



Maladaptive Daydreaming in Psoriasis Patients

Psoriasis Hastalarında Uyumsuz Hayal Kurma Bozukluğu

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ABSTRACT

Aim: Many psychiatric disorders are associated with psoriasis. A 16-item self-report maladaptive daydreaming (MD) scale (MDS-16) is described as a screening tool for MD. We aimed to explore whether MDS-16 scores differed in psoriasis patients compared to healthy individuals, hypothesizing higher scores and higher rates of probable maladaptive daydreamers (MDers) among psoriasis patients.

Materials and Methods: We included 184 psoriasis patients and 93 age- and sex-matched people without any cutaneous disorders in this case-control, cross-sectional, and questionnaire-based study. Dermatology Quality of Life Instrument in Turkish (TQoL) and MDS-16 were applied. We considered the participants with a total MDS-16 score ≥ 50 as probable MDers.

Results: Total MDS-16 score was higher in the psoriasis group ($p=0.038$). However, the difference between the frequencies of probable MDers was not significant ($p=0.234$). According to the multivariable analysis, psoriasis was not found as an independent risk factor for being probable MDer. In the psoriasis group, total MDS-16 scores were positively correlated with TQoL scores ($r_s=0.259$, $p=0.001$), which were significantly higher in probable MDers ($p=0.032$).

Conclusion: The association between psoriasis and MD may be related to the level of the impact of psoriasis on the quality of life.

Keywords: Maladaptive daydreaming, psoriasis, quality of life

ÖZ

Amaç: Birçok psikiyatrik bozukluk psoriasis ile ilişkilidir. On altı maddeden oluşan uyumsuz hayal kurma (MD) ölçeği (MDS-16), MD bozukluğu için bir tarama aracı olarak tanımlanmıştır. Bu çalışmada, psoriasisli bireylerde daha yüksek MDS-16 skorları ve olası uyumsuz hayal kurma bozukluğu oranı görüleceği hipotezinden yola çıkılarak, psoriasisli hastalar ile sağlıklı bireylerin MDS-16 skorları arasında fark olup olmadığını araştırmayı amaçladık.

Gereç ve Yöntem: Bu kesitsel, ankete dayalı, olgu-kontrol çalışmasına 184 psoriasis hastası ve herhangi bir deri hastalığı olmayan, yaş ve cinsiyet açısından uyumlu 93 kişi dahil edildi. Türkçe Dermatolojik Yaşam Kalite Ölçeği (TDYKÖ) ve MDS-16 uygulandı. Toplam MDS-16 puanı ≥ 50 olan katılımcılar olası MD bozukluğuna sahip bireyler olarak değerlendirildi.

Bulgular: Toplam MDS-16 skoru psoriasis grubunda daha yüksekti ($p=0,038$). Ancak, olası MD bozukluğuna sahip bireylerin sıklığı arasında anlamlı fark yoktu ($p=0,234$). Çok değişkenli analize göre, psoriasis, MD bozukluğu açısından bağımsız bir risk faktörü olarak saptanmadı. Psoriasis grubunda; MDS-16 skorları, TDYKÖ skorları ile pozitif korelasyon gösterirken ($r_s=0,259$, $p=0,001$), olası MD bozukluğuna sahip bireylerde TDYKÖ skorları daha yüksekti ($p=0,032$).

Sonuç: Psoriasis ile MD bozukluğu arasındaki ilişki, psoriasisin YK üzerindeki etki düzeyi ile ilişkili olabilir.

Anahtar Kelimeler: Uyumsuz hayal kurma, psoriasis, yaşam kalitesi

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INTRODUCTION

Maladaptive daydreaming (MD) is an extensive fantasy activity that replaces human interaction and/or interferes with functioning in various areas of life and can give rise to severe distress¹. It may arise as a coping strategy due to psychological stress and real-life problems^{2,3}. In addition, patients with MD may have other symptoms related to depression, anxiety, dissociation, and obsessive-compulsive related disorders⁴.

Somer et al.⁴ described a 16-item self-report MD scale (MDS-16) to discriminate between individuals with and without MD. The MDS-16 is currently used as the screening tool, translated and validated in various languages^{5,6}.

Psoriasis is a chronic inflammatory systemic disorder that can have a negative impact on quality of life (QoL) and cause psychological and social morbidity. Coping with psoriasis can lead to chronic stress. Psychological distress may trigger or worsen psoriasis within a vicious cycle. Patients can develop new coping strategies during the disease course⁷⁻⁹.

Many psychiatric disorders, such as anxiety, eating, mood (depression or bipolar disorder), sleep, somatoform disorders, sexual dysfunction, and substance abuse, are associated with psoriasis^{10,11}. Evaluating the psychosocial comorbidities is essential for assessing the severity of psoriasis during the disease course. Until now, there has been no report regarding the association between psoriasis and MD in the literature.

We hypothesized that psoriasis might trigger or enhance MD as a coping strategy. We aimed to explore whether MDS-16 scores differed in psoriasis patients compared to healthy individuals, hypothesizing higher scores and higher rates of probable maladaptive daydreamers (MDers) among psoriasis patients.

MATERIALS AND METHODS

Participants

This case-control, cross-sectional, and questionnaire-based study was conducted between August 2022 and January 2023 at the dermatology outpatient clinic in our tertiary referral hospital. Participants were divided into two groups, as the psoriasis and control group. We enrolled 184 patients with psoriasis in the psoriasis group, whereas 93 age- and sex-matched people from the same geographical region and without any cutaneous disorders were in the control group. Those younger than 18 years and those who did not accept to attend the study were excluded.

We obtained ethics approval from the Tekirdağ Namık Kemal University Non-interventional Clinical Research Ethics Committee (approval number: 2022.131.06.21, date:

28.06.2022). All participants provided informed consent before participating in the study.

Measures

Sociodemographic and Clinical Data

For all participants, we recorded data on age, sex, smoking, alcohol use, body mass index (BMI), comorbidities, regularly used medicines, marital status (single, married, divorced, widowed), education levels (elementary/middle school, high school, Bachelor's/Master's degree), occupation status, income level (low, middle, high), and residence area. In addition, age at the psoriasis onset, disease duration, involvement of special sites (scalp, nail, genital, flexural, and palmoplantar regions), and therapies used for psoriasis were recorded in the psoriasis group.

Psoriasis Area Severity Index

Psoriasis area severity index (PASI) is the most commonly used scale to evaluate psoriasis severity¹². The patients with PASI scores ≥ 10 or body surface area $\geq 10\%$ are accepted to have moderate-severe psoriasis. However, in some patients, PASI scores may not exactly reflect the disease severity because of the impact of the disease on QoL. Despite a PASI score < 10 , patients with psoriatic arthritis, involvement of visible or special areas, presence of resistant plaques, itching/pain/burning sensations, or Dermatology Life Quality Index > 10 are also considered as moderate-severe psoriasis^{13,14}. In the psoriasis group, we defined the severity of psoriasis in light of this information.

Quality of Life Assessment

We used the Dermatology QoL instrument in Turkish (TQoL) to assess the impact of psoriasis on the participants' QoL over the last month. The TQoL is a validated, five-point Likert-type (0=never to 4=always) self-report questionnaire consisting of 11 items, each conceptualized to measure different domains, including cognitive, emotional, social, daily activity, sexual life, and symptoms. The total possible score ranges between 0 and 44. The lower the score, the better the QoL^{15,16}.

MDS-16 Scale

The MDS-16 was used to assess the potential MD cases. It is a 16-item self-report questionnaire on a Likert-type scale ranging from 0% (none of the time/never) to 100% (all of the time/extremely frequent) with 10% increments. The total score is the average of 16 items^{4,6}. Higher scores indicate a higher potential for MD. Metin et al.⁵ made a validity and reliability study of the Turkish version of the MD scale.

Somer et al.⁶ reported the optimal cutoff score as 40 in screening patients with MD with a near perfect sensitivity. However, a cutoff score of 50 had 100% specificity (no false-positive case) and very accurate sensitivity in that study. Because we did not perform clinical interviews, total scores of ≥ 50 were considered probable MDers^{17,18}. The Cronbach's α for the MDS-16 in this study was 0.913.

Statistical Analysis

The Statistical Package for the Social Sciences v.25 software (IBM Corp., Armonk, NY, USA) was used for all statistical analyses. $P < 0.05$ was considered statistically significant.

The normality of the distribution of continuous variables was assessed using the Kolmogorov-Smirnov test. Continuous variables were presented as median (interquartile range) or mean \pm standard deviation, and categorical variables as frequency and percentage.

The Cronbach's α was measured for the internal consistency of the MDS-16 questionnaire. According to the normality test results, the independent samples t-test or the Mann-Whitney U test was used for comparisons between two groups, and the Kruskal-Wallis test was used if the number of groups was greater than two. The Dunn-Bonferroni approach was performed for multiple comparisons after the Kruskal-Wallis test. The Pearson's chi-square or Fisher-Freeman-Halton test was employed to compare categorical variables. The

correlations between continuous variables were examined using the Spearman correlation test.

We performed the enter method of multivariable logistic regression analysis to assess the association between independent risk factors and MD. To verify whether the model fits the data, we employed the Hosmer and Lemeshow test. The independent variables with $p < 0.05$ in the univariable logistic regression test were then included in multivariable logistic regression. We defined the dependent variable by dichotomizing probable MDers (total MDS-16 score ≥ 50) and non-probable MDers (total MDS-16 score < 50). Independent variables were the study group (psoriasis or control), age, sex, smoking, alcohol use, BMI, marital status, education level, occupation status, income level, residence area, and psychiatric comorbidities. In addition, age at the psoriasis onset, psoriasis duration, involvement of special sites, TQoL score, PASI, and treatment used for psoriasis were defined as independent variables in the psoriasis group.

RESULTS

Comparison of Sociodemographic Characteristics and Total MDS-16 Scores Between Study Groups

The data of study groups were statistically similar in terms of age, sex, marital status, BMI, and income levels. The comparisons of sociodemographic and clinical data for the groups are presented in Table 1.

	Variables	Psoriasis group (n=184)	Control group (n=93)	p
Age	Mean \pm SD	42.51 \pm 13.42	41.34 \pm 11.27	0.562 ^a
	Median (IQR)	42 (21)	42 (17)	
Sex (n, %)	Female	91, 49.5%	50, 53.8%	0.498 ^b
	Male	93, 50.5%	43, 46.2%	
Marital status (n, %)	Single	43, 23.4%	19, 20.4%	0.386 ^c
	Married	129, 70.1%	69, 74.2%	
	Divorced	7, 3.8%	5, 5.4%	
	Widowed	5, 2.7%	0	
BMI (n, %)	<18.5 (underweight)	4, 2.2%	1, 1.1%	0.630 ^c
	≥ 18.5 and <25 (normal)	51, 27.7%	30, 32.6%	
	≥ 25 and <30 (overweight)	82, 44.6%	42, 45.7%	
	≥ 30 and <40 (obesity)	39, 21.2%	18, 19.6%	
	≥ 40 (severe obesity)	8, 4.3%	1, 1.1%	
Education level (n, %)	Elementary/middle school	63, 34.2%	16, 17.2%	<0.001 ^b
	High school	67, 36.4%	12, 12.9%	
	Bachelor's/Master's degree	54, 29.3%	65, 69.9%	
Income level (n, %)	Low (I < 0)	67, 37.2%	27, 29.3%	0.154 ^b
	Middle (I = 0)	92, 51.1%	47, 51.1%	
	High (I > 0)	21, 11.7%	18, 19.6%	

Table 1. Continued

	Variables	Psoriasis group (n=184)	Control group (n=93)	p
Smoking (n, %)	None	85, 46.2%	63, 67.7%	0.001 ^b
	Current smoker	99, 53.8%	30, 32.3%	
Alcohol use (n, %)	No	154, 83.7%	59, 63.4%	<0.001 ^b
	Yes	30, 16.3%	34, 36.6%	
Occupation (n, %)	No	77, 44%	20, 23%	0.001 ^b
	Yes	98, 56%	67, 77%	
Residence area (n, %)	Village	9, 4.9%	3, 3.2%	<0.001 ^b
	District	125, 67.9%	16, 17.2%	
	City	50, 27.2%	74, 79.6%	
Psychiatric disorders (n, %)	Absent	173, 94%	83, 94.3%	0.923 ^b
	Present	11, 6%	5, 5.7%	
	- Depression	7	2	
	- Anxiety	3	3	
	- Schizophrenia	1		
- Alcohol addiction	1			
Probable MDers (n, %)		20 (10.9%)	6 (6.5%)	0.234 ^b
Total MDS-16 score	Mean±SD	26.13±17.16	21.82±15.83	0.038 ^a
	Median (IQR)	23.75 (25.63)	18.12 (21.56)	

^aMann-Whitney U test; ^bPearson's chi-square test; ^cFisher-Freeman-Halton test.
SD: Standard deviation, IQR: Interquartile range, MDS-16: Maladaptive daydreaming scale, I: Income, O: Outcome, MDers: Maladaptive daydreamers

Relationship Between Total MDS-16 Scores and Sociodemographic and Clinical Features

There were no statistically significant associations between total MDS-16 scores and sex, marital status, obesity, education level, smoking, alcohol use, occupation status, and accompanying comorbidities in both groups. The associations of total MDS-16 score with income level, residence area, and psychiatric disorders were only significant in the psoriasis group (Table 2).

There was a weak negative correlation between age and the total MDS-16 score only in the control group ($r_s = -0.215$, $p = 0.042$).

In the psoriasis group, there was no significant association between total MDS-16 scores and psoriasis severity or involvement of special sites. Total MDS-16 scores were higher among patients not treated with systemic agents, yet the difference was not significant (Table 3). In addition, the total MDS-16 scores and BMI, age, PASI, disease duration, or the age of psoriasis onset were not significantly correlated. There was a weak positive correlation between TQoL and the total MDS-16 scores ($r_s = 0.259$, $p = 0.001$).

Sociodemographic Characteristics of Probable MDers

In both groups, sex, marital status, education levels, smoking, alcohol use, occupation status, BMI, income level, or the

presence of psychiatric disorders did not significantly differ between probable MDers and the others.

Of 184 psoriasis patients, 20 (10.9%) were probable MDers. Among the probable MDers, 17 (85%) were residing in a district and 3 (15%) were in a village, whereas among non-probable MDers, 108 (65.9%) were in a district, 50 (30.5%) in a city, and 6 (3.7%) in a village ($p = 0.003$).

In the psoriasis group, disease duration or severity, age of the onset of psoriasis, PASI, or special site involvements did not significantly differ among probable MDers compared to non-probable MDers. TQoL scores were significantly higher in probable MDers (Table 4). A much larger proportion of patients treated only with topical agents or phototherapy were probable MDers (Table 3).

Multivariable Analysis

Multivariable analyses, utilizing the enter method, were performed for all participants (Model 1), the psoriasis group (Model 2), and the control group (Model 3). According to the results of Hosmer and Lemeshow tests ($p = 0.064$, $p = 0.789$, and $p = 0.767$ for Model 1, Model 2, and Model 3, respectively), the models fit the data and could be further interpreted. The explained pseudovariance (Nagelkerke, R^2) was 21.3% for Model 1, 16.3% for Model 2, and 33.7% for Model 3. The percentages of cases correctly classified were 90.8% in Model 1, 89.4% in Model 2, and 95.3 in Model 3.

Table 2. Relationship between total MDS-16 scores and sociodemographical/clinical features

Variables	Total MDS-16 score					
	Psoriasis group			Control group		
	n	Median (IQR)	p	n	Median (IQR)	p
Income level ^a						
- Low (I<O)	67	26.3 (28.1)	0.018	27	19.4 (30.63)	0.447
- Middle (I=O)	92	24.4 (25.3)		47	17.5 (18.13)	
- High (I>O)	21	11.3 (20.9)		18	16.3 (19.7)	
Residence area ^b						
- Village	9	32.5 (28.13)	0.016	3	10	0.665
- District	125	26.3 (28.75)		16	20.3 (20.8)	
- City	50	19.1 (21.56)		74	17.8 (22.8)	
Psychiatric disorders ^c						
- Absent	173	23.1 (24.7)	0.033	83	18.1 (21.3)	0.685
- Present	11	41.3 (30)		5	18.1 (47.5)	

^aKruskal-Wallis test. Pairwise comparisons; the differences between I<O and I>O (p=0.018) and between I=O and I>O (p=0.028) were significant.
^bKruskal-Wallis test. Pairwise comparisons; the differences between district and city (p=0.018), village and city (p=0.016) were significant.
^cMann-Whitney U test.
 IQR: Interquartile range, I: Income, O: Outcome, MDS-16: Maladaptive daydreaming scale

Table 3. The relationship between MDS-16 results and treatment types in the psoriasis group

Treatment types	Probable MDers (n, %)	Total MDS-16 scores Mean±SD Median (IQR)
Topical or phototherapy (n=34)	8 (23.5%)	32.5±19.2 32.2 (29.8)
Systemic conventional (n=58)	4 (6.9%)	23.1±15.3 21.6 (19.06)
Biologic agents (n=92)	8 (8.7%)	25.7±17.1 22.2 (27.97)
p	0.030 ^a	0.058 ^b

^aPearson's chi-square test, ^bKruskal-Wallis test.
 MDers: Maladaptive daydreamers, MDS-16: Maladaptive daydreaming scale, IQR: Interquartile range, SD: Standard deviation

The multivariable analysis revealed that residence area and psychiatric disorders for all participants, TQoL score and treatment type for psoriasis patients, and age for the control group were independent risk factors for being probable MDers. Psoriasis was not found to be an independent risk factor for MD [odds ratio (OR): 0.681; 95% confidence interval (CI): 0.169-2.75; p=0.590]. The results of multivariable logistic regression analysis are presented in Table 5.

DISCUSSION

Based on the knowledge that many psychiatric disorders are associated with psoriasis, we explored whether psoriasis patients had higher total MDS-16 scores and whether probable MDers might be more frequent among psoriasis patients. Following our hypothesis, total MDS-16 scores were significantly higher in the psoriasis group (p=0.038). However, the difference in the frequency of probable MDers between

the study groups was not statistically significant (p=0.234). In addition, psoriasis was not an independent risk factor for MD according to the multivariable analyses.

Psoriasis may affect the quality of the social, personal, and sexual lives of the patients. Therefore, the patients are prone to have anxiety, depression, or other psychological disorders, yet not all patients have difficulties in adjusting to their disease^{7,8}. According to previous reports, the QoL, psychological distress, or stress are not associated with the psoriasis severity and duration, or treatment modalities^{7,9,19-21}. Beyond the cosmetic disfigurement of psoriasis, psychological factors and the inability to cope with stress are strong determinants of disability in psoriasis patients⁹. We observed a weak positive correlation between TQoL and the total MDS-16 scores (r_s=0.259, p=0.001), and TQoL scores were higher among probable MDs (p=0.032). In addition, according to the multivariable analysis, higher TQoL scores were associated with

a greater risk of being a probable MDer in the psoriasis group (OR: 1.055; 95% CI: 1.002-1.110). On the other hand, although total MDS-16 scores were significantly higher in the psoriasis group, the difference in the frequency of probable MDers between the study groups was not significant, and psoriasis was not among the risk factors of being a probable MDer. In addition, there was no relationship between MD and psoriasis

severity, duration, or location. Among treatment modalities, a larger proportion of patients treated with skin-directed therapies (topical or phototherapy) were probable MDers. Similarly, treatment with systemic conventional (OR: 0.162; 95% CI: 0.036-0.738) or biologic agents (OR: 0.250; 95% CI: 0.073-0.854) was associated with decreased risk of being probable MDer, which may be attributed to their long-term

Table 4. Comparison of age, BMI, and TQoL scores between probable MDers and non-probable MDers

Variables	Non-probable MDers Mean±SD Median (IQR)	Probable MDers Mean±SD Median (IQR)	p
Age			
- Control group	42.2±11.05 44 (16)	29.33±6.98 26.5 (13)	0.006 ^a
- Psoriasis group	42.53±13.27 42 (21)	42.37±15.06 42 (26)	0.961 ^b
BMI			
- Control group	26.64±4.6 25.7 (5.4)	27.34±2.67 28.4 (4.8)	0.481 ^b
- Psoriasis group	27.46±4.98 26.95 (5.1)	29.63±7.78 29.35 (12.6)	0.119 ^b
TQoL scores			
- Psoriasis group	18.03±10.87 16.5 (19)	23.65±9.37 22 (15)	0.032 ^b
PASI			
- Psoriasis group	2.7±4.6 1 (2.4)	3.1±6.5 1 (1.7)	0.806 ^b

^aIndependent samples t-test, ^bMann-Whitney U test.

MDS-16: Maladaptive daydreaming scale, IQR: Interquartile range, BMI: Body mass index, TQoL: Dermatology QoL instrument in Turkish, PASI: Psoriasis area severity index, SD: Standard deviation

Table 5. Results of multivariable logistic regression analysis

Risk factors	OR	95% CI	p
All participants			
Residence area			
- Village	Reference		
- District	0.616	0.110-3.447	0.581
- City	0.106	0.012-0.955	0.045
Psychiatric disorder			
- Absent	Reference		
- Present	4.88	1.118-21.3	0.035
Psoriasis group			
Higher TQoL scores	1.055	1.002-1.110	0.042
Treatment types			
- Topical or phototherapy	Reference		
- Systemic convantional	0.162	0.036-0.738	0.019
- Biologic agents	0.250	0.073-0.854	0.027
Control group			
Older age	0.838	0.728-0.966	0.015

OR: Odds ratio, CI: Confidence interval, TQoL: Dermatology Quality of Life Instrument in Turkish

positive effects on QoL, although used for moderate/severe psoriasis. Therefore, daydreaming or MD may be a coping strategy for psoriasis patients with impaired QoL independent from the other measures of disease severity.

Reported accompanying psychopathologies may not be compatible with the extent of psoriasis lesions¹¹. The correlation between psoriasis and mental disorders includes alterations of neuroimmune, serotonergic, or dopaminergic systems^{10,22,23}. Low serotonin and high dopamine levels were found to be associated with psoriasis²². In addition, the use of serotonin reuptake inhibitors in psoriasis patients was found to be associated with a decreased need for systemic psoriasis treatment²⁴. On the other hand, accompanying psychiatric comorbidities of MD, such as anxiety disorders, depressive disorder, obsessive-compulsive related disorders, have been reported^{4,25-27}. MD marked by addictive features has shared mechanisms with obsessive-compulsive disorder or dissociation^{27,28}. Therefore, serotonergic and dopaminergic systems may be involved in the development of MD, like psoriasis. In this study, although total MDS-16 scores were significantly higher among participants with known psychiatric disorders in the psoriasis group, psychiatric disorders were not associated with probable MDers in both groups. Nevertheless, when we analyzed both groups together in a multivariable analysis, participants with a psychiatric disorder were at 4.88 times the risk of being a probable MDers compared to those without any psychiatric disorders (95% CI: 1.118-21.3; $p=0.035$).

In line with previous studies, probable MDers were younger-aged adults in the control group^{28,29}. In addition, age and total MDS-16 scores were reversely correlated, and older age was associated with lower risk for MD (OR: 0.838; 95% CI: 0.728-0.966). However, there was no association between age and probable MDers in the psoriasis group.

Previous studies have reported that MD is more common in individuals with lower education levels^{18,30}. Our study groups were not similar in the case of the education level. The majority of participants had higher education in the control group. However, there was no association between MD and education level in either group.

In the psoriasis group, total MDS-16 scores and the frequency of probable MDers were higher among participants living in a village/district. Similarly, living in a city was linked with a decreased risk of being probable MDers (OR: 0.106; 95% CI: 0.012-0.955); however, such an association was not observed in case all participants were analyzed together. This difference may be attributed to the disproportion of participants' residence areas between the study groups. Moreover, although total MDS-16 scores were higher among low/middle-income participants, the frequency of probable MDers was not significantly different.

Study Limitations

The first limitation of our study was its cross-sectional nature. Second, because we did not correlate the scale scores with the diagnostic structured clinical interviews, there may be potential false positives in our data. Third, some sociodemographic features (education level, occupation, and residence) of the study groups were not similar. Although we found no correlation between total MDS-16 scores and education level or occupation status, total scores were significantly higher in participants with low/middle income or residing in a village/district in the psoriasis group. In addition, it would have been better to exclude cases with psychiatric disorders from the study in the first place to better understand the relationship between psoriasis and MD, independently from the other psychiatric disorders.

CONCLUSION

Although psoriasis was not found as an independent risk factor, TQoL scores were higher among probable MDers, and the higher the TQoL score, the higher the risk for MD in the psoriasis group. Therefore, the relationship between psoriasis and MD may depend on the level of impact of psoriasis on the QoL. Clinicians should better be aware of the MD as a potential accompanying psychopathology while following up patients with psoriasis and impaired life quality. Further studies with clinical interviews are needed to confirm and extend our findings.

Ethics

Ethics Committee Approval: We obtained ethics approval from the Tekirdağ Namık Kemal University Non-interventional Clinical Research Ethics Committee (approval number: 2022.131.06.21, date: 28.06.2022).

Informed Consent: All participants provided informed consent before participating in the study.

Authorship Contributions

Concept: Ö.Z., E.B., S.A., H.A., Design: Ö.Z., E.B., S.A., H.A., Data Collection or Processing: Ö.Z., E.B., S.A., H.A., Analysis or Interpretation: Ö.Z., Literature Search: Ö.Z., E.B., Writing: Ö.Z., E.B.

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