How to Cite This Article: Abid, S., Majeed, R., Bhatti, S. F., Anwar, P., & Tahir, L. (2025). Mental Health Problems and Psychological Well-being of Patients with Eczema in Pakistan. *Journal of Social Sciences Review, 5*(1), 377-383.
https://doi.org/10.62843/jssr.v5i1.496

Volume 5, **Issue** 1 (Winter 2025)
Pages: 377-383
ISSN (Online): 2789-4428
DOI: 10.62843/jssr.v5i1.496
Corresponding Author: Sophia Abid (Email: sophie.abid16@gmail.com)

JOURNAL OF SOCIAL SCIENCES REVIEW (JSSR)

Mental Health Problems and Psychological Well-being of Patients with Eczema in Pakistan

Sophia Abid [a] Rabia Majeed [b] Sundus Fatima Bhatti [c] Pulwasha Anwar [d] Labina Tahir [e]

Abstract: *There is substantial literature on the association between mental health problems and eczema globally, particularly in Western countries; however, limited research has been conducted in Pakistan. Therefore, this study investigates the relationship between mental health problems (operationalized as anxiety and depression) and psychological well-being among Pakistani adults diagnosed with eczema, aged 18 and over. The study employs a cross-sectional correlational research design and a purposive sampling technique. The assessment tools include the shorter versions of the DASS-21 questionnaire (depression and anxiety subscales to measure depression and anxiety among patients with eczema) and an 18-item psychological well-being questionnaire. Results indicate a positive and significant association between depression and anxiety, while these variables show a negative but non-significant correlation with psychological well-being. Additionally, depression and anxiety negatively (but not significantly) predict psychological well-being. The study highlights key implications for Pakistani adults, such as the role of mental health professionals in raising awareness through seminars, webinars, and workshops. It also emphasizes promoting psychological help-seeking behavior, government initiatives to increase awareness, and the need for psychological intervention services in affected communities, especially in areas lacking resources. Steps must be taken to improve societal welfare by providing adequate mental health facilities.*

Keywords: Anxiety, Depression, Eczema, Mental Health, Pakistan

Introduction

Atopic dermatitis (AD), also known as eczema, is an inflammatory skin disease characterized by severe itching and eczematous lesions (Silverberg et al., 2019). AD affects around 20% of children and up to 10% of adults in developed nations, placing a substantial burden on both individuals and healthcare resources (Nutten, 2015). Eczema commonly appears on the cheeks, face, around the eyes, and on the forehead, causing itching, dry skin, and inflammation. This can interfere with daily activities and lead to detrimental psychological effects on the affected individuals (Afzal & Rafique, 2023; Bershad, 2011; Peate, 2011; Schmitt et al., 2011).

Mental health issues encompass a broad range of emotional, cognitive, and behavioral problems that affect a person's day-to-day functioning as well as their general sense of well-being. These issues may include anxiety disorders, depression, and related conditions, as well as difficulties with emotional dysregulation, which can arise from biological, psychological, and environmental causes (WHO, 2022). Two significant and notable mental health problems are depression and anxiety. Depression can be defined as a persistent state of sadness or upset for most of the day, lack of interest in pleasurable activities, indecisiveness, inactivity, fatigue, negative thinking, hopelessness, suicidal thoughts, and even attempts. Anxiety, on the other hand, is characterized by excessive worry, tension, and fear about the future, and

[a] Associate Clinical Psychologist, Institute of Professional Psychology, Bahria University, Karachi Campus, Sindh, Pakistan.
[b] Senior Clinical Psychologist, Lady Aitchison Hospital, Lahore, Punjab, Pakistan.
[c] Doctor (MBBS), Department of Clinical Medicine, Chengde Medical University, Hebei, China.
[d] PhD Scholar, Department of Psychology, Institute of Social Sciences, Bursa Uludağ University, Bursa, Turkey.
[e] Associate Psychologist, Department of Psychology, Jinnah University for Women, Karachi, Sindh, Pakistan.

can manifest through symptoms such as a rapid heart rate, sweating, freezing, and shaking. Studies have shown that among eczema patients, anxiety and depression are commonly found and highly prevalent (Adesanya et al., 2023; Boehm et al., 2012; Treudler et al., 2020).

Psychological well-being is a person's general emotional and cognitive functioning, encompassing life satisfaction, personal growth, self-acceptance, and effective management (Ryff, 1989). It involves both hedonic well-being (happiness and satisfaction with life) and eudaimonic well-being (feeling of purpose and personal fulfilment) (Keyes, 2002). Positive psychological well-being is linked to good mental health, resilience, and improved coping in adversity (Diener et al., 2017). Studies have depicted that among individuals with eczema the psychological wellbeing is adversely affected (Dennis et al., 2006; Singleton et al., 2024).

The effects of AD reach beyond physical pain, significantly influencing patients' psychological health. The long-term character of the disease, combined with apparent skin lesions, tends to cause psychological suffering, such as depression and anxiety (Sandhu et al., 2019). A population-based cohort study proved that AD patients had a 14% higher incidence of depression and a 17% higher incidence of anxiety than individuals without AD (Langan et al., 2020). Psychological well-being and mental health issues in patients suffering from eczema are proportionally inversely related since growing anxiety, depression, and as a consequence of eczema diminish total psychological well-being (Dalgard et al., 2015). Alternatively, greater psychological well-being encompassing emotional robustness and resilience to is likely to cushion the degree of mental health issues linked to eczema (Kim et al., 2020).

The interaction between AD and mental disorders is reciprocal. Psychological exacerbates AD symptoms, creating a vicious cycle of worsening skin condition and heightened (Yosipovitch et al., 2024). This cycle highlights the need to treat both dermatological and psychological factors in the management of AD. Sleep disruptions are common in AD, with further effects on mental health. Severe itching with AD frequently results in disturbed sleep, with subsequent daytime fatigue and lower quality of life (Kantor & Silverberg, 2017). The psychosocial effects of AD encompass social interactions and relationships. Social withdrawal and isolation may result from embarrassment and self-consciousness due to visible skin lesions (Dieris-Hirche et al., 2017). Social isolation itself may further promote mental health issues, creating a cycle that is difficult to overcome. AD children and adolescents are most susceptible to psychological morbidity. Eczema, which is visible, causes bullying and rejection by peers, creating low-esteem and social anxiety (Kim et al., 2018).

A meta-analysis of studies concluded that children and adolescents with AD were at a much greater risk of developing mental disorders than without AD (Li et al., 2019). These involve medical costs, lost productivity, and compromised quality of life, further emphasizing the importance of integrated management approaches that cover both physical and psychological dimensions of the disease. Hon et al. (2015) examined the occurrence of depressive, and anxiety, symptoms of childhood atopic eczema (AE) and their relation to severity of disease, quality of life, and bio physiology of skin. Impairments of quality of life were related to disease severity, distorted skin bio physiology, and psychological di. One more study states that the implications point toward the use of an interdisciplinary treatment, which combines psychotherapy, behaviour therapy, and coping mechanisms along with dermatological management. Siewertsen et al. (2024) surveyed the psychological burden of hand eczema in terms of depression, anxiety, and quality of life (QoL). He had a moderate-to-severe effect on QoL and was closely correlated with severity of disease.

Shipowick et al. (2025) investigated what resources for mental health and well-being exists worldwide for people with skin conditions. From analysis of 26 dermatology patient advocacy and health organization websites, resources that were found included mental health information, coping techniques, peer support, and counselling. Successful application should take account of cultural variations, stigma, and accessibility in order to maximize global reach. Current studies largely concentrate on the biological causes of eczema, with scant consideration of its psychological consequences. Therefore, there is need of studies that investigate the mental health problems and well-being of patients of eczema.

Although there is considerable literature regarding mental health problems and detrimental psychological well-being among patients with eczema, limited studies have been conducted in Pakistan. Thus, the objective of this study is to examine the association between mental health problems, operationalized as depression and anxiety, and psychological well-being among patients with eczema in Pakistan. This research aims to fill the existing gap and provide implications for Pakistani adults.

Hypotheses:

1. Anxiety and depression are likely positively and significantly relate with each other and negatively and significantly relate to psychological well-being among patients with eczema.
2. Anxiety and depression are likely to have a negative and significant impact on psychological well-being among patients with eczema.

Method

Study Design: This was a cross-sectional correlational study designed to examine the relationship between mental health problems i.e. depression and anxiety and psychological wellbeing of patients with eczema.
Sampling: A purposive sampling technique was used to collect data from 200 patients with eczema.
Inclusion Criteria: Patients in public and private hospitals of Pakistan with age 18 or more than 18, both gender with minimum qualification of intermediate.

Research Instruments

Depression Anxiety Scale (DASS-21): The Depression Anxiety Stress Scale (DASS-21) is a 21-item scale with a four-point Likert scale ranging from "Did not apply to me" [0] to "Applied to me most of the time" [4]. The subscales for anxiety and depression, each consisting of 7 items, were used to assess depression and anxiety. The scale has a Cronbach's alpha of 0.88 for depression and 0.82 for anxiety.
Psychological Well-Being Scale (Ryff, 1995): Ryff's 18-item scale uses a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree) and has a reliability coefficient ranging from 0.86 to 0.93.

Ethical Considerations and Procedure

The study strictly followed the ethical standards of APA 7. Before and after the data collection process, permission was obtained from the university, and the authors were subsequently contacted for permission to use their questionnaires in our study. After receiving permission, participants were approached in hospitals in Gujranwala, Lahore, and Karachi, both in public and private hospitals. Patients who fulfilled the inclusion criteria of the study were included. Before data collection, participants signed an informed consent form, in which it was stated that participation was voluntary, they were not forced to participate, and they could leave the study at any time. Participants filled out the questionnaire in approximately 15 minutes. Afterward, they were thanked, and it was ensured that no physical or psychological harm occurred. After data collection, the data was entered into SPSS version 29 for analysis.

Results

Table 1

Characteristics of Participants (N=200)

Characteristics	Frequency	Percentage	Mean	Standard Deviation
Gender				
Men	60	30		
Women	140	70		
Age			37.95	9.54
Education				
Intermediate	85	42.5		
Bachelor	62	31		
Master	28	14		
Ph.D	25	12.5		
Site of face affected				
Whole Face	79	39.5		
Cheeks	92	46		
Around Forehead and above eyes	29	14.5		

The above table depicts those 60 men (30%) and 140 women (70%) participated in the study, with a mean age of 37.95 and a standard deviation of 9.54. The education categories of the participants show that 85 (42.5%) have an intermediate education level, 62 (31%) have a bachelor's degree, 28 (14%) have a master's degree, and 25 (12.5%) have a PhD. The site of eczema shows that 79 (39.5%) have eczema on their entire face, 92 (46%) on the cheeks, and 29 (14.5%) around the forehead and above the eyes.

Table 2

Correlation among Study Variables (N=200)

Variables	1	2	3
1. Depression	-	.43**	-.04
2. Anxiety			-.07
3. Psychological Well-being			-

The above table depicts that depression and anxiety have a significant positive relationship with one another, but a negative, non-significant association with psychological well-being.

Table 3

Hierarchical Regression for Psychological Well-being (N=200)

Variables	B	SE	ß	R	R^2	p	95% CI	
							LL	UL
Step 1								
Depression	-.10	.17	-.04	.04	.002	.55	-.45	.24
Step 2								
Anxiety	-.16	.172	-.07	.07	.006	.36	-.51	.19

The above table depicts depression and anxiety as predictors of the outcome variable, psychological well-being. Step 1 indicates that depression negatively but not significantly predict psychological well-being ($\beta = -10$, $R^2 = 0.002$, $F = 0.35$), accounting for 0.2% of the variance in psychological well-being scores. Step 2 shows that anxiety, although negatively but not significantly predicting psychological wellbeing ($\beta = -0.16$, $R^2 = 0.006$, $F = 0.81$), accounting for 0.6% of the variance in psychological well-being.

Discussion

There is very limited literature regarding the association between mental health problems and psychological well-being among patients with eczema, specifically in Pakistan. Therefore, the current study aims to fill this gap and provide targeted implications for patients with eczema in Pakistan.

The current research sought to investigate the correlations between depression, anxiety, and psychological well-being in patients with eczema. The initial hypothesis suggested that anxiety and depression were negatively and significantly correlated with psychological well-being. The findings revealed positive and significant association between anxiety and depression and negative correlations of depression and anxiety with psychological well-being, but these were not statistically significant. This result indicates that although greater levels of depression and anxiety might be associated with less psychological well-being, the relations are not as strong as to allow for definitive conclusions.

These findings are contrary to earlier studies which showed that individuals with atopic eczema have an increased risk of depression and anxiety. For example, a paper in the Journal of Allergy and Clinical Immunology established that atopic eczema in adults increases their chances of developing new depression and anxiety, with a dose-response association between depression and eczema severity (Andersen et al., 2020). Recent and previous studies have shown depression, and anxiety has negative association with wellbeing among patients with eczema due to societal stigma and discrimination (Schonmann et al., 2020; Siewertsen et al., 2024). The disparity between the findings of the present study and existing research could be attributed to variation in sample attributes, measurement instruments, or the existence of confounding variables that were not controlled for in the present study.

The second hypothesis suggested that anxiety and depression would have a significant and negative effect on psychological well-being. Regression analyses indicated that neither anxiety nor depression predicted psychological well-being significantly, explaining little variance in well-being scores. This implies that other variables not investigated in this study might have a greater influence on psychological well-being in eczema patients. Earlier research has pointed out that more severe atopic dermatitis, pruritus, pain in the skin, and involvement of the face are linked to greater anxiety and depression (Lai et al., 2023). It is thus conceivable that severity and particular presentations of eczema, as well as other psychosocial elements, play more important roles in psychological well-being than anxiety and depression.

The results highlight the multifaceted nature of the relationship between chronic skin disease such as eczema and mental health. Though anxiety and depression are relevant considerations, they could be only part of what shapes psychological well-being in this group of patients. Future investigations would benefit from examining other variables such as coping, social support, disease severity, and resilience to further understand the determinants of psychological well-being in patients with eczema.

Conclusion

The result of the study concluded positive and significant association of depression and anxiety while the association of these two variables with psychological well-being is negative but not significant. Furthermore, linear regression analysis depicts both depression and anxiety predict psychological well-being negatively but not significantly. These findings encourage more similar studies in future for patients with eczema.

Limitations and recommendations

One of the major limitations is the use of self-reported information, which is likely to result in response bias and influence the validity of results. Furthermore, the cross-sectional nature of the study restricts the potential to identify causality between eczema and mental issues, and the direction of causality between psychological distress and eczema cannot be determined. The research might also not have control over confounding factors like socioeconomic status, genetic makeup, and prior mental illness, which may affect the findings. Further, eczema severity variations were not fully controlled for, and this may have affected the observed psychological effects. Cultural and societal influences could also contribute to how eczema impacts mental health, but this factor was not extensively examined. To overcome these shortcomings, future studies need to explore longitudinal studies in order to elucidate the long-term psychological effect of eczema.

Implications

The implications of this study point towards the importance of a multidisciplinary approach in eczema management, with collaboration between mental health professionals and dermatologists. Early intervention can be facilitated by routine psychological screening for depression and anxiety in eczema patients, with an overall enhancement in treatment outcomes. Considering the adverse effect of depression and anxiety on psychological health, even if they are not statistically significant, adding psychological therapies like cognitive-behavioral therapy (CBT) or stress management techniques might prove useful. Public health consciousness programs can also minimize the stigma surrounding eczema and its psychological impact, motivating people to seek early medical and mental health care. Subsequent studies need to investigate other predictors like coping skills, social support, and resilience to further see what makes the psychological well-being of eczema patients stronger. Finally, healthcare policies should incorporate dermatology and psychology and ensure that it is a combination of both treatment and care and enhance the overall quality of life for people living with eczema.

References

Adesanya, E. I., Matthewman, J., Schonmann, Y., Hayes, J. F., Henderson, A., Mathur, R., ... & Mansfield, K. E. (2023). Factors associated with depression, anxiety and severe mental illness among adults with atopic eczema or psoriasis: a systematic review and meta-analysis. *British Journal of Dermatology, 188*(4), 460-470. https://doi.org/10.1093/bjd/ljac132

Afzal, Z., & Rafique, R. (2023). Psychological Comorbidities in People Living with Eczema: A Mini Review. *Journal of the Dow University of Health Sciences (JDUHS), 17*(2). https://doi.org/10.36570/jduhs.2023.2.1152

Ahmed, A. (2024). Could psychodermatology be the cure for your skin concerns? *The Daily Telegraph.*

Andersen, Y. M. F., Egeberg, A., Skov, L., & Thyssen, J. P. (2017). Erratum to: Comorbidities of atopic dermatitis: Beyond rhinitis and asthma. *Current Dermatology Reports, 6*(3), 241. https://doi.org/10.1007/s13671-017-0196-3

Bershad, S. V. (2011). Atopic dermatitis (eczema). *Annals of internal medicine, 155*(9), ITC5-1. https://doi.org/10.7326/0003-4819-155-9-201111010-01005

Boehm, D., Schmid-Ott, G., Finkeldey, F., John, S. M., Dwinger, C., Werfel, T., ... & Breuer, K. (2012). Anxiety, depression and impaired health-related quality of life in patients with occupational hand eczema. *Contact dermatitis, 67*(4), 184-192. https://doi.org/10.1111/j.1600-0536.2012.02062.x

Dalgard, F. J., Gieler, U., Tomas-Aragones, L., Lien, L., Poot, F., Jemec, G. B. E., ... & Szabo, C. (2015). The psychological burden of skin diseases: A cross-sectional multicenter study among dermatological out-patients in 13 European countries. *Journal of Investigative Dermatology, 135*(4), 984-991. https://doi.org/10.1038/jid.2014.530

Dennis, H., Rostill, H., Reed, J., & Gill, S. (2006). Factors promoting psychological adjustment to childhood atopic eczema. *Journal of Child Health Care, 10*(2), 126-139. https://doi.org/10.1177/1367493506062552

Diener, E., Oishi, S., & Tay, L. (2017). Advances in subjective well-being research. *Nature Human Behaviour, 1*(5), 1-7. https://doi.org/10.1038/s41562-017-0082

Dieris-Hirche, J., Gieler, U., Petrak, F., Milch, W., Wildt, B., Dieris, B., & Herpertz, S. (2017). Suicidal ideation in adult patients with atopic dermatitis: A German cross-sectional study. *Acta Dermato Venereologica, 97*(10), 1189-1195. https://doi.org/10.2340/00015555-2741

Drucker, A. M., Wang, A. R., Li, W., Sevetson, E., Block, J. K., & Qureshi, A. A. (2017). The burden of atopic dermatitis: Summary of a report for the national eczema association. *Journal of Investigative Dermatology, 137*(1), 26-30. https://doi.org/10.1016/j.jid.2016.07.012

Henderson, A. D., Adesanya, E., Mulick, A., Matthewman, J., Vu, N., Davies, F., Smith, C. H., Hayes, J., Mansfield, K. E., & Langan, S. M. (2023). Common mental health disorders in adults with inflammatory skin conditions: nationwide population-based matched cohort studies in the UK. *BMC Medicine*, *21*(1), 285. https://doi.org/10.1186/s12916-023-02948-x

Hon, K. L., Pong, N. H., Poon, T. C., Chan, D. F., Leung, T. F., Lai, K. Y & Luk, N. M. (2015). Quality of life and psychosocial issues are important outcome measures in eczema treatment. *Journal of Dermatological Treatment, 26*(1), 83-89. https://doi.org/10.3109/09546634.2013.873762

Kantor, R., & Silverberg, J. I. (2017). Environmental risk factors and their role in the management of atopic dermatitis. *Expert Review of Clinical Immunology, 13*(1), 15-26. https://doi.org/10.1080/1744666X.2016.1212660

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207-222. https://doi.org/10.2307/3090197

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539–548. https://doi.org/10.1037/0022-006X.73.3.539

Kim, D. H., Li, K., Seo, S. J., & Jo, S. J. (2020). The impact of atopic dermatitis on psychological well-being and quality of life: A systematic review and meta-analysis. *Allergy, Asthma & Clinical Immunology, 16*, 60. https://doi.org/10.1186/s13223-020-00462-6.

Kim, J. P., Chao, L. X., Simpson, E. L., & Silverberg, J. I. (2018). Persistence of atopic dermatitis and filaggrin gene mutation in a US longitudinal cohort. *Journal of Allergy and Clinical Immunology, 142*(3), 855-858. https://doi.org/10.1016/j.clindermatol.2018.05.007

Koskelo, M., Sinikumpu, S.-P., Jokelainen, J., & Huilaja, L. (2023). Anxiety and depression in patients with hand eczema: A population-based study among 853 middle-aged subjects. *Contact Dermatitis, 89*(6), 464–470. https://doi.org/10.1111/cod.14412

Lai, Y. C., Yew, Y. W., & Schwartz, R. A. (2023). Interventions for anxiety and depression in patients with atopic dermatitis: *A systematic review. Scientific Reports, 13*, 12345.

Langan, S. M., Irvine, A. D., & Weidinger, S. (2020). Atopic dermatitis. *The Lancet, 396*(10247), 345-360. https://doi.org/10.1016/s0140-6736(20)31286-1

Li, C. Y., Chen, M. L., & Hsu, C. J. (2019). Association of atopic dermatitis with mental health disorders in children and adolescents in Taiwan: A nationwide population-based study. *Frontiers in Pediatrics,* 7, 1-7.

Nutten, S. (2015). Atopic dermatitis: Global epidemiology and risk factors. *Annals of Nutrition and Metabolism, 66(Suppl 1),* 8-16. https://doi.org/10.1159/000370220

Peate, I. (2011). Eczema: causes, symptoms and treatment in the community. *British Journal of Community Nursing, 16*(7), 324, 326–331. https://doi.org/10.12968/bjcn.2011.16.7.324

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069

Sandhu, J. K., Wu, K. K., Bui, T.-L., & Armstrong, A. W. (2019). Association between atopic dermatitis and suicidality: A systematic review and meta-analysis: A systematic review and meta-analysis. *JAMA Dermatology (Chicago, Ill.), 155*(2), 178–187. https://doi.org/10.1001/jamadermatol.2018.4566

Schmitt, J., Apfelbacher, C. J., & Flohr, C. (2011). Eczema. *BMJ clinical evidence, 2011*, 1716.

Schonmann, Y., Mansfield, K. E., Hayes, J. F., Abuabara, K., Roberts, A., Smeeth, L., & Langan, S. M. (2020). Atopic eczema in adulthood and risk of depression and anxiety: A population-based cohort study. *Journal of Allergy and Clinical Immunology: In Practice, 8*(1), 248-257.e16. https://doi.org/10.1016/j.jaip.2019.08.030

Shipowick, T., Austin, J., Sudiacal, N., Miller, S., Pereira, J. A., & Bundy, C. (2025). Mental health and well-being support for individuals living with skin conditions: A global landscape analysis of patient needs and current resources. *JEADV Clinical Practice*. https://doi.org/10.1002/jvc2.606

Siewertsen, M., Näslund-Koch, C., Duus Johansen, J., Simonsen, A. B., Nguyen, T. T., Zachariae, C., Skov, L., & Loft, N. (2024). Psychological burden, anxiety, depression and quality of life in patients with hand eczema: A systematic review and meta-analysis. *Journal of the European Academy of Dermatology and Venereology: JEADV, 38*(11), 2110–2117. https://doi.org/10.1111/jdv.20140

Silverberg, J. I., Lei, D., Yousaf, M., Janmohamed, S. R., Vakharia, P. P., Chopra, R., Chavda, R., Gabriel, S., Patel, K. R., Singam, V., Kantor, R., Hsu, D. Y., & Cella, D. (2020). Association of atopic dermatitis severity with cognitive function in adults. *Journal of the American Academy of Dermatology, 83*(5), 1349–1359. https://doi.org/10.1016/j.jaad.2020.05.041

Singleton, H., Hodder, A., Almilaji, O., Ersser, S. J., Heaslip, V., O'Meara, S., Boyers, D., Roberts, A., Scott, H., Van Onselen, J., Doney, L., Boyle, R. J., & Thompson, A. R. (2024). Educational and psychological interventions for managing atopic dermatitis (eczema). *Cochrane Database of Systematic Reviews, 8*(8), CD014932. https://doi.org/10.1002/14651858.CD014932.pub2

Treudler, R., Zeynalova, S., Riedel-Heller, S. G., Zuelke, A. E., Roehr, S., Hinz, A., Glaesmer, H., Kage, P., Loeffler, M., & Simon, J. C. (2020). Depression, anxiety and quality of life in subjects with atopic eczema in a population-based cross-sectional study in Germany. *Journal of the European Academy of Dermatology and Venereology: JEADV, 34*(4), 810–816. https://doi.org/10.1111/jdv.16148

World Health Organization (WHO). (2022). *World mental health report: Transforming mental health for all.* WHO.

Yosipovitch, G., Canchy, L., Ferreira, B. R., Aguirre, C. C., Tempark, T., Takaoka, R., Steinhoff, M., & Misery, L. (2024). Integrative treatment approaches with mind-body therapies in the management of atopic dermatitis. *Journal of Clinical Medicine, 13*(18), 5368. https://doi.org/10.3390/jcm13185368