

# *Time spent on treatment in dermatology - how much time do outpatients use and is it a measure of morbidity?*

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## ABSTRACT

**Introduction.** The impact of skin disease on patients is varied. Time appears to be an important element in the assessment of the impact of chronic recurrent diseases such as skin diseases. In addition, data about the time spent on treatment has not previously been described in spite of its obvious importance to general patient management in dermatology.

**Materials and methods.** The total time spent on treatment, including time spent on visiting the physician and obtaining drugs from the pharmacy, was therefore investigated in a sample of consecutive outpatients in employment (n=53) and healthy controls (n=41).

**Results.** Patients spent an average of 2.4 minutes (95% confidence interval: 1.9 - 2.8 minutes) while healthy controls spent 0.9 min (95% confidence interval: 0.7 - 1.2) per day treating skin disease (P<0.001). No correlation between time spent and disease, duration, quality-of-life (Dermatology Life Quality Index) or patient age was found.

**Discussion.** The observation suggests that time alone is not an appropriate surrogate measure in a mixed group of patients. Additional studies are therefore necessary to delineate the usefulness of time spent on treatment (TSOT). This should be done in more uniform groups of patients and using other objective measures of morbidity. Finally the data presented suggest that TSOT in itself may not be a major factor in patients' assessment of treatments.

## KEY WORDS

dermatology,  
quality-of-life,  
morbidity,  
index,  
methodology

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### *Introduction*

Measuring morbidity causes inherent problems in dermatology where chronic-recurrent diseases of low mortality predominate. Routine clinical bedside assessment is neither sufficiently explicit nor accurate, and semi-quantitative measures developed for specific diseases, e.g. PASI score, are not generally applicable (1, 2).

A need for a reliable general method of morbidity quantification therefore exists in dermatology.

One approach is the use of patients' assessments of quality-of-life (QOL), e.g. the dermatology life quality index (DLQI) (3). Studies have documented a positive correlation between QOL questionnaires and clinical

aspects of disease severity, e.g. improved QOL after treatment or physician-patient consensus about QOL (3, 4, 5).

Skin diseases often require considerable therapeutic effort by the patient, i.e. daily application of ointments. The time spent towards cure of the skin disease therefore represents an investment of time. It may be speculated that the time patients spend on the treatment of their disease, (time spent on treatment, TSOT), reflect the importance they attach to their disease. A simple calculation of TSOT could therefore hypothetically give an easy objective, continuous scale measure of morbidity in dermatological patients.

In addition this study provides indicative data describing the time dermatological patients spend on treating their disease. This information has not previously been available, though it is of relevance to the assessment of self-treatment strategies in dermatology.

## Materials and methods

A total of 53 consecutive adult patients were studied at their first visit to the dermatological clinic at Roskilde Hospital, and compared with 41 healthy controls. Patients in retirement were not included in order to accentuate the choice in time allocation made by each patient. For assessment of QOL the DLQI was chosen because of its ease of use, and previous wide use in the assessment of morbidity of skin diseases.

Each patient was questioned about the TSOT and asked to fill in a questionnaire quantifying the TSOT over the past 3 months. This included time directly spent in self-care, as well as time spent on visiting pharmacy, general practitioner, practicing specialist or hospital. Descriptive statistics were used, and comparisons were made using Spearman rank correlation and Mann-Whitney test where appropriate.

## Results

The patients spent an average of 2.4 minutes (95% confidence interval: 1.9 - 2.8 minutes) and controls 0.9 min (95% confidence interval: 0.7 - 1.2) per day treating their skin disease ( $p < 0.001$ ). The mean age was 43.3 (39.9 - 46.7) years and mean DLQI score of patients was 10.8 (8.6 - 13.1). Mean disease duration was 11.2 (8.2 - 14.2) years. The most frequent diagnoses were eczema (20/52), psoriasis (13/52) and folliculitis/acne (7/52). Patients with visible lesions did not have reduced QOL in comparison to those with hidden lesions. No significant correlations were found between TSOT and DLQI, diagnosis, age or disease duration.

## Discussion

The absence of significant correlations between the TSOT and the other parameters studied suggests that TSOT is not useful as a surrogate single overall measure of morbidity. Many other factors also play a role for QOL in dermatological patients, e.g. subjective symptoms, and these may overshadow the importance of this general TSOT registration without invalidating the core concept of using time as a measure.

In addition, methodological factors in the present study may have influenced the conclusion. The different time frame of the DLQI (1 week) and the TSOT (3 months) was not thought to invalidate the conclusion since the diseases are chronic recurrent and active at the time of the consultation. On the other hand the inclusion of time spent on acquiring the prescribed medicine, i.e. time spent at the prescribing physician and the pharmacy, include a range of variables that are not under the immediate control of the patient and may therefore act as potential confounders. The inclusion of different patient groupings adds strength to the general observation of TSOT, but does not make allowance for the area involved, i.e. a large affected area on the body may not cause as much morbidity as a smaller involved area in the face, although the TSOT may be longer. Finally the results do not take into account the possible under-treatment by patients, i.e. TSOT may be low but treatment may be ineffectual and morbidity therefore high.

The data presented also have immediate practical implications, which warrant further investigation. In terms of treatment, the data suggest that it may be speculated that time spent on self-treatment is a less critical parameter in patient management. Modes of therapy that are efficient but relatively cumbersome may therefore have a greater level of acceptance among patients than commonly expected by dermatologists. The psychological effects of such treatments may compensate for their efficacy. It is also unlikely that the relationship between TSOT and morbidity is linear and a cut-off point is likely to exist. No significant differences were found between groups of dermatological patients, suggesting that the findings are more likely to be general than disease specific.

In conclusion this study has presented new data on TSOT, which are of immediate practical relevance in the planning of treatment, and may serve as the basis for further investigation of TSOT as a measure of morbidity in more uniform groups of patients.

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