# Report

# Androgenetic alopecia: Does its presence change our perceptions?

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#### Abstract

**Background** The aim of this study was to evaluate the effects of androgenetic alopecia on males with and without hair loss and to delineate the level of stress gained by this type of alopecia.

**Methods** Two hundred and 52 males (175 with hair loss, 77 without hair loss), between 16 and 72 years of age, participated in the study. A hair loss form (five questions for sociodemographical features, eight questions for dermatological features, eight questions for psychological evaluation) and a list of stressful life events were used. **Results** Desire for treatment was significantly different between the participants with and without androgenetic alopesia (AGA;  $\chi^2 = 5.877$ , d.f. = 1, *P* = 0.015). Regardless of the presence of AGA, 61.4% accepted AGA as a natural condition with a solution that should be sought, 38.5% as a cause for increased attention, and 56.2% thought that the psychological effects of AGA would mostly be negative. The negative effects of their AGA on other family members, relationships with the opposite sex and occupation/academic life were considered by 37.1%, 43.0% and 36.3% of the participants, respectively. None of the psychological parameters differed significantly between the participants with and without AGA. A small portion (5%) of the variance in perception of stress (0.22<sup>2</sup> = 0.048) might be explained by the degree of alopecia.

**Conclusion** Social and cultural differences might alter perceptions concerning AGA regardless of its presence in an individual.

# Introduction

Androgenetic alopecia (AGA), which is also known as malepattern baldness, is a specific type of hair loss mediated by systemic androgens and genetic factors. Although AGA is not considered a 'disease', it becomes a medical problem when the hair loss is subjectively seen as excessive, premature, severely progressive and distressing.<sup>1-4</sup>

The concept of health has a wider definition compared with the past. The contemporary definition which emphasis well being of the individual not only in a physical sense but also in mental and social senses encompasses the psychological distress created by physical limitations. Research on the psychological results of AGA has been concentrated on the socio-cultural meaning of hair loss, and individual as well as social variations in percepting and emotionally reacting to baldness.<sup>1,3</sup>

The present study addresses the rate and severity of hair loss, influence of family history, desire to seek or not to seek a treatment, preferences for various treatment modalities, and strategies to cope with the problem. Also, it attempts to illuminate how males with or without hair loss perceive androgenetic hair loss socially and how distressing it is considered.

# **Materials and Methods**

#### **Participants**

Two hundred and 52 males ranging in age between 16 and 72 years (mean age 34.82  $\pm$  9.62) participated in the study. Table 1 summarizes sociodemographic features of the sample. No significant differences were found between the groups with or without AGA in terms of sociodemographical variables. Only 2% (n = 5) of all the subjects admitted to having mental disturbances.

# Instruments

#### Hair loss form

A self-report form comprising 21 items was prepared by the researchers for sociodemographic characteristics (five items), dermatological features pertaining to hair loss (eight items), and

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	% ( <i>n</i> )	% ( <i>n</i> )	% ( <i>n</i> )	% ( <i>n</i> )	% ( <i>n</i> )	% ( <i>n</i> )
Education	Primary school	High school	Collage			
	34.1 (86)	29.4 (74)	36.5 (92)			
Marital status	Married	Not-married	Divorced	Widow	Living apart	
	70.2 (177)	26.6 (67)	2.0 (5)	0.8 (2)	0.4 (1)	
Financial status	Low	Medium	High			
(self-report)	51.2 (129)	44.8 (113)	4.0 (10)			
Job	With white-collaret	Officer/retired	Workmen	University student	Others	Unknown
	21.1 (53)	23.3 (59)	37.3 (94)	6.3 (16)	8.7 (22)	3.6 (9)

Table 1 Sociodemographical features of the participants

psychological characteristics (eight items). In addition, each subject self-assessed the presence and severity of his hair loss on the form by selecting a figure corresponding to his own alopecia among the figures of the Norwood Hamilton Scale.

#### Stressful Life Events list

A list of 43 potentially stressful life events originally developed by Holmes and Holmes.<sup>5</sup> In the present study each subject was given the Turkish translation of this instrument and asked to insert 'baldness' into the most suitable space in the list, thereby indicating the extent of distress caused by losing hair as compared with other stressful events.

#### Method

Each would-be participant was contacted at his workplace, informed of AGA and requested to participate in a study concentrating on dermatological and psychological aspects of hair loss. Those who accepted were provided with the Hair Loss Form and Stressful Life Events List.

This study was performed after obtaining permissions from the Academic Councils of The Dermatology and Psychiatry Departments, Adnan Menderes University Faculty of Medicine.

#### Statistical analyses

SPSS 10.0 package program ([SPSS 10.0 for Windows] SPSS Inc., Chicago, IL) was utilized for the statistical analyses of the study. We performed a Student's *t*-test or chi-squared test where indicated to investigate differences between groups with and without AGA. The relationship between desire for treatment and demographical variables was assessed by means of a forward, stepwise, logistic regression analysis. Any *P*-value < 0.05 was accepted as statistically significant.

#### Results

### **Dermatological data**

Of the participants, 30.6% (n = 77) reported not having AGA and 69.4% (n = 175) reported having varying degrees of hair loss. The hair loss types and its continuance for the subjects



Figure 1 Continuance and grade of hair loss

having AGA are presented on Fig. 1. Hair loss in their family members was reported in 65% (n = 165) of the participants. The rate of positive family history was 87.3% (n = 144) among the subjects with AGA, and 12.7% (n = 21) among the subjects without AGA.

#### Desire for treatment

When the standpoint of the participants to the treatment was analyzed regardless of the presence or absence of AGA, 76.9% (n = 193) reported that they would like to have treatment, while 23.1% (n = 58) declared that they would not. The rate of desire for treatment in the groups with and without AGA were 81.1% and 67.1%, respectively, which differed significantly ( $\chi^2 = 5.877$ , d.f. = 1, P = 0.015). Being younger and having a lower financial level increased the desire for treatment (Table 2).

Of the participants having declared a desire for treatment, 60.1% (n = 149) stated that they would prefer medical treatment. This was followed by surgical treatment with a rate of 13.3% (n = 33) and by a combination of both methods with a rate of 3.6% (n = 9). The groups with or without AGA did not differ in their treatment preferences.

**Table 2** Sociodemographical variablesaffecting desire for treatment

							CI % 95	
Variable	В	S.H.	Wald	d.f.	Ρ	Exp (B)	Low	High
Age	0.040	0.016	5.930	1	0.015	1.040	1.008	1.074
Income	0.559	0.262	4.558	1	0.033	1.750	1.047	2.924
Constant	-3.475	0.759	20.938	1	0.000	0.031		



Figure 2 Strategies of coping with androgenetic alopesia

# Strategies for coping with AGA

As presented in Fig. 2, although most of the participants thought that having their hair cut very short was a very appropriate approach, participants with AGA endorsed this to a significantly higher extent ( $\chi^2 = 10.477$ , d.f. = 1, *P* = 0.001). Changing the direction of hair and using a hat followed this method. Of the participants with AGA 22.3% declined using any method.

# **Psychological data**

# Perception of stress

In the Stressful Life Events List the participants ranked their hair loss between the 26th and 27th items, i.e. "the spouses starting or stopping to work outside of home environment" and "starting to attend school or leaving school", respectively. When evaluated in terms of stress score, the average score of the participants was found to be 28.9 (SD = 18.5). In order to find out how the perception of stress was influenced by the level of hair loss, the Eta correlation rate was used. When perception of stress was considered as a dependent variable, Eta was found to be 0.22. Thus, one might say that a small portion (5%) of the variance in perception of stress (0.22<sup>2</sup> = 0.048) might be explained by the degree of alopecia.

#### Perception of AGA and its effects

Regardless of the presence of AGA, 61.4% (n = 154) of all the participants accepted AGA as a natural condition; however, they thought that a solution should be sought. 15.9% (n = 40) viewed it as a natural condition, 19.9% (n = 50) as a disease, and 2.8% (n = 7) as a physical disability.

 Table 3
 Participants' views on how baldness could affect an individual's life

	Negative impact, %	No impact, %	Positive impact, %
Psychological well being	56.2	39.8	4.0
Family relationships	37.1	59.8	3.2
Occupational/academic life	36.3	59.4	4.4
Relations with opposite sex	43.0	49.8	7.2

When the social environment's affective reaction towards AGA was questioned, 38.5% (n = 97) of the participants endorsed the choice "it is noticed", while 32.9% (n = 83) endorsed "it is ignored", 16.7% (n = 42) "it makes others feel sorry (for the balding person)", and 11.9% (n = 30) as "it is subject to teasing".

Table 3 summarizes the participants' anticipations pertaining to the impact of AGA on the affected individual's psychological condition, family relationships, occupational/academic life, and relations with the opposite sex.

None of the psychological parameters differed significantly between the participants with and without AGA.

# Discussion

Hair is a major component of an individual's general appearance and provides useful social signals about identity and status.<sup>1,2,6</sup> In our study the group consisting of individuals who were individually experiencing AGA differed from the group without AGA solely in terms of their desire for treatment and coping strategies. Because our study group did not consist of individuals admitting to the hospital with a desire for treatment, we were able to investigate a wider group. The individuals without hair loss would have lower rates of seeking treatment if they had alopecia and were compared with those already having alopecia. Those who declared their desire for treatment were significantly younger. DeMuro-Mercon et al.7 stated that AGA became an adaptable condition with increasing age. Similarly in our study, the association of a decreasing desire for treatment with an increasing age suggests that AGA might be viewed as an adaptable condition. Conversely, the finding that a decrease in the desire for treatment is associated with an increased economical status could be explained by

the self-confidence gained with being in a more favorable financial condition.

Sinclair<sup>4</sup> reported the preference of wearing wigs to surgical treatment in men with AGA. Another considerable finding of the present study is that changing the color of the hair or wearing a wig were not favorable coping strategies among our subjects with AGA. This might be a reflection of a general attitude characterizing Turkish society, namely devaluation of preoccupation with physical appearance. The participants chose wearing shorter hair as the first option and doing nothing at all as the second. When today's fashion trends were considered, having a shorter hair cut gives one a more modern outlook and thereby eliminates the negative influences brought forward by hair loss.

The findings of the present study demonstrate that all the participants, regardless of the presence of alopecia, had similar perceptions concerning AGA. This might be explained by a decisive social perception of the condition somehow influencing the personal experience. Likewise, Franzoi *et al.*<sup>8</sup> reported that the public self-consciousness level did not differ significantly between individuals with or without alopecia.

The participants ranked hair loss in the middle of the list, questioning stress-inducing life events. This might be related to the fact that AGA was perceived as a natural process and that treatment should be sought by most of (61.4%) the participants. The increase in severity of baldness was not related to the increase in the percepted level of this problem in the Stressful Life Events list.

A previous report indicated that up to 45% of individuals with hair loss of moderate degree, up to 79% of those with severe hair loss, and up to 60% of those seeking treatment are teased by their peers.<sup>9</sup> In our study 38.5% of the participants reported AGA as something noticed, 32.9% as something ignored, and 16.7% as something pitiful. Only 11.9% of the participants considered AGA as a teased condition.

When the participants evaluated the positive, neutral or negative impacts of hair loss on the affected individual's mental state, relationships with the opposite sex and their occupational and academic lives, mental state was believed to be affected most (56.2%), followed by relationships with the opposite sex (43%). However, the participants did not share the belief that family (37.1%) and occupational and/or academic life (36.3%) might be affected negatively.

When the physical and social attraction dimensions of relationships with the opposite sex were considered, our findings converged with those of studies investigating the influences of baldness on people's outlooks. A previous study demonstrated that photographs of individuals without hair loss were found to be more attractive by the participants of both sexes.<sup>10,11</sup> Another study reported that hair loss will hinder one's chance of getting involved in a romantic affair, but does not have a similar influence on one's chance of finding a job.<sup>8</sup> Also, AGA was found to be related to psychological parameters such as worry, helplessness, self-consciousness and social stress, but was not related to job opportunities.<sup>12</sup>

In conclusion, social and cultural variations might considerably shape individual perceptions concerning AGA regardless of its presence in an individual. In our study, the views about male baldness were obtained from only male subjects, thus limiting its ability to reflect society's attitude as a whole. Having women in the study group might aid in clarifying all dimensions of this issue.

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