INTRODUCTION

Physical appearance and attraction is an attached particular importance in today’s social structure. That is why problems of hair, which plays a prominent role in the physical attraction, may create significant psychological and social issues for people.[1] Stigmatization is the state of being isolated, marginalized, and ignored by the general population because of a disease or degrading sign the person has.[2] Hair diseases act as a stigma when they cause notable changes in the physical appearance. Therefore, stigmatization becomes an important psychological issue in patients with hair diseases. There are a number of studies in the literature investigating stigmatization, especially caused by psoriasis.[3-6] However, there is only a limited number of studies investigating the feeling of stigmatization in patients with various chronic skin diseases, which may also cause stigmatization.[7,8]

Alopecia areata (AA) is a benign inflammatory autoimmune disease characterized by the loss of hair without scars, which is prevalent in 0.1% of the population.[9] Severity, pattern, and duration of the disease vary extremely from a single small alopecic plaque, which can be hidden easily to complete loss of eyebrows, eyelashes, or hair. Although it is not life-threatening and creates no significant pain, ache, or itch, it has been associated with notable emotional stress and low self-esteem.[10,11] Such negative thoughts may also lead to significant reduction in the quality of life. Many previous studies have described significant feeling of stigmatization in patients with mental disorders (MD).[12,13] Thus, we hypothesized that AA may contribute to a similar degree of perceived stigma. In this study, we aimed to measure the perceived stigma especially in patients with AA; and to compare the results with patients with MD. We also evaluated the demographic and clinical factors related to the perceived stigma.
MATERIALS AND METHODS

Patient selection

Patients with AA who presented to Afyon Kocatepe University Hospital outpatient clinic of dermatology in winter and spring 2013, were included in this cross-sectional study. Patients with MD were consecutively recruited from psychiatric outpatient clinic. The presence of a MD was assessed by the Diagnostic and Statistical Manual of Mental Disorder Fourth Edition (DSM-IV). Patients were included in the study if they had at least one of the following diagnoses: psychotic disorder, mood disorder, anxiety disorder, sleep disorder, or somatoform disorder. Patients had been diagnosis with MD at least 6 months prior to inclusion to the study. All patients with MD were using psychotropic drug. Exclusion criteria for patients with MD: (i) Age <18 years or 65> (ii) any significant medical illness (iii) any comorbid DSM-IV-Text Revision Axis II diagnosis (personality disorders) (iv) severe cognitive impairment and lack of insight that might influence the interview and study results. The study was approved by the Local Ethical Committee, and all the patients signed an informed consent form before recruitment. Exclusion criteria for patients with AA: (i) Any visible skin diseases or scars other than AA (ii) patients having only body hair loss (iii) any previous diagnosis of a psychiatric disorders (iv) age <16. Patients’ demographic data such as age, gender, educational status, marital status, and residence, and clinical data such as skin type, duration of disease, pattern of hair loss, severity of involvement by “Severity of alopecia tool,” use of camouflage and previous treatments were noted. 

Stigmatization questionnaire

Patients were asked to complete the 28-items modified stigmatization questionnaire developed by Ginsburg and Bink by choosing one of the following six options: 0 = I absolutely do not agree, 1 = I do not agree, 2 = I partially do not agree, 3 = I partially agree, 4 = I agree, and 5 = I absolutely agree. Reverse scoring was adopted for some of the items. The total score ranged from 0 to 140. Feeling of stigmatization was considered higher as patients scored higher.

Statistical analysis

All data were analyzed by SPSS version 18.0 (IBM Co., Chicago, IL, USA). Characteristics of the population were determined using descriptive methods. Nonparametric tests were employed, as data did not distribute normally. Mann–Whitney U-test was used for the comparison of scores between groups. Pearson’s and Kendall’s tau correlation tests were used for the assessment of correlation between total stigmatization scores and dermatological and clinical data. A P value <0.05 was considered statistically significant.

RESULTS

Demographic and clinical characteristics of the groups

Demographic and clinical characteristics of patients with AA and patients with MD are depicted in Table 1. Patients with AA and patients with MD did not differ significantly in gender, marital status, and education except age. The mean age of the patients with AA was 28.4 ± 10.5 years, and that of the MD group was 36.5 ± 13.3 years. The difference in the mean age between groups was significant (P = 0.03). Clinical severity, patterns of hair loss, and camouflage use in patients with AA are shown in Table 2. Fifteen patients stated that they routinely referred to various methods to hide their lesions.

Comparison between groups on the perceived stigma

Responses of the both groups on the perceived stigma scale were presented in Table 3.

### Table 1: Demographic and clinical characteristics of patients with alopecia areata and mental disorder

|                      | AA group (n=40) | MD group (n=42) | P     |
|----------------------|----------------|-----------------|-------|
| Age (mean±SD)        | 28.4±10.5      | 36.5±13.3       | 0.03* |
| Gender               |                |                 |       |
| Female               | 14             | 17              | 0.60  |
| Male                 | 26             | 25              |       |
| Marital status       |                |                 |       |
| Single               | 20             | 17              | 0.38  |
| Married              | 20             | 25              |       |
| Work status          |                |                 |       |
| Employed             | 18             | 23              | 0.37  |
| Unemployed           | 22             | 19              |       |
| Education            |                |                 |       |
| Primary school       | 14             | 20              | 0.24  |
| High school          | 12             | 14              |       |
| University degree    | 14             | 8               |       |
| Place of residence   |                |                 |       |
| Rural                | 17             | 20              | 0.64  |
| Urban                | 23             | 22              |       |
| Age at onset of disease (years) (mean±SD) | 26.5±10.5 | 30.8±11.4 | 0.08 |
| Duration of disease (years) (mean±SD)    | 1.9±3.2        | 5.6±16.7        | 0.02* |

*P<0.05. AA – Alopecia areata; MD – Mental disorder; SD – Standard deviation
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Total and subscales of perceived stigma scores were higher in the group of patients with the AA compared to the patients with MD [Table 4].

In both groups, the level of perceived stigma did not differ significantly according to gender, marital status, education years.

We conducted correlation analysis between total perceived stigma scores and age at disease onset and duration of disease. The analysis revealed no correlation in both groups. In AA group, the stigma scores did not correlate with clinical severity of disease, pattern of hair loss, and camouflage use.

**DISCUSSION**

The aim of this study was to evaluate the perceived stigma in patients with AA and to compare it with patients with MD. MD was one of the most stigmatized medical conditions, which has been confirmed in many studies.[12,13] Previous studies support the use of the feelings of stigmatization questionnaire by Ginsburg and Link as an evaluation tool for perceived stigma in dermatology patients.[3,16,17] However, there are no studies available on its use in patients with MD. We thought it would be interesting to assess the perceived stigma by using this scale with regard to MD to be able to compare these two conditions. In our study, the results showed that individuals with AA reported more stigma compared to patients with MD. This suggests that AA is a condition that leads to more self-stigmatization than MD. There are several possible explanations for this finding. First, patients with AA may not hide their lost hair or have difficulties in hiding, whereas MD can often be concealed. Previous studies revealed in physical and mental illnesses, if an individual could not manage to conceal ones’ illness, the level of stigmatization could increase.[16,18,19]

Although we did not find any correlation with camouflage use and perceived stigma scores, in our AA group 37.5% were concealing or trying to conceal their disease. Second, although AA is merely seen as a skin disorder, it has been found to be associated with higher level of anxiety, depression and lower self-esteem, poor quality of life, which may contribute to the level of perceived stigma.[20-25]

Thus, these psychological consequences could result in a double stigma in patients with AA. Besides, it should be kept in mind that in our study, AA group was younger when compared with MD group and it was reported that age may have a significant impact on perceived stigma.[26]

In the literature, to the best of our knowledge, there is no study to explore perceived stigma in patients with AA who were seeking treatment in dermatology setting. Some studies conducted in patients with chemotherapy induced alopecia have concentrated on perceived stigma.[27,28] These studies found that these patients often feel stigmatized by others. In addition, for women subjects, hair loss makes them feel unattractive and look like they are sick or dying.[29] On the other hand, for men, the lack of hair made them look child-like, vulnerable, and less macho.[30]

AA is a cosmetically very disfiguring clinical picture.[31] According to sociocultural perspective, women are more concerned about physical appearance than men.[32] We did not find any gender effect on perceived stigma in patients with AA. Some researchers have found that women with AA suffered from more negative psychological effects of hair loss compared to men.[33] In individuals who get a disease or disorder related to body image and appearance, such as obesity, vitiligo and psoriasis, perceived stigma was more commonly reported in women than in men. Further studies are needed to be performed with larger populations in order to detect possible role of gender in patients with AA.[3,8,34]

We found that perceived scores were not correlated with age at disease onset and duration of disease. It appears that patients are unable to reduce their self-stigma during course of their illness. This result is line with Yen et al’s
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Table 3: Perceived stigma scale items and scores in patients with alopecia areata and mental disorder

| Mean±SD | P |
|---------|---|
| **AA group** | **MD group** |
| Anticipation of rejection | | |
| When my hair lost/mental health improves after treatment, I feel much better about myself | 0.44±0.8 | 0.50±0.6 |
| I feel physically unattractive and sexually undesirable when the hair lost/mental health is bad | 2.21±1.8 | 2.02±1.9 |
| People with AA/MD often think of themselves as being “comfortable” when hair lost/mental health improves greatly | 1.4±1.4 | 0.9±1.1 |
| If I thought an employer might discriminate against someone because of AA/MD, I would not apply for the job | 2.8±1.7 | 2.5±1.7 |
| I would not apply or get training for a job that involved dealing with the public because of AA/MD | 2.7±1.8 | 2.0±1.7 |
| I sometimes avoid social situation because of AA/MD | 2.5±1.7 | 1.4±1.5 |
| When the AA/MD is severe, I’m too a ashamed to engage in sexual activity | 3.0±1.7 | 2.1±1.7 |
| An employer who knows a person has a history of AA/MD will probably pass over the application and give the job to someone else | 2.6±1.7 | 1.8±1.7 |
| Feeling of being flawed | | |
| Many people assume that having AA/MD is a sign personal weakness | 2.4±1.6 | 1.7±1.8 |
| I often think that others think that AA/MD patients are inferior | 2.9±1.5 | 2.3±1.7 |
| I sometimes think family members feel that I’m weaker than they are because I have AA/MD and they do not | 3.5±1.6 | 2.7±1.7 |
| When people learn that you have AA/MD, they begin to search for flaws in your personality | 2.7±1.7 | 1.5±1.6 |
| Sensitivity to the opinions of others | | |
| Some people act as though my having AA/MD were my fault somehow | 3.0±1.5 | 1.8±1.9 |
| People avoid me and shy away for fear because I have AA/MD | 2.7±1.8 | 2.7±1.9 |
| I have been hurt by what other people say to me because I have AA/MD | 2.8±1.8 | 1.6±1.4 |
| Sometimes I feel like an outcast because of my AA/MD | 3.6±1.5 | 1.6±1.8 |
| Guilt and shame | | |
| I never feel embarrassed or ashamed because of my AA/MD*** | 1.7±1.4 | 1.9±1.9 |
| Having AA/MD makes me feel different from other people | 3.0±1.4 | 1.6±1.7 |
| If my child were to develop AA/MD, I would not feel guilty*** | 2.7±1.8 | 2.0±1.9 |
| I rarely feel the need to hide the fact I have AA/MD | 3±1.7 | 1.6±1.8 |
| Positive attitudes | | |
| If my child developed AA/MD, I feel he or she could have as a good a life as if he or she didn't have it*** | 1.8±1.6 | 1.4±1.7 |
| AA/MD patients are treated like lepers | 3.6±1.4 | 2.6±1.8 |
| If my child were to have AA/MD, I think he or she could develop his or her potential just as though he or she did not | 1.8±1.5 | 1.3±1.5 |
| The people closest and most important to me do not seem to notice that I have AA/MD*** | 1.7±1.7 | 1.6±1.7 |
| Secretiveness | | |
| I do my best to keep family members I do not live with from knowing that I have AA/MD | 3.5±1.7 | 2.4±1.8 |
| If I were to make a new friend, I would tell him or her all about my AA/MD | 1.9±1.6 | 2.2±1.03 |
| I have told people close to me to keep the fact of my AA/MD a secret | 3.3±1.5 | 1.9±1.8 |
| People do not want to be my friend when they learn I have AA/MD | 3.3±1.5 | 2.0±1.7 |

*P<0.05, **Response to each item are on a 5 point scale (score 0=absolutely do not agree, score 5=absolutely agree), ***Reverse scored items. Higher scores indicate greater level of perceived stigma.

AA – Alopecia areata; MD – Mental disorder; SD – Standard deviation

The clinical severity of visible skin disease is expected to increase the level of felt stigma. In a German study among vitiligo patients, patients with visible skin lesions were found to have higher total stigma scores than those with nonvisible lesions.[8] In another study by Krüger et al., recruited among children with vitiligo, patients with facial lesions and the ones’ using camouflage had higher stigma scores.[9] On the contrary, the stigma scores of AA patients were not related to the severity of disease and camouflage use. A similar result was yielded for psoriasis patients in a study by Hrehorów et al.[10] The authors explain this result by

study.[35] However, Ginsburg and Link’s study detected this relationship.[3] In this study, Ginsburg and Link’s questionnaire was modified.[9] This may explain why we did not found any correlation between perceived stigma scores and duration of illness.

In our study, there was no relationship between perceived stigma and sociodemographic variables in either AA or MD group, which is in line with previous studies.[16,37] However, some authors reported that perceived stigma is related with education, marital status and occupational status.[24,38]
the fact that having psoriasis itself is a major cause of feeling stigmatized. According to us, the presence of a visible hair loss is the main cause of stigma, not the extent of hair loss.

There are several limitations to the present study. First, the sample size was small, highly selective, and consistent of individuals attending to dermatology and psychiatry outpatients’ clinics, results cannot be generalized to patients with AA and MD as a whole. Second, our study is a cross-sectional study, which does not allow the exact determination of the effect of sociodemographic factors on perceived stigma. Third, the design of study relies on self-reporting. Thus, some participants may not reflect their true feeling or behavior. Fourth, we have no control group without MD. If that were possible, it would have been better understand the dynamics of similarities and differences between groups.

CONCLUSION

We found that AA is a condition that can lead to more self-stigmatization than MD. No significant relationship was found between level of perceived stigma and demographic variables in both AA and MD group.

The level of perceived stigma needs to be considered in assessment of patients with AA. The recognition of the possibility that high level of perceived stigma may affect adherence to AA treatment should also be kept mind by dermatologist. Further studies with larger samples should be carried out to explore level of perceived stigma in AA.

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Conflicts of interest

There are no conflicts of interest.

Table 4: Stigma scale characteristics and scores in patients with alopecia areata and mental disorder

|                       | AA group (n=40) | MD group (n=42) | P     |
|-----------------------|----------------|----------------|-------|
| Anticipation of rejection | 17.8±9.9      | 13.4±7.4       | 0.02* |
| Feeling of being flawed  | 11.6±5.0       | 7.1±5.2        | <0.01*|
| Sensitivity to the opinions of others | 12.2±5.3 | 7.3±5.2 | <0.001* |
| Guilt and shame         | 10.2±3.7       | 8.3±4.7        | 0.04* |
| Positive attitudes      | 10.1±3.8       | 7.1±4.9        | 0.06  |
| Secretiveness           | 12.0±3.9       | 8.6±4.5        | 0.01* |
| Total score             | 74.1±23.5      | 52.0±24.3      | <0.01*|

*P<0.05 AA – Alopecia areata; MD – Mental disorder

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