



## Research Article

www.ijrap.net



### ROLE OF AYURVEDA IN IMPROVING THE QUALITY OF LIFE (QOL) OF PSORIASIS PATIENTS: A SURVEY STUDY

Siddharth<sup>1\*</sup>, Tapas Bratha Tripathi<sup>2</sup>, Govardhan Belaguli<sup>3</sup>

<sup>1</sup>Final year PG Scholar, Department of Swastavritta, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India

<sup>2</sup>Head and Professor, Department of Swastavritta, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India

<sup>3</sup>Final year PG Scholar, Department of Manovigyan Evum Manasa Roga, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka, India

Received on: 06/08/18 Accepted on: 10/09/18

\*Corresponding author

E-mail: sidyadav0786@gmail.com

DOI: 10.7897/2277-4343.096170

#### ABSTRACT

Background: Quality of life (QOL) is an important health outcome representing the ultimate goal of all health interventions which is measured as physical, mental and social functioning. Psoriasis is a chronic skin disorder which has a degrading impact on one's QOL, affecting their physical, functional and emotional well-being. The Dermatological Quality of life Index (DLQI) is a tool that measures the effects of psoriasis on a patient's QOL. The different medicines and treatment procedures of Ayurveda have been effectively used to reduce the signs and symptoms and improve QOL of psoriasis patients. Objectives: To assess the QOL in the patients with psoriasis undergoing any Ayurvedic management with a base of black box design. Methodology: 60 diagnosed psoriasis patients seeking Ayurveda treatment in a tertiary Ayurveda hospital located in Hassan of southern India were selected as samples for the study. QOL assessment of patients was recorded with the help of DLQI questionnaire before and undergoing Ayurvedic management for 30 days. The results were statistically analyzed on 30<sup>th</sup> day. Results: In the domains of DLQI questionnaire (Symptoms and feelings, Daily activities, Leisure, work and school, Personal relationship, Treatment) the subjects were found to have statistically significant improvement in overall QOL with the P value <0.001. Conclusion: From this study it was concluded that there is a significant improvement in the quality of life of psoriasis patients who undergoes any Ayurvedic intervention / management for 30 days.

**Key Words:** Ayurveda; Psoriasis; Kitibha; Quality of Life; Kushta; Chikitsa

#### INTRODUCTION

The word "psoriasis" comes from Greek words meaning "the state of having the itch". Psoriasis is a persistent disease interposes by pause and reduction<sup>1</sup>. Psoriasis involves the largest, most visible organ of the body, the skin. It is a papulo - squamous disorder of the skin characterized by sharply defined erythematous - squamous lesions. It can occur at any age, but highest incidence is noted in the age group of 20-39 years with an equal male to female preponderance. There are two tip of onset, one in third decades and one in sixth decades<sup>2</sup>. For many people, psoriasis does modify their quality of life<sup>3</sup>. Psoriasis can be emotionally, physically, and cosmetically debilitating. According to a study conducted by the National Psoriasis Foundation in 2008 (n=426), 71% of those surveyed reported that psoriasis has a significant impact on their everyday life; 62% and 59%, respectively, reported significant itching and irritation; 41% considered their psoriasis to be disfiguring; 53% stated that psoriasis significantly impacts their emotional well-being; 63% expressed that psoriasis affects their feelings of self-consciousness in a negative manner; and 58% expressed feelings of awkwardness. When asked how they believe the public observes them, 61% responded that they believe their psoriasis leads others to stare; 56% agree that others believe their psoriasis is contagious; 42% say their psoriasis leads others to feel painful around them; and 22% agree that psoriasis negatively impacts the quality of care they receive at salons, swimming pools, gyms, and restaurants (National Psoriasis Foundation, 2008h)<sup>4</sup>. It is universal in occurrence and the incidence rate is 1-3% of the population worldwide<sup>5</sup>. In India overall rate of psoriasis is 1%<sup>6</sup>.

People diagnosed with psoriasis find ways to cope with the negative impact it has on their everyday lives. In a 2001 survey, patients were asked to rate how often they utilize certain coping strategies when people negatively react to their psoriasis. The most common coping mechanism used by psoriasis patients is to cover the skin lesions. The second and third most common coping strategies involved educating individuals about psoriasis and informing the public that psoriasis is not contagious. A less common coping mechanism involved telling themselves is that most people do not understand their problem. Less frequent coping mechanisms reported include "telling oneself that others can be insensitive (59%) or telling themselves that some people are just plain mean (42%)". Although people with psoriasis commonly employ coping strategies, none of the above strategies was associated with a better quality of life (Rapp, Cottrell, & Leary, 2001). It can occur at any age, but highest incidence is noted in the age group of 20-39 years with an equal male to female prevalence.

Quality of Life is defined as a composite measure of physical, mental and social well-being as perceived by each individual or by group of individuals that is to say, happiness, satisfaction and fulfilment as it is experienced in such life concerns as health, wedding, family work, financial situation, learning opportunities, self esteem, creativity belongingness and truth in others<sup>7</sup>. Quality of life is a major concern for people diagnosed with psoriasis. Not only do the lesions themselves cause disability and pain, but the negative stigmatization from the general public can lead to many psychosocial disorders, including hopelessness and anxiety. Psoriasis is a chronic disease with no predictable cure. Therefore, those diagnosed with psoriasis live with the negative impact of

this devastating disease daily. Patients of skin diseases always experience physical, emotional & socio-economic embarrassment in the society. Normal 10 - 15% of the general practitioner's work is with skin disorders (Roxburgh's Common Skin Diseases) & it is the second commonest cause of loss of work<sup>8</sup>.

Ayurveda being the oldest system of medicine in the world adapts a unique holistic approach to the science of life, health and cure. It aims at physical, mental and social well being which is clearly depicted in its definition – „...Prasanna Atma Indriya Mana Swastha Ityabhidheeyate'. Ayurvedic literature has provided substantial information regarding the diagnosis and management of skin disorders. All the skin diseases in Ayurveda have been discussed under the broad heading of "Kushta". The word Kushta (skin diseases) means "to destroy", "to scrap out" or "to deform"<sup>9</sup>. "Kushta" is defined as "Kushnati Iti Kushtam", meaning that which destroys and deranges the skin of the body<sup>10</sup>. Amarakosha defines Kushta as a disease which causes destruction of the skin and other parts of the body subsequently. All Kushta manifest due to involvement of Tridosha, but their presentation depends on the predominance of particular Dosha<sup>11</sup>. Seven causative factors for Kushta have been mentioned viz. Tila Taila(seasam oil), Kulattha(horse gram), Valmika (ant hill), Linga Roga, Mahisha Dugdha (bufallow milk), Mathitha Dadhi(churned curd) and Vrutaka(brinjal)<sup>12</sup>. Kushta is further divided into Mahakushta and Kshudra Kushta<sup>13</sup>. Kitibha Kushta is one among Kshudra Kushta, with predominance of Vata and Kapha Dosha with Kina Khara Sparsha Parusha (rough on touch, dry) as its symptoms<sup>14</sup>.

Over the years, the number of patients opting for Ayurvedic treatment has also increased dramatically due to less adverse effects and lasting curative methods<sup>15</sup>. This has paved way for tremendous course of Ayurvedic interventions which has been increasingly made use of in treating acute and chronic skin disorders successfully. The present study will be useful for ensuring quality of life in psoriasis patients undergoing Ayurvedic management and will open new ground in searching of Ayurvedic modalities of treatment in psychosocial aspects.

## MATERIALS AND METHODS

### Source of data

60 Kitibha (Psoriasis) patients visited in OPD and IPD of S.D.M. College of Ayurveda & Hospital, Hassan - Karnataka, India.

## OBSERVATIONS AND RESULTS ON THE DOMAINS OF DLQI

Table 1: Results of Wilcoxon signed rank test on Itchy, sore, painful, stinging symptoms

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P value	Remarks
	N	MR	SR	N	MR	SR				
Itchy, sore painful, stinging	3	21.5	64.50	41	22.57	925.5	16	-5.653	<0.001	S

Table 2: Results of Wilcoxon signed rank test on embarrassed or self-conscious symptoms

Parameters	Negative Ranks			Positive Ranks			Ties	Z value	P Value	Remarks
	N	MR	SR	N	MR	SR				
Embarrassed or self-conscious	3	27.33	82.00	41	22.15	908.00	16	-5.286	<0.001	S

Table 3: Results of Wilcoxon signed rank test on Interfered shopping, home or garden activities

Parameters	Negative Ranks			Positive Ranks			Ties	Z value	P Value	Remarks
	N	MR	SR	N	MR	SR				
Interfered shopping, home or garden	0	0	0.00	34	17.50	595.00	26	-5.684	<0.001	S

## Study design

Hospital based prospective observation survey study with pre and post-test design in a single group of 60 psoriasis patients before and undergoing any Ayurvedic intervention was conducted in a tertiary Ayurveda medical college attached to a teaching hospital located in Southern India. These patients were assessed for QOL by DLQI questionnaire during whichever Ayurvedic management for a period of 30 days. The outcome was assessed statistically after 30 days.

The study was approved and supervised by Institutional Ethical Committee (IEC no: SDM/IEC/42/2015-2016)

## Assessment tool

Dermatology life quality index (DLQI) was used as a tool in the study. The symptoms was analysed under six headings of DLQI questionnaire as follows:

Questions of DLQI	Sections
Question 1 and 2	Symptoms and feelings
Question 3 and 4	Daily activities
Question 5 and 6	Leisure
Question 7	Work and school
Question 8 and 9	Personal relationships
Question 10	Treatment

The final assessment was done based on total score observed during treatment of 30 days.

## Method of Collection of Data

Patients having psoriasis above 16 years of age of both the sex was selected to assess their quality of life (QOL) using DLQI questionnaire.

## Inclusion criteria

- Patients with diagnosed psoriasis above 16 years of age of either sex.
- Patients who are willing to participate in the study.

## Exclusion criteria

- Major and complicated medical emergencies.
- Other than inclusion criteria are excluded from the study.

Table 4: Results of Wilcoxon signed rank test on clothing activities

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P value	Remarks
	N	MR	SR	N	MR	SR				
Clothes	3	19.00	57.00	38	21.16	804.00	19	-5.336	<0.001	S

Table 5: Results of Wilcoxon signed rank test on social or leisure activities

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P value	Remarks
	N	MR	SR	N	MR	SR				
Social or leisure activities	3	24.33	73.00	35	19.09	668.00	22	-4.787	<0.001	S

Table 6: Results of Wilcoxon signed rank test on sports

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P Value	Remarks
	N	MR	SR	N	MR	SR				
Sport	0	0.00	0.00	15	8.00	120.0	45	-3.771	<0.001	S

Table 7: Results of Wilcoxon signed rank test on working or studying

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P value	Remarks
	N	MR	SR	N	MR	SR				
YES working or studying	17	9.00	153.00	00	0.00	0.00	43	-4.123	<0.001	S
NO working or studying	35	18	630	00	0.00	0.00	25	-5.341	<0.001	S

Table 8: Results of Wilcoxon signed rank test on Partner or close relatives

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P Value	Remarks
	N	MR	SR	N	MR	SR				
Partner or close relatives	1	18.50	18.50	35	18.50	647.50	24	-5.667	<0.001	S

Table 9: Results of Wilcoxon signed rank test on Sexual difficulties

Parameters	Negative Ranks			Positive Ranks			Ties	Z value	P value	Remarks
	N	MR	SR	N	MR	SR				
Sexual difficulties	0	0.00	0.00	23	12.00	246.00	37	-4.796	<0.000	S

Table 10: Results of Wilcoxon signed rank test on Treatment

Parameters	Negative Ranks			Positive Ranks			Ties	Z Value	P value	Remarks
	N	MR	SR	N	MR	SR				
Treatment	1	20.00	20.00	40	21.03	841	19	-5.975	<0.001	S

Table 11: Effect on DLQI's total score

	Negative Ranks			Positive Ranks			Ties	Z Value	P Value	Remarks
	N	MR	SR	N	MR	SR				
Total score	47	24	1128.00	0	0	0	13	-6.397	0.000	S

### Symptoms and feelings

There was statistically significant difference in Itchy, sore, painful and stinging complaints between BT and DT in 41 patients, mean rank 22.57, sum of ranks 925.5 and no change in 16 patients (Z value = - 5.653, P<0.001) (Table 1).

There was statistically significant difference in embarrassed or self conscious between BT and DT in 41 patients, mean rank 22.15, sum of ranks 908 and no change in 16 patients (Z = - 5.286, P<0.001) (Table 2).

### Daily activities

There was statistically significant difference in shopping home or gardening between BT and DT in 34 patients, mean rank 17.50, sum of ranks 595.00 and no change in 26 patients (Z = - 5.684, P<0.001) (Table 3).

There was statistically significant difference in Clothing activities between BT and DT in 38 patients, mean rank 21.16, sum of ranks 804.00 and no change in 19 patients (Z = 5.336, P<0.001) (Table 4).

### Leisure

There was statistically significant difference in social or leisure activities between BT and DT in 35 patients, mean rank 19.09, sum of ranks 668.00 and no change in 22 patients (Z = -4.787, P<0.001) (Table 5).

There was statistically significant difference in activities of sports between BT and DT in 15 patients, mean rank 8.00, sum of ranks 120.00 and no change in 45 patients (Z = -3.771, P<0.001) (Table 6).

## Work and school

There was statistically significant difference in working or studying between BT and DT in 43 patients those who marked yes and 25 patients who marked no, mean rank 0.00, sum of ranks 0.00 and no change in 45 patients ( $Z = -4.123, -5.341, P < 0.001$ ) (Table 7).

## Effect of Ayurvedic management on psoriasis patients on their Personal relationships

There was statistically significant difference in Partner and close relatives between BT and DT in 35 patients, mean rank 18.50, sum of ranks 647.50 and no change in 24 patients ( $Z = -5.667, P < 0.001$ ) (Table 8).

There was statistically significant difference in Sexual difficulties between BT and DT in 23 patients, mean rank 12.00, sum of ranks 246 and no change in 37 patients ( $Z = -4.796, P < 0.001$ ) (Table 9).

## Effect of Ayurvedic management on psoriasis patients on their Treatment

There was statistically significant difference in Treatment between BT and DT in 40 patients, mean rank 21.03, sum of ranks 841 and no change in 19 patients ( $Z = -5.975, P < 0.001$ ) (Table 10).

## DISCUSSION

### On DLQI's total score observed during the study

Following values were observed on the total score of DLQI. As per observations done during the study out of 60 psoriasis patients who was suffering from impaired QOL, 47 patients had improvement in their QOL while 13 remained unchanged and none of them reported decreased QOL who had undergone Ayurvedic management of 30 days (Table 11).

### On each domain

#### Symptoms and feelings

##### 1. The symptoms and feelings of itchy, sore, painful or stinging of psoriatic skin

The symptoms like itching sore pain or stinging skin may be painful, probably that may be the reason for the impairment in quality of life. Patients feel itching, sore or painful condition due to increased level of vitiated vata and kapha dosa. The different Ayurvedic therapies help to remove the excessively vitiated dosha and do the balancing of doshas which result in reduction of symptoms. Different procedures has different mode of actions e.g. vamana procedure may expel the kapha and cause reduction in the complaint of itching, lepa with soothing drugs like chandana may help in reducing the burning sensation, dusting of powders like that of Arjuna twak may help in reducing the watery discharge etc. In this study it was seen that during the treatment the symptoms were reduced and there was a significant improvement in Quality of life.

##### 2. The feeling of embarrassment or self consciousness because of psoriatic skin

According to a study by Rapp et al. (1999) "psoriasis imparts a negative impact on Health Related Quality of life (HRQL) similar to the impact of other major medical and psychiatric conditions". Now-a-days due to the influence of media many people become more conscious about their skin which leads even small problems of the skin when visible may lead to social stigma. Thus any kind of unwanted mark or wound leads to the reason of embracement.

This makes the patients to be more self conscious in public. During the treatment the symptoms were reduced and there was a significant improvement in Quality of life.

#### Daily activities

##### 3. The interference with shopping or looking after home or garden

This survey reported that psoriasis disrupts activities of daily living like going shopping or looking after home or garden. If psoriasis lesions are on body parts that are commonly visible people become hesitant to go to public places, difficult to mingle with people etc. The lesions that have constant watery discharge may also cause discomfort and ruin the dress of the patient thus making it difficult for them to go out to do work. Skin is the protective layer of the body, when there is any lesion on the skin that area becomes very sensitive and gets easily inflamed. Environmental factors like sunlight, dust, dry winds etc may cause severe reactions on this sensitive skin thus making it difficult for the patients to go out or work in the gardens.

In the study during the treatment the symptoms were found to have reduced and there was a significant improvement in Quality of life. When the symptoms got reduced and after knowing about psoriasis that it is not contagious, people become aware and their stress got reduced.

##### 4. The influence of the clothes in wearing

Clothes have become a part of man's character were many people are judged by the clothes they wear. Reference about their skin condition by others, covering their lesions, and avoiding contact with people are significantly associated with negative impact on life. Therefore the patients of skin disorders try to wear clothes that cover the lesion. This may sometimes worsen the condition if it increases the sweating etc.

Patients with psoriasis have very itchy, cracked dry plaques or areas of skin. Because the skin is dry, cracked, and oozing at times, clothes will stick to the open areas; further contribute to the bleeding when it is removed. The best solution for such problems is wearing of soft cotton clothes that are loose. This may facilitate air circulation and also prevent further injury.

In this study it was noted that during the Ayurvedic treatment when the symptoms came down it also reviled them of stress of clothing.

#### Leisure

##### 5. The affected social or leisure activities through psoriatic skin

Individuals with psoriasis commonly engage in coping strategies to avoid unwanted and unpleasant social consequences. However, most of these strategies fail to improve patient's QoL. It was seen in some studies that talking to others regarding the non-contagious nature of psoriasis lessens the negative impact on the QoL and thereby reduces social discomfort. But it is not always easy to talk to everybody about the nature of lesion and the stigma against skin problems start when they notice the lesion. During the treatment the symptoms were reduced and there was a significant improvement in the social aspect of the Quality of life.

##### 6. The difficulties faced during any sport

We all know that exercise is good for us, and if you suffer from psoriasis, taking parts in sports can be especially worthwhile, but patients with psoriasis also have the problem of increasing discomfort after sweating. Another negative impact of outdoor sports is the exposure to dust and intense sunrays. These can cause the inflammation to flare up. During the treatment the symptoms were reduced which helped the patients to involve more in the sports, thus improving their mental status and quality of life. For the patients of psoriasis light exercises like yoga can be advised

inside the house which helps to reduce the stress and maintain fitness.

#### Work and school

##### 7. The prevention by psoriatic skin faced as a problem from working or studying

Psoriasis can pose many challenges in the workplace. The visible nature of this autoimmune disease makes it difficult to conceal from co-workers, who may become curious or even mistakenly think the skin condition is contagious. Psoriasis symptoms may be so severe that doing your job becomes difficult or you need to stay home. The exaggeration of symptoms in stress can also result in the difficulty to cope with hard work. Students are more prone to the mental effects of psoriasis because their classmates and peers may not always understand about their condition. The peer pressure may again cause stress and further increase in symptoms. This can also have a negative impact on the academic output of the students. Gaikwad et al. in a study of 43 psoriasis patients found that their disease affected the social functioning, led to decreased work efficiency and subjective distress at work in more than half of the subjects. During treating with Ayurveda and educated them about the psoriasis that it is not contagious, there were significant improvement in quality of life.

#### Personal relationship

##### 8. The amount of problems created with the partner or friends

Psoriasis is a condition that can affect relationship in a number of ways. Genital psoriasis can have a significant impact on sex and intimacy. Psoriasis affects the whole family, both emotionally and sometimes financially. Gaikwad et al. Patients opined that psoriasis has affected their interpersonal relationship resulting in stress in home environment. There can also be the feeling of inferiority developed in the patient when he or she is with his spouse. This may reflect as staying away from family get together, reunions, weddings and other similar social functions with his/her partner. This can result in their relationship turning bitter. Same is the case of friends. Even though the friend or spouse may not have any problem, the patient himself stays away from them. During the treatment in this study the symptoms were reduced and there was a significant improvement in Quality of life.

##### 9. The difficulties caused by psoriatic skin during sexual activities

Psoriasis can cause significant sexual impairment leading to a decreased quality of life (Gupta & Gupta in 1997) their sexual activity declined after psoriasis. The appearance of skin problem had an impact on their sexual life of the patients and their partners, so this may be the reason for the impairment of Quality of life before the treatment. Both men and may suffer from psoriasis patches on their genitals, not only making them self-conscious about their appearance, but also potentially making sex physically uncomfortable. The mental conflicts that the person has to go through when he/she is suffering from a skin condition may also impair the sexual function. The libido is something that highly depends on the mental status of the person. The stress is a factor that can lead to both the increase in skin symptoms and decrease in libido.

#### Treatment

##### 10. The depth of delayed treatment by the psoriatic skin

The treatment modalities in Ayurveda include both Shaman and Shodhana types of Chikitsa. It was seen in this study that most of the patients had a little inconvenience and some even had a lot. No one opined that the treatment is not troublesome. This may be because of reasons like; the Shodhana procedures are very

difficult to follow, the Shaman Oushdhi like Kashaya are not palatable, the overall treatment schedule is very time consuming etc. The time consuming nature of the treatments is considered more inconvenient because most of the people have a busy schedule. Kushtha is difficult to cure therefore it is called 'Duschikitsya'. It needs repeated body purifications and bloodletting to reduce the accumulation of Dosha as per the classical treatment schedule. The shaman Oushadhi has a milder action than the Shodhana. Thus in this study on the whole it was seen that undergoing Ayurveda treatment helped to reduce symptoms and thus improve the quality of life.

#### CONCLUSION

As per the observations done on the outcomes during the study, out of 60 psoriasis patients who was suffering from impaired QOL, 47 patients had improvement in their QOL while 13 remained unchanged and none of them reported decrease in their QOL who had undergone Ayurvedic management of 30 days.

#### Limitations of the study

The conclusion was based on the outcome of any Ayurveda intervention on limited samples of 60 psoriasis patients who were not selected on the basis of gold standard method. The effectiveness of any Ayurveda intervention which got significant result in the present study might be because of its black box design and also the present study was an outcome observed during the study period of 30 days.

#### ACKNOWLEDGMENT

Authors are highly grateful to all 60 subjects who participated in the study. Authors thank the research committee of SDM college of Ayurveda, Hassan which provided necessary guidelines and facilities for conducting the research work. The constant support of Principal, staff and scholars of Swasthavritta, SDM College of Ayurveda, Hassan are acknowledged with credit.

#### ABBREVIATIONS

QOL – Quality of Life  
DLQI - Dermatological Quality of life Index  
OPD – Out patient department  
IPD – In patient department  
BT – Before treatment  
DT – During treatment

#### REFERENCES

1. Behl PN, Srivastava G, Aggarwal. Practice of Dermatology. 10th edition. New Delhi: CBS Publishers and Distributors; 2005. p. 252.
2. Kerdel F, Jimenez-Acosta F. 8. Dermatology Just the Facts. McGraw-Hill Professional; 2003;1 p.1
3. Bamber, Petrina Nicole, "Quality of life for patients with psoriasis : more than skin deep" (2009).Master's and Doctoral Projects. Paper 272.
4. Bamber, Petrina Nicole, "Quality of life for patients with psoriasis : more than skin deep" (2009).Master's and Doctoral Projects. Paper 273.
5. Sehgal V. Textbook of Clinical Dermatology. 5th edition. New Delhi: Jaypee Brothers Medical Publishers; 2011. p. 135.
6. Dogra S, Yadav S. Psoriasis in India:Prevalance and Pattern. Indian J Dermatol Venereol Leprol 2010;76.595–601.
7. Park K. Concept of health and disease. Preventive and social medicine. 21st edition. Jabalpur: Banarsidas Bhanot; 2011. p16

8. Thappa DM. Textbook of Dermatology Venereology and Leprology. 2<sup>nd</sup> edi. New Delhi:Elsevier,a devision of Reed Elsevier India private limited.;2005. P1.
9. Ashoka A. An observational study on the role of mithyahaaravihara in certain skin diseases. RGUHS.2006:15
10. Shukla V, Tripathi R (eds.) Charaka samhita. 1<sup>st</sup> ed. Agnivesha. kushta Nidana. In: Delhi: chaukhambha sanskrit pratishthan; 2006. p513
11. Shukla V, Tripathi R, editors. Charaka Samhita, 1st edition, Agnivesha,Chikitsa Sthana, Kustha Chikitsa, (chapter 7) verse 31, In: Delhi: Chaukhamba Sanskrit Pratishthan, 2010; Vol.I. p.185.
12. Tripathi H. Vangasena Samhitha.1st edition. Varanasi: Chaukhambha Sanskrit Series Office; 2009. p.326.
13. Shukla Vidyadhar, Tripathi Ravidatta. Charaka Samhitha.Reprint edi. Delhi: Chaukhambha Sanskrit Pratishthan; 2010. Vol2 p182.
14. Shukla V, Tripathi R, editors. Charaka Samhita, 1st edition Agnivesha, Chikitsa Sthana, Kustha Chikitsa, (chapter 7) verse 31, In:, Delhi:Chaukhamba Sanskrit Pratishthan, 2010; Vol.I. p.184.
15. Al-Hoqail I. Impairment of quality of life among adults with skin disease in central Saudi King Fahad Medical City, Saudi Arabia. J Family Community Med 2009; 16:105–9.

**Cite this article as:**

Siddharth *et al.* Role of Ayurveda in improving the quality of life (QOL) of psoriasis patients: A survey study. *Int. J. Res. Ayurveda Pharm.* 2018;9(6):41-46 <http://dx.doi.org/10.7897/2277-4343.096170>

Source of support: Nil, Conflict of interest: None Declared

Disclaimer: IJRAP is solely owned by Moksha Publishing House - A non-profit publishing house, dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJRAP cannot accept any responsibility or liability for the site content and articles published. The views expressed in articles by our contributing authors are not necessarily those of IJRAP editor or editorial board members.