

## ASSESSMENT OF PHYSICAL AND MENTAL HEALTH OF PSORIASIS PATIENTS BY SHORT FORM 36 HEALTH SURVEY SCORING

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### ABSTRACT

**Objective:** To assess the physical and mental health of psoriasis patients using short form 36 health survey scoring and its comparison with normal subjects.

**Design:** Case-control study.

**Place and Duration of Study:** Department of Dermatology Combined Military Hospital Abbottabad, Pakistan from July 2009 to March 2010.

**Patients and Methods:** A total of 40 patients, 18 years of age or older, clinically diagnosed as psoriasis, without any mental or physical illness were surveyed. Age and sex matched 40 normal individuals were selected as controls. Clinical severity of psoriasis was measured by PASI score. Short form 36 questionnaire urdu version was given to the psoriasis patients and the control group and assisted by the trained staff to fill the questionnaire. The ethical requirements for the study were fulfilled. SPSS 10 was used for data analysis.

**Results:** The mean PASI score of the psoriasis patients was 9.72 (SD  $\pm$  2.42). The mean score of SF 36 in the patient group was 44.43 (SD  $\pm$  3.62) while that in control group was 84.95 (SD  $\pm$  3.61) ( $p < 0.001$ ). The  $p$  values in all 8 domains of the SF 36 were highly significant. The physical and mental component scores of psoriasis patients were significantly lower compared to control group.

**Conclusion:** Psoriasis patients have significantly low physical and mental health and thus lower quality of life as compared to healthy individuals.

**Keywords:** Psoriasis, Quality of life, Short Form 36.

### INTRODUCTION

Psoriasis is a chronic, proliferative, inflammatory skin disease characterized by red plaques with silvery scales mainly distributed over extensor surfaces<sup>1</sup>. Psoriasis can affect many aspects of professional and social life<sup>2</sup> and is linked with social stigmatization, physical disability and psychological distress<sup>3</sup>. Psoriasis patients believe that their disease has moderate to large negative impact on their Quality of Life (QoL), with alterations in their daily activities<sup>4</sup>. Due to the chronic and recurrent nature of the disease, the patients feel hopeless in terms of cure for the condition<sup>5</sup>. A comparative study reported reduction in physical and mental functioning comparable with that seen in cancers, arthritis, hypertension, heart disease, diabetes and depression<sup>6</sup>. The aim of the study is to compare

the quality of life of psoriasis patients with normal subjects using Health Survey Short Form 36 (SF36). Inducing remission and achieving reduction in severity of psoriasis may not be enough. Pharmacological treatment should be accompanied by patient education and social interventions<sup>7</sup>. Physicians have to be empathetic towards the patients to effectively manage their disease. Establishing this trust between the patient and treating physician will potentially improve treatment compliance and the final outcome<sup>8</sup>. Improving the QoL of psoriasis patients is a desirable and attainable goal. Various measures have been used to assess QoL in psoriasis patients<sup>9</sup>. Disease specific measures are more sensitive for the detection and quantification of small changes while generic measure are used to compare outcomes across different populations<sup>10,11</sup>.

### PATIENTS AND METHODS

This case control study was conducted at the Dermatology department of Combined

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Military Hospital Abbottabad, from July 2009 to March 2010. The ethical requirements for the study were fulfilled. This research has compared the Quality of Life (QoL) of psoriasis patients with normal subjects using Short Form 36 Health

indicates that 0% in a domain represents the poorest possible QoL and 100% indicated full quality of life.

Data was analyzed with the help of

**Table-1: Sub scales of SF-36 and their characteristics across cases and controls.**

Subscales of SF-36	Patients		Control Group		p-value
	n=40		n=40		
	Means	St. Dev	Means	St. Dev	
Physical functioning	51.25	7.90	92.25	5.76	<0.001**
Role physical	62.5	12.65	88.75	12.59	<0.001**
Bodily pains	59.87	8.47	88.61	8.10	<0.001**
Physical health	35.43	4.36	74.34	4.95	<0.001**
Vitality	46.00	5.08	84.37	3.95	<0.001**
Social functioning	36.87	10.57	89.37	8.74	<0.001**
Role emotion	16.65	16.86	71.63	24.53	<0.001**
Mental health	46.90	5.79	90.30	6.64	<0.001**

\*p-value <0.05 is considered to be significant, \*\*p-value <0.001 id considered to be highly significant

survey scoring<sup>12,13</sup>. Forty psoriasis patients of either sex, aged 18 years or above without any severe psychological or physical illness were selected for the study. Age and sex matched 40 normal individuals were selected as control. We measured the clinical severity of psoriasis by using Psoriasis Area Severity Index (PASI). Short Form 36 questionnaire standardized urdu version was given to the psoriasis patients and the control group who were assisted by the trained staff to fill the questionnaire.

The SF 36 is a 36 item questionnaire which measures (QoL) across eight domains and covers both physical and mental functioning of the individuals. The eight domains that the SF 36 measures are as follows : physical functioning; role physical; bodily pain; general health; vitality; social functioning; role emotional; mental health. Each of the 36 questions is transformed into a 0 – 100 scale on the assumption that each question carries equal weightage. The scoring of the SF 36

statistical program SPSS version 20. Descriptive statistics were used to describe the data that is frequencies, percentages, means and standard deviations of the variables. Chi-square test for qualitative variables and independent sample t test for quantitative variables were used to assess the statistical significance of the variables between the two groups. For role emotion Mann-Whitney U test was used to evaluate the statistical significance and to reject the null hypothesis. A p-value < 0.05 was taken as significant.

## RESULTS

A total of 40 psoriasis patients were included in the study who belonged to either gender and were older than 18 years. In the patient group 19 (47.5%) were males and 21 (52.5%) were females and the mean age was  $38.92 \pm 8.37$  years. In the control group 18 (45%) were males and 22 (55%) were females, with average mean age of  $37.82 \pm 6.82$  years. Both the groups

were comparable with respect to age ( $p=0.522$ ) and gender ( $p=0.825$ ). The mean PASI score of the patient group was 9.72 (SD=2.42). The mean score of short form 36 in the patient group was 44.43 (SD=3.62) and that in control group was 84.95 (SD=3.61) ( $p<0.001$ ). The summary of scores of Short Form 36 in all eight domains in both case and control group is given in table-I.

## DISCUSSION

Psoriasis is a chronic skin disease with recurrent relapses so it represents a lifelong burden for the patients. As the disease lesions are clearly visible to other people when they are on exposed areas of the body, the disease can affect the emotional well being of the patient<sup>14</sup>. The aim of the study was to check the QoL of psoriasis patients and compare it to normal individuals in order to improve the management options for psoriasis patients. This study extends research on the impact of psoriasis on QoL by applying the SF 36 tool. With this generic quality of life measure we assessed the physical and mental components of quality of life of patients with chronic plaque psoriasis and compared them with normal individuals. The SF 36 has eight domains and it covers QoL by considering the general health, regular daily activity, bodily pain and social activities in a very precise manner. Fernandez et al had the opinion that SF 36 was more sensitive than the other skin specific instruments in detecting worse QoL in male patients<sup>15</sup>. In our study the result showed that the control group was well matched. The mean PASI score was 9.72 (SD=2.42) so most of our patients were suffering from moderate psoriasis same as in many other studies<sup>16,17</sup>. Our study showed significantly lower physical and mental component scores in psoriasis patients. The mean mental component score (MCS) in our study was even lower than the physical component score (PCS) which is also supported by the study of Lewis et al<sup>18</sup>. Our results confirmed that psoriasis has a significant negative impact on the quality of life. These findings are consistent with other studies. Rapp et al demonstrated that the mean values of MCS for patients with psoriasis were lower than those

for patients with heart disease, diabetes and cancer. Regarding the PCSs only patients with congestive heart failure had lower scores than psoriasis patients but in that study 51% of psoriasis patients had arthritis. Heydendael et al<sup>19</sup> could not find any significant relation between disease severity and QoL in psoriasis patients but lesions on visible body areas were significantly correlated with QoL of psoriasis patients. Our findings support the concept that psoriasis severity should not only include PASI scores but also include QoL measures<sup>20,21</sup>. It is necessary to include QoL assessment before starting the treatment of psoriasis patients<sup>22</sup>. Although the specific measures are more sensitive but generic tools like SF 36 perform well as general measure of health status outcomes<sup>23</sup>.

## CONCLUSION

Psoriasis has a significant negative impact on the patients QoL as compared to healthy population.

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