

General

The Application of a Self-Compassion Program in Families of Emerging Adult Women With Alopecia Areata

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The present study investigates the implementation of a self-compassion program targeting families—specifically parents and siblings—of emerging adult women diagnosed with alopecia areata. Alopecia areata is an autoimmune skin disorder characterized by hair loss on the scalp and body. While it does not pose a direct threat to physical health, it significantly impacts individuals' psychological well-being. Individuals with alopecia areata often report elevated levels of anxiety, stress, depression, and shame, and tend to exhibit high levels of self-judgment. Importantly, existing literature suggests that the condition also affects the emotional well-being of family members, although relevant research and targeted interventions for this population remain scarce. Families often experience negative emotional responses as they assume a supportive role—both emotionally and practically—while also recognizing the social stigma experienced by the affected individuals. A total of 20 participants, aged 25 to 65 years, including mothers, fathers, and sisters of emerging adult women with alopecia areata, took part in the study. The participants engaged in a six-session self-compassion intervention. Post-intervention results indicated an increase in self-compassion and its positive dimensions, alongside a decrease in its negative dimensions, as well as reductions in anxiety, depression, stress, and bodily shame. No statistically significant changes were observed in characterological or behavioral shame. The enhancement of self-compassion may help the family in order to take care of people with alopecia areata. The study concludes with a discussion of limitations and suggestions for future research.

Introduction

The field of healthcare constitutes an area of research interest from various perspectives, including psychology—such as counseling psychology, positive psychology, and health psychology, among others. Numerous studies are continuously conducted focusing on various illnesses, aiming both to examine the psychological factors adversely affected by disease and to identify those that may serve as protective resources, strengthening the patient's psychological resilience. While a substantial body of research focuses on individuals diagnosed with illness, studies and interventions targeting their families remain comparatively limited. Although the primary burden of illness is experienced by the individual, this does not imply that their family remains unaffected at a psychological level (Moons et al., 2020). This is particularly evident in cases where the family assumes the role of caregiver, as is often the case with severe or chronic illnesses (e.g., cancer). In such contexts, examining the psychological state of caregivers becomes essential. Particular attention is given to caregivers, as their well-being is critical; if the caregiver is not psychologically well, it becomes increasingly difficult for them to provide effective care and meet the demands associated with supporting the patient (Hahn-Goldberg et al., 2018).

The majority of studies conducted on families have primarily focused on cases involving cancer (Guerra-Martín et al., 2023) and developmental disorders (Factor et al., 2019). This focus is understandable, as cancer is often perceived as a life-threatening illness that significantly disrupts an individual's overall functioning, while developmental disorders—such as Autism Spectrum Disorder (Factor et al., 2019)—are lifelong conditions. However, even in cases of illnesses that are not considered life-threatening, families may still be psychologically affected. This may occur because families often bear the emotional burden of the affected individual's psychological state and typically serve as the primary support system (Gillick, 2013). In addition, they may be required to manage their own negative emotions—such as feelings of guilt or concerns related to hereditary factors—or may experience guilt regarding the onset and progression of the illness. Furthermore, family members may feel inadequate in their roles as caregivers or supporters, questioning their ability to effectively assist the individual in need (Gillick, 2013). A review of the existing literature revealed a lack of studies focusing specifically on the families of individuals diagnosed with alopecia areata, with the exception of one study that will be discussed later.

Alopecia areata is an autoimmune skin disorder that affects approximately 1%–2% of the general population

(Korta et al., 2018; Lee et al., 2020). It is characterized by patchy hair loss occurring on various parts of the scalp or body. The hair loss typically appears in uneven patterns and can affect any area where hair normally grows, including the scalp, face, eyebrows, eyelashes, body, and genital regions. Although the onset is usually gradual, the condition can progress to complete hair loss in some cases (Beigi, 2018). The disorder most commonly begins in childhood or adolescence, with these life stages representing the highest incidence of onset (Lee et al., 2020). No significant gender differences have been observed in terms of prevalence, as both men and women can develop alopecia areata (Mirzoyev et al., 2014). However, men tend to be diagnosed at a slightly younger average age (31.5 years) compared to women (36.4 years) (Mirzoyev et al., 2014). Notably, recent research has reported a significant increase in the overall incidence of alopecia areata, along with a decline in the average age of onset (Wang et al., 2022). Although the condition affects both sexes equally, women appear to experience greater psychological distress as a result (Tucker, 2009). This is largely due to the fact that the hair loss primarily affects the scalp—one of the most visible areas of the body—and hair is culturally and symbolically associated with femininity. For women, the loss of hair can therefore represent a perceived loss of femininity. Moreover, societal beauty standards and the influence of social media reinforce the expectation for women to maintain a flawless appearance, further intensifying the psychological impact of the condition (Tucker, 2009). In this context, alopecia areata can be perceived as a visible sign that something is “wrong” or out of one’s control. Since the condition is often attributed—at least in part—to psychological factors that affect the immune system, many women internalize the blame, believing that their inability to manage stress or emotional challenges has contributed to the onset of the disorder.

Although alopecia areata does not pose a direct threat to physical health and can often be managed with appropriate treatment, its psychological impact on affected individuals is significant. Patients with alopecia areata frequently report elevated levels of anxiety (Okhovat et al., 2023), stress (Han et al., 2022; Pellant et al., 2026; Sengupta & Wagani, 2024), depression (Jagtiani et al., 2017; Okhovat et al., 2023), shame (Liu et al., 2018), suicidal ideation (Jagtiani et al., 2017), substance abuse, eating disorders, and sexual dysfunction (Sharma, 2016).

Beyond these psychological effects, individuals with alopecia areata also experience challenges on a practical level. In the domain of employment, they often report frequent absences from work or higher rates of unemployment (Muntyanu et al., 2023). Furthermore, the condition appears to influence major life decisions, including those related to career, academic pursuits, and interpersonal relationships (Muntyanu et al., 2023). A pattern has been observed wherein individuals with alopecia areata tend to undervalue themselves and their capabilities, often refraining from pursuing opportunities they desire (Muntyanu et al., 2023). These patterns are further reinforced by the social stigma associated with the condition; many individuals

report having experienced stigmatizing incidents (Hurrell, 2023). This is particularly evident in social contexts, where individuals may avoid interactions due to discomfort, and in sexual or intimate relationships, where feelings of shame lead to withdrawal and isolation (Hurrell, 2023). Importantly, the effects of alopecia areata are not limited to the individuals directly affected, but also extend to their families (Liu et al., 2018). One study conducted (Davis, 2014) specifically explored the experiences of families of individuals with alopecia areata. The findings revealed that family members also experienced high levels of stress, and many described going through various emotional stages before reaching a point of acceptance regarding the diagnosis. Moreover, their accounts corroborated the patients’ experiences of stigma, as families themselves reported feeling judged or scrutinized by their social environment. This social response had a negative impact not only on the patients’ self-esteem, self-confidence, and self-image, but also on their overall quality of life, intensifying emotional distress. Family members also reflected on their role in supporting the individual with alopecia areata, emphasizing efforts to promote social engagement and to manage the challenges arising within family dynamics. In addition, they reported contributing financially to treatment, acknowledging the significant cost burden involved. They underscored the importance of a holistic approach to care—one that integrates collaboration among healthcare professionals and mental health practitioners to comprehensively address the needs of individuals with alopecia areata (Davis, 2014).

No other studies to date have been conducted specifically on families of individuals with alopecia areata. However, related research examining the role of self-compassion in caregivers has yielded significant findings. One study involving 73 caregivers of individuals with dementia found that higher levels of self-compassion were associated with reduced caregiver burden and a decrease in maladaptive coping strategies, while simultaneously enhancing the use of adaptive coping strategies (Lloyd et al., 2019). In another study, a Mindfulness-Based Self-Compassion intervention was implemented with 24 caregivers who had a family member diagnosed with dementia. Following the intervention, participants reported high levels of satisfaction and indicated that self-compassion and mindfulness helped them manage their caregiving responsibilities more effectively. Specifically, the intervention was followed by reductions in rumination about the illness, negative thoughts and emotions, and avoidance behaviors. At the same time, it facilitated greater acceptance and personal responsibility by promoting a focus on positive appraisals. The caregivers’ shift in perspective regarding the illness also contributed to improved caregiving and a stronger focus on their own well-being (Spigelmyer et al., 2023). Furthermore, a recent systematic review on caregivers of individuals with neurodegenerative diseases highlighted that self-compassion plays a critical role in promoting the maintenance of psychological well-being during challenging caregiving experiences (Lero et al., 2025).

Other studies have examined the role of self-compassion in relation to anxiety, stress, and depression among caregivers. For instance, a study conducted with 208 family caregivers of individuals with cancer found that those who scored high in self-compassion reported lower levels of depression. Depression tends to be elevated among family caregivers, particularly in healthcare contexts such as China, where the healthcare system is under-resourced and families often assume the majority of caregiving responsibilities. However, individuals who demonstrated self-compassion appeared better able to manage the demands of caregiving, which in turn was associated with reduced depressive symptoms (Xu et al., 2020). Similarly, a study of 72 family caregivers of people with lung cancer also found that self-compassion was negatively associated with depression in this population (Hsieh et al., 2019). Comparable findings have been reported in studies with other caregiver populations, including family carers of individuals with dementia (Grant, 2022), 57 partner caregivers of people with neurological conditions (Hlabangana & Hearn, 2020) and 29 caregivers of individuals with pulmonary hypertension (Rawlings et al., 2023), where higher self-compassion was consistently associated with lower levels of depression.

Self-compassion has also been found to contribute to the reduction of stress. This has been supported by studies conducted with 72 family caregivers of individuals with lung cancer (Hsieh et al., 2019), 141 family carers of adults aged 65 or older with chronic illnesses (Murfield et al., 2024), as well as studies examining stress levels among adult caregivers of aging parents with chronic medical conditions (Byrd, 2015).

With regard to anxiety, research has similarly shown that self-compassion is associated with lower anxiety levels. This has been observed among family caregivers of individuals with dementia (Grant, 2022) and those caring for patients with pulmonary hypertension (Rawlings et al., 2023). Additionally, a study involving 391 hospital-based caregivers demonstrated that higher self-compassion was associated with lower levels of depression and anxiety, particularly when compared to caregivers who exhibited greater self-judgment (Lathren et al., 2024).

Although studies specifically examining the relationship between self-compassion and mental health outcomes in family caregivers remain relatively limited, there is a broader body of research that supports these associations across diverse populations. For example, in patients with cancer, self-compassion has been found to be negatively correlated with stress (Pinto-Gouveia et al., 2014), anxiety (Wei et al., 2023; Zhu et al., 2019, 2020) and depression (Pinto-Gouveia et al., 2014; Wei et al., 2023; Zhu et al., 2019, 2020). Moreover, a mindfulness-based self-compassion intervention with 45 individuals suffering from dermatological conditions led to reductions in stress, anxiety, and depressive symptoms following completion of the program (Sengupta & Wagani, 2024).

In relation to alopecia areata, it has been reported that individuals with this condition experience high levels of anxiety and depression (Okhovat et al., 2023), as well as stress (Han et al., 2022; Pellant et al., 2026; Sengupta &

Wagani, 2024). As for the relationship between self-compassion and shame, no studies to date have explored this specifically within families of individuals with alopecia areata. However, existing findings indicate that individuals with alopecia areata often experience high levels of shame, largely due to hair loss and concerns about their appearance in the eyes of others (Liu et al., 2018). One study conducted with women diagnosed with alopecia areata confirmed these findings, highlighting elevated levels of shame; notably, the study also found that women who scored higher in self-compassion reported significantly lower levels of shame (Hurrell, 2023). In addition, studies examining the benefits of compassion-focused therapy—which is designed to enhance self-compassion—among patients with vitiligo (an autoimmune dermatological condition similar to alopecia areata) have shown that fostering self-compassion can lead to a reduction in feelings of shame following intervention (Fatollahzadeh et al., 2023; Soleymannpour et al., 2022).

Emerging adulthood is considered a developmental milestone encompassing individuals aged 18 to 29 years (Arnett, 2000). This stage is often characterized as a challenging period across multiple life domains, including academic, professional, and interpersonal spheres. Emerging adults frequently face issues such as financial instability, delayed independence, difficulties in securing employment, prolonged education, and problems in interpersonal relationships—all of which place a considerable burden on their mental health (Arnett, 2000). Although there is a growing body of research focusing on this population due to heightened interest in promoting psychological well-being, no studies have yet examined the manifestation of alopecia areata within emerging adulthood.

Moreover, intervention studies involving individuals with alopecia areata remain limited. A CBT intervention (N = 15) showed improvements in quality of life, reductions in depressive symptoms and emotional distress, as well as less hair loss (Hart et al., 2021). Similarly, a mindfulness-based intervention (N = 5) led to reductions in social anxiety, general anxiety, and depression, along with improved quality of life (Heapy et al., 2023). Furthermore, a compassion-focused therapy program (N = 40) resulted in decreased internalized shame and self-criticism (Rasouliisini et al., 2019). However, these studies present several methodological limitations, such as small sample sizes, lack of follow-up assessments, and limited evidence regarding the long-term maintenance of intervention effects.

In contrast, self-compassion-based interventions have demonstrated notable benefits in clinical populations, particularly in patients with cancer (Chen et al., 2024; Fan et al., 2023; Mifsud et al., 2021). The aim of the self-compassion interventions is to enhance the kindness toward oneself, recognizing the pain and the difficulties as common experience among people and thoughts and emotions in a more mindful way according to the Self-compassion model (Neff, 2003a). Nevertheless, a review of the current literature revealed no studies investigating the effects of such interventions on families of individuals with alopecia areata.

Purpose and Research Objectives

The present study aims to implement a self-compassion-based intervention targeting family members of women aged 18 to 29 diagnosed with alopecia areata. This population was chosen based on prior evidence indicating that women are more significantly affected psychologically by alopecia areata compared to men. Furthermore, the selected age range corresponds to a clearly defined developmental stage (emerging adulthood), which has not previously been examined in the context of alopecia areata within the literature. The research objectives are:

- A. The self-compassion-based intervention would be effective in increasing the levels of self-compassion among family members of emerging adult women with alopecia areata.
- B. The self-compassion-based intervention would be effective in reducing anxiety, stress, and depression among family members of emerging adult women with alopecia areata.
- C. The self-compassion-based intervention would be effective in reducing shame among family members of emerging adult women with alopecia areata.

Methods

Design

A six-session self-compassion-based intervention was designed. Three self-report questionnaires were administered at two time points: prior to the intervention (baseline measurements) and upon its completion (post-intervention measurements). Descriptive statistics were conducted, along with an assessment of the internal consistency of the variables using Cronbach's alpha. Furthermore, to examine the effectiveness of the intervention, Paired Sample T-tests were performed on the study variables. Given that the intervention was specifically designed to cultivate self-compassion and self-compassion exercises were taken place, self-compassion was considered the primary outcome of the study. The remaining variables (anxiety, depression, stress, shame) were examined as secondary outcomes to explore broader psychological effects of the intervention. Given the limited availability of the target population, no a priori sample size calculation was performed. To facilitate the interpretation of the findings, a post-hoc sensitivity analysis was conducted using GPower 3.1. Assuming a paired-samples t-test, a two-tailed α of .05, a power of .80, and a sample size of 20, the minimum detectable effect size was $d_z = 0.66$.

Sample

The sample consisted of $N = 20$ individuals aged 25-65, who were members of the families of emerging adult women diagnosed with alopecia areata and represented 20 different families. Of these, 14 (70%) were women and 6 (30%) were men, with a mean age of 50.20 years ($SD = 12.86$). Regarding marital status, 16 participants (80%) were married and 4 (20%) were single. The majority of the par-

ticipants ($n = 13$, 65%) were high school graduates, while 7 participants (35%) held a higher education degree (bachelor's level). In terms of their relationship to the affected individual, more than half of the participants ($n = 11$, 55%) were mothers of women with alopecia areata, 6 (30%) were fathers, and 3 (15%) were sisters. During the intervention, it was emerged that three mothers reported having experienced alopecia areata themselves in the past. Although they participated as family members of individuals with alopecia areata, this characteristic was considered during the interpretation of the findings. Purposive sampling was employed, as participants were selected based on specific inclusion criteria (a) adults who had a close female family member aged 18 to 29 years diagnosed with alopecia areata, (b) only one individual from each family participated in the study. The demographic characteristics of the sample are presented in [Table 1](#).

Materials

Participants completed three self-report questionnaires at two time points—before the intervention (baseline) and after its completion (post-test)—as well as a demographic information form. The demographic form included questions regarding gender, age, marital status, educational background, and the type of relationship with the emerging adult woman diagnosed with alopecia areata. At the beginning of the questionnaire, there was a specific field asking whether any other family member had participated in the study. Participants were also asked, in addition to providing their unique personal code, to provide an additional code consisting of the initials of all family members in order to prevent the participation of individuals from the same family group. All questionnaires used in the study were valid, reliable, and standardized in the Greek language.

Self-Compassion Scale (Neff, 2003b, in Greek by Karakasidou et al., 2017). This scale assesses self-compassion through 26 items, divided into six subscales: Self-Kindness, Common Humanity, Mindfulness, Self-Judgment, Isolation, and Over-Identification. Responses are given on a 5-point Likert scale (1 = Almost Never to 5 = Almost Always). In the present study, the scale demonstrated high reliability both at pre-test and post-test. Cronbach's alpha for pre-test measures is: self-compassion: $\alpha = .921$, self-kindness $\alpha = .842$, common humanity $\alpha = .823$, mindfulness $\alpha = .832$, self-judgment $\alpha = .836$, isolation $\alpha = .785$, over-Identification $\alpha = .776$ and for post measures is: self-compassion $\alpha = .934$, self-kindness $\alpha = .849$, common humanity $\alpha = .831$, mindfulness $\alpha = .838$, self-judgment $\alpha = .827$, isolation $\alpha = .791$, over-identification $\alpha = .734$ ([Table 2](#)).

Depression, Anxiety, and Stress Scale (DASS-21) (Lovibond & Lovibond, 1995, in Greek version by Lyrakos et al., 2011). This 21-item scale evaluates three emotional states: Depression, Anxiety, and Stress. It uses a 4-point Likert scale ranging from 0 = Did not apply to me at all to 3 = Applied to me very much or most of the time. In the current study, the scale demonstrated acceptable internal consistency: Cronbach's alpha is satisfactory for pre measures (depression $\alpha = .758$, anxiety $\alpha = .764$, stress $\alpha = .738$) and for post-test Cronbach's alpha is depression $\alpha = .751$, anxi-

Table 1. Demographic features of the sample (N=20)

		n (%)	M (SD)
Gender	Man	6 (30%)	
	Woman	14 (70%)	
Marital status	Married	16 (80%)	
	Single	4 (20%)	
Education level	High school	13 (65%)	
	Higher education degree (bachelor's level)	7 (35%)	
Family relationship	Mothers	11 (55%)	
	Fathers	6 (30%)	
	Sisters	3 (15%)	
Age			50.20 (SD = 12.86)

ety $\alpha = .772$, stress $\alpha = .758$) (Table 2). DASS-21 scores were calculated by summing the seven items of each subscale, resulting in raw scores ranging from 0 to 21. The cut-off scores for raw scores are for depression: 0-4 (normal), 5-6 (mild), 7-10 (moderate), 11-13 (severe), ≥ 14 (extreme severe), for anxiety: 0-3 (normal), 4-5 (mild), 6-7 (moderate), 8-9 (severe), ≥ 14 (extreme severe) and for stress: 0-7 (normal), 8-9 (mild), 10-12 (moderate), 13-16 (severe), ≥ 17 (extreme severe).

Experience of Shame Scale (Andrews et al., 2002, in Greek version by Gouva et al., 2016). This questionnaire consists of 25 items and includes three subscales assessing different domains of shame: Bodily Shame, Characterological Shame, and Behavioral Shame. Responses are given on a 4-point Likert scale (1 = Not at all to 4 = Very much). In the present study, internal consistency was high for both baseline and post-test assessments. For pre-measures, bodily shame $\alpha = .823$, characterological shame $\alpha = .845$ and behavioral shame $\alpha = .815$. For post-test measures, bodily shame $\alpha = .817$, characterological shame $\alpha = .831$ and behavioral shame $\alpha = .828$ (Table 2).

Procedure

Participant recruitment was conducted through social media, by posting a call for participation in online groups related to alopecia areata, as well as through collaborations between the researchers and mental health professionals and dermatologists, who promoted the study to individuals who met the inclusion criteria. The study received ethical approval from the Ethics Committee of Panteion University, Athens, Greece. Participants were provided with a written informed consent form, which included detailed information about the research process and their rights. They consented to participate voluntarily. All ethical and deontological principles were adhered to, including anonymity, confidentiality, data protection, voluntary participation, and the right to withdraw at any time without penalty.

Self-Compassion Intervention

The intervention was based on the Self-Compassion Intervention Protocol developed and implemented in previ-

ous studies with university students (Karakasidou & Stalikas, 2017b) and battered women (Karakasidou & Stalikas, 2017a), which yielded statistically significant results in increasing self-compassion and reducing anxiety, stress, and depression. The program was delivered online through Zoom and consisted of six sessions, each lasting 120 minutes. During the first session, participants were introduced to the core concepts of self-compassion. The second session involved a self-kindness meditation, aiming to cultivate a gentle and supportive inner attitude. In the third session, participants were guided to write a self-compassionate letter, designed to help them develop a compassionate inner voice. The fourth session included a multiple-selves role-playing activity, through which participants practiced self-compassionate responses to difficult internal experiences, enhancing their capacity to manage adversity with kindness and understanding. In the fifth session, the focus was on using self-compassion to support emotional regulation and the management of challenging emotions. During the sixth and final session, participants explored how to apply self-compassion across various domains of their lives and created a personal self-compassion motto to use as a reminder during difficult circumstances. During the sessions, participants completed a range of experiential exercises, and they were also assigned home practice to complete independently in their own time. Examples of these activities included journaling, self-kindness meditation, writing a self-compassionate letter, role-playing, and the use of self-compassion mantras. The intervention was delivered in a group format, with all participants ($N = 20$) attending the same group in order to ensure that all participants received the intervention under the same conditions. Equal time and opportunity for participation were provided to all participants throughout the sessions. The intervention was delivered by the study researcher, who is a licensed psychologist and psychotherapist. Dr. Karakasidou provided overall supervision and had trained the researcher in the intervention protocol prior to its implementation. Participants completed the pre-intervention measures prior to the start of the program and the post-intervention measures one week after its completion. All participants completed both the baseline and post-intervention assessments and attended all intervention sessions, with no participant at-

trition or absences recorded. In addition, at the end of the intervention, participants completed an intervention evaluation form to provide feedback on the content, delivery format, exercises, and the facilitator.

Results

Descriptive Statistics

Initially, means and standard deviations of the variables were examined. The self-compassion scores and its positive dimensions were lower in the pre-intervention measurements compared to the post-intervention measurements. Conversely, the negative dimensions of self-compassion, as well as the subscales of the DASS-21 and the Experience of Shame Scale, were higher at baseline than at the end of the intervention. Internal consistency was found to be high across all scales and subscales. Furthermore, a normality check was conducted using the Shapiro-Wilk test, which indicated that the assumption of normal distribution was met for all variables ($p > .05$). In regarding pre-test variables, normality distribution was: self-compassion $W(20)=.931$, $p=.163$, self-kindness $W(20)=.963$, $p=.606$, common humanity $W(20)=.947$, $p=.330$, mindfulness $W(20)=.932$, $p=.170$, self-judgment $W(20)=.937$, $p=.210$, isolation $W(20)=.970$, $p=.764$, over-identification $W(20)=.935$, $p=.190$, depression $W(20)=.972$, $p=.795$, anxiety $W(20)=.953$, $p=.408$, stress $W(20)=.939$, $p=.229$, bodily shame $W(20)=.950$, $p=.365$, characterological shame $W(20)=.988$, $p=.994$, behavioral shame $W(20)=.959$, $p=.522$. For post-test measures, normality distribution was: self-compassion $W(20)=.932$, $p=.172$, self-kindness $W(20)=.940$, $p=.235$, common humanity $W(20)=.952$, $p=.403$, mindfulness $W(20)=.918$, $p=.091$, self-judgment $W(20)=.912$, $p=.071$, isolation $W(20)=.954$, $p=.434$, over-identification $W(20)=.910$, $p=.064$, depression $W(20)=.942$, $p=.257$, anxiety $W(20)=.939$, $p=.230$, stress $W(20)=.981$, $p=.942$, bodily shame $W(20)=.915$, $p=.080$, characterological shame $W(20)=.984$, $p=.977$, behavioral shame $W(20)=.941$, $p=.251$. Additionally, skewness and kurtosis values were calculated for all variables, and all values fell within acceptable limits. Specifically, for the pre-test measures, skewness values ranged from $-.380$ to $.488$, while kurtosis values ranged from $-.766$ to $.745$. For the post-test measures, the corresponding values ranged from $-.235$ to $.398$ for skewness and from $-.775$ to $.406$ for kurtosis. Therefore, the parametric Paired Sample T-test was deemed appropriate for assessing differences between pre- and post-intervention scores (see [Table 2](#)).

Paired Sample T-Test

A Paired Sample T-test was conducted to investigate differences between pre- and post-intervention measurements in relation to the effectiveness of the intervention. The results revealed statistically significant differences across most variables. Starting with the self-compassion variable, there was a statistically significant increase, $t(19) = -15.68$, $p < .001$, *Cohen's d* = 3.51, with higher scores observed in the post-intervention measurements ($M = 3.69$, $SD = .49$) compared to the pre-intervention measurements

($M = 2.83$, $SD = .69$). Statistically significant increases were also observed across the positive subscales of self-compassion:

- Self-kindness, $t(19) = -9.29$, $p < .001$, *Cohen's d* = 2.08 (pre: $M = 2.97$, $SD = .82$; post: $M = 3.97$, $SD = .44$),
- Common humanity, $t(19) = -14.23$, $p < .001$, *Cohen's d* = 3.18 (pre: $M = 2.74$, $SD = .63$; post: $M = 3.61$, $SD = .53$),
- Mindfulness, $t(19) = -6.50$, $p < .001$, *Cohen's d* = 1.45 (pre: $M = 3.14$, $SD = .80$; post: $M = 4.00$, $SD = .30$).

For the negative dimensions of self-compassion, statistically significant decreases were observed in the post-intervention scores:

- Self-judgment, $t(19) = 13.56$, $p < .001$, *Cohen's d* = 3.03 (pre: $M = 3.21$, $SD = .88$; post: $M = 2.35$, $SD = .71$),
- Isolation, $t(19) = 7.97$, $p < .001$, *Cohen's d* = 1.78 (pre: $M = 3.00$, $SD = .95$; post: $M = 2.29$, $SD = .86$),
- Over-identification, $t(19) = 14.41$, $p < .001$, *Cohen's d* = 3.22 (pre: $M = 3.65$, $SD = .89$; post: $M = 2.81$, $SD = .83$).

With regard to the DASS-21 subscales, statistically significant reductions were observed in all variables following the intervention: a) depression, $t(19) = 10.16$, $p < .001$, *Cohen's d* = 2.27 (pre: $M = 11.55$, $SD = 3.29$; post: $M = 8.40$, $SD = 3.17$), b) anxiety, $t(19) = 9.63$, $p < .001$, *Cohen's d* = 2.15 (pre: $M = 9.85$, $SD = 2.57$; post: $M = 6.05$, $SD = 4.05$), c) stress, $t(19) = 2.84$, $p < .01$, *Cohen's d* = 0.65 (pre: $M = 12.25$, $SD = 3.90$; post: $M = 9.35$, $SD = 2.57$).

Finally, for the subscales of the Experience of Shame Scale, a statistically significant reduction was found only for Bodily shame, $t(19) = 7.43$, $p < .001$, *Cohen's d* = 1.66, with post-intervention scores ($M = 7.20$, $SD = 1.74$) being lower than pre-intervention scores ($M = 10.90$, $SD = 3.32$). In contrast, the differences were not statistically significant for: a) Characterological shame, $t(19) = 1.70$, $p > .05$, *Cohen's d* = 0.38 (pre: $M = 28.65$, $SD = 9.36$; post: $M = 28.15$, $SD = 8.74$), and b) Behavioral shame, $t(19) = 0.41$, $p > .05$, *Cohen's d* = 1.24 (pre: $M = 24.85$, $SD = 6.65$; post: $M = 24.35$, $SD = 6.05$) (see [Table 3](#)).

Discussion

The present study aimed to implement a self-compassion intervention for families of young adult women (ages 18 to 29) with alopecia areata. The choice of this specific population was based on the need to delve deeper into the subject, as there is a significant gap in the literature concerning the families of these individuals. The motivation stemmed from a previous study—perhaps the only one—conducted (Davis, 2014), which focused on families of people with alopecia areata. That study also highlighted the impact of alopecia areata on families, who reported experiencing high levels of stress and going through various emotional stages. They stated that they too, beyond the patients themselves, may face social stigma and are involved in both practical and emotional aspects of the condition, such as covering treatment costs, providing emotional support, encouraging socialization, and managing family re-

Table 2. Descriptive Statistics (N=20)

Variables	M (SD)	Cronbach's alpha	Shapiro-Wilk (p)
Self-compassion_pre	2.83(.69)	.921	.163
Self-kindness_pre	2.97(.82)	.842	.606
Common humanity_pre	2.74(.63)	.823	.330
Mindfulness_pre	3.14(.80)	.832	.170
Self-judgment_pre	3.21(.88)	.836	.210
Isolation_pre	3.00(.95)	.785	.970
Overidentification_pre	3.65(.89)	.776	.190
Depression_pre	11.55(3.29)	.758	.795
Anxiety_pre	9.85(2.57)	.764	.408
Stress_pre	12.25(3.90)	.738	.229
Bodily shame_pre	10.90(3.32)	.823	.365
Characterological shame_pre	28.65(9.36)	.845	.994
Behavioral shame_pre	24.85(6.65)	.815	.522
Self-compassion_post	3.69(.49)	.934	.172
Self-kindness_post	3.97(.44)	.849	.235
Common humanity_post	3.61(.53)	.831	.403
Mindfulness_post	4.00(.30)	.838	.091
Self-judgment_post	2.35(.71)	.827	.071
Isolation_post	2.29(.86)	.791	.434
Overidentification_post	2.81(.83)	.734	.064
Depression_post	8.40(3.17)	.751	.257
Anxiety_post	6.05(4.05)	.772	.230
Stress_post	9.35(2.57)	.758	.942
Bodily shame_post	7.20(1.74)	.817	.080
Characterological shame_post	28.15(8.74)	.831	.977
Behavioral shame_post	24.35(6.05)	.828	.251

Table 3. Pre and Post measures among research's variables (N=20)

	Pre measures	Post measures	t	Cohen's d	p
	M(SD)	M(SD)			
Self-compassion	2.83(.69)	3.69(.49)	-15.68	3.51	<.001
Self-kindness	2.97(.82)	3.97(.44)	-9.29	2.08	<.001
Common humanity	2.74(.63)	3.61(.53)	-14.23	3.18	<.001
Mindfulness	3.14(.80)	4.00(.30)	-6.50	1.45	<.001
Self-judgment	3.21(.88)	2.35(.71)	13.56	3.03	<.001
Isolation	3.00(.95)	2.29(.86)	7.97	1.78	<.001
Overidentification	3.65(.89)	2.81(.83)	14.41	3.22	<.001
Depression	11.55(3.29)	8.40(3.17)	10.16	2.27	<.001
Anxiety	9.85(2.57)	6.05(4.05)	9.63	2.15	<.001
Stress	12.25(3.90)	9.35(2.57)	2.84	0.65	<.01
Bodily shame	10.90(3.32)	7.20 (1.73)	7.43	1.66	<.001
Characterological shame	28.65(9.36)	28.15 (8.74)	1.70	0.38	>.05
Behavioral shame	24.85 (6.65)	24.35 (6.05)	1.81	0.41	>.05

lationships. All of the above indicate that families are not passive bystanders—they are emotionally affected and actively involved.

The findings of the study showed that after the completion of the intervention—during which mothers, fathers, and sisters practiced techniques to enhance self-compassion—

sion—there was an increase in self-compassion and its positive dimensions, while self-judgment, isolation, and over-identification decreased. Additionally, levels of anxiety, stress, depression, and bodily shame were reduced. On the other hand, there were no statistically significant differences in the reduction of characterological shame and behavioral shame.

At baseline, participants presented severe levels of depression and anxiety and moderate-to-severe levels of stress. These findings are consistent with previous literature indicating that individuals with alopecia areata experience elevated levels of anxiety (Okhovat et al., 2023), stress (Han et al., 2022; Pellant et al., 2026; Sengupta & Wagani, 2024), and depression (Jagtiani et al., 2017; Okhovat et al., 2023). Following completion of the intervention, the severity of anxiety, depression, and stress symptoms decreased, with post-intervention levels falling within the moderate, moderate, and mild ranges, respectively.

The first hypothesis examined whether participants' levels of self-compassion would increase following completion of the intervention, and this hypothesis was supported. Participants showed an overall increase in self-compassion as well as in its individual positive components, while the negative dimensions of self-compassion decreased. More specifically, there was an increase in self-kindness, a sense of common humanity, and mindfulness, and a decrease in self-judgment, isolation, and over-identification. There is no prior research data on the effectiveness of self-compassion interventions in family members of individuals with alopecia areata. However, similar self-compassion interventions conducted with caregivers of individuals with dementia and neurodegenerative diseases have shown significant benefits in terms of increased self-compassion (Lloyd et al., 2019; Spigelmyer et al., 2023), mindfulness, satisfaction, responsibility-taking (Spigelmyer et al., 2023), well-being (Lero et al., 2025; Spigelmyer et al., 2023), and the adoption of more functional coping strategies (Lloyd et al., 2019). Adopting a more compassionate attitude toward oneself not only benefits the individuals themselves but also extends to the caregivers, as they take on more responsibility and adopt more effective coping strategies through a more compassionate reappraisal of their strengths. Cultivating self-compassion may contribute to better management of anxiety, stress, depression, and certain dimensions of shame.

The second hypothesis, which examined whether depression, anxiety, and stress levels would decrease among family members of emerging adult women with alopecia areata, was supported. After the completion of the intervention, participants reported a reduction in depression, anxiety, and stress. Previous studies conducted on individuals with alopecia areata have shown an increase in anxiety (Okhovat et al., 2023), stress (Han et al., 2022; Pellant et al., 2026; Sengupta & Wagani, 2024), and depression (Jagtiani et al., 2017; Okhovat et al., 2023). This likely indicates that the emotional state of a family member affects the emotional well-being of the other members as well, which may explain the levels of these variables measured before the intervention. Additionally, only family members of young

adult women took part in the study. Emerging adulthood spans the age range of 18 to 29 years (Arnett, 2000), during which individuals are more practically and emotionally dependent on their families due to the challenges and difficulties that arise in this developmental stage. Furthermore, individuals with alopecia areata tend to undervalue themselves, exhibit higher unemployment rates, take more absences from work, experience difficulties in interpersonal relationships, and neglect their academic careers (Muntyanu et al., 2023). This situation inevitably affects the family, which in turn experiences emotional distress, anxiety, stress, and depression. Moreover, both individuals with alopecia areata (Davis, 2014; Hurrell, 2023) and their families (Davis, 2014) face social stigma, which often leads to isolation and worsens their psychological condition. Caregivers in general take on a significant portion of responsibilities and treatment costs due to systemic difficulties in healthcare services (Xu et al., 2020). This is also confirmed in the case of alopecia areata, where treatment is costly and requires a combination of medical and psychological care (Davis, 2014). Although no previous studies have been conducted specifically on families of individuals with alopecia areata, self-compassion interventions for caregivers of people with cancer (Hsieh et al., 2019; Xu et al., 2020), dementia (Grant, 2022), neurological conditions (Hlabangana & Hearn, 2020) and pulmonary hypertension (Rawlings et al., 2023) have shown that self-compassion is associated with a reduction in depression.

In a similar vein, self-compassion is associated with lower stress levels in caregivers of individuals with lung cancer (Hsieh et al., 2019) and chronic illnesses (Byrd, 2015; Murfield et al., 2024), as well as with reduced anxiety in caregivers of individuals with dementia (Grant, 2022) and pulmonary hypertension (Rawlings et al., 2023). Beyond the family context, caregivers working in hospital settings also experience less anxiety and depression when they score high in self-compassion (Lathren et al., 2024). The present study aligns with previous research, as a compassionate attitude toward oneself helps individuals take action, while mindfulness helps them avoid getting caught in the vicious cycle of overthinking, which is linked to anxiety, stress, and depression. Self-compassion also helps individuals avoid catastrophizing and allows them to discover alternative and more positive ways of coping, which reduces the intensity of anxiety and stress. Finally, the dimension of common humanity—which was also strengthened through the intervention, where participants shared common characteristics (family members of women aged 18 to 29 with alopecia areata)—helped participants realize that they are not experiencing the situation alone. The sharing of common experiences reduced feelings of isolation and contributed to the reduction of depression, anxiety, and stress.

Although the relationship between self-compassion and anxiety (Wei et al., 2023; Zhu et al., 2019, 2020), stress (Pinto-Gouveia et al., 2014) and depression (Pinto-Gouveia et al., 2014; Wei et al., 2023; Zhu et al., 2019, 2020) has been extensively studied in cancer patients, it has been less explored in individuals with alopecia areata. However, it

appears that this population also experiences symptoms of anxiety and depression (Okhovat et al., 2023; Sengupta & Wagani, 2024) as well as stress (Han et al., 2022; Pellant et al., 2026; Sengupta & Wagani, 2024). One intervention that focused on enhancing mindfulness showed that after its completion, participants reported lower levels of anxiety and depression (Heapy et al., 2023). Nevertheless, due to the limited research on this topic, there is a clear need for further studies involving individuals with alopecia areata and their families.

The third hypothesis examined whether shame levels would decrease among emerging adult women with alopecia areata, and this hypothesis was partially supported. Individuals with alopecia areata experience shame due to hair loss and changes in their physical appearance (Liu et al., 2018), as well as due to the stigma they face (Davis, 2014). However, self-compassion has been associated with lower levels of shame in people with alopecia areata (Hurrell, 2023; Rasouliisini et al., 2019), as well as in individuals with vitiligo (Fatollahzadeh et al., 2023; Soleymannpour et al., 2022)—conditions that affect physical appearance. In the present study, the self-compassion intervention was correlated by reductions only in body shame, but not in behavioral or characterological shame. The hypothesis corresponding to the latter two dimensions refer to aspects of character and behavior, which are more fundamental traits—Therefore, a longer-duration intervention might potentially lead to reductions in these dimensions of shame. On the other hand, the observed reduction in bodily shame may be attributable to the intervention's content, which specifically targeted appearance-related concerns associated with alopecia areata. The four questions that make up the body shame dimension, however, refer to physical aspects of the body. Through the intervention, participants likely identified to some extent with alopecia areata as a condition that affects appearance, and self-compassion helped them view certain parts of their body—about which they may feel insecure (e.g., weight)—from a different perspective. Moreover, during the intervention, three mothers mentioned that they had experienced alopecia areata themselves in the past. Strengthening self-compassion helps individuals refrain from criticizing themselves for their imperfections, avoid over-identifying with their flaws, and recognize that all people go through similar challenges or have aspects of their appearance they are dissatisfied with. Although no statistically significant changes were observed in characterological and behavioral shame, this finding should be interpreted with caution. The absence of statistical significance does not necessarily indicate the absence of an intervention effect. Given the sample size, the study may not have been sufficiently powered to detect smaller effects.

It is important to acknowledge certain limitations. The most important limitation concerns the single-group pre–post intervention design, without the inclusion of a control group. Therefore, it is not possible to rule out the influence of other factors, such as participants' expectations, demand characteristics, regression to the mean, non-specific effects of participation in a group process, or the

natural progression of the variables under investigation over time. Consequently, the findings should be interpreted as indications of a possible association between participation in the intervention and the observed changes, rather than as evidence from which definitive causal conclusions can be drawn. One major limitation was the sample size, which consisted of 20 participants. Since alopecia areata affects approximately 1%–2% of the general population and strict inclusion criteria were applied in this study (family caregivers of women in emerging adulthood with alopecia areata), the sample size was limited in order to obtain more targeted results relevant to this specific population. A post-hoc sensitivity analysis indicated that the study was powered to detect effects of $d_z = 0.66$ or larger. Consequently, although medium-to-large effects could be detected, smaller effects may have gone undetected. Therefore, non-significant findings, particularly for shame, should be interpreted with caution. Another limitation of the study was related to the demographic characteristics of the participants. The majority were mothers of women with alopecia areata, while fathers and sisters were underrepresented. Additionally, brothers and husbands were not included among the participants. An additional limitation concerns the fact that three participating mothers reported a personal history of alopecia areata. Their own experience with the condition may have influenced their responses, particularly regarding body-related shame, and therefore may have acted as a potential confounding factor. In general, and as seen in other studies, mothers tend to be more willing to participate in research concerning their children—likely due to the close relationship they share. However, it is important to also take into account the experiences of other family members. Finally, a limitation was the absence of follow-up measurements, which would have provided more precise insights into the long-term maintenance of the intervention's benefits. Nonetheless, it should be noted that a follow-up evaluation six months post-intervention has already been planned and is expected to be completed in future time.

Future studies would benefit from employing more rigorous research designs, such as randomized controlled trials or studies incorporating a waitlist control group, in order to evaluate the effectiveness of self-compassion interventions with greater accuracy. Also, future research should aim to include a larger number of participants and ensure broader representation in terms of the type of familial relationship (e.g., including more fathers). This study focused specifically on families of women in emerging adulthood with alopecia areata. Future studies could include family caregivers of children and adolescents, or individuals across a wider age range and of any gender, as no research has yet been conducted with these populations. Since this is the first research attempt to implement a self-compassion program in families of women with alopecia areata, the findings should be interpreted with caution. Repeating the intervention in future studies is crucial in order to draw more reliable and generalizable conclusions.

Conclusions

In conclusion, the findings suggest that enhancing self-compassion in families of emerging adult women with alopecia areata may help family members manage their own emotions and beliefs surrounding the condition and, by extension, support their ability to provide meaningful support to individuals with alopecia areata. However, due to the limited research on this topic, further investigation is necessary in order to draw more reliable conclusions about how self-compassion can assist these individuals and their families in coping with the disease and its practical and emotional consequences. As an autoimmune condition, alopecia areata is characterized by periods of remission and relapse, with recurrence being common. For this reason, it is important to identify the factors and characteristics—such as self-compassion—that can serve a protective role in both the prevention and management of alopecia

areata. Furthermore, self-compassion interventions can be incorporated into peer counseling frameworks, where families of individuals with alopecia areata participate, share common experiences and concerns, and, through the process of sharing within the context of common humanity, manage their own negative emotions and ultimately support their loved ones. In the end, since the treatment of alopecia areata is holistic and multifaceted, self-compassion interventions for the families of individuals affected can also be integrated into the therapeutic framework in order to enhance support and ultimately improve the effectiveness of the treatment.

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