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The Adjunctive Impact of Counselling in Management of Dermatological Patients: Tertiary Hospital Experience

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Abstract

Background

The skin as one of the largest organs in the body mirrors our emotion. Exhaustive inquiry of a dermatology patients' life experience might help to provide insight and understanding to coping and the need for psychological counselling which might help in long term remission of such dermatoses.

Methods and Materials

This interventional study was carried out on newly diagnosed dermatology subjects from September 2012 to February 2014. Within this period, subjects who met the inclusion criteria for the study were recruited into the study by the researchers. The diagnoses of the skin deramtoses were made and some confirmed by histology were necessary.

Each of the subjects was administered a self-evaluation structured questionnaire after thorough explanation and consent to participate in the study was obtained. Their psychological morbidity was noted and thirty (30) minutes to Sixty (60) minutes counselling session conducted for each subject.

Results

A total number of 2,340 dermatological patients were seen out of which 930 were newly diagnosed dermatological cases. Two hundred and forty six (246) who met the inclusion criteria for the study were recruited. These comprised 155 (63.0%) females and 91 (37.0%) males. Their age ranges from 15years to 70years with a mean age and standard deviation of 31.6years ± 11.2 respectively. Subjects who were students with higher educational degree suffered more psychological morbidity or distress. However, there was statistically significant reduction on the impact of their psychological morbidity after few sessions of counselling which comprised psychoanalytical psychotherapy and cognitive behavioural therapy.

In conclusion, there was a significant psychological morbidity among dermatological patients. Imperatively, a well articulated and integrated psychotherapy and cognitive behavioural therapy would be of immense benefits to dermatology patients apart from administration and usage of drugs.

Keywords: skin dermatoses, psychological morbidity, impact of counselling

1. Introduction

People with dermatological illnesses are left feeling less important as individuals. They also tend to be highly sensitive to social significance of their actions and appearances, anticipating rejection by others with some degree of embarrassment and shame (Kellett & Gilbert, 2001). It is therefore not surprising that majority or significant number of such dermatological patients due to their appearance alteration perception do have psychological morbidity. However, little attention has been paid to them and ways of attending to these integral components of the state of their disease has also been neglected (Fortune et al., 2000; Koblenzer, 1983); the link between dermatological and psychological problems has long been established in most literatures (Koblenzer, 1983; Papadopoulos, 1999a).

The skin is a complex system that is made up of glands, blood vessels, nerves and muscle elements, many of which are controlled by the autonomic nervous system and can be influenced by psychological stimuli

(Papadopoulos, 1999b). These have the capacity to cause autonomic arousal and are capable of affecting the skin and the development of various skin disorders (Van Moffaert, 1992).

Psychological factors have long been associated with the onset, maintenance and even exacerbation of dermatological disorders (Cole, Roth, & Sachs, 1998; Koo, 1995; Buljan & Situm, 2005). Just like other parts of the world, common skin dermatoses in our environment includes, dermatitis, acne vulgaris, Lichen planus, viral and fungi infection (Folks & Kinney, 1992; Alebiosu, 2002).

This study would aim at identifying most skin dermatoses with high psychological issues and the level of impact of counselling in addressing such dermatoses. The knowledge of such would help not only to effectively manage such patient but to reemphasize a multidisciplinary collaboration between the dermatologist, clinical psychologist and the psychiatrist.

2. Materials and Method

The study was carried out in the dermatology unit of the University of Abuja Teaching hospital between September 2012 and February 2014. Dermatology referrals come from within the hospital, private and government owned hospitals in Abuja and sister states viz. Kogi; Niger, Nasarawa, Plateau, Benue and Kaduna. Study subjects were recruited from newly diagnosed dermatological patients through a simple random method bearing in mind the following criteria:

Subjects must be/have:

i) Fifteen years and above

ii) Minimum of primary school education

iii) Ability to understand and write English language and;

iv) Consent to participate in the study

Exclusion criteria where:

i) Patients less than fifteen years

ii) Nil formal education

iii) Comorbid conditions with high psychological impact like Diabetes, retroviral disease, cancers, Haemoglobinopathies

iv) Those who declined to participate in the study.

Appropriate sociodermographic data was obtained with diagnosis of the skin dermatoses made and histological confirmation obtained were necessary. Furthermore, they were assessed with self-evaluation questionnaire on State—Trait Anxiety Index (STAI) score which were filled and, total scores noted during their first visit. The State—Trait Anxiety Index (STAI) score contains 20 self- descriptive statements to which subjects responded by noting the intensity of their reaction on a 4—point scale. The instruction is to report the present feelings, the state of anxiety is revealed.

Scoring: separate scores ranging from 0-80, are calculated for the two scales. A—State and A—trait. The scale produces a measure of anxiety more independent of depression (Spielberger, Gorrsuch, & Lushere, 1987).

Further sample questionings to evaluate subjects who had pervasive mood or loss of interest in daily activities were identified and regarded as being depressed.

Each subject underwent 30-60 minutes counselling session which includes psychoanalytical psychotherapy and cognitive behavioural therapy concerning not only their dermatological problem but also the identifiable psychological morbidity. Subjects that did not come back after the first counselling session served as the control group. For each clinic visit the process was repeated and scores generated were keyed into and analyzed with IBM SPSS version 19.0. Statistical measures used include frequencies, analysis of variances, independent t-test, paired t-test for subjects that came for second and third visit, and correlations of the counselling sessions of the various visit to determine the impact of the psychological intervention.

3. Results

During the study period a total of two hundred and forty six (246) 26.2% who met the inclusion criteria were enrolled from the nine hundred and thirty six new dermatological patients seen. These comprised one hundred and fifty five (155) (63.0%) females and ninety-one (91) (37.0%) males. The age ranges from 15 years to 70 years with a mean age of 31.6 years and standard deviation (SD) ± 11.2 respectively. The female to male ratio was 1:7:1 and dermatological disorder with high psychological morbidity includes pilosebacous disorders

(among which are inflammatory and non inflammatory acne vulgaris) 51 (20.7%), Eczematous dermatitis (with atopic dermatitis topping the group) 50 (20.3%), Papulosquamous disorders (Lichen planus & Psoriasis) 30 (12.2%), chronic urticaria 18 (7.3%), Viral infection (facial & genital warts) 15 (6.1%), connective tissue disease (e.g. discoid lupus erythematosis) 7 (2.8%) respectively.

Subjects who were students with higher educational degree suffered more psychological symptoms ranging from anxiety, depression social phobia respectively.

Table 1. Mean score of the different skin dermatoses and their frequencies

Various Skin Dermatoses	**Mean (SD)**	**Frequency**	**%**
Eczematous Dermatitis	51.8 (7.6)	50	20.3
Hair Disorder	55.2 (11.3)	6	2.4
Palpulosquamous Disorder	50.6 (6.3)	30	12.2
Viral Infection	49.3 (6.7)	15	6.1
Pigmentary Disorder	47.0 (3.5)	4	1.6
Pilosebaceous	49.0 (6.6)	51	20.7
Chronic Urticaria	52.8 (8.7)	18	7.3
Adverse Drug Eruptions	51.6 (4.8)	5	2.0
Connective Tissue Disorder	49.4 (5.0)	7	2.8
Fungi Infections	49.0 (12.4)	6	2.4
Genodermatoses	50.0 (0)	2	0.8
Benign Neoplastic Skin Disorder	52.0 (6.2)	5	2.0
Bullous Disorder	47.3 (10.2)	3	1.2
Generalized Pruritis	47.9 (9.3)	7	2.8
Follicular Hyperkeratosis	48.0 (9.1)	4	1.6
Eruptive Vellus Hair Disorder	54.0 (5.6)	3	1.2
Lymphedema	52.0 (7.2)	3	1.2
Others	49.3 (6.9)	15	6.1
Hansen's Disease	54.5 (9.7)	4	1.6
Combination of two skin diseases	47.7 (4.1)	6	2.4
Papular Pruritic Urticaria	47.0 (9.9)	2	0.8
	50.4 (7.3)	246	100

Table 1 above shows the frequency distribution of the different skin dermatoses in the study and their respective mean score and standard deviation.

Table 2 below depicts the socio demographic factors and their mean scores at the first visit, second visit and the third visit respectively. Independent t test was conducted to ascertain if there were reduction in the mean scores of males after the first and second visit separately, female separately, also married and singles separately and other socio demographic .There was statistically significant reduction in their mean after the first visit and second visit with t test $p<0.05$, except for those with primary education where there was no statistically significant reduction in their mean score after the second visit with $p>0.05$.

Analysis of variance ANOVA was conducted to test if there were statistically significant differences in the different groups. There were no statistically significant differences in the mean score among the different age groups, educational status, marital status and gender at the three visits with exception of the second visit where there was statistically significant difference in the mean score of males and female.

Table 2. Socio-demographic factors and their mean score at first visit, second visit and third visit respectively

Variables	1st visit mean score (n=246)			2nd Visit mean Score (n=173)			3rd Visit mean score (n=63)			t-test for 1st visit and second visit mean score			t-test for 2nd visit and 3rd visit mean score		
	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	t	df	p	t	df	p
Sex:															
Male	91	50.3	(6.9)	56	43.7	(6.7)	24	38.5	(6.4)	5.69	145	**0.0001***	3.22	78	**0.0019***
Female	155	50.5	(7.5)	117	41.3	(6.3)	39	35.0	(7.8)	10.72	270	**0.0001***	5.08	154	**0.0001***
F, P	**0.017**	**0.898**		**5.17**	**0.024***		**3.62**	**0.06**							
Age Group:															
15-34years	165	50.3	(7.6)	117	42.0	(6.2)	43	36.3	(7.9)	9.74	280	**0.0001****	4.78	158	**0.0001****
35-54years	69	50.4	(6.6)	46	41.6	(7.4)	16	35.4	(6.9)	6.67	113	**0.0001****	5.05	60	**0.0001****
≥ 55years	12	52.0	(6.7)	10	46.0	(4.5)	4	40.3	(3.3)	2.71	60	**0.0088***	2.28	12	**0.042***
F, P	**0.296**	**0.744**		**1.98**	**0.141**		**0.67**	**0.52**							
Educational Status:															
Primary	17	53.2	(7.4)	11	41.2	(5.4)	4	38.5	(4.4)	4.63	26	**0.0001****	0.89	13	**0.389**
Secondary	77	51.3	(7.2)	57	43.0	(6.3)	16	34.8	(8.2)	6.95	132	**0.0001****	4.30	71	**0.0001****
Tertiary	152	49.7	(7.2)	105	41.4	(6.7)	43	36.7	(7.4)	9.01	255	**0.0001****	3.99	146	**0.0001****
F, P	**2.598**	**0.077**		**0.75**	**0.476**		**0.58**	**0.56**							
Marital Status:															
Single	137	50.5	(7.4)	94	41.9	(6.3)	35	35.5	(7.9)	9.21	229	**0.0001****	4.78	127	**0.0001****
Married	109	50.3	(6.8)	79	42.4	(6.8)	28	37.4	(6.8)	7.86	186	**0.0001****	3.34	105	**0.0011***
F, P	**0.029**	**0.866**		**0.21**	**0.645**		**1.06**	**0.31**							

SD -Standard deviation

P values marked **- Highly statistically significant

* - Statistically significant

F is the Analysis of Variance (ANOVA) value & df is the degree of freedom

It can be deduced from table 2 above that 61.5%males, 75.5%females, 68.8%singles, 72.5%married persons, 64.7%subjects with primary education, 74.0% subjects with secondary education and 69.1% subjects with tertiary education came back for the second session respectively; while 42.9%males, 33.3%females, 37.2%singles, 35.4%married persons, 36.4%subjects with primary education, 28.1% subjects with secondary education and 40.9% subjects with tertiary education came back for the third session respectively. There were statistically significant reductions per each counselling visit with better clinical improvement on the dermatology as summarized on table 2 above.

Table 3. The mean score of dermatological diseases with high Psychological distress at the first visit by their gender

Skin disorder	Male		Female				
	Mean N	(SD)	Mean N	(SD)	T test	df	p
Pilosebacous disorder	49.8 (6.8)	20	48.6 (6.6)	31	0.627	49	0.534
Eczematous dermatitis	50.2 (6.9)	10	52.3 (7.7)	40	0.786	48	0.436
Papulosquamous disorder	50.5 (5.6)	13	50.7 (6.9)	17	0.085	28	0.933
Chronic urticaria	53.1 (8.4)	7	52.6 (9.2)	11	0.116	16	0.909
Viral infection	48.6 (6.8)	8	50.1 (7.1)	7	0.418	13	0.683
Hair disorder	58.5 (14.8)	2	53.5(11.4)	4	0.468	4	0.664
Fungi infection	59.0 (12.7)	2	44.0(10.2)	4	1.592	4	0.187

The table 3 above shows the mean score on STAI of subjects with high psychological distress at their first visit by gender. Mean score of female subjects diagnosed of Pilosebacous disorder, Chronic urticaria, and hair disorder were lower than that of their men counterpart. Seven of the subjects diagnosed of connective tissue disorder and generalized pruritis each were all females whereas the three with Eruptive hair disorder were all male subjects. However, the mean differences of male and female subject with different skin disorder were not statistically significant at the first visit.

Table 4. Correlation and t test for subjects that came back for the second counselling session

Skin Dermatoses	Frequency	First visit mean score	Second visit mean score	Correlation (r)		Paired t-test	
		Mean (SD)	Mean (SD)	r	p value	t	p
Pilosebacous	42	49.2 (6.6)	41.4 (5.0)	0.744	0.0001**	11.5	0.0001**
Eczematous Dermatitis	40	52.3 (7.1)	42.3 (6.7)	0.531	0.0001**	9.46	0.0001**
Papulosquamous disorder	22	49.9 (6.4)	42.1 (8.4)	0.631	0.002*	5.54	0.0001**
Chronic urticaria	14	53.6 (8.5)	42.9 (6.2)	0.401	0.151	4.82	0.0001**
Viral Infection	8	50.8 (6.6)	43.3 (5.8)	0.545	0.163	3.58	0.009*
Connective Tissue disorder	5	50.8 (5.2)	42.6 (6.2)	0.643	0.242	3.73	0.02*
Hair disorder	4	59.8 (11.3)	46.3 (10.3)	0.980	0.02*	11.3	0.001**
Fungi disorder	2	46.0 (17.0)	32.5 (3.5)	1.000	0.0001**	1.42	0.390
Generalized pruritus	4	49.3 (11.0)	41.3 (3.1)	0.977	0.023*	2.9	0.07

SD: Standard deviation

P value marked*: Statistically significant

Out of the 246 subjects who were enrolled into the study only one hundred and seventy three (173) 70.3% came for a second counselling session and sixty three (63) 36.4% of the 173 showed up for a third counselling session. There were statistically significant reductions in the mean score per each counselling session with better clinical improvement on the dermatological disorder. Although there was reduction in the mean score of subjects diagnosed with fungi disorder and generalized pruritus, (t test value of 1.42 and 2.9 respectively) was not statistically significant at $p > 0.05$. Furthermore, high correlations per each counselling session in Pilosebacous, eczematous dermatitis, papulosquamous disorder, hair disorder, fungi disorder and generalized pruritus were observed and they were statistically significant as shown in table 4 above.

Table 5. Mean scores of subjects with high psychological morbidity at different counselling sessions

Skin Dermatoses	Mean Score on 1st visit	Mean Score on 2nd visit	Mean Score on 3rd visit	Correlation of 1st & 2nd Visit		Correlation of 2nd & 3rdVisit		Paired t test (1st & 2nd Visit)		Paired t test (2nd & 3rd Visit)	
	Mean (SD)	Mean (SD)	Mean (SD)	r	p	r	p	t	p	t	p
Pilosebacous	52.2 (8.9)	43.8 (6.5)	38.0 (7.9)	0.841	0.0001*	0.900	0.0001*	6.36	0.0001*	5.96	0.0001*
Eczematous Dermatitis	56.6 (7.4)	44.9 (6.6)	30.0 (14.1)	0.664	0.051	0.942	0.0001*	5.95	0.0001*	9.29	0.0001*
Papulosquamous disorder	49.1 (6.4)	41.2 (8.8)	35.7 (8.8)	0.579	0.062	0.868	0.0001*	3.59	0.005*	3.99	0.003*
Chronic urticaria	55.9 (7.7)	44.6 (6.5)	35.9 (6.8)	0.228	0.527	0.704	0.023*	4.03	0.003*	5.35	0.0001*
Viral Infection	52.0 (8.9)	44.0 (5.9)	30.8 (7.9)	0.585	0.445	-0.34	0.656	2.21	0.115	2.334	0.102
Connective Tissue disorder	48.0 (0.1)	41.5 (9.2)	29.0 (12.7)	-		1.000	0.0001*	1.00	0.500	5.00	0.126
Hair disorder	60.0 (14.1)	45.0 (14.1)	30.0 (14.1)	-	-	-	-	-	-	-	-

SD: Standard deviation

P value Marked*: Statistically significant

Figure 1 below and table 5 above illustrates the mean scores of subjects with high psychological morbidity at their different counselling sessions. Sixty three (63) of the subjects deemed it fit to come back for another counselling session after the second visit. Nonetheless, there were high positive correlations between each counselling session. It can be observed from table 5 above that there were better positive statistically significant correlations between the second and the third counselling session except for viral infection with a negative correlation. Most of the skin dermatoses had statistically significant reduction in their mean scores after each counselling session.

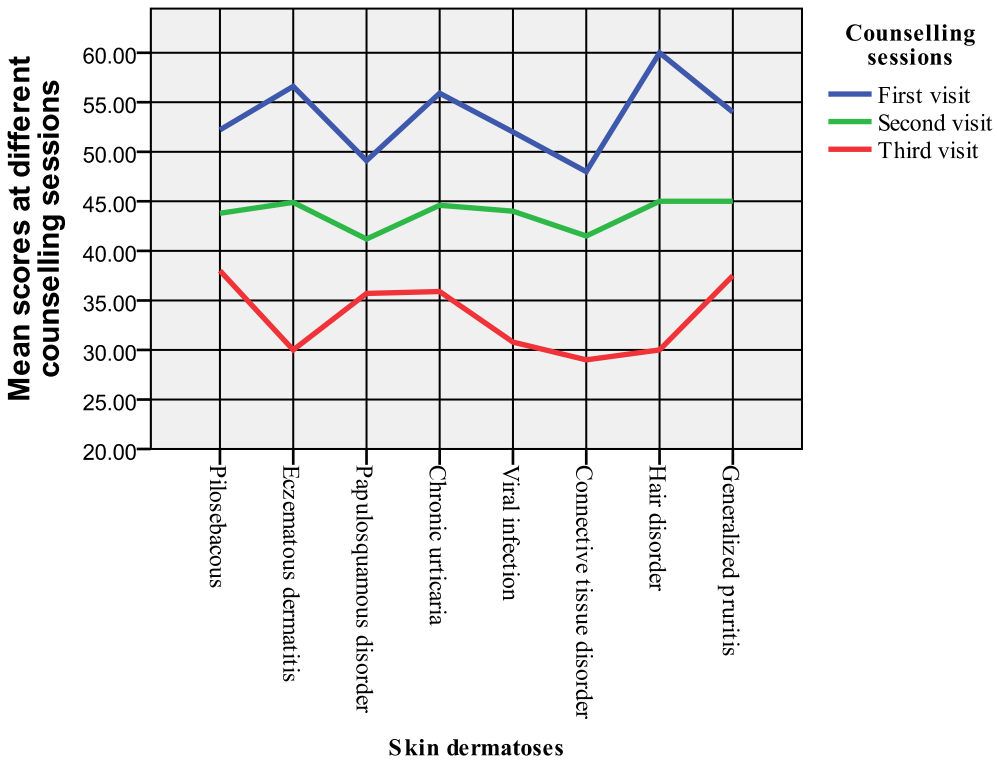

Figure 1. Mean scores of subjects with high psychological morbidity at different counselling sessions

Table 6. Comparison of Mean scores and socio demographic characteristics of both control and subject with high psychological distress at the first counselling session

Variable	Control			Subject					
	N	Mean	(SD)	N	Mean	(SD)	t	df	p
SEX									
Male	35	48.7	(7.5)	56	51.4	(6.2)	1.863	89	**0.065**
Female	38	49.4	(7.2)	117	50.8	(7.7)	0.989	153	**0.324**
MARITAL STATUS									
Single	43	48.8	(7.7)	94	51.3	7.5	1.764	135	**0.081**
Married	30	49.4	(6.7)	79	50.0	6.9	0.409	107	**0.634**
EDUCATIONAL STATUS									
Primary	6	54.0	(6.0)	11	52.7	(8.3)	0.337	15	**0.241**
Secondary	20	49.9	(8.5)	57	51.8	(6.7)	1.016	75	**0.513**
Tertiary	47	48.0	(6.7)	105	50.4	(7.4)	1.901	150	**0.059**
AGE GROUP									
15-34years	48	48.8	(7.6)	117	51.0	(7.6)	1.689	163	**0.093**
35-54years	23	49.4	(6.9)	46	50.9	(6.5)	0.885	67	**0.379**
≥ 55years	2	52.0	(9.9)	10	52.0	(6.7)	0.000	10	**1.000**
SKIN DERMATOSES									
Eczematous disorder	10	50.1	(9.5)	40	52.3	(7.1)	0.818	48	**0.418**
Papulosquamous disorder	8	52.6	(2.8)	22	49.9	(6.4)	1.144	28	**0.262**
Viral Infection	7	47.7	(7.0)	8	50.8	(6.6)	0.883	13	**0.394**
Pilosebacous disorder	9	48.1	(7.8)	42	49.2	(6.6)	0.449	49	**0.655**
Chronic urticaria	4	50.3	(10.0)	14	53.6	(8.5)	0.661	16	**0.518**
Fungi infection	4	50.5	(12.4)	2	46.0	(17.0)	0.379	4	**0.724**
Overall Mean at first visit	73	49.0	(7.3)	173	51.0	(7.2)	2.002	244	**0.046***

SD: Standard deviation

P value marked*: Statistically significant

In Table 6 above , the seventy three (73) 29.7% that did not come back for another counselling session were used as the control group, to determine if there were any significant difference in those who came back and those who did not. It was observed that the overall mean of the 173 who came back for the second counselling session was higher than the mean of the 73 who did not come back and it was statistically significant and $p<0.05$.

4. Discussion

Majority of dermatological diseases do not threaten life rather, they have negative impact on the quality of life in a good number of patients, psychological and social distractions are observed. Many patients facing social isolation adapt to this situation, however in some patients, serious adaptation disorder may arise in addition to these psychological problems such as depression, anxiety and social phobia may develop (Koblenzer, 1983).

Literature has documented psychological intervention for a number of cutanoeus conditions such as vitiligo, psoriasis, acne vulgaris and, atopic dermatitis, which have been suggested to be as effective for each of these types of disorder as classical medical therapeutic process (Van Moffaert, 1992; Higgins & Du Viver, 1994). In our study we found positive correlation between psychological intervention (psychoanalytical psychotherapy and cognitive behavioural therapy) and dermatological disorders such as acne vulgaris, atopic dermatitis, lichen planus, psoriasis, chronic urticaria and viral infections which includes facial/genital warts. This finding is corroborated by previous observations by Van Moffaert et al. (1992) and Cole et al. (1998). Patients that had the above skin disorders and were subjected to sessions of counselling at different times of their clinic/follow up

visits had statistically significant reduction on their psychological distress as evidenced by the reduction in their mean scores in this study.

Ukonu et al in their study had shown a high psychiatric distress such as depression, anxiety among sufferers of atopic dermatitis and acne vulgaris in our environment (Ukonu & Ezechukwu, 2012), and this is further buttressed by Papadopoulos et al (Papadoulos & Walker, 2003). Hence, Ohya et al. suggested that a proper assessment of a patient's experience beyond the skin disorders helps to strengthen the Doctor-patient relationship which has been shown to be an integral part of adherence to the management of atopic dermatitis (Ohya et al., 2001).

It can be frustrating to live with chronic recurring and relapsing skin disorders for which we do not have a permanent cure. Even when there are multiple effective treatment means available, the clinical outcome relies heavily on the patient's level of compliance (Lavd, Webb, & Thompson, 2012). We observed a differential compliance among female subjects towards psychological interventions as compared to their male counterpart.

This study showed that a higher percentage of the females came back for the second counselling session but during the third counselling session the percentage of males that complied were higher than that of their female counterpart. Previous studies have shown that there is a greater propensity among the male dermatology patients to develop secondary psychiatric complications (Folks & Kinney, 1992; Shellow et al., 1994; Robinson, Rumsey, & Partridge, 1996). It therefore posits that greater attention should be paid to male dermatological patients with a view of encouraging them and proper psychological evaluation and intervention (Robinson, Rumsey, & Partridge, 1996; Seng & Nee, 1997).

Educational degree helped in compliance to follow up visit among subjects who needed psychological intervention. However subjects with primary education were not too eager in showing up at the third session as there was no statistically significant difference in the mean score at the second and third session. This study noted that younger age group and single subjects were more of a compelling factor driving subjects to come for their clinic/counselling session.

Furthermore, positive correlation existed between dermatological conditions such as acne vulgaris, lichen planus, atopic dermatitis and the need for psychological intervention was observed among the subjects. This could probably be attributed to the fact that dermatological patients with such conditions suffer various degrees of anxiety and depression (Owoeye et al., 2007; Pullmood & Rajagopalan, 1996; Gupta, 2003).

In conclusion, the relationship between skin dermatoses and psychological conditions are least understood. Our study showed that there is disparity in the means of those who came back for counselling session and those who did not come back. In order to manage these patients effectively, there is need for holistic approach both of the dermatological and psychological disorder a patient presents since these would help not only to improve clinic compliance but will reduce drug dependence and increase the capacity of the patient to cope with their difficulties and to become more emotionally balanced.

We assert that most skin dermatoses will have better outcome if proper psychological counselling becomes an integral part of their management.

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