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CLINICAL REPORT

Psoriasis Care Consumption and Expectations from a Gender Perspective in a Psoriasis Population in Northern Sweden

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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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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.

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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 I. *Distribution of frequency and income in study population (n=1060) and in the county as a whole, stratified for age and gender (no decimals shown)*

	Frequency (%)				Income[a] (thousand SEK)			
	Study population		Whole county		Study population		Whole county	
Age (years)	F	M	F	M	F	M	F	M
0–9	0.0	<1	13	13	0	10	<1	<1
10–19	5	4	11	13	2	5	6	5
20–29	6	4	14	14	100	129	91	117
30–39	14	13	13	14	137	186	137	187
40–49	20	23	13	14	158	205	163	220
50–59	20	23	12	13	155	221	162	222
60–69	14	19	10	9	106	177	123	183
70–79	11	7	9	7	75	141	86	138
80–89	3	2	5	3	60	168	71	107
90–99	<1	0	<1	<1	122	0	67	69
Total	–	–	–	–	129.3	187.9	90.4	124.7

[a]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.

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

Table III. *Type of doctor, desired and utilized, respectively, and utilized treatment, in study population (n=1060)*

Variable	Distribution (%)					
	Desired			Utilized 1995–1996		
	Women	Men	Total	Women	Men	Total
Type of doctor						
Dermatologist	52.9	62.8	58.0	43.6	48.4	46.1
Private dermatologist	5.0	4.8	4.9	9.2	8.0	8.7
General practitioner	2.3	1.0	1.6	33.8	29.6	31.5
Combination[a]	39.9	31.4	35.5	–	–	–
Treatment						
Topical	–	–	–	78.8	79.2	79.0
UV light	–	–	–	30.1	29.4	29.8
Systemic[b]	–	–	–	12.2	14.3	13.2

[a] Dermatologist (special requirements) and general practitioner (normal circumstances).

[b] Methotrexate, cyclosporine or acitretin.

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.

Table IV. *Care consumption (number of visits) 1995–1996 in study population (n=1060); multiple regression analysis*

Variable	Care consumption[a]			
	Mean	F value[b]	B value[c]	*p* value
Gender	–	2.04	–	0.154
Women	4.79	–	0	–
Men	6.00	–	1.22	0.154
Age (years)	–	5.86	–	0.001
0–39	8.27	–	3.97	0.000
40–49	4.33	–	0.03	0.982
50–59	4.68	–	0.38	0.738
60+	4.30	–	0	–
Income[d]	–	4.26	–	0.005
0–100 000	5.85	–	−1.46	0.242
100 001–150 000	4.72	–	−2.59	0.038
150 001–200 000	3.71	–	−3.60	0.001
>200 000	7.31	–	0	–
Joint symptoms	–	6.14	–	0.013
Yes	6.42	–	2.04	0.013
No	4.37	–	0	–
Quality of life	–	7.52	–	0.001
Low	7.22	–	0	–
Medium	5.50	–	−1.72	0.085
High	3.46	–	−3.76	0.000
Total	5.40	–	–	–

[a] $r^2=0.082$, i.e. the variation in care consumption is explained to 8.2% by the above-mentioned variables.

[b] The relation between the variation between groups and the variation within groups.

[c] The regression coefficients between variable and care consumption.

[d] Annual income in 1996 before tax in Swedish crowns. The exchange rate in 1996 (February) was 10.51 per £. The income given includes salary and pension.

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 than women (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

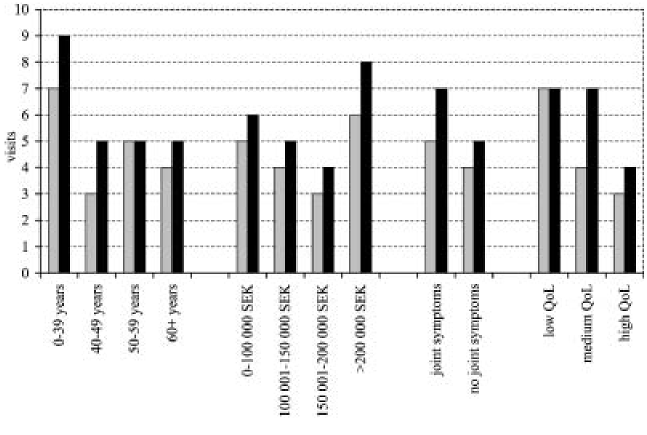

Fig. 1. Care consumption (number of visits, mean value) 1995–1996 in groups of ages, income (Swedish crowns, SEK), joint symptoms and quality of life (QoL), stratified for gender (women ▨, men ■).

age. At this age, women may use systemic drugs treatment more frequently as the probability of pregnancy has decreased. In the previous paper (5) we saw no difference in disease extent between women and men, but the greater proportion of joint symptoms among women may to some degree explain the somewhat unexpected prevalence of systemic treatment among women.

In ages up to 40, where we found the highest care consumption, two peaks of onset of the disease can be found, in adolescence and in the 30s (15). Maybe the need for psoriasis care is at its greatest just after onset. This is a time for learning about the disease, how to treat oneself and how to live with the disease (5, 16). The results would have been strengthened with data on respondent age at the onset of the disease. Furthermore, young people, particularly girls, are more influenced by messages in the mass media (17), where idealized bodies are generally portrayed. Young women aged 13, 15 and 17 are shown to be more dissatisfied with their body the older they grow, while the opposite is found among boys (18). They may be bothered by having psoriasis on the skin and therefore visit the doctor frequently. Importantly, it is not only the mass media that influence young people's embodied self-identity; it is also individually constructed by heritage (19) and socially constructed in complex ways (20).

Women with the highest income and men with the lowest income had the highest self-cost, which strengthens the above discussion concerning gender-related economic priorities.

Women may be more urgent to have a functional social network, which includes professionals in the local area, and therefore visited the local health care centre more often. Visits to the medical social worker were important for those with special needs, such as those with low income, joint symptoms and low QoL, which underlines the need for such a psychosocial specialist as a part of the health care team (21). *Professional care* and *polite treatment* expectations were almost totally fulfilled among both women and men, which does great credit to the psoriasis health care provided by the dermatology clinic. Expectations concerning amelioration, however, were not satisfyingly fulfilled for almost half of the population, especially among men. This is a challenge for the health care system. The high percentage of respondents stating that they had been cured, at least partly, was surprising as there is no cure for psoriasis. Maybe they consider themselves to be cured when they are in remission. The expectation of cure may reflect a hope rather than an expectation.

We conclude that there are gender differences in utilization of psoriasis care due to diversities in income and gender roles. Men utilized the specialized care, while women visited the local health clinic and treated themselves more often. Most of the important expectations regarding the health care system are fulfilled by the specialized care. Awareness of gender differences is important among professionals. In order to decrease such differences, decision-makers should provide for a maintained, highly specialized care including medical social workers on the one hand, as well as a local health care system of high standard on the other. This is necessary to provide an equal quality of care for women, for those living far from the population centres and for those with special needs.

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