NEEDS ASSESSMENT OF PSYCHOCUTANEOUS MEDICINE AMONGST DERMATOLOGY PRACTITIONERS IN SOUTH AFRICA

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A research report submitted to the Department of Internal Medicine; Division of Dermatology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Medicine in Dermatology

This research report is presented in a "submissible" format of a paper

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FACULTY OF HEALTH SCIENCES

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DECLARATION

Title: Needs assessments of psychocutaneous medicine amongst dermatology practitioners in South Africa (SA)

Contribution Statement:

This is to certify that the contents of this research report are the original research work of Kaisha Mokwatlo. The candidate conceptualised, designed the study protocol and prepared the writing-original manuscript draft under the supervision of the supervisors.

I Kaisha Mokwatlo, declare that this Research Report is my own, unaided work. It is being submitted for the degree of Masters in Dermatology to the Faculty of Health Sciences, Department of Internal Medicine; Division of Dermatology at the University of the Witwatersrand, Johannesburg. It has not been submitted before any degree or examination at any other university.

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Mr Sphamandla Josias Nkambule, MMedSc, assisted and guided the candidate with running the formal statistical data analysis, preparing the manuscript writing-review and editing for publication with *The International Journal Of Dermatology*. Dr Mvulane, Dr Friedlander and Dr Nkehli critically reviewed the final draft versions of the manuscript. As the candidate's supervisors, we have approved this research report for submission.

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DEDICATION

I dedicate this Research Report to my parents,

Makgotheng and Louisa Mokwatlo

And in loving memory of my grandmother

Mary Mokwatlo

“ *Thank you for passing on the baton Barungwa…*”

ABBREVIATIONS

BC	Before Christ
CME	Continuing Medical Education
CMSA	Colleges of Medicine of South Africa
DRASA	Dermatology Association of South Africa
DSSA	Dermatological Society of South Africa
FDA	Food and Drug Administration
MCA	Medical Control Agency
MDD	Major Depressive Disorder
OCD	Obsessive Compulsive Behaviour
SNRI	Selective Norepinephrine Reuptake Inhibitor
SA	South Africa
SSRI	Selective Serotonin Reuptake Inhibitors
STROBE	Strengthening the Reporting of Observational Studies in Epidemiology
TCA	Tricyclics Antidepressant
TTM	Trichotillomania
USA	United States of America
WHO	World Health Organization
WSDA	Washington State Dermatology Association

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CHAPTER 1: SUBMISSIBLE ARTICLE

International Journal of Dermatology

Title: Needs assessment of psychocutaneous medicine amongst dermatology practitioners in South Africa

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ABSTRACT

Background

Studies conducted in high-income countries reported that one in three patients seen at dermatology facilities suffers from an underlying psychological problem. However, the current literature is limited regarding the prevalence in low- and middle income countries or the awareness of psychocutaneous medicine in these settings. This study aims to assess the level of comfort in assessing patients with psychocutaneous conditions, prescribing psychotropic drugs, training needs in managing psychodermatological conditions, and need for psychodermatology clinics amongst dermatology practitioners in South Africa (SA).

Methods

A cross-sectional survey was conducted amongst dermatology practitioners in SA from 14 January to 14 March 2021. Members of the Dermatological Society of South Africa (DSSA) and Dermatology Registrar Association of South Africa (DRASA) were asked to complete a needs assessment survey questionnaire linked via e-mail.

Results

A total of 248 surveys were distributed among dermatology practitioners, and 48 were completed. Only four per cent (n=2) reported being very comfortable prescribing antipsychotic medication to patients. Moreover, a high proportion (72,9%; n=35) of the respondents reported not having received sufficient training in identifying patients with psychological problems. Just over half of the practitioners, 52.1 per cent (n=25), expressed interest in attending educational seminars in psychodermatology.

Conclusion

We found a low level of comfort in prescribing psychotropic drugs, and almost two-thirds of the practitioners reported a need for psychocutaneous medicine teaching during registrar training. We recommend that further studies be done in African countries.

Keywords:

Psychocutaneous medicine, psychodermatology, dermatology practitioner, South Africa

ARTICLE

Introduction

Psychodermatology refers to a subspecialty of dermatology that focuses on the relationship between the mind and the skin.[1] Koo and Lee classified psychocutaneous conditions into four classes: patients with primary dermatological disorders with secondary psychiatric symptoms, patients with primary psychiatric disorders with secondary dermatological manifestation, patients with psychophysiological disorders, and miscellaneous (Table 5) [2]

Psychodermatology is not a new science; the links between the mind and the skin have long been recognised (e.g. historical accounts in the Bible, the works of Shakespeare, and the period of Buddha) The earliest reference dates back to 1200 BC.[1, 3]

It is estimated that a third of patients seen in dermatology clinics have an underlying psychological problem, and most refuse a referral to the psychiatric department.[4] However, the current literature is limited regarding the prevalence in developing countries. Disorders such as vitiligo, acne, alopecia areata, and psoriasis are strongly associated with psychological conditions. [5] (Table 5) Literature suggests an increasing suicide risk in patients with psoriasis, atopic dermatitis, and acne,[6] further highlighting the need to investigate the nexus between dermatological and psychiatric conditions. Factors associated with increased suicidal behaviours in dermatology patients include a co-existing psychiatric illness, chronic and poorly controlled skin conditions (e.g. psoriasis), and significant stressful life events (e.g. bereavement).[7] Furthermore, significant pruritus and chronic facial lesions or facial scarring (especially with a younger age of onset) have also been found to occur with symptoms of suicide ideation.[7] According to Gupta *et al.* suicidal behaviour can also be associated with pharmacological interventions such as dermatological medication (e.g. isotretinoin, tumour necrosis factor-alpha inhibitors, interleukin-17 inhibitors) for the treatment of skin disorders.[7] Despite this evidence, there continues to be limited training for dermatology practitioners to improve their knowledge or capacity to manage patients with psychodermatological issues.[4, 5, 8-17]

<u>How comfortable are dermatologists in assessing and prescribing psychotropic drugs to psychodermatology patients?</u>

There is a growing interest in psychodermatology in the global the north .[4, 5, 8-17] Some of the studies demonstrated that less than 50% of dermatology practitioners reported being very comfortable in managing patients with psychocutaneous disorders, ranging from about five per cent (5.05%) in Eastern Europe to 42.2% in Washington State (United States (US)).[4, 5, 8-17]

Psychotropic drugs are broad, and have many classifications and subclassifications. In the psychodermatology context, the three commonly used psychotropic drugs include: antidepressants; antipsychotics; and mood stabilizers.[18] Most psychodermatological disorders manifests with depression, anxiety and psychosis [2], therefore the drugs commonly used to treat these conditions are: antidepressants (most of which have anxiolytic properties e.g. selective serotonin reuptake inhibitors (SSRI); and tricyclic antidepressants (TCA)); and antipsychotics. Gee *et al* also found that an overwhelmingly high number of the dermatologists practising in Boston, Massachusetts (US) had never initiated psychotropic drugs i.e. 75% per cent of their respondents reported that they never initiated anxiolytics; 69% never initiated antipsychotics; 72 % never initiated antidepressants; and 95% never initiated mood stabilizers.[9] Moreover, none of the dermatologists in their study were highly comfortable with initiating mood stabilizers drugs to their patients. [9]

The need for dermatologists to learn psychodermatology

Psychodermatology forms a small section in most dermatology textbooks[19-21], and it was not examined in the last 5 years of the dermatology fellowship written examinations in SA as seen on the Colleges of Medicine of South Africa (CMSA) exam website[22]. Poot *et al* recommended that dermatologists attend congresses/conferences that are primarily devoted to psychodermatology to enhance their relational skills and improve knowledge to confidently manage patients suffering from psychocutaneous problems.[23] However, there are no globally standardised guidelines that determine the scope of teaching for practising psychodermatology by dermatologists.[23,24] This suggests that there is a great need to incorporate psychodermatology training during the residency/registrar programs. To this end, in an opinion piece, Gould contended that the goal is not to turn aspiring dermatologists into psychiatrists but to instil the necessary skills to diagnose and manage patients presenting symptoms of psychological disorders.[25] A systematic review of most studies that assessed 'knowledge, awareness and need of psychodermatology amongst dermatologist'[4, 5, 9-17] showed a varying view regarding attending continuing medical education (CME) in psychodermatology, with over half (50-78%) of respondents showing an interest to attend CMEs, most of which were dermatologists from Asia[10, 11, 26]; and less than a quarter (2-17%) of the respondents demonstrated no interest, and the majority were from North America (15% in Wisconsin and 17% in Washington State)[4, 8]

The need for psychodermatology clinics

The pitfall of the development of medical specialities and subspecialties is that the practitioners in each specialty tend to lose the comprehensive view of their patients and mainly focus on the system

relevant to their specialty.[25] Therefore, liaison clinics have been proposed as a solution and can provide an alternative avenue for teaching subjects such as psychodermatology.[24]

The perceived stigma around utilizing psychiatric facilities often results in dermatology patients refusing referrals to such facilities, hence the need for liaison psychodermatology clinics.[26] Such interventions have been thought to reduce the stigma of mental health among psychodermatology patients in the United Kingdom, as seen through their increased uptake of psychiatric treatment.[27] As such, patient treatment experience is enhanced through collaboration.

In SA, psychodermatology is not a recognised subspecialty, and there are no designated psychodermatology services or psychodermatology clinics designed to offer psychodermatological support. However, there are only a few South African studies to date which have assessed the impact of skin diseases on quality of life.[28-30] To this end, this study aims to assess the awareness and training requirements of psychodermatology in SA. According to our knowledge, this is the first study that assesses the need for psychocutaneous medicine amongst dermatology practitioners in SA.

Objectives

1. To determine the level of comfort in assessing patients with psychodermatological disorders amongst dermatology practitioners in SA.
2. To determine the level of comfort in prescribing psychotropic drugs amongst dermatology practitioners in SA.
3. To assess the need for additional psychodermatology training or continuing medical education (CME).
4. To probe the need for psychodermatology clinics in SA

Methods

Study design

The study adopted a cross-sectional survey design to establish dermatologists' awareness, and level of comfort in practising psychocutaneous medicine in SA. The study is reported according to the set of recommendations and guidelines for reporting observational studies “Strengthening the Reporting of Observational Studies in Epidemiology (STROBE)” Statement Appendix F

Sample

The study included specialist dermatologists, registrars and medical officers, and excluded medical interns rotating through the dermatology department. At least 27 respondents were needed to make the data statistically significant.

Survey instrument

The needs assessment survey, comprising sixteen close-ended questions, of which, three questions assessed the demographics, five Yes/No questions and one follow up question was used. This validated survey was adapted from the ‘Needs assessment survey of psychocutaneous medicine’ by Kawahara *et al*.[4] The permission to use the survey was granted by Dr Ladan Mostaghimi, who was the Director of the Psychocutaneous Clinic at the University of Wisconsin–Madison [4].
Minor modifications of a few terms in the survey were made to adapt it to suit respondents in the South African context.

Data collection

A survey questionnaire was sent via e-mail to members of the Dermatological Society of South Africa (DSSA), and members of the Dermatology Registrar Association of South Africa (DRASA) who were in private practice, government health services and academic settings. DSSA and DRASA are professional organisations that promote the science and practice of dermatology through education.
A mailing list of specialist dermatologists and dermatological trainees was obtained from the relevant organisations. The survey was distributed online from 14 January to 14 March 2021. It was administered through an open-access SurveyMonkey format to 248 registered dermatologists and trainees practising in South Africa.

Data analysis

Statistical analysis was carried out using the statistical package for the Social Sciences (SPSS) version 20.0 for Windows. For categorical data, we calculated frequencies and percentages. Codes were done to have a measure to explain what a high or low level of comfort is. For objective 1 (to determine level of comfort in assessing patients with Psychodermatological disorders) and 2 (to determine the level of comfort in prescribing psychotropic drugs amongst dermatology practitioners). Questions 1-3 spoke to the objective 1 and were combined to get a score. They were all 'yes' and 'no' answers, with 'no' given a score of 1 and 'yes' scored as 2. Therefore, the maximum score was 6, implying a high comfort level, and a score of 3 a low level, and 4 intermediate level. A similar method was applied to questions 4-7, which spoke to objective 2, with a maximum & minimum score of 11 and 4 respectively. See Appendix B. The Spearman's Rho statistic was used to measure the strength of association between the length of years of experience in dermatology, the comfort level in prescribing psychotropic drugs and assessing patients with psychodermatology disorders.

Ethical approval

The study protocol and survey methodologies used in this study were registered and approved by the Faculty of Health Sciences, University of the Witwatersrand (Wits), Human Research Ethics Committee (Medical) for ethical clearance (Certificate number M200263, Date 17/09/2020. Ethical Review Board). See Appendix A

Results

Of the 248 dermatology practitioners to whom the questionnaires were sent, 48 (19,0%) responded. The demographic characteristics and length of dermatology practice experience among the survey respondents (n = 48) are shown in Table 2. Regarding the survey respondent work designations, a majority of 62,5 per cent of the respondents were specialist dermatologists (n = 30), with the remaining 31,3 per cent (n = 15) and 6,3 per cent (n = 3) being registrars and medical officers, respectively. The respondents had varying levels of dermatology experience, with a third of the survey respondents (33,3 per cent, n = 16), having less than four years of experience, and almost half (41,7 per cent, n = 20), with more than ten years of experience.

How comfortable are South African dermatology practitioners in assessing patients with psychocutaneous conditions

Just below a half (47,9%, n =23) reported to be highly comfortable in assessing patients with psychodermatological disorders, and around quarter (25,0% (n = 12) & 27,0% (n = 13)), reported low and average comfort respectively, see Figure 1. There was a significant association with the length of years of practice experience in dermatology and increased comfort i.e. the respondents with longer practice years in dermatology were found to be more confident (r = 0,46 P < 0,005)

How comfortable are South African dermatology practitioners in prescribing psychotropic drugs.

The survey demonstrates a varying comfort level amongst practitioners regarding prescribing psychotropic drugs. One quarter (12) of the respondents prescribe psychotropic drugs to patients if required to do so. A higher proportion, 20 (41,7%), reported that they do not prescribe them at all, meanwhile sixteen (33,3%) survey respondents reported that they do not prescribe psychotropic medications to their patients because they are not trained to use them, see Table 3. Overall about two-thirds (n = 30) of the respondents reported a low comfort in prescribing psychotropic drugs, see Figure . There was a strong positive correlation between comfort in prescribing psychotropic drugs and the length of years of experience in dermatology (r = 0, 26 P <0,077).

Figure 2 illustrates how comfortable the survey respondents' were in prescribing antipsychotics and antidepressants to their patients. A large number of the survey respondents, thirty-nine (81,3%), were not comfortable prescribing antipsychotics, while a few of them, two (4,2 %), were somewhat comfortable prescribing antipsychotics to their patients. However, their level of discomfort in

prescribing antidepressants was less than that of prescribing antipsychotics, with twenty-nine (60,4) indicating discomfort.

The majority of survey respondents, 41 (85,4%), believed that some medication prescribed for dermatological treatment might have psychiatric side effects Table 3.

Interest in additional training in psychodermatology

Approximately two-thirds (62,5%) of survey respondents considered formal psychodermatology education during the registrar training programme to be very important, whereas only one (2,1%) deemed it unimportant (Figure 3- A). In addition, just over half (52,1%) of the survey respondents stated that they would be interested in participating in continuing medical education (CME) programs on psychodermatology by attending educational seminars (Figure 3-B)

The respondents were asked about the number of the patients that they treat that will benefit from a psychocutaneous assessment, and asked to rank the benefits on a scale of 1-100% with options of 10, 30, 70 and 100%. Eight (16,7%) of the respondents noted less than ten per cent, 15 (31,3%) chose 30 per cent, ten (20,8%) stated 70 per cent, and only five (10,4%) stated that 100 per cent of their patients might benefit from a psychocutaneous assessment in their practise (Table 4).

Need for psychodermatology clinic

Finally, in terms of the preferred clinical provision model, very few practitioners, three (6,3%), reported that they would prefer to have a psychiatrist available during clinic times for immediate consults. Other options were to indicate the preferred frequency of having a psychiatrist in the clinic. Eleven (22,9%) respondents would prefer a once-a-week clinic and formal courses for registrars, and 25 (52,1%) would prefer a once-a-month clinic and formal courses for registrars. Only nine (18,8%) of the surveyed respondents would prefer only formal courses for registrars (Table 4).

Discussion

There have been several reports on this subject; however, it appears that this is the first study in SA to assess the needs of dermatology practitioners for further knowledge and training in psychocutaneous medicine.

How comfortable are South African dermatology practitioners in assessing patients with psychocutaneous conditions

Emotional problems/disorders encompass: depression, anxiety, irritability, apathy, and emotionalism (disturbance of normal control of emotions).[31] It has been reported that the co-existence of any emotional disorder with any physical illness compromises the quality of life and worsens treatment outcomes.[31] Over two thirds (72,9%) of the participants in the study indicated that they were not adequately trained to identify patients with emotional problems. This finding was slightly higher than that reported in Wisconsin (US) by Kawahara *et al*, 60,0%.[3] This highlights a deficit in the skill to properly assess patients requiring psychological support. It was found that 39,6 % of the respondents do not routinely inquire about the emotional/social impact of skin problems in their patients' lives. This is despite three South African publications which highlighted the impact of skin diseases on quality of life (e.g. acne[29], seborrheic dermatitis[30], psoriasis and other dermatological conditions [28]). Perhaps the lack of routine psychological well-being checks may be related to the patient load in dermatology clinics due to a shortage of dermatologist in SA [32]. Mosam & Todd reported a significant shortage of dermatologists in SA, a ratio of about 1: 500 000.[32]

How comfortable are South African dermatology practitioners in prescribing psychotropic drugs.

Most of the psychiatric disorders that are encountered in psychodermatology are; depression, anxiety and psychosis[2], which are treated with antidepressants (some have anxiolytic properties), and antipsychotics respectively. Therefore, only these two major psychotropic drugs were assessed in this survey. The 'Comfort in prescribing' in this context implied the 'ease' that the practitioner felt in prescribing the drugs. It is possible that one can have reasonable knowledge about a particular drug, and have legal grounds to prescribe it, yet not feel at ease to prescribe that drug. The majority of the respondents reported that they were not comfortable with prescribing antipsychotics and antidepressants, 81.3% and 60.4%, respectively. These observations were similar to those found in Wisconsin (83,0% and 58,0%).[3] It is noteworthy that in both studies, antipsychotics were the psychotropic drugs that dermatology practitioners were less comfortable with prescribing than antidepressants. This may also explain why all (100%) dermatologists reported that they would refer patients with delusional disorders to a psychodermatology clinic. Antipsychotics are not popularly

prescribed by practitioners other than psychiatrists and neurologists in general. The perceived greater adverse event profile of antipsychotics may be responsible for this finding e.g. extrapyramidal side effects, adverse cutaneous reactions (Stevens-Johnson syndrome /toxic epidermal necrolysis). Less than half (41,7%) of respondents indicated that they don't prescribe psychotropic drugs irrespectively, even when they know that their patients need them. This may perhaps imply that some dermatologists may share the common view that prescribing antipsychotic drugs is only limited to the psychiatrist,[33] and this may have led to reduced investment in dermatologists learning more about them. Despite that, only a small number of dermatologists (6,3%) said that they would like a psychiatrist available during their clinic times for immediate consults. Interestingly, Malkani *et al* found that a third of pharmacists were also not 'comfortable' in dispensing psychotropic drugs that were prescribed by dermatologists, and 19,0% of them refused to issue the psychotropic drugs. This is because the majority (70,0%) of pharmacists in their study believed that only psychiatrists should prescribe psychotropics, which also highlighted the need for promoting awareness of psychodermatology to pharmacists as they are the patient's last stop after consultation.[33] Eighty-five per cent of the respondents believed that the medication prescribed for dermatological treatment might have psychiatric side effects. Despite this, only 19,5 % inquire about the side effects very often. This figure was comparable with that found in Wisconsin at 26,0%. The downside to this is that patients may not readily volunteer to talk about their mental health problems, and dermatologists in some cases do not always pursue further actions even when mental health problems are found during consultation.[34]

Interest in additional training in psychodermatology

About two thirds (62,5%) of the respondents highlighted the importance of incorporating psychodermatology training during the registrar program. These findings were in contrast to those found in Wisconsin of 34,0%. However, despite this identified need for training in psychodermatology, Poot *et al* pointed out the paucity of guidelines that determine the scope of teaching and the limitations thereof for practising psychodermatology by dermatologists. [22] Currently psychodermatology training is not incorporated during registar/residency training in SA and to our knowledge there are no additional platforms that offer psychodermatology training in SA. In the UK, there are organizations/platforms that offer psychodermatology training e.g. 'The mind and skin course at the University of Hertfordshire, and the European Society for Dermatology and Psychiatry to name a few.[35] About half (52,1%) of the respondents expressed interest in attending psychodermatology seminars. This was similar to studies done in Chile (50,0%),[17] Eastern Europe (61,0%),[13]Turkey (51.1 %) specialists and 60,0% trainees),[19] Kazakhstan (68,0%), [16], with Albania and the Middle East reporting higher needs, 75.6% and 78,0% respectively, [8, 15] which shows that some practitioners

recognise the importance of equipping themselves with such knowledge to manage the patients holistically. In contrast, studies done in the US showed the perceived need for learning about psychodermatology during training to be lower, 39,0% and 34,0% in Washington and Wisconsin, respectively.[3, 7]

Need for psychodermatology clinic

Almost half (52,1%) of the participants reported that they will like to have a monthly psychodermatology clinic and formal training, while the dermatologists in Wisconsin had a divided need; 32,0% said they wished for a monthly clinic, while 30,0% wanted a weekly clinic.' In the recent literature, Patel and Jafferany compiled an extensive, informative analysis of the components and benefits of 23 psychodermatology clinics across the world. They reported a significant improvement in patient outcomes and cost-effectiveness of such liaison clinics.[29, 30] These outcomes emphasise the benefit of psychodermatology clinics/services.

A low response rate limited this study, therefore, there may be a non-responder bias, and the findings may not be an accurate representation of the views of the majority of South African dermatologists.

Conclusion

Similar to prior studies, it was discovered that most dermatologists in the sample felt that they are inadequately trained to manage patients with psychodermatological issues. There was an interest in attending psychodermatology CME and a small role for psychodermatology/liaison clinics. We recommend more follow-up studies to be done to determine the spectrum of psychocutaneous diagnoses, especially in African countries

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Manuscript Tables

Table 1: Psychocutaneous medicine needs assessment tool/ questionnaire

Survey Questions	**Answer Options**
1. Designation	Dermatology Specialist/ Medical Officer/ Registrar
2. Years of practice in dermatology	< 4yrs/ 4 - 10 years/ > 10 years
3. Years of practice as a doctor	< 5 years/ 5 - 15 years/ > 15 years
4. Do you routinely inquire about the emotional/social impact of skin problems on your patient's life?	Yes/ No
5. Do you believe you have received sufficient training on how to identify patients with emotional problems?	Yes/ No
6. Do you believe you have received sufficient training on how to refer patients with emotional problems?	Yes/ No
7. How comfortable do you feel about prescribing antipsychotic medication to your patients?	Very Comfortable/ Somewhat Comfortable / Not Comfortable
8. How comfortable do you feel about prescribing antidepressants to your patients?	Very Comfortable/ Somewhat Comfortable/ Not Comfortable

Survey Questions	Answer Options
9. Do you prescribe psychotropic medication to your patients if you decide that they need them?	Yes/ No / No, I am not
10. Do you believe some medication prescribed for dermatological treatment may have psychiatric effects?	Yes/ No
11. If your response to question 10 is yes, how often do you assess your patients for psychiatric side effects?	Very often/ Sometimes/ Rarely
12. How important is psychodermatology training during registrar training?	Very Important / Somewhat Important / Not Important
13. How interested are you in attending educational seminars in psychodermatology?	Very Interested / Somewhat Interested / Not Interested
14. What percentage of your patients do you think may benefit from a psychodermatology assessment?	<10% / 30% / 50% / 70% / 100%

Survey Questions	Answer Options
15. If you have a possibility to have a psychodermatology clinic at your facility, which options would you choose?	I would like to have a psychiatrist available during clinic times for immediate consults / I would like a once a week clinic and formal courses for registrars / I would like a once a month clinic and formal courses for registrars / I would prefer only formal courses for registrars

Survey Questions	Answer Options
16. What type of patients would you like to be able to refer to a psychodermatology clinic	Delusional patients/ Patients with emotional consequences of skin disease/ Patients with non-compliance with their dermatology treatment/ Patients resistant to conventional dermatology treat/ Patients with chronic skin problems

Table 2: Demographic characteristics and length of dermatology practice among the survey respondents in SA (*N = 48*)

Characteristics	**Number of respondents (%)**
All	48 (100)
Designation:	
Specialist dermatologist	30 (62.5)
Registrar	15 (31.3)
Medical officer	3 (6.3)
Years of practice in dermatology:	
< 4 yrs	16 (33.3)
4-10 yrs	12 (25.0)
>10 yrs	20 (41.7)
Years of practice as a doctor:	
<5 yrs	1 (2.1)
5-10 yrs	22 (45.8)
>15 yrs	25 (52.1)

P-level = $P < 0.05$.

Table 3: Comfort level in assessing patients with psychocutaneous conditions (N = 48).

Survey Questions	Number of respondents (%)
1. Do you routinely inquire about the emotional/social impact of skin problems on your patient's life?	
Yes	29 (60.4)
No	19 (39.6)
2. Do you believe you have received sufficient training about how to identify emotional problems?	
Yes	13 (27.1)
No	35 (72.9)
3. Do you believe you have received sufficient training about how to refer patients with emotional problems?	
Yes	25 (52.1)
No	23 (47.9)
4. Do you prescribe psychotropic medication to your patients if you decide that they need them?	
Yes	12 (25.0)
No	20 (41.7)
No, I am not trained to use these medication	16 (33.3)
5. Do you believe that the medication prescribed for dermatological treatment may have psychiatric side effects?	
Yes	41 (85.4)
No	7 (14.6)
6. If your response to the above qusetion is yes, how often do you assess your patient for the psychiatric side effects?	

Survey Questions	Number of respondents (%)
Very often	8 (19.5)
Sometimes	20 (48.8)
Rarely	13 (31.7)

P-level = $P < 0.05$

Table 4: The need for psychodermatology clinics in SA amongst the surveyed dermatology practitioners in SA. (N = 48).

Survey Questions	**Number of respondents (%)**
1. What percentage of your patients may benefit from a psychocutaneous assessment?	
<10 %	8 (16.7)
30 %	15 (31.3)
50 %	10 (20.8)
70%	10 (20.8)
100 %	5 (10.4)
2. If you have the possibility to have a psychodermatology clinic available at your facility, which options below would you choose?	
I would like to have a *psychiatrist available* during clinic times for immediate consults	3 (6.3)
I would like a once a week clinic and formal courses for registars	11 (22.9)
I would like a once a month clinic and formal courses for registars	25 (52.1)
I would prefer only formal courses for registars	9 (18.8)
3. What type of patients would you like to be able to refer to a psychodermatology clinic	
Delusional patients	33 (100.0)
Patients with emotional consequences of skin diseases	0 (0.0)
Patients with non-compliance with their psychodermatology treatment	0 (0.0)
Patients resistant to conventional dermatology treatment	0 (0.0)
Patients with chronic skin problems	0 (0)

Table 5: Classification of Psychodermatological Disorders

Classification of Psychodermatological Disorders
Dermatological disorders with psychiatric symptoms
Alopecia areata
Albinism
Chronic eczema
Generalized psoriasis
Icthyosiform syndrome
Neurofibromatosis
Rhinophyma
Vitiligo
Psychophysiological disorders
Acne excoriee
Aphthosis
Atopic dermatitis
Herpes simplex virus
Hyperhidrosis
Pruritus
Seborrheic dermatitis
Urticaria
Psychiatric disorders with dermatologic symptoms
Delusions of parasitosis
Dermatitis artefecta
Eating disorders
Neurotic excoriations
Obsessive-compulsive-Disorders
Psychogenic pruritus
Miscellaneous
Cutaneous sensory syndromes
Chronic itching scalp
Glossodynia
Vulvodynia
Psychogenic purpura syndrome
Pseudopsychodermatologic disease
Suicide in dermatology patients

Manuscript Figures

Figure 1

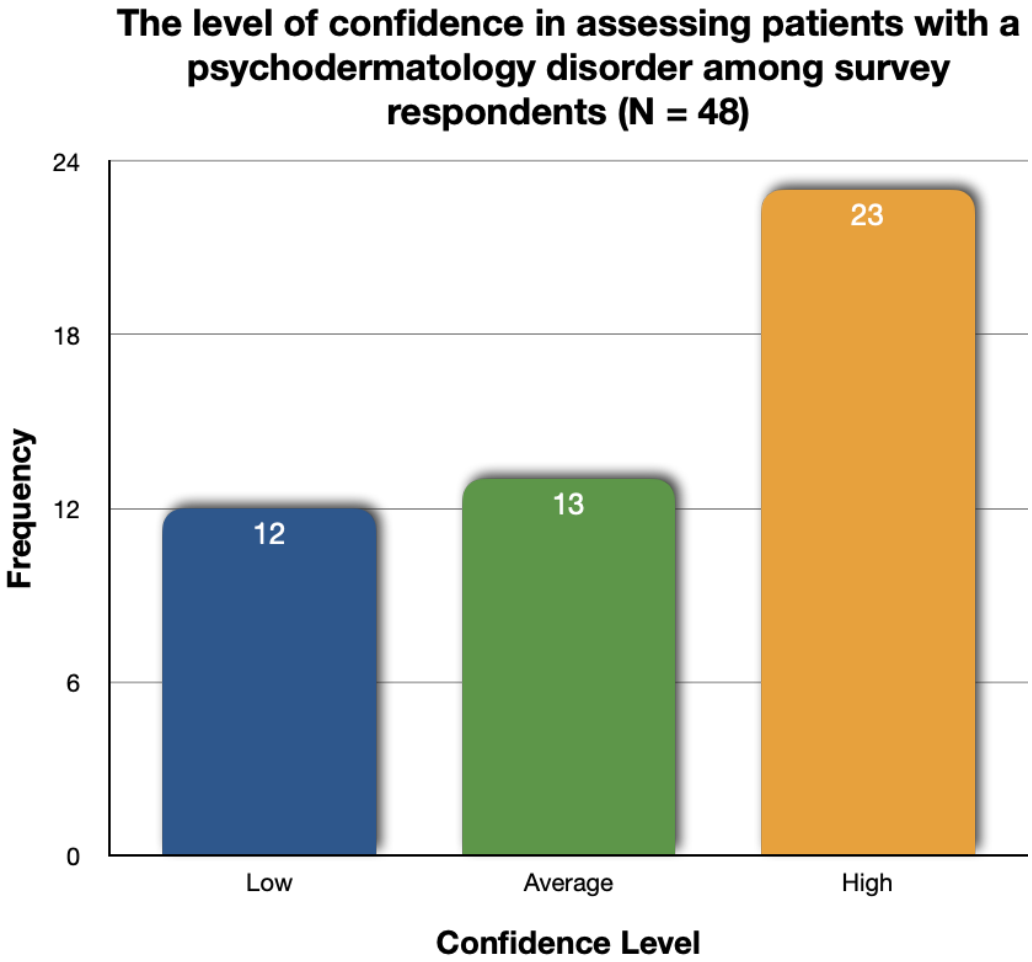

Figure 1: The level of comfort in assessing patients with a psychodermatology disorder and prescribing psychotropic drugs amongst the surveyed dermatology practitioners in SA

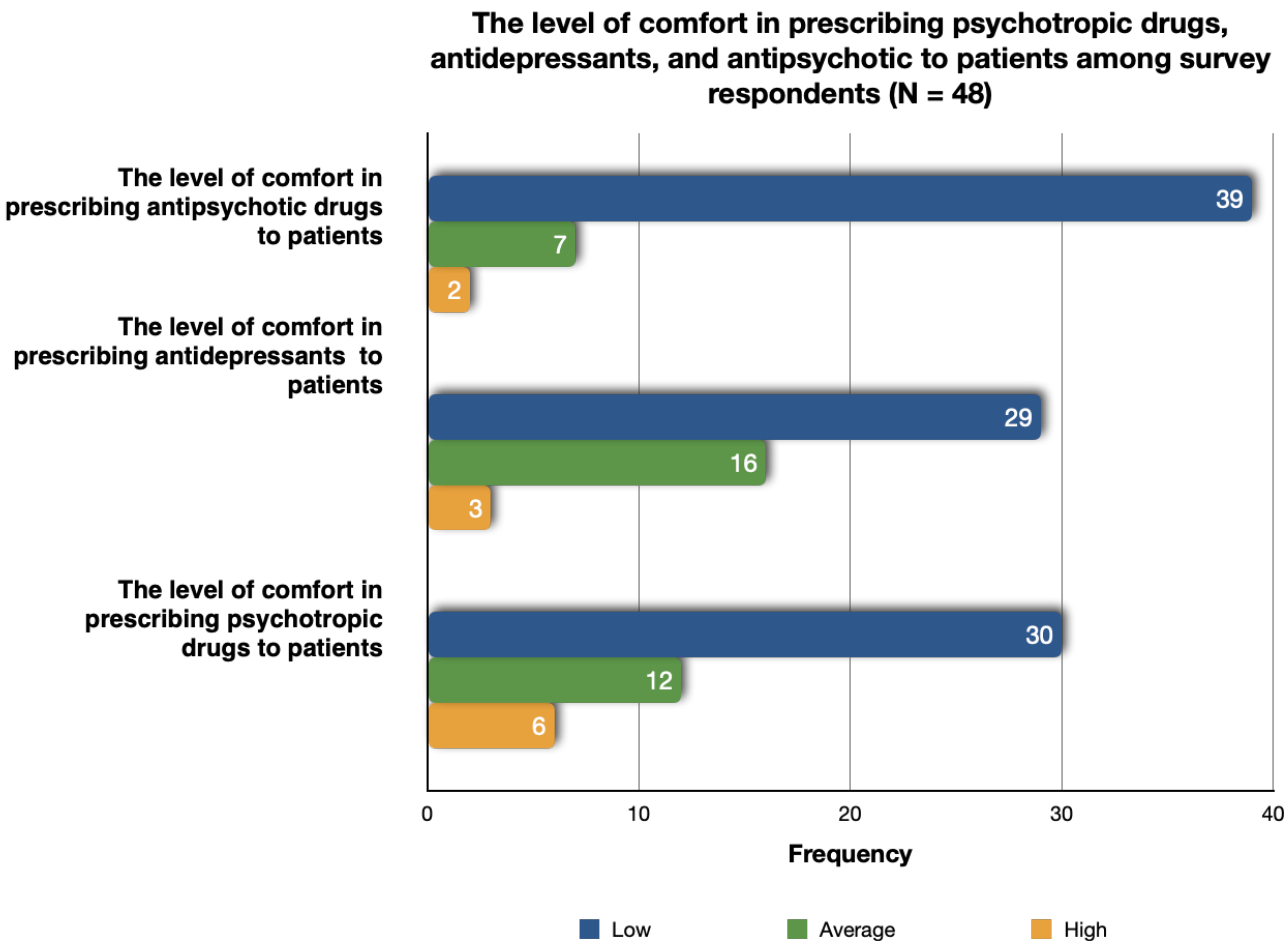

Figure 2: The level of comfort in prescribing psychotropic drugs in general, antidepressants and antipsychotics

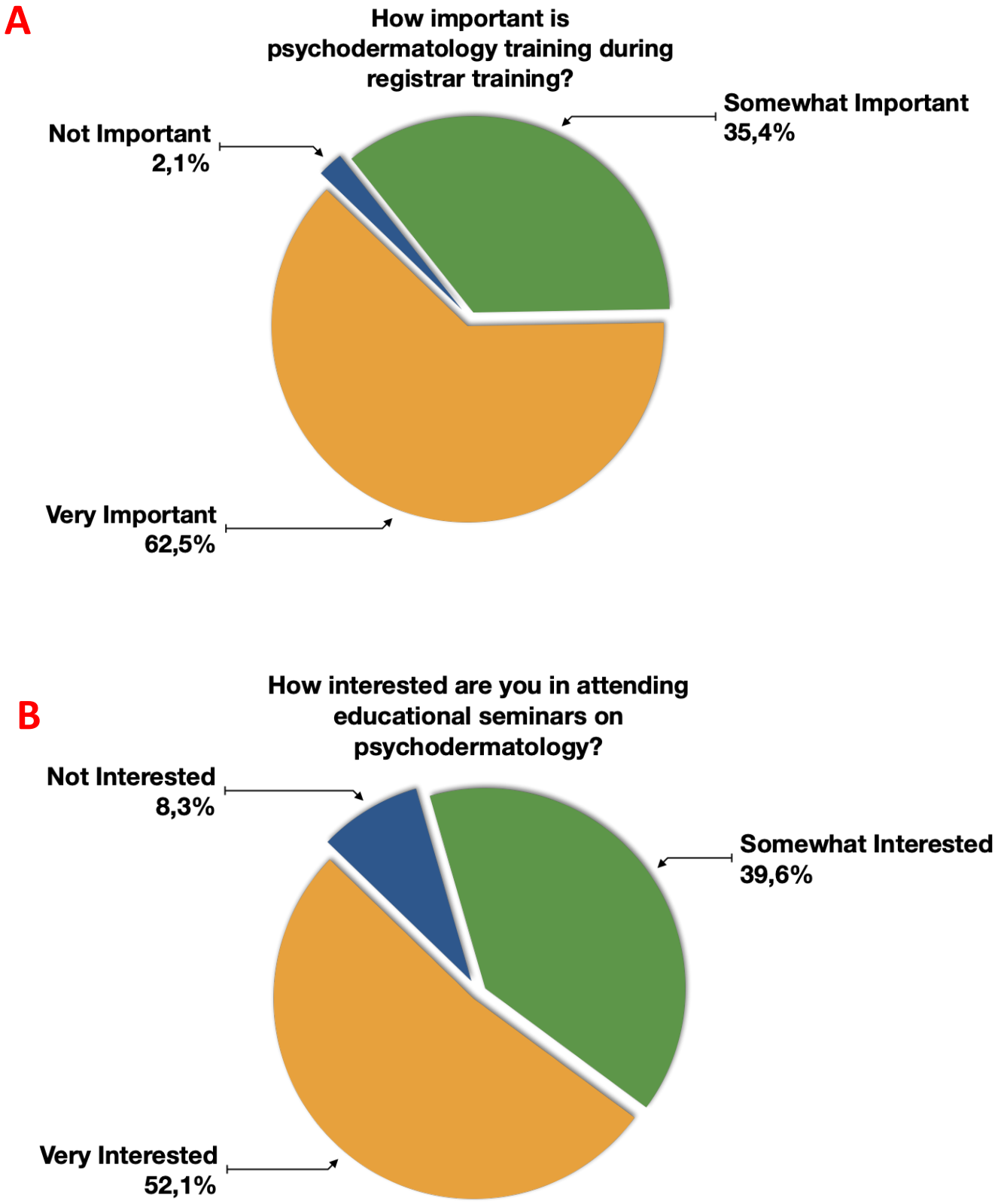

Figure 3: Assessment of the need for additional psychodermatology training amongst the surveyed dermatology practitioners in South Africa | A – Attitudes towards psychodermatology training during registrar training | B - Continuing medical education (CME) interest.

Manuscript Appendices

Appendix A: Ethical Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

R49 Dr KM Mokwatlo

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
CLEARANCE CERTIFICATE NO. M200263

NAME: **(Principal Investigator)**	Dr KM Mokwatlo
DEPARTMENT:	School of Clinical Medicine Department of Medicine Division of Internal Medicine - Dermatology Medical School University
PROJECT TITLE:	*Needs assessment of psychocutaneous medicine amongst dermatology practitioners in South Africa* ***Change of study title noted on 2021/01/21***
DATE CONSIDERED:	2020/02/28
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Drs N Mvulane, W Friedlander and L Nkehli
APPROVED BY:	CB Penny Dr CB Penny, Chairperson, HREC (Medical)
DATE OF APPROVAL:	2020/09/17

This Clearance Certificate is valid for 5 years from the date of approval. An extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office secretariat on the 3rd floor, Phillip Tobias Building, Parktown, University of the Witwatersrand, Johannesburg.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to submit details to the Committee. **I agree to submit a yearly progress report**. When a funder requires annual re-certification, the application date will be one year after the date when the study was initially reviewed. In this case, the study was initially reviewed in **February** and therefore reports and re-certification will be due in the month of **February** each year. Unreported changes to the study may invalidate the clearance given by the HREC (Medical).

Signature of Principal Investigator Date

Appendix B: Questionnaire

This questionnaire was developed by Dr Ladan Mostaghimi (Director of Psychocutaneous Clinic at the University of Wisconsin-Madison) . Permission to use study was granted.

Instruction: please select the best answer

1. Do you routinely inquire about the emotional/social impact of the skin problems on your patient's life?
    - Yes
    - No
2. Do you believe you have received sufficient training about how to identify patients with emotional problems?
    - Yes
    - No
3. Do you believe you have received sufficient training about how to refer patients with emotional problems?
    - Yes
    - No
4. How comfortable do you feel about prescribing antipsychotics to your patients?
    - Very comfortable
    - Somewhat comfortable
    - Not comfortable
5. How comfortable do you feel about prescribing antidepressants to your patients?
    - Very comfortable
    - Somewhat comfortable
    - Not comfortable
6. Do you prescribe psychotropic medication to your patients if you decide that they need them?
    - Yes
    - No
    - No. I am not trained to use these medication
7. Do you believe that the medication prescribed for dermatological treatment may have psychiatric side effects?
    - Yes
    - No

8. If your response to question 7 is yes, how often do you assess your patient for the psychiatric side effect?
    - Very often
    - Sometimes
    - Rarely
9. What percentage of your patients may benefit from a psychocutaneous asssessment?
    - <10%
    - 30%
    - 50%
    - 70%
    - 100%
10. How important is psychodermatology training during registrar training?
    - Very important
    - Somewhat important
    - Not important
11. If you have the possibility to have a psychodermatology clinic available at your facility, which options below would you choose?
    - I would like to have a psychiatrist available during clinic times for immediate consults
    - I would like a *once a week* clinic and formal courses for residents
    - I would like a *once a month* clinic and formal courses for residents
    - I woud prefer only formal courses for residents
12. What type of patients would you like to be able to refer to a psychocutaneous clinic?
    - Delusional patients
    - Patients with emotional consequences of skin disease
    - Patients with non-compliance with their dermatology treatment
    - Patients resistant to conventional dermatology treatment
    - Patients with chronic skin problems

13. How interested are you in attending educational seminars on psychodermatology?
    - Very interested
    - Somewhat interested
    - Not interested
14. Designation
    - Medical officer

- Registrar
- Dermatology specialist

15. Your years of practice in dermatology
    - <4yrs
    - 4-10 yrs
    - >10yrs
16. Your years of practice as a doctor
    - <5 yrs
    - 5-15 yrs
    - >15 yrs

Appendix C: Journal Authors Submission Guidelines

International Journal Of Dermatology Publication Guidelines

Author Guidelines *IJD* SUBMISSION FORMS

Online Submission

Contact the Editorial Office

1. ABOUT *IJD*

Published monthly, the *International Journal of Dermatology* (*IJD*) is specifically designed to provide dermatologists around the world with a regular, up-to-date source of information on all aspects of the diagnosis and management of skin diseases. Accepted articles regularly cover clinical trials, education, morphology, pharmacology and therapeutics, case reports, and reviews. Additional features include tropical medicine reports, news, correspondence, and proceedings and transactions.

IJD is guided by a distinguished, international editorial board and emphasizes a global approach to continuing medical education for physicians and other providers of health care with a specific interest in problems relating to the skin.

2. MANUSCRIPT CATEGORIES

IJD invites the following types of submission:

Case Report*

A report of 400–600 words, illustrated by no more than three illustrations. This category offers a means for rapid communication about a single subject.

Clinical Trial

An article of 700–1200 words concerning a drug evaluation. This category provides rapid publications and is meant to be a succinct presentation with a minimum of graphs and tables.

Commentary*

An editorial 700–1200 words in length with approximately five references. The author may express his or her opinion without complete documentation.

Clinicopathological Challenge*

A photographic essay that includes both a clinical and a pathological photograph in color. The diagnosis and legends for the photographs should be listed after the references in the article. The article should be no more than 2 pages in length and contain 4-5 references.

Correspondence*

Letters to the editor and short notes. Contributions should not exceed 600 words, two figures, and 5 references. In order to offer rapid dissemination of accepted manuscripts, Correspondence items will be published online-only. Online-only correspondence items are assigned to an issue of the journal, but are excluded from the print edition. Online-only correspondence items are e-paginated and are fully citable and indexable.

Dermatological Surgery

An article relating to the surgical aspects of treatment. Article types may include Review, Report or Correspondence format.

Education

An article about the methodology of curriculum and instruction in dermatology, about 2500 words.

On a Human Scale* (by invitation only)

An article that relates to social, economic, cultural, artistic and humanitarian aspects of medicine. The length of the article should not exceed 1200 words including a short summary of the topic addressed. A brief author biography and photo should be submitted with the article. If you have a topic that you feel would fit nicely in this section, please send a note to **IntJDerm@gmail.com** for approval to submit.

Pharmacology and Therapeutics

An article relating to the treatment of diseases and the pharmacology of dermatologically-related drugs. (Can include Clinical Trials, Reviews, Reports, and Correspondence. The latter is preferred for reports of adverse drug reactions.) When referring to a drug, please use the generic name approved by the United States Food and Drug Administration or recognized as the United States Adopted Name. At the end of the manuscript, please list the American Trade names.

Reminiscence

An article on the history of dermatology or skin diseases; also a biographic account of an historic or noteworthy figure in dermatology.

Report

An original article including, whenever possible, an Introduction, Materials and Methods or Case Report(s), Results, Comment, and References. A Structured Abstract of not more than 250 words must be included and should consist of four paragraphs labelled Background, Methods, Results, and Conclusions. Also, it should describe the problem studied, how the study was performed, the main results, and what the author(s) concluded from the results. The article should range from 2500-3000 words.

Review

A major didactic article that clarifies and summarizes the existing knowledge in a particular field. It should not be an exhaustive review of the literature, and references should not exceed 50 in number. Tables, diagrams, and selected figures are often helpful and preferred. The length is left to the judgment of the author, although it generally should not exceed 5000 words. Topics may include updates in clinically relevant basic science and cutaneous biology. A list of 10 multiple choice and/or true and false questions should be listed at the end of the article to provide additional educational challenge to the reader. An abstract is required, though it need not be structured.

Tropical Medicine Rounds

An article dealing with the diseases and special problems encountered by dermatologists working in the tropics. Article submissions should follow the Report, Case Report, or Correspondence format.

Updates in Medicine

This contribution to the journal should be 700–1200 words in length with sufficient references to document important points. It is not essential that the contribution be heavily referenced as it is meant to serve as an update for dermatologists in various fields of medicine and is not portrayed to be an extensive or exhaustive review of the literature. However, it would be very helpful if pertinent and salient references are included, not only for documentation purposes, but also for additional reading.

Medical Genetics

Report, Review or Correspondence format should be followed. *No abstract required

3. SUBMISSION OF MANUSCRIPTS

Submissions should be made online at the *IJD* **ScholarOne Manuscripts site** (formerly known as Manuscript Central). New users should first create an account (do not upload document files at this time). Once a user is logged onto the site, submissions should be made via the Author Center.

Revised manuscripts must be submitted as revisions as directed by the ScholarOne website. Do not resubmit a revision as a new manuscript as this may result in re-review and considerable delay. The revision should be complete and contain all the tables and figures. Do not resubmit the original manuscript with your revision.

Submission of a manuscript will be held to imply that it contains original unpublished work and is not being submitted for publication elsewhere at the same time. The author must supply a full statement to the Editor about all submissions and previous reports that might be regarded as redundant or duplicate publication of the same or very similar work.

By submitting a manuscript to, or reviewing for, this publication, your name, email address, institutional affiliation, and other contact details the publication might require, will be used for the regular operations of the publication, including, when necessary, sharing with the publisher (Wiley) and partners for production and publication. The publication and the publisher recognize the importance of protecting the personal information collected from users in the operation of these services, and have practices in place to ensure that steps are taken to maintain the security, integrity, and privacy of the personal data collected and processed. You can learn more at **https://authorservices.wiley.com/statements/data- protection-policy.html.**

4. PREPARATION OF MANUSCRIPTS

Manuscripts must be written in English and must comply with these instructions in every detail.

Text should be supplied in a word processed format such as Microsoft Word for Windows. Charts and tables are considered textual and should be supplied in the same format. Figures (illustrations, diagrams, photographs) should be supplied in gif, jpeg, tif or eps format.

All manuscripts must be typed in 12 pt font with lines double spaced and margins of at least 2.5 cm.

Abbreviations must be defined when first used, both in the abstract and in the main text.

Manuscripts must be as succinct as possible. Text must comply with the word and figure limits defined in Section 2. If authors consider that a manuscript should not conform to the limits specified, exceptionally good reasons must be clearly provided in a cover letter accompanying the submission. Repetition of information or data in different sections of the manuscript must be carefully avoided.

Manuscripts should, where appropriate, include:

Title Page

The first page of all manuscripts should contain the following information: 1) the title of the paper 2) surnames (family names),initials of each author, and their degree (if any)

3) name of the institution(s) at which the research was conducted
4) name, address, telephone number and email address of corresponding author
5) manuscript word count (excluding abstract and references), table and figure count 7) any conflict of interest disclosures (see Section 5)
8) a running head not exceeding 50 characters

Abstracts

Authors submitting Reports should note that structured abstracts (maximum 250 words) are required. The structured abstract should adopt the format: Background, Methods, Results, Conclusions.

Review articles require abstracts (maximum 250 words) but they need not be structured.

Abstracts should not contain citations.

Text

This should in general, but not necessarily, be divided into sections with the headings: Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References, Tables, Table and figure legends. Figures should be submitted as separate files. The acknowledgements should include a statement of all funding sources that supported the work.

Please submit the full text of the manuscript, including the abstract, references, tables and legends as a single document. The title page may be included as page 1 of the main manuscript document or can be uploaded as a separate file, but must be included.

Tables and Figures

Tables should not be inserted in the appropriate place in the text but should be included at the end of the manuscript, each on a separate page.

Figures (illustrations, diagrams, photographs) should be supplied in gif, jpeg, tif or eps format and submitted as separate electronic files.

Tables and figures should be referred to in text as follows: Fig. 1, Figs. 2–4; Table 1, Tables 2 and 3. The place at which a table or figure is to be inserted in the printed text should be indicated clearly on a manuscript. Each table and/or figure must have a legend that explains its purpose without reference to the text. Where a figure has more than one panel, each panel should be labelled in the top left-hand corner using lower case letters in parentheses i.e. '(a)', '(b)' etc., and a brief description of each panel given in the figure legend. When using histology figures, the stain type and magnification level must be included in the legend.

Only figures of excellent quality will be considered for publication. The Journal will publish color photographs free of charge subject to editorial approval. When an individual is identifiable in a photograph written permission must be obtained (see Section 5 'Ethics' below).

Authors are themselves responsible for obtaining permission to reproduce previously published figures or tables.

References

References should be in Vancouver format and appear as consecutive, unbracketed superscript numbers in the text, e.g. 'in our previous reports[1,2] and those of Smith *et al*.[3–5]' and should be listed numerically in the reference list at the end of the article.

Format references as below, using standard (Medline) abbreviations for journal titles. When there are more than four authors, include the first three authors followed by *et al*.

1. de Berker DAR, Baran R, Dawber RPR. The Nail in Dermatological Diseases. In: *Baran and Dawber's Diseases of the Nails and their Management* (Baran R, Dawber RPR, de Berker DAR, Haneke E, Tosti, A, eds), 3rd edn. Oxford: Blackwell Science Ltd., 2001: 172–92.
2. Murray ML, Cohen JB. Mycophenolate mofetil therapy for moderate to severe atopic dermatitis. *Clin Exp Dermatol* 2007; **32**: 23–7.

3. Graham-Brown R, Burns T. *Lecture Notes: Dermatology*. Oxford: Wiley-Blackwell, 2006. 4. Smith A. (1999) Select committee report into social care in the community [WWW document]. URL http://www.dhss.gov.uk/reports/report015285.html [accessed on 7 November 2003].

5. DECLARATIONS

Original Publication

Submission of a manuscript will be held to imply that it contains original unpublished work and is not being submitted for publication elsewhere at the same time. The author must supply a full statement to the Editor about all submissions and previous reports that might be regarded as redundant or duplicate publication of the same or very similar work.

Conflicts of Interest

Authors are responsible for disclosing all financial and personal relationships between themselves and others that might be perceived by others as biasing their work. To prevent ambiguity, authors must state explicitly whether potential conflicts do or do not exist.

Ethics

When reporting experiments on human subjects, indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional or regional) and with the Helsinki Declaration of 1975, as revised in 1983. Do not use

patients' names, initials or hospital numbers, especially in illustrative material. When reporting experiments on animals, indicate whether the institution's or a national research council's guide for, or any national law on, the care and use of laboratory animals was followed. A statement describing explicitly the ethical background to the studies being reported should be included in all manuscripts in the Materials and Methods section. Ethics committee or institutional review board approval should be stated.

Patients have a right to privacy that should not be infringed without informed consent. Identifying information should not be published in written descriptions, photographs and pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) gives written informed consent for publication. Identifying details should be omitted if they are not essential but patient data should never be altered or falsified in an attempt to attain anonymity. Complete anonymity is difficult to achieve and informed consent should be obtained if there is any doubt. For example, masking the eye region in photographs of patients is inadequate protection of anonymity.

Authorship

All persons designated as authors should qualify for authorship and all those who qualify should be listed. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. One or more authors should take responsibility for the integrity of the work as a whole, from inception to published article. Authorship credit should be based only on 1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; 3) final approval of the version to be published. Conditions 1, 2 and 3 must all be met. Acquisition of funding, the collection of

data or general supervision of the research group, by themselves, do not justify authorship. All others who contributed to the work who are not authors should be named in the Acknowledgements section.

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As a member of the Committee on Publication Ethics (COPE), adherence to these submission criteria is considered essential for publication in IJD; mandatory fields are included in the online submission process to ensure this. If, at a later stage in the submission process or even after publication, a manuscript or authors are found to have disregarded these criteria, it is the duty of the Editor to report

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8) a running head not exceeding 50 characters

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Review articles require abstracts (maximum 250 words) but they need not be structured.

Abstracts should not contain citations.

Text

This should in general, but not necessarily, be divided into sections with the headings: Abstract, Introduction, Materials and Methods, Results, Discussion, Acknowledgements, References, Tables, Table and figure legends. Figures should be submitted as separate files. The acknowledgements should include a statement of all funding sources that supported the work.

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2. Murray ML, Cohen JB. Mycophenolate mofetil therapy for moderate to severe atopic dermatitis. *Clin Exp Dermatol* 2007; **32**: 23–7.

3. Graham-Brown R, Burns T. *Lecture Notes: Dermatology*. Oxford: Wiley-Blackwell, 2006. 4. Smith A. (1999) Select committee report into social care in the community [WWW document]. URL http://www.dhss.gov.uk/reports/report015285.html [accessed on 7 November 2003].

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Appendix E: STROBES Checklist

STROBE Statement—Checklist of items that should be included in reports of ***cross-sectional studies***

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	15
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	15
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	16
Objectives	3	State specific objectives, including any prespecified hypotheses	18
Methods			
Study design	4	Present key elements of study design early in the paper	19
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	19
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants	19
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	
Bias	9	Describe any efforts to address potential sources of bias	
Study size	10	Explain how the study size was arrived at	19

Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	
		(*b*) Describe any methods used to examine subgroups and interactions	
		(*c*) Explain how missing data were addressed	
		(*d*) If applicable, describe analytical methods taking account of sampling strategy	
		(*e*) Describe any sensitivity analyses	
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	21
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	22 28 (Table 3)
		(b) Indicate number of participants with missing data for each variable of interest	
Outcome data	15*	Report numbers of outcome events or summary measures	21 22
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	
		(*b*) Report category boundaries when continuous variables were categorized	

		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	
Discussion			
Key results	18	Summarise key results with reference to study objectives	23
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	24
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	24
Generalisability	21	Discuss the generalisability (external validity) of the study results	
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.

Appendix F: Approved Protocol with Extended Literature Review

RESEARCH PROPOSAL

The level of confidence, and training need, in managing patients with psychocutaneous disorders amongst dermatology practitioners in South Africa.

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CONTENTS

INTRODUCTION

Psychodermatology is a subspecialty that addresses skin conditions that are at the interface of dermatology and psychiatry. [1]

The field of psychodermatology is not new; it is only recently that it has gained some popularity.[2] Hippocrates (460-337 BC) alluded to the relationship between stress and its effects on the skin in his writings, quoting cases of people who pulled their hair out in response to emotional stress. [2]This phenomenon was later described as trichotillomania by a French dermatologist Hallopeau Francois Henri in 1889.[2] Other historical accounts of trichotillomania can be found in: the Bible (Ezra 9v3: "When I heard this, I tore my tunic and my cloak, pulled hair from my head and beard, and sat down appalled"[2]; and in the works of Shakespeare (Romeo & Juliet, The rape of Lucrece & King Lear).[2]

Aristotle (384-322 BC) was convinced that the mind and body were not separate entities but complementary and inseparable.[2] The skin and psyche are interconnected through their ectodermal embryonic origin.[3] In 1799 Robert Willian, an English dermatologist, described delusions of parasitosis as a fixed false belief that the skin is infested with parasites.[2] In 1857 William James Erasmus Wilson described the first 'skin neurosis', and he also addressed topics such as delusions of parasitosis amongst others.[2]

Psychodermatology in India dates back to the period of Buddha (circa 563-483 BC). It is alluded that Buddha's chief attendant's sister suffered from an enfeebling and socially embarrassing skin disease which Buddha treated by educating her about how to steer and navigate her emotions, especially anger.[4]

Classification of psychocutaneous disorders

There is no single universally accepted classification system of psychocutaneous disorders, many of the conditions overlap into different categories. Koo and Lee developed a classification that is currently the most widely recognized.[5] They classified psychocutaneous conditions into four categories. See table 1

I. Primary dermatological disorders with secondary psychiatric symptoms e.g. alopecia areata, vitiligo, generalised psoriasis, chronic eczema, icthyosiform syndromes, albinism, and Rhinophyma. These patients tend to develop secondary depression, social withdrawal, social phobias, generalized anxiety disorder, low self-esteem.[5]

II. Primary psychiatric disorders with dermatological manifestations e.g. dermatitis artefecta, delusions of parasitosis, trichotillomania, obsessive compulsive disorders (OCD), psychogenic pruritus and neurotic excoriations.[5]

III. Psychophysiological disorders (dermatology conditions worsened by stress) e.g. psoriasis, atopic eczema, seborrheic dermatitis and urticaria.[5]

IV. Miscellaneous (includes disorders or symptoms not otherwise classified). These include: cutaneous side effects from psychotropic drugs (e.g. acneiform eruption, drug reactions); depression secondary to dermatology treatment (e.g. Isotretinoin); suicide in dermatology; cutaneous sensory symptoms (patients who experience idiopathic abnormal skin sensation e.g. pruritus, crawling or burning; and pseudopsychodermatologic disease (patients who presents with peculiar cutaneous symptoms without clear physical findings or subclinical disease altered by scratching).[5] Psychodermatologic disease can mimic other skin and medical disorders.[5] It is worth noting that conditions like vitamin B12 deficiency, cocaine or amphetamine addiction, hyperthyroidism, Alzheimer's have been misdiagnosed as delusions of parasitosis in the past.[5]

Prevalence of psychocutaneous disorders

Studies have shown that at least a third of patients seen in dermatology practices have some underlying psychological/psychiatric illness or issue complicating their skin problem.[6] Dalgard et al reported a prevalence of 10% of clinical depression, 17.2% of anxiety disorder, and 12.7% of suicidal ideation amongst patients with common skin diseases.[7]

The literature suggests an increasing suicide risk in patients with psoriasis, atopic dermatitis and acne.[8] Factors associated with increased suicidal behaviours in dermatology patients include: a co-existing psychiatric illness; a chronic and poorly controlled skin condition (e.g. psoriasis); major stressful life events (e.g. bereavement); presence of significant pruritus; chronic facial lesions or facial scarring (especially with a younger age of onset); and the use of dermatological medication (e.g. isotretinoin, tumour necrosis factor alpha inhibitors, interkeukin-17 inhibitors).[9]

The prevalence of depression in patients with psoriasis is between 10 and 62%; which is higher than other skin conditions. The risk of suicide has also been consistently higher in psoriasis compared to other skin conditions.[10] However, the severity of the psoriatic lesion does not correlate with the psychological distress caused by the condition. Pompili et al found that in 112 patients with psoriasis, 33.9% (38) reported suicidal ideation and 6.3%[6] had a history of attempted suicide.[7] Of importance is that stressful life events may impact the onset, exacerbation, and relapse of psoriasis; thus creating a vicious circle. Biological therapy indicated for psoriasis can add to the psychological distress. There is a report of 7 cases of completed suicide amongst patients with psoriasis on tumour necrosis factor alpha inhibitors:
2 cases on Adalimumab and 5 cases on Infliximab.[10]

Dieris-Hirche et al reported an increased risk of suicidal ideation and depression symptoms in a sample of 181 German patients with atopic dermatitis.[11] Of the 181 patients: 21.5% (39) indicated suicidal ideation while 6.6% (12) reported at least one attempted suicide.[11]

Acne is a chronic disease that frequently interferes with quality of life. Many studies have shown an association between acne and impaired self-esteem, depression and suicidal ideation.[12] Unlike psoriasis, there is an association between acne severity and risk of suicidal ideation.[12] Isotretinoin is a retinoid that is approved by Food and Drug Administration (FDA) for treatment of cystic acne.

There is controversy as to whether isotretinoin use increases depression and also results in suicidal ideation or isotretinoin leads to an improvement in clinical depression.[13] However, there are studies that have reported suicide ideation and completed suicide in patients who used isotretinoin. Middelkoop reviewed adverse drug reactions to isotretinoin which were reported to the World Health Organization (WHO), the United Kingdom Medicines Control Agency (MCA), and the manufacturer Roche. The author found that in 12400 prescriptions for isotretinoin treatment: 0.38 % (47) of those patients completed suicide; and 0.45% (56) reported suicidal ideation.[13] A review of cases of isotretinoin-related depression and suicide by Wysowski et al demonstrated a temporal relationship between isotretinoin use and suicidal behaviour.[13]

Studies from different populations found the prevalence of primary psychiatric disorders with cutaneous manifestation to be low [1, 5] (see table 2, appendix 2) The highest prevalence was reported for trichotillomania

The prevalence of trichotillomania (TTM), looking mostly at college students, was found to be from 1 to 13.3%.[14] The estimated lifetime prevalence of obsessive compulsive disorder (OCD) is reported to be 2-3%[15] whilst the prevalence of neurotic excoriations amongst dermatology patients is estimated to be 2% [16]. Dermatitis artefecta is often seen in individuals who battle to cope with stress. The prevalence of dermatitis artefecta in the general population is 0.05-0.4%.[17] Delusions of parasitosis has a low prevalence, with 3.65 per 100 000 cases reported by Pearson et al.[18] Despite its rarity, it is estimated that 85% of dermatologists will encounter at least one case of delusions of parasitosis in their career, and dermatologists have reported that they often struggle to manage such cases ”.[18]

Approach to the clinical assessment of a patient with a psychodermatological disorder

As mentioned previously, at least a third of patients seen in dermatology practices have some underlying psychological/psychiatric illness or issue complicating their skin problem.[2] Given this prevalence the ideal treatment should involve psychiatric assessment and therapeutic management. However, a lot of those with comorbid psychiatric illness often refuse referral to the psychiatry department for the effective management of their psychiatric conditions.[2] Dermatologists are then faced with the responsibility of ensuring that patients are properly assessed and initiate treatment where necessary.

When assessing a patient with an underlying psychological/psychiatric illness one needs to explore the factors that predispose, precipitate and perpetuate their condition to fully understand their illness holistically and offer a biopsychosocial intervention.[19]

The factors that need to be included in the clinical assessment of the psychological and psychiatric comorbidity can be classified into[19]:

Predisposing factors: these are events or factors that have predisposed the patient to developing underlying psychological or psychiatric illnesses not necessarily at the same time period of the occurrence of the events e.g. traumatic life events like severe neglect, sexual abuse or trauma from war.[19]

Precipitating factors: these are factors associated with the definitive onset of a disease i.e. an event which triggers the onset of a mental health illness e.g. major stressful life event like loss of

employment, marital stress, death of a spouse or close family can result in major depressive disorder, anxiety disorder or psychotic disorder developing at the same period of the event.[19]

Perpetuating factors: these are specific events that exacerbates existing problems e.g. stress, death of a loved one, or loss of employment.[19]

Traumatic life events that are occasionally associated with autonomic nervous system dysregulation and sympathetic hyperarousal may play a predisposing , precipitating, and perpetuating role in stress-reactive dermatoses such as psoriasis, atopic dermatitis, idiopathic urticarial, and self- induced dermatoses.[19]

Management of psychocutaneous conditions [5]
The management of psychocutaneous conditions includes:

- Management of the primary condition either dermatological, psychiatric or psychophysiological
- Psychological counselling that includes adjustment and coping skills

- Cognitive behavioural therapy
- Hypnosis
- Mindfulness

The use of psychotropic drugs in dermatology

There is comparatively little literature on the use of psychotropic drugs (antidepressants, anxiolytics, antipsychotics and mood stabilizers) in dermatology.

While a referral to psychiatry is ideal, as stated previously, a lot of dermatology patients refuse such referral.[5, 20] The most practical way for a dermatologist to approach these patients is to have a working knowledge of common psychotropic drugs that can be safely used in dermatology.[21]

The choices of psychotropic drugs are based on the major underlying psychiatric illness. I.

Psychotic and delusional disorders:

Of the psychotic and delusional disorders, the most regularly seen is: delusions of parasitosis; dermatitis artefecta; neurotic excoriations; and trichotillomania[21, 22]. Antipsychotics should preferably be initiated by a psychiatrist; however, due to resistance to a psychiatric referral, the dermatologist who is well informed about antipsychotics may safely initiate them[21, 22] Treatment includes:

- Typical antipsychotics: Haloperidol
- Atypical antipsychotics : Risperidone, Olanzepine , Quietapine , Ziprasidone

II. Depression:

It is estimated that about 25 % patients who present with a psychocutaneous disorder have an underling mood disorder, and almost half of these patients meet the criteria for major depressive disorder (MDD).[21] The association of depression with skin diseases has been demonstrated in alopecia areata, chronic urticaria, and neurodermatitis.[21] When a patient is diagnosed with depression

by a dermatologist, the dermatologist may contemplate starting an antidepressant while the patient awaits psychiatry consultation.[21]Treatment includes[22]:

- Selective Serotonin Reuptake Inhibitors (SSRI): Fluoxetine, Sertraline, Citalopram,
- Serotonin Norepinephrine Reuptake Inhibitor (SNRI): Venlafaxine, Duloxetine
- Dopamine Norepinephrine Reuptake Inhibitors: Bupropion
- Tricyclic Antidepressants (TCA) : Amitriptyline

III. Anxiety disorders:

Anxiety can worsen dermatologic disorders, and vice versa.[22] Conditions such as obsessive compulsive disorder (OCD) can manifest as onychophagia (nail biting), trichotillomania, and acne excoriè.[15] Treatment depends on acuteness and course of the process.[21] Treatment includes21, 22:

- Alprazolam, Oxazepam, Lorazepam and Buspirone

LITERATURE REVIEW

Psychodermatology is an underappreciated and relatively neglected branch of dermatology.[4] Studies done on psychodermatology suggest that dermatologists may not be that aware of psychodermatology, and feel underprepared to manage most psychocutaneous disorders despite being the first line of contact for these patients.[1, 3, 23, 24] This is attributed to the fact that psychodermatology is not taught well during dermatology registrar/residency programmes across the globe. [1, 3, 23, 24] There are no guidelines that determine the scope of teaching and limitations for practising psychodermatology by the dermatologist which results in patients being undertreated leading to serious repercussions such as worsening depression and suicide. Given that most patients refuse a referral to psychiatrist[20, 25], when faced with a patient with a psychocutaneous disorder the dermatologist has two options: either to address the psychological condition (which involves a good approach to assessment and therapeutic options); or to disregard the psychological problem and allow it to remain untreated.[26] Unfortunately, the latter option although not ideal, is commonly resorted to by most dermatologists mainly because of the lack of training in this field. This further distances the field from the dermatologist, thus shifting the bulk of the responsibility to psychiatrists as dermatologists feel that it is beyond their scope of practice.[27]

Studies in basic knowledge of dermatology recommend that all dermatologists should attend congresses/conferences that are especially devoted to psychodermatology so that they can develop relational skills and their knowledge, to be more comfortable in managing patients with psychodermatology problems.[28] Such dedicated dermatologists are then referred to as the *well-informed* dermatologist. The *well informed* dermatologist is thus expected to be competent in prescribing psychotropic drugs, anti-depressants, and anxiolytics.[28]

There is both the enacted stigma and perceived stigma around mental health care usage, which results in patients being less receptive to psychiatry referrals. Close liaison between dermatologists, psychiatrists and psychologists through multidisciplinary team meetings in a dermatology/ psychodermatology clinic can provide ease to the psychodermatology patients and allow their proper management without them feeling stigmatized.[29] There are few papers that have been published on the implementation and usefulness of psychodermatology clinics.

Dermatologists are expected to use standard scales such as the Dermatology Life Quality Index (DLQI) and/or the Hospital Anxiety and Depression Scale to assess and recognize patient eligible for psychodermatology clinic referral.[30] Countries or states where psychodermatology clinics have been established have reported better outcomes, with a reduced burden of multiple appointments to either discipline.[30] So far there are few psychodermatology services offered worldwide despite the high demand.[24]

Having noted the high prevalence of psychological/psychiatric illnesses in dermatology patients and the lack of acceptability of psychiatric referral [2], it is therefore necessary for the dermatologists to understand and be comfortable with managing psychodermatology patients, and this is the basis for good dermatologic practice.[31] This includes: good psychological/psychiatric assessment; suicide risk; relevant investigations; and therapeutic options (both medical and behavioural).

JUSTIFICATION OF THE STUDY

Studies have shown that over a third of patients seen at a dermatology clinic have underlying psychological or psychiatric needs.[2] However, dermatologists in most countries feel underprepared to manage these patients.[1] As far as we know, there are no studies that have been done on the practice of psychodermatology in South Africa. We would like to do a study to determine: the level of confidence and training needs in psychodermatology amongst dermatology practitioners; and if psychodermatology clinics are needed in South Africa.

STUDY OBJECTIVES:

- To determine the level of confidence in assessing patients with a psychodermatology disorder amongst dermatology practitioners in South Africa.
- To determine level of confidence in prescribing psychotropic drugs amongst dermatology practitioners in South Africa.
- To assess the need for additional psychodermatology training or continual medical education CME.

- To assess the need for psychodermatology clinics in South Africa.

METHODOLOGY

A questionnaire with 18 multiple choice questions will be distributed to the dermatology practitioners who will be attending the 6th annual dermatology congress in South Africa in 2020.

Study design

This will be a prospective cross-sectional study.

Study population

There are currently 266 dermatologists registered with the Health Practitioner Council of South Africa (HPCSA) and 50 trainees (registrars and medical officers) in the state hospitals in South Africa.

Inclusion criteria:

- Dermatology consultants (specialist)
- Dermatology trainees (registrars and medical officers)

Exclusion criteria:

- Medical interns rotating in dermatology
- Other medical practitioners not practising dermatology

Sample size

There are currently about 316 dermatology practitioners in South Africa. This study will include all dermatology consultants, registrars and medical officers attending the 6th annual dermatology congress in South Africa in 2020. We would like to receive completed questionnaires from at least 27 participants for the study to be statistically valid.

Data variables:

Demographic data

- Trainee or Consultant
- Years of practice as a doctor
- Years of practice in dermatology

Questionnaire (see appendix 3)

Data processing and analysis

Data collected from the questionnaires will be entered into Microsoft excel spreadsheet. The data will be analysed using STATA software.

Demographic data will be used to describe the baseline characteristics of the study population. We would like to determine the relationship between some of the demographic characteristics and the questionnaire data.

Frequencies (percentages) will be calculated to summarize categorical variables; and mean (standard deviation) or median (interquartile range) will be calculated to summarize continuous variables. Chi-squared test, t-test or Kruskall-Wallis tests will be used to determine the relationship between some of the questionnaire data (independent variable) and demographic data (dependent variables). The variables will be analysed according to objectives (appendix 4).

Limitations
Not everyone that is invited to participate in the study will respond, which may result in nonresponder bias.

ETHICAL CONSIDERATION
Permission for the study will be sought from the human research ethics committee (HREC) of the University of the Witwatersrand.

Permission will also be requested from the participants.

The questionnaire is in a multiple choice format and does not require the participants' name. The questionnaire will be collected in a sealed box. All the results of the study will be stored in a password protected device, to which only I, the researcher will have access to.

TIMELINES

	11 Oct 2019	30 Oct 2019	Jan-Feb 2020	10-13 Sept 2020	15 Sept –7 Nov 2020	15 Dec 2020
Protocol submission						
Assessment meeting						
Ethics submission for clearance						
Questionnaire distribution and collection (Dermatology congress)						
Data analysis & write up						
Submit final report						

FINANCE
The study will be self-funded.

Project budget	
Activity	Rand

• Stationary • Communication technology (calls, internet data, meetings) • Total	250 250 500

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Table 1. Koo and Lee classification of psychocutaneous conditions [6]

I. Primary dermatological disorders with secondary psychiatric symptoms: these patients tend to develop secondary depression, social withdrawal, social phobias, generalized anxiety disorder, low self-esteem:
    - Alopecia areata
    - Vitiligo
    - Generalised psoriasis
    - Chronic eczema
    - Icthyosiform syndromes
    - Albinism
    - Rhinophyma

II. Primary psychiatric disorders with dermatological manifestations:
    - Dermatitis artefecta
    - Delusions of parasitosis
    - Trichotillomania
    - Obsessive compulsive disorders (OCD)
    - Psychogenic pruritus
    - Neurotic excoriations

III. Psychophysiological disorders (dermatology conditions worsened by stress)
    - Psoriasis
    - Atopic eczema
    - Seborrheic dermatitis
    - Urticaria
    - Rosacea

IV. Miscellaneous (includes disorders or symptoms not otherwise classified)
    - Cutaneous side effects from psychotropics e.g. acneiform eruption, drug reactions e.g. erythema multiforme, Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and fixed drug eruption.
    - Depression secondary to dermatology treatment e.g. Isotretinoin.
    - Suicide in dermatology.
    - Cutaneous sensory symptoms (patients who experience idiopathic abnormal skin sensation e.g. pruritus, crawling or burning.
    - Pseudopsycocutaneous disease (patients who presents with peculiar cutaneous symptoms without clear physical findings or subclinical disease altered by scratching). Psychodermatologic disease can mimic other skin disorders and medical disorders can mimic Psychodermatologic conditions[2].

- Conditions like vitamin B12 deficiency, cocaine or amphetamine addiction, hyperthyroidism, Alzheimer's have in the past been misdiagnosed as delusions of parasitosis[2].

APPENDIX 1

Condition	Prevalence %
Trichotillomania	1-13
Obsessive compulsive disorder	2-3
Neurotic excoriation	2
Dermatitis artefecta	0.005-0.4
Delusions of parasitosis	0.000037

APPENDIX 3
Introduction and consent
Dear colleagues

My name is Dr Kaisha Mokwatlo; I am a registrar in department of Dermatology at the University of Witwatersrand, affiliated with Chris Hani Baragwanath hospital. I am doing a research study for Masters in Medicine in Dermatology titled: 'The level of confidence, and training need, in managing patients with psychocutaneous disorders amongst dermatology practitioners in South Africa'.

Psychodermatology is a subspecialty that addresses skin conditions that are at the interface of dermatology and psychiatry.

Studies have shown that about 30% of patients seen in dermatology practices have an underlying psychological/psychiatric illness or issue complicating their skin problem, and these patients often refuse referral to the psychiatry/psychology clinics. The dermatologists are therefore the first point of contact for these patients and are faced with the responsibility to ensure that the underlying psychological/psychiatry component is addressed. However, studies done on psychodermatology suggest that dermatologists are not that aware of psychodermatology, and feel underprepared to manage most psychocutaneous disorders.

Purpose of questionnaire

The purpose of the study is to determine how confident dermatology practitioners are in engaging, assessing, and prescribing psychotropic drugs to patients with psychocutaneous disorders, and also assess if there is a need for additional training in psychodermatology during registrar training.

Confidentiality

Your responses will be confidential and will not be linked to you personally or your institution.

Voluntary participation

Your participation in this study is voluntary. You also do not have to answer any question that makes you uncomfortable.

The survey will take about 5 minutes.

Thank you for taking your time to consider and answer the following questions.

Participating in the study will imply consent.

APPENDIX 3
Study questionnaire [21]
[*This questionnaire was developed by Dr Ladan Mostaghimi (Director of Psychocutaneous Clinic at the University of Wisconsin-Madison) and was edited by Dr Craig Gjerge, Department of Medicine Wisconsin for a similar study titled 'Needs assessment of psychocutaneous medicine'. This assessment tool was developed to evaluate the need for, and interest in a psychocutaneous clinic. The questions were designed to: determine the need for psychocutaneous clinic; the level of comfort of the dermatology practitioner in managing patients with psychocutaneous disorders; and training need for psychodermatology during residency/registrar training. The questionnaire was first distributed to the faculty residents/registrars at the University of Wisconsin-Madison Dermatology Department, as a pilot study. The study results were presented at the Association for Psychocutaneous Medicine of North America Annual Meeting, February 17, 2005: Need Assessment for Psychocutaneous Clinics. To achieve a higher response rate, the questionnaire was distributed at the Spring 2008 Wisconsin Dermatology Society (WDS) meeting, which had an attendance of 85 physicians and medical professionals. Permission to use questionnaire was obtained from Dr Ladan Mostaghimi.]*

Instruction: please select the best answer

1. Do you routinely inquire about the emotional/social impact of skin problems on your patient's life? o Yes o No

2. What percentage of your patients may benefit from a psychocutaneous asssessment? o <10% o 30% o 50% o 70% o 100%
3. How important is psychodermatology training during registrar training?
    - Very important
    - Somewhat important o Not important
4. If you have the possibility to have a psychodermatology clinic available at your facility, which options below would you choose? o I would like to have a psychiatrist available during clinic times for immediate consults
    - I would like a *once a week* clinic and formal courses for residents o I would like a *once a month* clinic and formal courses for residents o I woud prefer only formal courses for residents
5. What type of patients would you like to be able to refer to a psychocutaneous clinic?
    - Delusional patients
    - Patients with emotional consequences of skin disease o Patients with non-compliance with their dermatology treatment o Patients resistant to conventional dermatology treatment o Patients with chronic skin problems
6. Do you believe you have received sufficient training about how to identify emotional problems? o Yes o No
7. Do you believe you have received sufficient training about how to refer patients with emotional problems? o Yes
    - No
8. How interested are you in attending educational seminars on psychodermatology?
    - Very interested o Somewhat interested o Not interested
9. How comfortable do you feel about prescribing antipsychotic medication to your patients?
    - Very comfortable o Somewhat comfortable o Not comfortable
10. How comfortable do you feel about prescribing antidepressants to your patients?
    - Very comfortable o Somewhat comfortable o Not comfortable
11. Do you prescribe psychotropic medication to your patients if you decide that they need them? o Yes
    - No
    - No. I am not trained to use these medication
12. Do you believe that the medication prescribed for dermatological treatment may have psychiatric side effects? o Yes o No
13. If your response to question 12 is yes, how often do you assess your patient for the psychiatric side effect? o Very often o Sometimes
    - Rarely
14. Designation o Medical officer o Registrar
    - Dermatology specialist
15. Your years of practice in dermatology o <4yrs o 4-10 yrs o >10yrs
16. Your years of practice as a doctor

- o <5 yrs
- o 5-15 yrs
- o >15 yrs

17. Sex
    - o Male
    - o Female
18. In which country are you currently practising dermatology?
    - o South Africa
    - o Other

APPENDIX 4
Data collection sheet
Demographic data

Questionnaire data

- Q = Question
- NO = Number

Unique NO	Designation	Years of practice in dermatology	Years of practice as a doctor	Q1	Q 2	Q3-16

APPENDIX 5
Plan for data analysis

Objectives	Demographic data	Questions	Methods
To determine the level of confidence in assessing patients with a psychodermatology disorder amongst dermatology practitioners in South Africa.	Trainee or consultant Years of practice as a doctor Years of practice in Dermatology	• Do you routinely ask about emotional/ social impact of the skin problem on your patient's life? Yes/no	Frequency, % (by designation for categorical variables); Median, IQR (for continuous variables)
To determine level of confidence in prescribing psychotropic drugs amongst dermatology practitioners in South Africa.	Trainee or consultant Years of practice as a doctor Years of practice in Dermatology	• How comfortable do you feel about prescribing : - Antidepressants Antipsychotics Anxiolytics • Do you prescribe psychotropic medication to your patient if you decide they need them? Very comfortable/ somewhat comfortable /not comfortable	Frequency, % (by designation for categorical variables); Median, IQR (for continuous variables)
To assess the need for additional psychodermatology training	Trainee or consultant Years of practice as a doctor	• Do you believe you have received sufficient training about how to	Frequency, % (by designation for categorical variables);

or continuing medical education (CME).	• Years of practice in Dermatology	identify patients with emotional problems? • How important is it to have psychocutaneous training during your residency training? Yes/no	Median, IQR (for continuous variables)
To assess the need for psychodermatology clinics in South Africa.	Trainee or consultant Years of practice as a doctor Years of practice in Dermatology	If you have the possibility to have a psychocutaneous clinic available to your practice, which option will you choose? Psychiatry during clinic times for immediate consults/ once a week clinic &didactic courses for residents/ once a month clinic & didactic courses for residents/ didactic courses only/ I do not believe we need this type of clinic?	Frequency, % (by designation for categorical variables); Median, IQR (for continuous variables)

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Study questionnaire [21]

[*This questionnaire was developed by Dr Ladan Mostaghimi (Director of Psychocutaneous Clinic at the University of Wisconsin-Madison) and was edited by Dr Craig Gjerge, Department of Medicine Wisconsin for a similar study titled 'Needs assessment of psychocutaneous medicine'. This assessment*

tool was developed to evaluate the need for and interest in psychocutaneous clinic. The questions were designed to: determine the need for psychocutaneous clinic, the level of comfort of the dermatology personnel in managing patients with psychocutaneous disorders, and training need for psychodermatology during residency/registrar training. The questionnaire was first distributed to the faculty residents/registrars at the University of Wisconsin-Madison Dermatology Department, as a pilot study. The study results were presented at the Association for Psychocutaneous Medicine of North America Annual Meeting, February 17, 2005: Need Assessment for Psychocutaneous Clinics. To achieve a higher response rate, the questionnaire was distributed at the Spring 2008 Wisconsin Dermatology Society (WDS) meeting, which had an attendance of 85 physicians and medical professionals. Permission to use questionnaire was obtained from Dr Ladan Mostaghimi]

Instruction: please select the best answer

17. Do you routinely inquire about the emotional/social impact of the skin problems on your patient's life?
    - Yes
    - No
18. What percentage of your patients may benefit from a psychocutaneous asssessment?
    - <10%
    - 30%
    - 50%
    - 70%
    - 100%
19. How important is psychodermatology training during registrar training?
    - Very important
    - Somewhat important
    - Not important
20. If you have the possibility to have a psychodermatology clinic available at your facility, which options below would you choose?
    - I would like to have a psychiatrist available during clinic times for immediate consults
    - I would like a *once a week* clinic and formal courses for residents
    - I would like a *once a month* clinic and formal courses for residents
    - I woud prefer only formal courses for residents
21. What type of patients would you like to be able to refer to a psychocutaneous clinic?
    - Delusional patients
    - Patients with emotional consequences of skin disease

- Patients with non-compliance with their dermatology treatment
- Patients resistant to conventional dermatology treatment
- Patients with chronic skin problems

22. Do you believe you have received sufficient training about how to identify emotional problems?
    - Yes
    - No
23. Do you believe you have received sufficient training about how to refer patients with emotional problems?
    - Yes
    - No

24. How interested are you in attending educational seminars on psychodermatology?
    - Very interested
    - Somewhat interested
    - Not interested
25. How comfortable do you feel about prescribing antipsychotic medication to your patients?
    - Very comfortable
    - Somewhat comfortable
    - Not comfortable
26. How comfortable do you feel about prescribing antidepressants to your patients?
    - Very comfortable
    - Somewhat comfortable
    - Not comfortable
27. Do you prescribe psychotropic medication to your patients if you decide that they need them?
    - Yes
    - No
    - No. I am not trained to use these medication
28. Do you believe that the medication prescribed for dermatological treatment may have psychiatric side effects?
    - Yes
    - No
29. If your response to question 13 is yes, how often do you assess your patient for the psychiatric side effect?

- Very often
- Sometimes
- Rarely

30. Designation
    - Medical officer
    - Registrar
    - Dermatology specialist
31. Your years of practice in dermatology
    - <4yrs
    - 4-10 yrs
    - >10yrs
32. Your years of practice as a doctor
    - <5 yrs
    - 5-15 yrs
    - >15 yrs

APPENDIX 3

Data collection sheet

Demographic data

Questionnaire data

- Q = Question
- NO = Number

Unique NO	Province	Designation	Years of practice in dermatology	Years of practice as a doctor	Q1	Q 2	Q3-16

APPENDIX 4

Plan for data analysis

Objectives	Demographic data	Questions	Methods
To determine the level of confidence in assessing patients with a psychodermatology disorder amongst dermatology practitioners in South Africa.	• Trainee or consultant • Years of practice as a doctor • Years of practice in Dermatology	• Do you routinely ask about emotional/ social impact of the skin problem on your patient's life? Yes/no	Frequency, % (by designation for categorical variables). Median, IQR (for continuous variables)
To determine level of comfort in prescribing psychotropic drugs amongst dermatology practitioners in South Africa.	• Trainee or consultant • Years of practice as a doctor • Years of practice in Dermatology	• How comfortable do you feel about prescribing: - Antidepressants - Antipsychotics - Anxiolytics • Do you prescribe psychotropic medication to your patient if you decide they need them? Very comfortable/ somewhat comfortable /not comfortable	Frequency, % (by designation for categorical variables). Median, IQR (for continuous variables)
To assess the need for additional psychodermatology training or continuing medical education (CME).	• Trainee or consultant • Years of practice as a doctor • Years of practice in Dermatology	• Do you believe you have received sufficient training about how to identify patients	Frequency, % (by designation for categorical variables). Median, IQR (for continuous variables)

		with emotional problems? • How important is it to have psychocutaneous training during your residency training? Yes/no	
To assess the need for psychodermatology clinics in South Africa.	• Trainee or consultant • Years of practice as a doctor • Years of practice in Dermatology	• If you have the possibility to have a psychocutaneous clinic available to your practice, which option will you choose? • Psychiatry during clinic times for immediate consults/ once a week clinic &didactic courses for residents/ once a month clinic & didactic courses for residents/ didactic courses only/ I do not believe we need this type of clinic?	Frequency, % (by designation for categorical variables). Median, IQR (for continuous variables)

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