker, a psychosocial specialist, is a part of the health care team in public dermatology and rheumatology clinics as well as in some local health care centres in the county.

Clinical factors. Extent of the disease was measured from a sketch where the patient indicated the areas affected by psoriasis during the past month. The area was estimated using the same principles as in PASI score (5, 11, 12). The patients reported joint symptoms in the questionnaire.

Quality of Life. QoL was measured with a revised version of the DLQI (2, 5).

Hypothesis. Our hypothesis was that there are gender differences in both expectations of and utilization of psoriasis care. Psoriasis is often called an ‘equal’ disease. However, life circumstances are different for women and men. Thus socially related gender differences were expected.

Statistical methods

The relationship between clinical and socio-economic factors respectively, and care consumption was calculated using univariate and multiple regression analysis. In order to examine the relationship between gender, socio-economic factors and perceived QoL, respectively, and visits to a medical social worker, chi-square analysis was carried out. Calculations were made with SPSS version 11.5 for Windows.

RESULTS

Socio-economic characteristics

In comparison with the general population, there were almost twice as many women and men in the age range 40–69, and fewer of both women and men aged <30 years (Table I). With a mean income of 158 600 SEK per year (1996) the study population seemed to be more wealthy than people in the county (107 600 SEK) and the country as a whole (113 700 SEK) (13). However, after standardizing for age no differences between the study population and the general population in the county and the country as a whole were seen, irrespective of gender.

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Frequency (%)</th>
<th>Income (thousand SEK)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study population</td>
<td>Whole county</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>M</td>
</tr>
<tr>
<td>0–9</td>
<td>0.0</td>
<td>&lt;1</td>
</tr>
<tr>
<td>10–19</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>20–29</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>30–39</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>40–49</td>
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<td>50–59</td>
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<td>3</td>
<td>2</td>
</tr>
<tr>
<td>90–99</td>
<td>&lt;1</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

*Mean value of annual income 1996 before tax in Swedish crowns (SEK). The exchange rate in 1996 (February) was 10.51 SEK per £. The income given includes salary and pension. F, women; M, men.

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Regarding employment we found a couple of gender differences. Among the self-employed twice as many were men, while the opposite was found among occupations for which no training is requested, of whom more than twice as many were women aged over 40. Employment figures for the study population were similar to those of the county as a whole, where 69% were employed and 6% unemployed (1998) (13). Distribution of professions was similar to both the county as a whole and the country, except for occupations for which no training is requested.

Expectations

There were two questions regarding expectations when visiting the dermatology clinic. The first question had two alternative answers, to be cured or to receive amelioration, and the respondents were asked to choose one alternative. Amelioration was the most common answer given by both women and men (Table II). Twenty percent of the respondents expected to be cured of their psoriasis. In the second question the respondents were asked to choose two of the following alternatives: to receive professional care, to be treated politely, to be given information about self-treatment and to receive treatment contributing to a higher QoL. The two most important expectations among both women and men were receiving professional care and information about self-treatment, while polite treatment was more important among women (Table II). The most desired expectations among both women and men were almost totally fulfilled. Expected amelioration, however, was not fulfilled for almost half of the population, especially among men. The expectation of being cured was fulfilled for nearly half of the population (Table II). This indicates that patients and professionals interpret the concept of cure differently.

The most desired changes to the county health care system were shorter distance to UV treatment, reduction of the cost, more information and time with the doctor, and abolition of the compulsory admission note. These changes were desired to an equally large extent by both women and men, except for nearness to UV treatment, which was a priority for somewhat more women (27%) than men (20%). In addition, women (26%) wanted information about psoriasis to a larger extent than men (15%).

More than half of the respondents preferred to see a dermatologist when visiting a doctor (Table III). Among these a majority was men and they also utilized the dermatology clinic more often. A somewhat larger number of women wanted to see a general practitioner under normal circumstances and a dermatologist for special requirements, and they utilized the local health care clinic to a larger extent. A few more men used systemic drug treatments, and both genders were prescribed topical and UV treatment to the same extent. More women treated themselves more intensively at home during a period of treatment.

Consumption of health care

The mean value of care consumption during 1995–1996 was 4.79 visits among women and 6.00 among men (Table IV). In a multiple regression analysis the strongest factors influencing care consumption were age, QoL, income and joint symptoms (Table IV). Furthermore, in separate multiple regression analyses care consumption was analysed with regard to these strongest related factors, and from a gender perspective. We found that men had the highest care consumption except for some subgroups (Fig. 1).

Extent of psoriasis did not have a strong influence on care consumption, either in univariate or in multiple regression analysis. It did not add any explanatory strength to the model.

No strong relation was found between care consumption and self-cost. Women had higher self-cost, and

| Table II. Distribution (%) of expectations regarding psoriasis care and fulfilment of these expectations in study population (n=1060) |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | Expectations    | Fulfilment       |                  |                  |                  |
|                  | Women           | Men             | Total           | Women           | Men             | Total           |
|                  | Totally/ partly| Not at all      | Totally/ partly| Not at all      | Totally/ partly| Not at all      |
| Question 1 (choose one!) |                  |                  |                  |                  |                  |                  |
| Amelioration     | 63.0            | 62.4            | 62.7            | 60.5            | 39.5            | 52.9            | 47.2            | 56.7            | 43.3            |
| To be cured      | 21.0            | 20.4            | 20.7            | 41.5            | 58.4            | 42.4            | 57.6            | 42.1            | 58.0            |
| Question 2 (choose two!) |                  |                  |                  |                  |                  |                  |
| Professional care| 61.0            | 65.3            | 63.2            | 96.4            | 3.6             | 95.0            | 5.0             | 95.7            | 4.3             |
| Information about self-treatment | 44.1            | 42.3            | 43.1            | 82.5            | 17.5            | 86.9            | 13.1            | 84.7            | 15.2            |
| Treatment contribution to a higher quality of life | 30.5            | 32.4            | 31.5            | 72.5            | 27.4            | 71.3            | 28.8            | 71.8            | 28.1            |
| To be treated politely | 24.0            | 13.2            | 18.4            | 97.5            | 2.5             | 97.8            | 2.3             | 97.6            | 2.4             |

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those with the highest income also had the highest self-cost. Among men those with the lowest income had the highest self-cost.

A chi-square analysis showed a strong relationship between visiting a medical social worker, and joint symptoms and low QoL among both women and men, and low income as well among men.

Both women (43%) and men (53%) mainly used their own car when going for treatment, although men used the car more often. Consequently, more women (49%) than men (37%) used public transportation during the same period.

**DISCUSSION**

Men, who had higher incomes than women, utilized the specialized care more often than women did, although visits to a dermatologist were desired by more than half of the population among both women and men. Women visited a general practitioner more often, and such a visit is less expensive than a visit to a dermatologist. They also treated themselves topically and wanted information about the disease more frequently. We consider that our findings of gender differences in the utilization of psoriasis care to be related to diversities in income and gender roles. Furthermore, in our previous study (5) we found gender differences that we consider to be related to care consumption, due to their strong relationship to QoL, which in this study was shown to have a strong influence on care consumption. Such differences were, for example, involvement of psoriasis on the hands and withdrawal from treatment due to economy among women. Withdrawal due to distance to treatment facilities is found among both women and men, although distance seemed to matter more among men (5). In addition, women used their own car less than men did. When time and money are scarce, women’s own needs may have to come second, although they do not necessarily see it as a sacrifice (14).

In this study we found no distinctive gender differences in using systemic drug treatments, while more frequent use of such treatment among men has been found in other studies (8, 9). However, in this study population the majority of women were over 40 years of age.
Psoriasis care consumption and expectations from a gender perspective

Psoriasis care consumption and expectations from a gender perspective

ACKNOWLEDGEMENTS

We are grateful to the Swedish Psoriasis Association (SPA), the County council in Västerbotten and the Foundation of Ax:son Johnson, respectively, for generous grants, and to members of the SPA for help with the psoriasis register, the drawing up of the questionnaire and the distribution of the same. Furthermore we are grateful to Birgitta Törnkvist, PhD, Department of Statistics, Umeå University, for valuable advice.

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