



CHAPTER III

RESEARCH METHODOLOGY

Research Design :

This study was a descriptive, cross-sectional design which is an important starting point for many epidemiological investigations (Farmer, R.D.T., Miller, D.L., 1983). It is cheap and quick to complete and gives a useful initial overview of a problem. It might suggest the next investigations to further clarify the problems to tackle. It was appropriate for the assessment of the characteristic of self-care behaviours among psoriasis patients.

In this study, the data collection and measurement were carried out on a single occasion when each patient came to the hospital. All variables which could influence self-care behaviour were collected through a single interview with close and partially open ended questions. These variables were necessary to identify the relationship between the self-care behaviour and each of the specific variables.

Target population :

Psoriasis patients age 15 or above attending Maharaj Nakorn Chiangmai hospital and Chulalongkorn hospital.

Sample specification :

As psoriasis is equally common in male and female and several studies have demonstrated that the majority of patients develop the initial lesions in the third decade of life (e.g. Rose, G., Baker, DJP, 1979). In this study, psoriasis patients of both sexes attending at adult Dermatology Out-Patient Department of Maharaj Nakorn Chiangmai and Chulalongkorn hospital, with the ages equal or above 15 years old, were selected. It was assumed that patients seeking care from Chiangmai and Chulalongkorn Hospitals were similar in terms of the severity of the disease and the freedom of choices for care seeking. Our patients did not represent all psoriasis patients because the study was held in two hospitals that some of patients would come according to the severity of the disease.

Study population:

Psoriatic patients attending the hospitals between the first of June to the thirtieth of November 1992 were included.

Inclusion criteria:

Included in our study were patients who had either localized or generalized psoriasis, aged 15 years or above, attending Maharaj Nakorn Chiangmai or Chulalongkorn hospitals and willing to participate.

Exclusion criteria :

Excluded from the study were those who could not understand Thai or could not communicate in Thai.

Sample size:

Farber et al. had done the questionnaire survey of 2144 patients. They found that 40% of female and 60% of male patients had ever had remission period while B. Ramsay and Myra O' Ragan found that 55% never had complete remission (Ramsay, B., O'Ragan, M.A., 1990), (Faber, E.M., Bright, R.D., Nall, L.M., 1968). In Thailand, the percentage of psoriatic patients who were incompletely remission has not been published.

To assure that the study could be generalized to the whole psoriatic patients attending the two hospitals, the calculation for the sample sized was done by using the approximate proportion of the previous reports which assumed that 50% of the patients had good self-care behaviour. The formula used is shown below :

$$N = (Z\alpha)^2 (pq) / (\delta)^2$$

N = The number of the psoriasis patients

Z α = The standard score for the normal cumulative probability when the conclusion of the study could be wrong 5 times out of 100 times (Type I error = 0.05) which is equal to 1.96

pq = The variance of self-care behaviour.

δ^2 = The acceptable error of deviation from average good self-care behaviour

The substituting the values in the formula :

$$\begin{aligned} N &= (1.96)^2(0.50)(0.50) / (0.10)^2 \\ &= 96.04 \end{aligned}$$

Therefore the approximate number of subjects for this study was 100 cases.

Manoeuvre :

The instrument for this study was a questionnaire guideline. Most parts of the questionnaire were developed based on the literature review. Only one part was taken from Health Opinion Survey which had already been translated into Thai to measure stress and anxiety.

Before actual data gathering, the questionnaire was verified by 5 specialists: two dermatologists, one psychiatrist, one social worker and one epidemiologist for the validity.

The head of each department and nurses of each ward were asked for co-operation. Professional nurses with experiences in interviewing were asked and trained to interview the patients.

For enrollment, all psoriasis patients were informed about the procedures. Those who were willing to participate

performed verbal consent and answered the questions asked by the interviewers.

After the test instrument was modified according to the suggestions of the content experts, it was tested for internal consistency in some psoriasis patients.

Outcome measurement :

There were three main parts of partially open ended questionnaire.

Part one : comprised of demographic data and some other information about the characteristics of the patients such as onset of disease, remission period, and quality of life. These data were analyzed as possible influencing factors of self-care behaviour.

Part two : comprised of pre-determined questions about self-care behaviours' to avoid trigger factors potentially leading to the short remission period of psoriasis.

This part was divided into 4 categories according to 4 types of trigger factors or categories: trauma, infection, drug use and emotional stress.

The number of questions about self-care behaviour differed depending on the categories. Six questions dealt with the prevention of trauma, 7 questions were directed at the prevention of infection and 4 questions were targeted at

the inappropriate drug use. For emotional stress, a set of guideline consisting of 20 questions was used.

For self-care behaviours in the prevention of trauma, infection and drug use, the answers for each of the questions were divided into 3 choices: perform all the time (1st choice), perform some of the time (2nd choice), and never perform (3rd choice). Good self-care behaviours were those classified under the first choice. Behaviours under the second and third choices were considered poor self-care behaviours.

The first choice (perform all the time) was for the patients who behaved every time the episode happened.

The second choice (perform some of the time) was for the patients who seldom behaved whenever that episode happened.

The third choice (never perform) was for the patients who had never behaved whenever that episode happened.

Only the crucial questions of each factor were analyzed for good and poor self-care behaviours. The non-crucial questions were collected to generate hypothesis for future study.

For questions assessing emotional stress, the data were summed up into scores. The cut-off point was determined

by the mean of the total scores for all patients plus one standard deviation of the total scores for all patients. If a patient's total score was more than the cut-off point, then he or she would be classified as having poor self-care behaviour.

A summary of 4 categories was considered again for each patient to estimate the overall picture of self-care behaviour in the prevention of all 4 trigger factors. If the patients had poor behaviour in any categories, they would be classified as having poor self-care behaviour. A patient must have good self-care behaviour in all four categories in order to be classified as having good self-care behaviour.

In conclusion, the characteristics of self-care behaviour, which could answer the first research question, was classified into poor and good self-care behaviour in 4 elements below.

1. Self-care behaviour in the prevention of "trauma".
2. Self-care behaviour in the prevention of "infection".
3. Self-care behaviour in the prevention of inappropriate "drug use".
4. Self-care behaviour in the prevention of "emotional stress".
5. Overall Self-care behaviour.

Part three : comprised of possible influencing factors including demographic data, social support, attitude and

belief toward psoriasis, general knowledges of psoriasis, the perception of availability of dermatologist, and activity of community health personnel. These possible influencing factors could be further grouped into enabling, reinforcing and predisposing factors as depicted in the conceptual framework.

Most of the items about possible influencing factors were summarized in proportions (number of patients with or without each of the influencing factors). Attitude and belief were scored by using the Likert scale for the degree of agreement as follow:

Totally agree	=	5	score
Agree	=	4	score
Undecided	=	3	score
Disagree	=	2	score
Totally disagree	=	1	score

For the positive attitude and belief the score followed the scale mentioned but for the negative questions the score was converted accordingly.

These influencing factors were analyzed by uni-variate technique either Chi-square or T-test analysis depending on the characteristics of the variables and by multiple logistic regression analysis for all possible independent variables toward self-care behaviour.



Data collection and data analysis :

Interviews were carried out for each patient following the items in questionnaire guideline. The time spent on each patient was approximately 30 minutes.

Data entry was done by DBase programme, data validation was done by Epi-Info statistical programme and data analysis by SPSS+pc programme.

The data analysis for the first research question, the characteristic of self-care behaviour, was summarized into frequency of poor and good self-care behaviour for each type of the categories.

For the second research question, each influencing factor toward self-care behaviours, was analyzed by 3 methods:

1. Chi-square test, to test the difference of the influencing factor among those with good and poor self-care behaviour if the influencing factor was a categorical variable.

2. T-test, to test the difference of the influencing factors among those with good and poor self-care behaviour if the influencing factor was a continuous variable.

3. Multiple logistic regression analysis, to see the relation of all independent variables as mentioned in influencing the categorical outcome (poor and good self-care

behaviour).

The test was considered significantly different if the p-value was below 0.05.



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