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# Mental Health and Well-Being Support for Individuals Living With Skin Conditions: A Global Landscape Analysis of Patient Needs and Current Resources

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## ABSTRACT

The impact of skin diseases can be devastating, encompassing physical symptoms such as bumps, rashes, hyper- or loss of pigmentation, redness, itch, pain and scarring. The consequences on mental health and well-being are often more detrimental, impacting the ability to conduct routine daily activities and engage socially. Given the prevalence of dermatological conditions, it is critical that resources are available to address these needs. We conducted a review of dermatology patient advocacy groups and health organizations' websites to determine what types of resources to support mental health and well-being currently exist globally for individuals with skin conditions and identified 26 websites featuring resources such as sections dedicated to providing mental health information, programs on mental health topics and coping strategies, peer support forums, and counselling. Clinical trials and observational studies have demonstrated that many of these tools improve key mental health and well-being-related symptoms. In order for new and existing resources to be effective on a global scale, they should be delivered through methods that are sensitive to a spectrum of mental health-related stigma, and cultural beliefs. In parts of the world where individuals value privacy above openly speaking about one's feelings, or where smartphone adoption is ubiquitous (i.e., Europe, South-East Asia), digital health resources might hold the most potential for uptake. In regions such as Africa, and remote and rural Western Pacific, task-shifting, a process whereby laypeople are trained by health professionals to deliver community-based interventions, may be a promising format given mental health professional shortages. To provide optimal support for the mental health and well-being of those around the world with skin conditions, future efforts should focus on evaluation of the patient benefits offered by existing resources, and their adaptation and expansion to befit other world regions, and align with varied cultural needs and beliefs.

## 1 | Introduction

Skin conditions represent a tremendous health burden, affecting approximately one-third of the global population [1–3], and causing a host of symptoms including bumps, pustules, rashes, sores, redness, itchiness, hyperpigmentation or loss of pigmentation, pain and scarring. Treatments are centred on managing physical manifestations which can significantly hinder quality of life [4]. Because skin conditions are rarely life-threatening, they are typically perceived as less severe than diseases affecting other organs [5]. However, for conditions including psoriasis, psoriatic arthritis, and systemic lupus erythematosus, inflammatory-based skin manifestations are a component of immune system dysfunction and a systemic

**Summary**

- Why was the study undertaken?
  To identify what types of resources exist to support mental health and well-being for individuals with skin conditions, and understand optimal, globally inclusive ways to provide this support.

- What does this study add?
  We identified 26 patient advocacy websites featuring mental health and well-being resources for individuals with skin conditions, and considered methods of support delivery that are sensitive to mental health-related stigma, and cultural beliefs and lifestyles in six world regions.

- What are the implications of this study for disease understanding and/or clinical care?
  This study fosters improved care for the mental health and well-being of those with skin conditions, through the adaptation of existing resources to ensure that they are aligned with the varied needs and cultural diversity of individuals across the world.

inflammatory response that can be life-threatening [6, 7]. Furthermore, at least partly due to symptom visibility, the impact of dermatological conditions is often far-reaching, with consequences on the person's ability to work, attend school, socialize and conduct daily activities [8, 9]. Given this level of social withdrawal and isolation, it is unsurprising that dermatological conditions are linked to psychological distress, generating stigma and shame for those affected, and leading to a decline in *mental health and well-being*, as evidenced by lower quality of life and the presence of mood disorder symptoms [10, 11].

The prevalence of depression and anxiety in individuals with chronic skin conditions is 30%, much higher than has been demonstrated for people with diseases affecting the brain or heart [12, 13]. The substantial impact of skin conditions on the mental health and well-being of individuals was the impetus for the advent of psychodermatology, a field created with the overarching goal of addressing the range of psychological/psychiatric conditions that involve skin, and helping patients to develop appropriate and effective coping mechanisms [14–16]. However, the majority of dermatology clinics do not have access to interdisciplinary psychological services [17], meaning holistic treatment focusing on both skin and mind is rarely a routine offering for patients who must instead consider other sources of support. Digital health resources are one such category, and a recent review of the medical literature on electronic psychological interventions for people living with dermatological conditions identified 23 tools focused on providing education and therapeutic approaches to reduce mental health symptoms [18]. While this review of research-based mental health interventions is valuable, there is a lack of awareness and understanding about real-life resources and support available outside of research settings. Additionally, it is unlikely that existing resources are aligned with the different ways in which patients around the world optimally receive mental healthcare. Given the various stigmas that are associated with mental illness, consideration of ideal mechanisms for people with skin conditions to seek mental health support must be filtered through the lens of how mental health is both viewed and treated in their communities. In many areas of the world, mental health and well-being has not historically been a primary focus, due to a myriad of competing priorities affecting physical health. In 2024, a Delphi study was conducted to inform the development of items for a new dermatology patient-reported outcome measure (PROM) [19]. Through quantitative and qualitative data from 1154 people representing 66 countries and 90 dermatological conditions, the study found that the psychological impact of these conditions exceeds physical impacts, and manifests as stress, anxiety, low mood, suicidality, and self-consciousness. Though there has been a more recent global movement towards prioritizing mental well-being and addressing the numerous barriers to diagnosis and treatment [20–26], the data infrastructure to track the prevalence of mental health conditions is either limited or completely absent in much of the world, translating to significant challenges in understanding the true burden of mental illness. Unsurprisingly, most of the six World Health Organization (WHO) regions are lacking in mental healthcare capacity [27, 28], with numbers of mental health professionals far lower than is considered acceptable for their population sizes. In combination with the fact that many areas of the world harbour stigma surrounding psychological conditions [27], the most useful patient resources will be accessible to the population, and sensitive to their cultural needs and beliefs.

The International Alliance of Dermatology Patient Organizations, otherwise known as GlobalSkin, is a global not-for-profit alliance dedicated to providing research, advocacy and support to improve the lives of dermatology patients worldwide. To inform the development and expansion of mental health resources to fill existing gaps, and support the mental health and well-being (i.e., improved quality of life and/or reduction of symptoms of mood disorders) of those living with skin conditions around the world, we conducted a comprehensive landscape analysis to i) understand whether resources currently exist to support the mental health and well-being of these individuals; and to ii) identify optimal ways to approach the topic of mental health and well-being for people with dermatological conditions that is inclusive and sensitive to all WHO world regions.

### (i) Review of current mental health and well-being resources for individuals with skin conditions

GlobalSkin conducted a website review with the goal of identifying educational materials, tools, referrals and programs available to support the mental health and well-being of individuals across the world with skin conditions. This information would facilitate an understanding of whether global patient needs are being met, or whether these individuals would benefit from the generation of new resources (or the adaptation of existing ones) to support mental health and well-being.

## 2 | Methods

We created a list of dermatology patient advocacy group and skin health organizations and foundations, including members of GlobalSkin as well as groups and organizations referenced on

these member sites. For each group/organization, we searched for a website; if available, it was reviewed for information on impact of the condition on mental health and well-being as well as references to supportive resources.

Eligible resources comprised those providing information/education on the impact of skin conditions on mental health and well-being, and/or self-directed or more formalized programs intended to provide mental health-related education, support or training to individuals with skin conditions. We excluded short information pieces regarding mental health and well-being, as these were not deemed to be 'interventional' nor provided a significant source of education or support. Additionally, we restricted our focus to mental health resources that were specific for those with skin conditions, and as such, excluded websites containing only general information about mental health and the provision of help lines and forums not specific to those with skin conditions. The focus was on mental health and well-being supports tailored to those with a dermatological condition, as previous qualitative research has demonstrated that these are more valuable to patients than general mental health programs and tools that do not consider their lived experience [29]. Our search included websites targeted to individuals with visible differences, given that many visible differences are due to dermatologic conditions.

To supplement our website review, we conducted additional searches of the scientific database MEDLINE for articles featuring the name of each resource and published between January 1, 2013 and June 30, 2023, which tested the effectiveness of the identified resource through randomized controlled trials or observational studies.

Where feasible, we contacted groups and organizations that contributed to the mental health and well-being resources detected in our searches to both gain a stronger understanding of their initiatives, and to solicit the names of any other resources in this space.

The analysis was conducted in December 2023.

## 3 | Results

We identified 26 websites featuring various resources that are currently being used (or have been used in the recent past) to support improved mental health and well-being for individuals with skin diseases/conditions (Figure 1; *note to editor:* Figure 1 *inserted here*). We noted that many resources originated in the UK where several different groups and organizations have studied the impact of skin conditions on mental health and well-being, and advocated for improved supports (Table 1).

The resources have been created and managed by a mix of organizations including patient advocacy groups, health foundations, pharmaceutical companies, and academia. Many of the resources were for all individuals with a skin condition, while others—particularly those implemented by patient groups—target people experiencing a specific dermatologic disease: psoriasis and generalized pustular psoriasis, eczema, vitiligo, alopecia.

The resources were developed for a range of different purposes: providing educational information regarding mental health and well-being, guiding patients through coping strategies to manage the stress and anxiety associated with their condition, and creating a safe and supportive space for the individual to both share their feelings regarding their condition and its impact on their life, and connect with others with the same condition who can provide compassion and advice based on lived experience. Identified resources included electronic-based (apps, webinars, websites, virtual forums, etc.), in-person and telephone-based formats. Many tools are self-directed, where the patient consumes the material on their own time, while others are more structured, only offered at set times, or involve engagement with peers or a mental health leader. The interventional programs comprise cognitive behavioural therapy (CBT) and social interactive skills training (SIST) [*note to editor:* Table 1 *inserted here*].

Ten of these resources have been formally evaluated through clinical studies, to demonstrate the usability and acceptance of the tools, as well as patient benefits through outcomes such as reduction in levels of depressive symptoms, stress, and social anxiety, improved sleep, and increased feelings of self-acceptance and well-being [30–40].

### (ii) Defining and approaching mental health for people with skin conditions

Following the review of mental health and well-being resources that exist for those with dermatological conditions, we summarized the current epidemiology on skin conditions and mental health conditions in each region (where available), existing stigma around seeking mental health treatment, and the type of mental health and well-being resources that may have the most potential for success within the region.

### 3.1 | Africa

Research suggests that the lifetime prevalence of mental health diseases is approximately 25% in African countries, indicative of a significant burden [41, 42]. Because data on mental health are not collected within health systems, it is impossible to truly understand the burden in the region of Africa. Furthermore, there are numerous barriers to receiving treatment, primarily the high cost, and lack of mental health education, awareness and treatment options, as well as having far fewer mental health workers and providers than in other regions [42]. In most African countries, there is also stigma associated with mental health issues, which discourage acknowledgement of illness or seeking help due to discrimination and the impact on relationships with friends, family and colleagues [43, 44]. These prejudices are often rooted in misinformation and lack of awareness, and are further influenced by gender biases, and religious and culture-based doctrines, resulting in individuals avoiding treatment due to shame. Many subscribe to unfounded ideas about mental illness origins which leads to marginalization of those affected [43–45]. In this region, there are pervasive traditional beliefs that mental illnesses are a result of supernatural sources, such as curses from ancestors or bewitchment, further propagating fear, isolation, and for persons living with
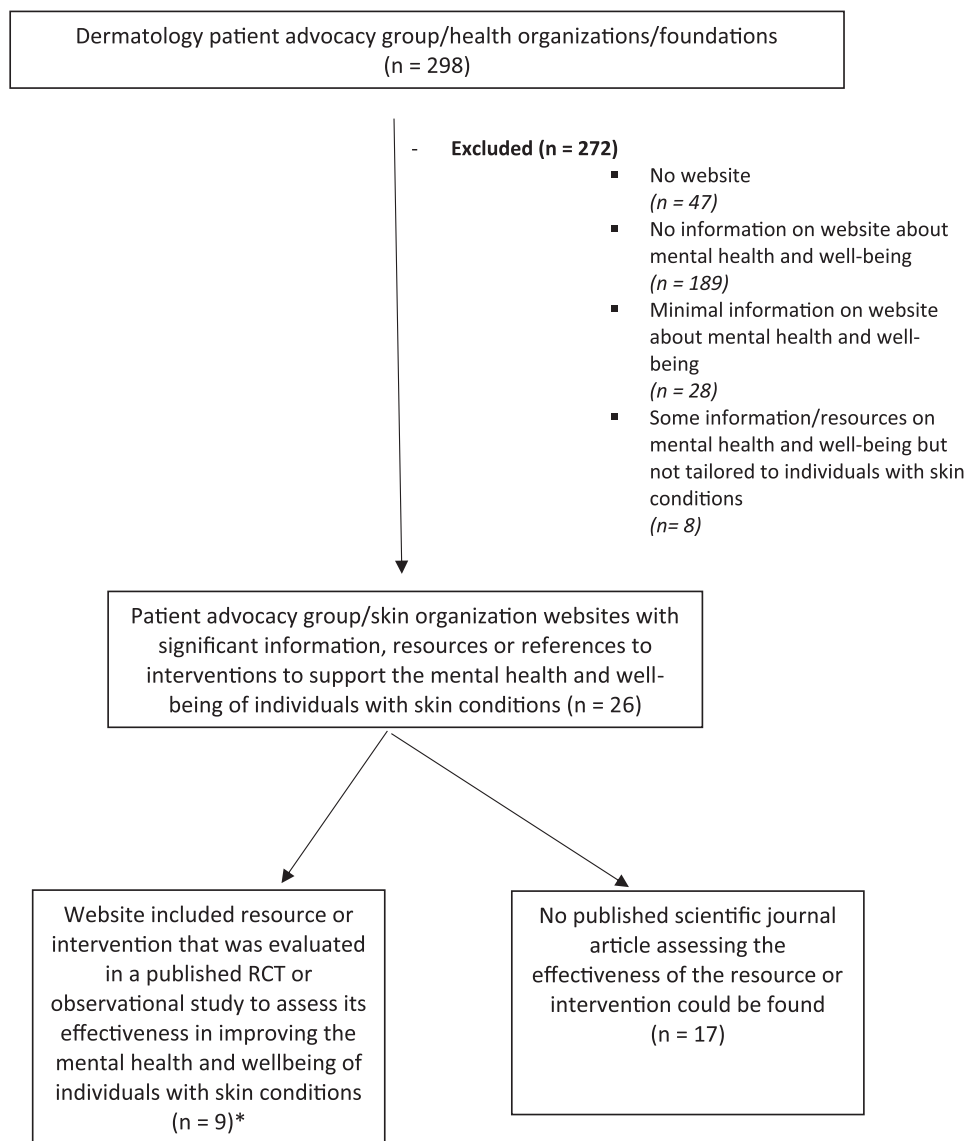
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┌─────────────────────────────────────────────────────┐
│  Dermatology patient advocacy group/health           │
│  organizations/foundations                           │
│  (n = 298)                                           │
└─────────────────────────────────────────────────────┘
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- **Excluded (n = 272)**
  - No website
    *(n = 47)*
  - No information on website about mental health and well-being
    *(n = 189)*
  - Minimal information on website about mental health and well-being
    *(n = 28)*
  - Some information/resources on mental health and well-being but not tailored to individuals with skin conditions
    *(n= 8)*

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┌─────────────────────────────────────────────────────┐
│  Patient advocacy group/skin organization websites   │
│  with significant information, resources or           │
│  references to interventions to support the mental    │
│  health and well-being of individuals with skin       │
│  conditions (n = 26)                                 │
└─────────────────────────────────────────────────────┘
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┌──────────────────────────────┐   ┌──────────────────────────────┐
│ Website included resource or  │   │ No published scientific       │
│ intervention that was         │   │ journal article assessing the │
│ evaluated in a published RCT  │   │ effectiveness of the resource │
│ or observational study to     │   │ or intervention could be      │
│ assess its effectiveness in   │   │ found                         │
│ improving the mental health   │   │ (n = 17)                      │
│ and wellbeing of individuals  │   │                               │
│ with skin conditions          │   │                               │
│ (n = 9)*                      │   │                               │
└──────────────────────────────┘   └──────────────────────────────┘
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**FIGURE 1** | Flowchart of dermatology website review process for supportive resources for mental health and well-being. *One of the nine websites included two resources (FACE IT and YP FACE IT) that were evaluated in a study. The search started with a comprehensive list of patient advocacy group/skin health organization websites, which were reviewed for the presence of detailed mental health and well-being information, as well as resources to support mental health and well-being that were tailored to individuals with dermatologic conditions. In total, 26 websites were included in this landscape analysis.

albinism, threatening life [43–48]. Given the belief systems, those affected may turn to traditional healers as the first or primary source of help, only seeking care from a biomedical mental healthcare professional or facility after their condition has severely deteriorated [43, 44].

To compensate for the lack of resources in many countries in Africa, task-sharing is often implemented [49]. The WHO recommends group interpersonal psychotherapy (IPT-G) as a first-line mental health intervention for vulnerable populations in low-resource regions [50]. StrongMinds is a Ugandan-based mental health support organization that treats depression in women and adolescents through this method, via a model of 6−10 in-person sessions, delivered by lay community-based counselors [51]. The sessions are categorized into three phases, starting with an initial phase in which the goal is to build trust and communication among members. During the middle phase, there is active engagement in discussion as well as a focus on identifying depression triggers and brainstorming potential solutions collectively. In the final phase, it is anticipated that the participants experience a reduction in symptoms and can begin to develop sustainable support structures that they can rely on. The group format is considered ideal in low-resource community-focused settings because it can facilitate connection and a reduction in isolation among participants while being cost-effective compared to a one-on-one format. However, it is important to recognize that due to the nature of their mental health concerns, some individuals may not feel ready to participate in a group setting and may prefer targeted support.

Successful treatment programs will likely be community-based, and inclusive of trusted and influential community leaders such as religious leaders and politicians. Gender-based programming that is appropriately sensitive and supportive of the goals of the

**TABLE 1** | Mental health and well-being resources for people with skin conditions.

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| Alopecia UK[a] | UK/Europe | Alopecia | Closed Facebook peer support group | Alopecia UK hosts a private Facebook group for those with alopecia to engage and share experiences. *Note: A qualitative study of individuals with alopecia who have participated in this online support group found that it improved their psychosocial well-being. Participants reported learning coping strategies, feeling understood and less alone in their condition, having improved self-acceptance, and being more willing to engage socially* [38].[a] |
| AMICUS Foundation | Poland/Europe | Inflammatory skin diseases | 'Psychologist for Skin' program | AMICUS Foundation has implemented a 'Psychologist for Skin' program, which has dermatologists and online support groups provide free training to psychologists or final-year psychology students to provide support for people with chronic inflammatory skin conditions. Individuals with these conditions can contact AMICUS to receive telephone support from one of these trained professionals. |
| Association Française du Vitiligo | France/Europe | Vitiligo | Telephone hotline | Emotional support is available through a telephone hotline that is available weekly, provided by the association's volunteers. |
| British Association of Dermatologists (BAD) | UK/Europe | All skin conditions | Skin Support (please note this link is not currently live) | The *SkinSupport* site included skin-specific psychosocial self-help information aimed at educating people with dermatological conditions and helping them improve their mental health wellness and regain confidence. As per BAD, the site is now closed. *Note: A study was conducted to gain feedback on the site from those with a skin condition, their relatives/friends, as well as dermatology healthcare providers. The site was well-accepted and usable by the majority of participants. Dermatologists reported that modifications might be needed (simplify language and content, create shortcuts for usability, check for accuracy of information, etc.)* [30]. |
| British Skin Foundation | UK/Europe | All skin conditions | British Skin Foundation | The British Skin Foundation is a UK charity that raises funds for skin disease research. They have worked with Changing Faces to contribute to the development of mental health resources to support individuals with visible differences (*FaceIt* and *YPFaceIt*, as described below) and feature a *Skin and Mind section* on their site, where they provide information on the various mental health provider types that can assist those who are experiencing an emotional impact from their condition. The British Skin |

**TABLE 1** | (Continued)

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| | | | | Foundation has indicated that they will be adding more information and resources to this section in the upcoming year. |
| Canadian Skin Patient Alliance | Canada/Americas | Skin conditions | Mental and social well-being support guide on their website | This document entitled 'Just diagnosed: How to support your mental and social well-being to navigate life with a skin condition' details what to expect after a skin condition diagnosis. It includes information about how to manage emotions and how to tell others about the diagnosis, and also describes several coping strategies. |
| Centre for Appearance Research, University of the West of England, National Health Service Trust, Vitiligo Support United Kingdom | UK/Europe | Visible skin conditions | Acceptance and Commitment therapy (ACT) mobile app | The resource is a mobile app based on ACT principles that combine mindfulness, personal value statements, and value-based goal settings, as well as social skills training. *Note: A small feasibility study indicated good user acceptance of this app, and engagement with all components, particularly the social skills training. Test users appreciated the app's accessibility and the tailored actionable reminders, as well as the app's supportive language* [36]. |
| Changing Faces | UK/Europe | Visible differences | Changing Faces | This site offers multiple mental health resources including mental health and well-being information for individuals with a visible difference, a support and information telephone line, and a free one-to-one counselling service for children, young people and adults needing appearance-related mental health and well-being support. Changing Faces also has a structured peer support program, facilitated by staff/volunteers, to provide emotional support and share coping strategies. Changing Faces has also been active in the development of two modular CBT programs: |
| Changing Faces collaboration with the British Skin Foundation, University of the West of England – Bristol, Centre for Appearance Research | | | FaceIT | *FaceIT* is an eight-session online psychosocial intervention for adults with a visible difference, that combines social interaction skills training (SIST) and cognitive behavioural therapy (CBT), through videos, learning materials and homework activities. *Note: In a randomised controlled trial, FaceIT reduced levels of depression, anxiety and appearance-related distress in individuals with visible differences compared to those receiving usual care* [31]. |
| | | | YP FaceIt | Based on the success of FaceIT, another version was designed specifically for teenagers/young adults. Online support site |

(Continues)

**TABLE 1** | (Continued)

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| | | | | includes seven brief modules to help empower individuals with appearance-affecting conditions, and to provide psychosocial support and advice. <br><br> **Note:** *The site was evaluated in small RCTs in the UK and Denmark comparing usual care to the seven session program, and found that the latter was associated with an increase in self-esteem and decrease in fear of negative evaluation from others* [32, 33]. |
| Collaborative Group for Psychodermatology in Canada | Canada/Americas | Skin conditions | Psychodermatology site | This group is in the early phases of developing an online self-learning platform for patients, that will allow them to learn self-care techniques and tools. |
| Cutaneous Lymphoma Foundation | United States/ Americas | Cutaneous lymphoma | Informational webinars | The Foundation offers various webinars and Facebook Lives conducted by social workers and clinicians to support patient mental health. |
| DEBRA International | Austria/Europe | Epidermolysis bullosa (EB) | Patient and caregiver booklets containing mental health-related information | The booklets provided by DEBRA discuss the impact of EB on the mental health and well-being of patients and caregivers, and are intended to provide psychosocial support. |
| Eczema Support Australia | Australia/ Western Pacific | Eczema | Psychologist training program | This group offers a free course for psychologists to gain knowledge of eczema, as well as training on essential strategies to aid individuals affected by this condition. Once psychologists complete this 7-module course, they join Eczema Support Australia's contact list of psychologists who have strong awareness of eczema. Individuals who are seeking support for their mental health and well-being due to their condition can contact a psychologist on this list, comfortable that they have familiarity with eczema and its impact. |
| ESPERANTRA | Peru, Americas | Melanoma (in addition to other cancers) | Psychological consultation | ESPERANTRA has an Emotional Support Department where the patient or their family member can schedule psychological teleconsultations to receive support managing the stress, depression, and anxiety that often accompany diagnoses of cancer. |
| Huidpatiënten Nederland | Netherlands, Europe | Skin conditions | Happi Skin app | This app, created by physicians, allows patients with skin conditions to monintor their health, set treatment goals, measure quality of life, assess mental health based on patient reported outcome measures. |

(Continues)

**TABLE 1** | (Continued)

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| HS Connect | United States/ Americas | Hidradenitis suppurativa (HS) | | HS Connect provides HS-related affirmation cards, online interviews and webinars with psychologists tailored to those with HS, to help support the mental health and well-being of individuals with this condition. |
| Janssen-Cilag | Australia/ Western Pacific | Psoriasis | Educational website | This educational website is by Janssen-Cilag, a pharmaceutical company that makes medical products for psoriasis. The site contains information about the impact of psoriasis on mental health, videos of discussions with clinical psychologists regarding coping strategies, as well as videos and articles from ambassadors (patient leaders) who share their journey regarding mental health wellness and psoriasis. |
| Karolinska Institutet | Sweden/Europe | Atopic dermatitis | CBT intervention | The intervention is an internet-based platform consisting of 10 modules designed to reduce symptoms of anxiety, homework assignments and feedback via asynchronous text messaging with a licensed psychologist. <br><br> *Note: An RCT found that compared with usual care, this internet-delivered CBT intervention led to reductions in stress, sleep issues and depressive symptom, and quality of life* [39]. |
| National Eczema Association (NEA) | US/Americas | Eczema | Mental health-related information on their website including invitation to share patient journey through writing | In addition to educational articles about the impact of eczema on mental well-being, the NEA also has a guided yoga video aimed at reducing anxiety for those with eczema. This is based on an NEA-funded study which demonstrated that meditation can improve quality of life in those with eczema. The NEA also has a call to patients to share their patient journey with eczema in the form of journalling or a letter, since writing can be a healing and effective way to release sadness and frustration. |
| National Organization for Albinism and Hypopigmentation (NOAH) | United States/ Americas | Albinism | Telehealth support group run by mental health counselor | NOAH collaborates with the Lighthouse Guild, which provides free telehealth support groups conducted by a licensed mental health counselor for conditions such as albinism that lead to vision loss/impairment. |
| Psoriasis Association | UK/Europe | Visible skin conditions | Compassion-Focused Therapy | The resource is a compassion-focused self-help intervention involving a written booklet for patients as well as an audio file to support the daily practice of a mindful soothing rhythm breathing exercise (approximately 8 min) over a 2-week period. |

(Continues)

**TABLE 1** | (Continued)

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| | | | | *Note: The CFT self-help intervention significantly decreased levels of stress, anxiety, and depression, compared to usual care* [34]. |
| Psoriasis Association Malaysia | Malaysia/Western Pacific | Generalized pustular psoriasis (GPP) | GPP Patient Support (GPS) Navigator Program[b] | The GPS Navigator program trains volunteer *Navigators*, who are then linked by Psoriasis Association Malaysia with individuals with GPP. The Navigators support their mental well-being by offering emotional support and sharing experiences about living with GPP. |
| PsorPhil | Philippines/ Western Pacific | Generalized pustular psoriasis (GPP) | PsorCoach peer-to-peer support program[b] | The PsorCoach program links individuals with GPP with a coach who has been trained to provide information about GPP, and offer emotional support. |
| Save Your Skin Foundation | Canada/Americas | Melanoma | Multiple mental health resources to assist individuals with melanoma | SYS has a number of tools designed to provide emotional support to individuals with melanoma:<br><br>• 1-on-1 patient support via email and telephone<br><br>• Resources on mental wellness after diagnosis of melanoma<br>Monthly online webinars for patients, facilitated by a wellness coach |
| St John's Institute of Dermatology and St Thomas' Hospital | UK/Europe | Skin conditions | Pediatric psychodermatology service | The program being offered is a national pediatric psychodermatology service for children and young persons with skin conditions. The patient and their family first have a consultation with the dermatologist and clinical psychologist to discuss the skin and mental wellness issues together, followed by a one-on-one session between the patient and the psychologist while the parent/carer continues to consult with the dermatologist. Finally, there is a session for the entire group to come together to discuss a plan to continue to address all symptoms. This service is available both in-person and virtually.<br><br>*Note: Surveys to elicit feedback from patients and their parents/ guardians indicated that the service is well-received and reduces psychological distress* [40]. |

(Continues)

**TABLE 1** | (Continued)

| Organization Group | Country/WHO region | Condition | Mental health and well-being resource | Description and notes |
|---|---|---|---|---|
| University of Manchester, funded and supported by the Psoriasis and Psoriatic Arthritis Alliance (PAPAA) | UK/Europe | Psoriasis | eTIPs for psoriasis | eTIPs is a CBT-based online program to reduce psychological distress and improve quality of life for people with psoriasis. *Note: This site was evaluated in an RCT comparing usual care to the eTIPs program in individuals with psoriasis, and found that the online resource was associated with a decrease in anxiety and increase in quality of life* [37]. |
| University of Sheffield | UK/Europe | Vitiligo | Psychosocial self-help | The resource is a document that is based on a cognitive behavioural model of social anxiety and includes psychoeducation, relaxation and attentional refocusing using guided imagery-based relaxation and techniques for switching attention. *Note: A randomized study found that the intervention led to a decreased in social anxiety* [35]. |

[a]Helped as intervention testers.
[b]Funded by Boehringer-Ingelheim as part of the GPP Charter to help improve the lives of people with GPP.

program should be considered, and messaging and awareness strategies should be mindful of the different attitudes held towards mental health by these demographic groups. Given the dangerous and damaging beliefs that exist in the region about the causes of both mental health conditions and some skin diseases, it is also important to develop initiatives to educate the public, dispel myths about illness origins, and to promote safe and effective treatment pathways.

## 3.2 | Americas

Prevalence data on skin conditions in the Americas is not available, though it exists for several countries within North and South America. In Canada and the United States, approximately one in four individuals has a skin condition [52, 53], while in Brazil, South America's most populous country, skin diseases are one of the three leading causes of years lived with disability (YLD), indicating a very significant burden [54].

Mental health data have been reported: of all regions in the WHO, the Americas has the highest prevalence of anxiety disorders as well as the second highest rate of depressive disorders [55]. Despite this large burden, only 10%−25% of those with a mental health condition are receiving the care that they need [56]. Barriers to accessing and receiving appropriate mental health care in the Americas include lower awareness of mental health illness, discrimination for those affected, as well as access challenges such as transportation, financial and language [25]. These barriers loom even larger for groups such as those in poverty and Indigenous people, women, and migrants/refugees/displaced people, and those who are subject to intersecting forms of marginalization [25].

There is also a shortage of human resources for mental health in the region. Most resources are concentrated in large urban centres, and are institution-based rather than community-based, further driving stigma and discrimination, and preventing individuals from seeking help [25].

The Americas is a culturally diverse region, and it is imperative that mental health programming involve community engagement so that the programs are rooted in the local beliefs. Interventions delivered by suitably trained and supported laypersons have shown high potential for feasibility and sustainability [57]. Prior epidemiological studies on mental health treatment gaps in the Americas have also concluded that customizable and accessible services would be ideal for this region, due to population needs [58].

## 3.3 | Eastern Mediterranean

In 2015, skin disorders were reported as being the fifth largest cause of disease burden in the Eastern Mediterranean Region (EMR) [59]. While there are no data on the impact of skin diseases on the mental health of citizens of this region, those who live in low- and middle-income countries (LMICs) are more prone to mental health disorders, particularly when subjected to factors of instability including war, population displacement, poverty and unemployment [60]. In the last two

decades, nearly 85% of the EMR has experienced a humanitarian crisis, and the 1-year prevalence of common mental conditions in this region is between 10% and 40% [61, 62]. This is undoubtedly an underestimation since routine collection of mental health data is not conducted, and many individuals are undiagnosed due to lack of awareness or fear of discrimination. Institutionalization is often viewed as the sole treatment for mental health conditions in many countries within the EMR [63]; this combined with low disease awareness is a contributor to the strong stigma towards mental health that exist in this region. A study examining barriers to seeking help for mental illness in the United Arab Emirates found that denial, fear of impact on their job, and thoughts of shame were the most common reasons preventing people from seeking help [64]. Though the treatment gap in the EMR is undoubtedly exacerbated by the region's shortage of qualified mental healthcare professionals [65], individuals who are seeking psychological support often first turn to sources that are tied in with their cultural beliefs, such as spiritual healers [66], which—depending on severity of symptoms—can lead to worsening mental health [67]. Although there has been some movement to foster collaboration between spiritual leaders in the community (i.e., faith healers and religious leaders) and the medical practice to facilitate more effective mental health delivery and de-stigmatize mental illness [66], these efforts have not been widespread throughout the EMR.

Recognizing that digital health technologies are well-suited to low-resource settings, the WHO, in collaboration with the National Mental Health Programme (NMHP) at the Ministry of Public Health Lebanon, has developed an electronic mental health intervention called *Step-by-Step* [68, 69]. This resource consists of five online modules to help reduce depression through psychoeducation, behavioural activation and training in stress-management strategies, in conjunction with weekly support (by telephone or text message) from trained layperson helpers. In a randomized controlled trial (RCT) among Syrians suffering from depression in Lebanon, *Step-by-Step* was found to reduce depressive symptoms and improve functioning in one or more key domains (i.e., cognition, mobility, self-care, getting along, life activities and societal participation) compared to usual care [68]. This type of format offers capacity for implementation in other populations that have online access.

It is critical that any programming to address mental health is a fit with the culture of the EMR, and recognizes existing related stigmas and biases. The high percentage of displaced people in this region means flexible modes of delivery are needed. Locally-driven initiatives will likely be most successful, as well as easily accessible via on-line interventions like *Step-by-Step*.

## 3.4 | Europe

Of all of the WHO regions, Europe has been the most involved in research around mental health and dermatology. A large recent pan-European study found that the prevalence of common skin conditions was 44%; 88% of individuals reported that their personal lives were negatively affected by embarrassment over their conditions [70]. Additionally, a sub-analysis of data from the 441 Europeans representing 25 countries who

participated in a Delphi panel to prioritize the various impacts of dermatological conditions found that psychological impacts were the most significant [71].

The UK has been particularly active in initiatives to understand the impact of skin conditions on mental health and well-being. In 2015, the All-Party Parliamentary Group on Skin (APPGS) was founded to raise awareness of skin conditions and related patient needs, and improve treatment options and availability [72]. In 2020, the APPGS commissioned a national survey to better understand the need for mental health provision for those living with skin conditions in the United Kingdom [73, 74], and findings indicated that having a dermatological condition impacted all aspects of life, including overall mood, ability to conduct daily activities, education, employment, and intimacy. The report highlighted the lack of accessible psychological services. Among children and young adults surveyed, 100% indicated that their dermatological condition had negative consequences to their mental health, and 85% reported low self-esteem. Nearly all adults surveyed (98%) self-reported that their skin condition had a negative impact on their psychological health, although only 18% had received support or treatment. Based on their findings, the APPGS offered several recommendations including integrated psychological support within dermatology [74], which has been echoed by the British Society for Paediatric and Adolescent Dermatology (BSPAD) in a recent consensus statement [75].

Researchers in France have initiated several large-scale studies to understand the impact of skin conditions. In 2016, the French Society of Dermatology, the French College of Dermatology Teachers and the French Federation of Continuing Medical Education in Dermatology collaborated to conduct a population-based survey to assess the prevalence of skin diseases in France, and gain a rich understanding of the psychological and psychiatric consequences [76]. They surveyed over 20,000 France residents aged 15 and over, and the results highlighted the significant effect of skin diseases, with 53% of these respondents reporting moderate or more severe anxiety and depression, and impacts on various facets of life including sexual relationships and work. A separate dermatology study termed the ALL Project launched in 2022, including 50,552 adults across 20 countries, and a survey of 65 questions regarding types of skin, skin diseases, skin phototypes, and skin colours, to better understand patient needs and experiences to inform public health policy. Findings indicated that 42% of patients with skin disease experienced sleep disturbances, and nearly half reported reduced productivity at work [77, 78].

Beyond these initiatives, the entire Europe region has placed a greater priority on mental health initiatives in recent years, as evidenced by the WHO European Framework for Action on Mental Health for 2021 to 2025 [21]. However, stigma and discrimination against those mental health conditions remain present in this region, due to pervasive views that those with poor mental health may be unstable and dangerous [79, 80]. Fear of the related impacts on their careers, their social lives, and even self-perceptions, cause sizable barriers to seeking a diagnosis and treatment [80]. Given that Europe is an economically and culturally heterogeneous region, comprising a mix of LMICs, there is likely to be a range of mental health

resources needed to meet population needs. An embedded approach of offering psychological services to dermatology patients may be ideal from a patient perspective but requires significant health system changes (including ensuring a sufficient number of mental health professionals in place to deliver across the region) that are costly and will take time to implement. A large percentage of the population in this region have internet access [81], meaning that online interventions could pose a more accessible, immediately feasible option. Additionally, the stigma surrounding mental health may mean that individuals will appreciate the ability to receive care in a confidential, self-directed manner.

## 3.5 | South-East Asia

There is a lack of large epidemiological studies of skin conditions in South-East Asia, so little is known about overall regional prevalence. Skin conditions contribute 4% of all YLD in India, the country with the region's highest population, indicating a significant burden [82]. In Indonesia, the next largest country, the prevalence of skin diseases was reported at 17% in 2013 [83]. Countries in South-East Asia account for 27% of all global cases of depression and 23% of global cases of anxiety [55] Notes: and these may be underestimates given that data on mental health prevalence are not routinely collected. WHO reports that one in seven individuals in this region have a mental health condition, of which less than 10% receive treatment [84].

Previous studies have identified barriers to accessing mental healthcare in South-East Asia including mental health stigma and cultural beliefs that prioritize spiritual healers over mental healthcare providers, as well as systemic issues such as poor access to medical care, and lack of training of healthcare professionals [85]. A recent survey reported that only 30% of individuals in South-East Asia are comfortable talking about their mental health, indicative of the stigma that is present in this region [86]. Skepticism and hesitation to seek help are intrinsically linked with shame and fear of impact on work and social relationships [87, 88].

Similar to other regions comprised of mainly low-income countries, South-East Asia will likely benefit from interventions that are low-cost and can be used by many. Such interventions, such as peer support programs, group therapy, and teletherapy could be helpful in addressing mental health challenges in a cost-effective and accessible way. The involvement of community laypersons in intervention delivery may be beneficial provided such individuals are appropriately trained by a healthcare professional and that there is continuous supervision, that their role does not include aspects that can only be safely and effectively implemented by a qualified expert, and that the intervention is evidence-based [89, 90].

Additionally, the use of digital health technology to provide mental health care programs may be promising [91].

## 3.6 | Western Pacific

There is a lack of prevalence data for dermatological conditions in the Western Pacific Region overall. In China, the region's largest country by population, the estimated prevalence of skin conditions was 26% in 2019 [92]. Prevalence estimates of mental illness range from 15% to 50% of the region's population [93]. Fewer than half of those with a mental condition in this region receive treatment [94]. Access to mental health care is not uniformly available across the Western Pacific, particularly in LMICs and territories [95]. This region has also experienced multiple natural disasters in recent decades, leaving citizens more vulnerable to mental health conditions and concerns [96, 97].

Stigma around mental health exists in this region, due to low awareness as well as feelings of shame and embarrassment created by belief systems that associate mental illness with weakness, lack of self-control and low resilience [98]. Similar to other WHO regions, some countries in the Western Pacific are more reserved about open discussions of feelings, which may further contribute to avoidance of treatment [99].

The high use of smartphones in this region (75%) suggests that a web-based program might be accessible and useful in this region [100]. However, barriers to adoption may include unreliable internet in certain areas of this region, firewalls preventing access to digital information, as well as limited digital literacy for some demographic groups. Therefore, community-based tools might be useful as well, particularly in remote and rural areas.

## 4 | Discussion

The burden of skin diseases can be devastating, and the visible nature of many of the symptoms translates to consequences on individuals' mental health. To our knowledge, this is the first review to determine what type of resources exist to support the mental health and well-being of individuals with skin conditions, and to try to understand what types of resources would likely be most beneficial to individuals living with dermatological conditions in different regions of the world. We noted that several of the six WHO regions are strongly culturally-rooted and perpetuate stigma around mental health; for regions including Africa, Eastern Mediterranean, Americas, and remote and rural Western Pacific, the use of task-shifting to train local community members to deliver group-based interventions may be ideal. For regions where most individuals have smartphones, digital health resources for mental health might hold the most promise. A recent large-scale study of dermatological patients in 17 European countries found that those with skin conditions experience higher levels of perceived stigmatization than the general population, perhaps caused by (and contributing to) psychological distress and quality of life decline [101]. Offering mental health resources (or at least connecting the patient to the resource) as part of dermatological care may be helpful in reducing existing stigma, by reinforcing the message that mental health impact is simply another symptom of the skin condition.

The findings of the landscape analysis revealed that there are currently several mental health resources for individuals with skin conditions, predominantly in the form of online interventions such as websites dedicated to providing information, modules on mental health topics and coping strategies, peer

support forums, and counselling. It is encouraging to observe the range of digital health resources and formats that already exist, and it is likely that the self-guided design of many of these will be helpful to individuals from regions where the culture is reserved regarding the sharing of emotions and feelings. This type of format allows for anonymity, compared to an in-person care delivery mode that may feel too invasive to the individual, or leave them vulnerable to judgment, particularly in regions where mental health illness is deeply stigmatized [102, 103]. This format is also ideal for regions with transient populations, whereby the flexibility of being able to access support via the internet will be useful [104–106].

Digital health technologies address many common barriers to the use of traditional in-person care visits for mental health such as geographic accessibility, cost, waiting times, and fear of judgement [85, 107, 108]. A large systematic review found that digital mental health programs have demonstrated measurable improvement in symptoms for those living in LMICs and experiencing milder forms of depression and anxiety, translating to a potential alignment with individuals with skin conditions [109]. A review of digital interactive psychological interventions that the evidence for effectiveness of such tools is not yet definitive, although some benefit to patients in terms of cognitive and emotional factors was observed [18]. Further testing and evaluation will be needed to ensure that mental health resources for the global population with dermatological conditions will be able to overcome frequently identified challenges with the electronic format. For example, user retention can be difficult for mobile mental health applications, as individuals need to be motivated for continuous engagement. The application has to be easy to use, employ appropriate, culturally-sensitive language, and be beneficial to users [110–112]. Less didactic formats, such as support forums and peer-based counselling, have the advantage of facilitating an improved sense of connection and belonging for those with illness [113, 114]. However, there is concern that such sessions need to be moderated regularly to make sure that all mental health and dermatology advice is accurate, so as not to cause harm [115, 116].

This review is not without its limitations. Although we have striven to be comprehensive with our searches, it is very possible that there are existing mental health resources that we were unable to identify, particularly those that are not available in English language. Additionally, it is also likely that our search did not identify very informal tools and resources that are more local-based (and not necessarily readily found through online searches), and those developed by smaller patient organizations or groups that do not have an online presence. While we did note whether each resource had been evaluated in the scientific literature for impact on mental health-related symptoms, we did include resources for which we were unable to find such testing, given that the purpose of this landscape analysis was solely to understand what type of resources are currently available to individuals with skin conditions. Future research to compare available tools and programs based on patient acceptability/uptake, as well as effectiveness in reducing symptoms of mental health decline, particularly by patient age group, would be useful in improving current resources and informing the creation of new ones. Additionally, the resources on our list will not necessarily be useful in all regions; as we have shown, there is wide variation in the types of formats that would likely be most fitting with the needs of different populations.

Much work has already been done to develop resources to best support individuals with skin conditions who are experiencing negative impacts on their mental health. Adaptation of these tools to ensure that they are aligned with the varied needs and cultural diversity of the individuals who are served by Global-Skin's member organizations, while sensitive to existing stigmas that exist with respect to mental health, will allow for optimal care of those with skin conditions.

## Author Contributions

**Tammi Shipowick:** conceptualization, methodology, formal analysis, writing–original draft preparation, writing–review and editing, supervision; **Jennifer Austin:** conceptualization, methodology, formal analysis, writing–original draft preparation, writing–review and editing, supervision; **Nicole Sudiacal:** methodology, writing–original draft preparation, writing–review and editing; **Stephanie Miller:** methodology, writing–original draft preparation, writing–review and editing; **Jennifer Pereira:** methodology, writing–original draft preparation, writing–review and editing; **Christine Bundy:** writing–original draft preparation, writing–review and editing, supervision. All authors have read and agreed to the published version of the manuscript.

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The authors have nothing to report.

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