Original Article:

The Quality of Life and Psychosocial Impact on Female Pattern Hair Loss in Saudi Arabia: A Cross-Sectional Study

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Received on Jul 27, 2025, accepted for publication on Mar 31, 2026, dx.doi.org/10.5455/mjhs.2026.03.013

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Abstract:

Background & Aims:
Hair plays a crucial role in self-identity and social interaction, particularly for women, making female pattern hair loss (FPHL) a distressing condition. While the psychosocial impact of FPHL is well-documented globally, research within the Saudi Arabian context remains limited. Given the cultural significance of hair in the region, understanding its broader implications is essential. This study aimed to assess the quality of life (QoL) and psychosocial impact of FPHL among women in Saudi Arabia, with a focus on emotional burden and social challenges.

Methods:
A cross-sectional online survey was conducted between October and December 2024, targeting Saudi women aged 18 years and older experiencing hair loss. A randomized sampling technique was employed to recruit 303 participants. Data were collected using a bilingual, expert-validated, pre-structured questionnaire. Respondents with incomplete answers or unrelated medical conditions were excluded.

Results:
Of the 303 participants, mild hair loss was most prevalent (88.1%), followed by moderate (10.2%) and severe (1.7%) cases. Younger women (aged 20–29) and those who were single reported the highest rates of hair loss. No significant association was observed between hair loss severity and employment status, working hours, or income. Although psychological symptoms such as depression, anxiety, fatigue, and sleep disturbances did not show a significant correlation with hair loss severity, participants reported a notable impact on social life and interpersonal relationships.

Conclusion:
FPHL adversely affects the quality of life and social engagement of Saudi women, particularly in terms of self-image and societal acceptance. Despite limited psychological correlation, the emotional and social dimensions warrant greater attention. These findings underscore the need for further research and the development of supportive groups tailored to the cultural context.

Keywords:
Female Pattern Hair Loss, Quality of Life, Alopecia

Introduction:

Hair plays a central role in shaping individual identity, influencing not only physical appearance but also self-perception and social interaction. For women, in particular, hair is often regarded as a symbol of femininity, youth, and vitality, making conditions such as female pattern hair loss (FPHL) deeply distressing.[1] FPHL, also known as androgenetic alopecia in women, is the most common form of hair loss, characterized by progressive thinning over the frontal and central scalp regions, typically sparing the frontal hairline[2]. Although FPHL is not a life-threatening condition, its effects extend far beyond the physical, profoundly impacting emotional well-being and overall quality of life (QoL).[1] The psychosocial burden of FPHL is well-documented in the global literature, with affected women frequently reporting feelings of embarrassment, diminished self-esteem, social withdrawal, and, in more severe cases, depression and anxiety[3]. These consequences are often driven by the societal emphasis on hair as an essential component of female beauty and identity. The psychological toll can be particularly pronounced in societies where cultural and religious norms further amplify the significance of hair. In Saudi Arabia, where societal expectations regarding physical appearance are especially prominent, women with FPHL may experience unique challenges, including social stigma, reduced confidence in professional and social settings, and strained interpersonal relationships.[4] Despite the substantial emotional and psychosocial implications of FPHL, research within the Saudi context remains limited. Existing studies tend to focus on clinical features, pathophysiology, and treatment modalities, with relatively little attention paid to the psychological and social dimensions of the condition[5]. Additionally, cultural practices unique to Saudi Arabia—such as veiling—may influence the personal experience and public perception of hair loss in ways that differ significantly from other regions. Given the lack of region-specific data, there is a pressing need to explore the broader impact of FPHL on QoL and psychosocial well-being among Saudi women. Understanding these dimensions is essential for developing culturally sensitive clinical interventions and support strategies tailored to this population's unique needs. This cross-sectional study aims to assess the quality of life and psychosocial effects of FPHL among women in Saudi Arabia, with a particular focus on emotional burden and social challenges. The findings aim to enhance understanding of the condition's broaderimplications and provide a foundation for improved clinical care and

targeted public health initiatives.

Methods:

This study utilized a cross-sectional survey design to assess the quality of life, psychological, and social impacts of female pattern hair loss (FPHL) among women in Saudi Arabia. Data were collected through an online questionnaire distributed between October and December 2024. The primary objective was to evaluate how FPHL affects women's emotional well- being, social functioning, and overall quality of life.

A randomized sampling technique was employed to recruit 303 Saudi women from the general population. Inclusion criteria consisted of females aged 18 years or older, residing in Saudi Arabia, experiencing hair loss, and willing to participate. Participants were excluded if they had incomplete responses or reported unrelated medical conditions known to cause hair loss.

Data Collection:

Data were obtained through a structured, electronically administered questionnaire. The survey instrument was developed following a comprehensive literature review and expert consultation to ensure content validity and relevance. Initially created in English, the questionnaire was professionally translated into Arabic to enhance cultural appropriateness and accessibility. A panel of dermatology and mental health experts reviewed the instrument to ensure face validity, and it was piloted with a small sample to confirm clarity and reliability.

Questionnaire Structure:

The questionnaire was composed of several sections designed to capture a broad range of variables influencing hair loss and its psychosocial implications. All items were presented in Arabic. Key components included:

1. Personal and Demographic Information:

Captured age group, marital status, educational level, employment status, daily work/study hours, and monthly income.

2. Clinical and Medical History:

Assessed history of scalp conditions (e.g., seborrheic dermatitis, psoriasis, fungal infections), medication use (e.g., corticosteroids, antidepressants), and family history of hair loss.

3. Psychological Factors:

Included validated scales for depression and anxiety, evaluating symptoms such as fatigue, sleep disturbances, irritability, and feelings of worthlessness, with responses rated by frequency over the past two weeks.

4. Social Impact and Quality of Life:

Measured the influence of hair loss on interpersonal relationships, professional engagement, emotional well-being, self-esteem, and tendencies toward social withdrawal.

5. Hair Loss Characteristics and

Perception:

Collected self-reported data on the severity (mild, moderate, severe), duration (<1 year, 1–5 years, >5 years), and any previous medical consultation or treatment.

6. Lifestyle Factors:

Examined smoking habits, sleep patterns, and other daily routines potentially affecting scalp and hair health.

7. Scalp Health Perception:

Evaluated subjective symptoms such as itching, burning, and tenderness, along with concerns about progression or future implications of hair loss.

Data Collection Process:

The survey was distributed via widely used social media platforms, including WhatsApp, Facebook, and Twitter, to reach a broad demographic. Participants were informed about the study's purpose, and their confidentiality and anonymity were assured. Informed consent was obtained electronically prior to participation.

Data Analysis:

Statistical analysis was conducted using IBM SPSS Statistics for Windows, Version 25 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarize sociodemographic and clinical characteristics. Chi-square tests were applied to examine associations between categorical variables and hair loss severity or psychosocial outcomes.

Ethical Considerations:

The study was reviewed and approved by the Research Ethics Committee at Qassim University, Saudi Arabia. All participants provided informed consent before completing the questionnaire. Confidentiality and data privacy were maintained throughout the research process in accordance with ethical standards.

Results:

Of the 303 females initially recruited, 302 participants were included in the final analysis. The overwhelming majority (88.1%) experienced mild hair loss, while 10.2% reported moderate, and 1.7% severe hair lossAge emerged as a significant factor associated with the severity of hair loss (χ^2 = 49.796, $p < 0.001$). Participants aged 20–29 years constituted the largest group (57.9%) and were significantly more likely to report mild hair loss (93.8%). Conversely, both the younger (<20 years) and older (≥30 years) groups showed higher proportions of moderate and severe hair loss.Marital status was also significantly associated with hair loss severity ($\chi^2 = 35.132$, $p < 0.001$). Single women, who made up 78.1% of the sample, exhibited a markedly higher prevalence of mild hair loss (93.7%) compared to their married counterparts. In terms of educational attainment, the majority of participants held a university degree (85.1%), and this group demonstrated a

significantly lower severity of hair loss compared to those with intermediate or postgraduate education (χ^2 = 18.122, p = 0.006). On the other hand, employment status, work/study hours, and income level showed no significant associations with the severity of hair loss (p > 0.05). For instance, among unemployed participants (71.2%), 88.4% reported mild hair loss—closely mirroring the overall distribution.

Table 1: Shows the sociodemographic characteristics among participants and the relationship between participant characteristics and the severity of hair-loss.

Parameter		Frequency (%) total=302	Hair loss			x2	P-value
			Mild 266(88.1%)	Moderate 31(10.2%)	Severe 5(1.7%)		
Age	< 20	74 (24.4%)	69 (93.2 %)	4 (5.4%)	1 (1.4%)	49.796	0.000
	20-29	175 (57.9 %)	164 (93.8 %)	9 (5.1%)	2 (1.1%)		
	30-39	25(8.3%)	16 (64.0 %)	7 (28.0 %)	2 (8.0 %)		
	40-49	15(5.0%)	10 (66.7 %)	5 (33.3 %)	0		
	50-59	13(4.3%)	7 (53.8 %)	6 (46.2 %)	0		
Marital Status	Single	236 (78.1%)	221 (93.7 %)	13 (5.5 %)	2 (0.8 %)	35.132	0.000
	Married	57(18.9 %)	40 (70.2 %)	15 (26.3 %)	2 (3.5 %)		
	Divorced/widow	9 (3.0%)	5 (55.6 %)	3 (33.3%)	2 (11.1 %)		
Educational Level	Primary	2 (0.7)	1 (50.0 %)	1 (50.0%)	0	18.122	0.006
	Intermediate	24 (7.9%)	19 (79.2%)	5 (20.8%)	0		
	University/College	257 (85.1%)	229 (89.1%)	25 (9.7%)	3 (1.2%)		
	postgraduate	19 (6.3%)	17 (89.5%)	0	2 (10.5)		
Employment Status	Non-employee	215 (71.2%)	190 (88.4%)	21 (9.8%)	4 (1.9%)	0.376	0.828
	employee	87 (28.8%)	76 (87.5 %)	10(11.4%)	1 (1.1%)		
Working/Studying Hours	< 6 Hours	82 (27.2%)	73 (89.0%)	7 (8.5%)	2 (2.4%)	3.920	0.687
	6-8 Hours	164 (54.3%)	146 (89.0%)	17 (10.4%)	1 (0.6%)		
	8-12 Hours	49 (16.2%)	41 (83.7%)	6 (12.2%)	2 (4.1%)		
	>12 Hours	7 (2.3%)	6 (85.7%)	1 (14.3%)	0		
Monthly Income	< 2,000 SAR	188 (62.3%)	167 (88.8%)	17 (9.0%)	4 (2.1%)	7.113	0.311
	2,000-5,000 SAR	38 (12.6%)	35 (92.1%)	3 (7.9%)	0		
	5,000-10,000	31 (10.3%)	24 (77.4%)	7 (22.6%)	0		
	> 10,000 SAR	45 (14.9%)	40 (88.9%)	4 (8.9%)	1 (2.2%)		

Participants' Medical Condition and Hair Loss Severity

The role of underlying medical conditions and long-term pharmacological treatments in hair loss was closely examined. Medical histories indicated that 0.7% of participants used immunosuppressive drugs for over six months, all experiencing

mild hair loss. Similarly, 1.3% had long-term corticosteroid therapy, all reporting mild hair loss. Severe seborrheic dermatitis was diagnosed in 2.6% of participants, with 87.5% having mild hair loss and 12.5% moderate. Scalp fungal infection and psoriasis were reported by 1.0% and 2.6% respectively, all cases associated with mild hair loss. Alopecia areata was present in 1.0% of participants, all experiencing mild hair loss. Two participants (0.6%) had complex medical conditions; one reported mild hair loss, the other severe. A vast majority (90.1%) reported no underlying medical conditions or relevant medication use, among whom 87.5% experienced mild hair loss, 11.0% moderate, and 1.5% severe. A significant association was found between the presence of medical conditions and hair loss severity (χ^2 = 62.635, P < 0.001). Despite the small numbers, statistical analysis revealed a highly significant association between the presence of medical conditions and the severity of hair loss ($\chi^2 = 62.635, p < 0.001$). While most medical conditions identified were associated with mild hair loss, the overall data suggests that having any medical comorbidity significantly alters the pattern and potentially the trajectory of hair loss severity.

Table 2: Association Between Medical Conditions, Medication Use, and Hair Loss Severity.

	Frequency (%) total=302	Hair loss			x2	P-value
		Mild 266(88.1%)	Moderate 31(10.2%)	Severe 5(1.7%)		
Use of immunosuppressive drugs > 6 months	2 (0.7%)	2 (100%)	0	0	62.635	0.000
Use of cortisone for longer than 6 months	4 (1.3%)	4 (100%)	0	0		
Severe seborrheic dermatitis	8 (2.6%)	7 (87.5%)	1 (12.5%)	0		
Scalp fungus	3 (1.0%)	3 (100%)	0	0		
Scalp psoriasis	8 (2.6%)	8 (100%)	0	0		
Alopecia areata	3 (1.0%)	3 (100%)	0	0		
Complicated condition	2 (0.6%)	1 (50%)	0	1 (50%)		
I do not suffer from any diseases or take any medication	272(90.1%)	238 (87.5%)	30 (11.0%)	4 (1.5%)		

Impact of Psychological Factors on Hair Loss

To examine the impact of psychological symptoms on hair loss among the participants, several questions evaluated the frequency and severity of these symptoms during the last two weeks. Responses were scored on a scale: never, several days, more than half the days, and nearly every day.

Psychological assessments revealed that

over 70% of participants experienced anhedonia at least once. Among those who never experienced this symptom, 26.8% had mild hair loss, 12.3% moderate, and 2.5% severe. Despite these figures, no significant association was found between anhedonia and hair loss severity (χ^2 = 1.859, P = 0.932). Similarly, depressive symptoms were prevalent, yet 87.0% of those never feeling depressed had mild hair loss, compared to 88.9% among those experiencing depression nearly every day, indicating number.

Significant correlation (χ^2 = 3.33, P = 0.766). Sleep disturbances were common, with 90.9% of those experiencing sleep problems more than half the days reporting mild hair loss, showing no significant relationship (χ^2 = 3.793, P = 0.705). Fatigue was reported by nearly 85%, but no meaningful variation in hair loss severity was observed across symptom frequencies (χ^2 = 7.211, P = 0.705). Eating disturbances, low self-esteem, concentration difficulties, psychomotor changes, and suicidal ideation were also assessed, with no significant associations found with hair loss severity. Furthermore, the degree to which hair loss interfered with daily responsibilities did not show a significant correlation with hair loss severity (χ^2 = 9.048, P = 0.171).

Despite the high prevalence of psychological symptoms—including anhedonia, depression, fatigue, sleep disturbance, and low self-esteem—no statistically significant relationships were identified between these symptoms and the severity of hair loss. These results suggest that while psychological distress is common among individuals experiencing hair loss, it does not predict the severity of the condition.

Table 3: shows the impact of hair loss on participants' psychosocial life and the frequency and severity of psychological symptoms in the past two weeks.

		Frequency (%) total=302	Hair loss			x2	P-value
			Mild 266(88.1%)	Moderate 31 (10.2%)	Severe 5 (1.7%)		
Lack of interest or pleasure	never	81 (26,8%)	69 (85.2%)	10 (12.3%)	2 (2.5%)	1.859	0.932
	several days	112 (37.1%)	101 (90.2%)	10 (8.9%)	1 (0.9%)		
	more than half the days	74 (24.5%)	66 (89.2%)	7 (9.5%)	1 (1.4%)		
	nearly every day	35 (11.6%)	30 (85.7%)	4 (11.4%)	1 (2.9%)		
Feeling upset, depressed or hopeless	never	69 (22.8%)	60 (87.0%)	7 (10.1%)	2 (2.9%)	3.33	0.766
	several days	120 (39.7%)	103 (85.8%)	15 (12.5%)	2 (1.7%)		
	more than half the days	68 (22.5%)	63 (92.6%)	5 (7.4%)	0		
	nearly every day	45 (14.9%)	40 (88.9%)	4 (8.9%)	1 (2.2%)		

Difficulty falling asleep staying asleep sleeping too much	never	78 (25.8%)	64 (82.1%)	12 (15.4%)	2 (2.6%)	3.793	0.705
	several days	92 (30.5%)	83 (90.2%)	8 (8.7%)	1 (1.1%)		
	more than half the days	66 (21.9%)	60 (90.9%)	5 (7.6%)	1 (1.5%)		
	nearly every day	66 (21.9%)	59 (89.4%)	6 (9.1%)	1 (1.5%)		
Feeling tired and lacking energy	never	45 (14.9%)	35 (77.8%)	8 (17.8%)	2 (4.4%)	7.211	0.302
	several days	95 (31.5%)	83 (87.4%)	11 (11.6%)	1 (1.1%)		
	more than half the days	90 (29.8%)	82 (91.1%)	7 (7.8%)	1 (1.1%)		
	nearly every day	72 (23.8%)	66 (91.7%)	5 (6.9%)	1 (1.4%)		
Lack of appetite or binge eating too much	never	83 (27.5%)	66 (79.5%)	14 (16.9%)	3 (3.6%)	9.598	0.143
	several days	84 (27.8%)	76 (90.5%)	8 (9.5%)	0		
	more than half the days	75 (24.8%)	69 (92.0%)	5 (6.7%)	1 (1.3%)		
	nearly every day	60 (19.9%)	55 (91.7%)	4 (6.7%)	1 (1.7%)		
Feeling dissatisfied with yourself or you are a failure or that you let yourself and your family down.	never	132 (43.7%)	114 (86.4%)	15 (11.4%)	3 (2.3%)	6.8	0.340
	several days	81 (26.8%)	68 (84.0%)	12 (14.8%)	1 (1.2%)		
	more than half the days	41 (13.6%)	40 (97.6%)	1 (2.4%)	0		
	nearly every day	48 (15.9%)	44 (91.7%)	3 (6.3%)	1 (2.1%)		
Difficulty concentrating	never	91 (30.1%)	77 (84.6%)	11 (12.1%)	3 (3.3%)	4.718	0.580
	several days	98 (32.5%)	90 (91.8%)	7 (7.1%)	1 (1.0%)		
	more than half the days	62 (20.5%)	54 (87.1%)	8 (12.9%)	0		
	nearly every day	51 (16.9%)	45 (88.2%)	5 (9.8%)	1 (2.0%)		
Moving or speaking slowly to a noticeable degree or being restless	never	186 (61.6%)	163 (87.6%)	19 (10.2%)	4 (2.2%)	2.835	0.829
	several days	60 (19.9%)	53 (88.3%)	7 (11.7%)	0		
	more than half the days	28 (9.3%)	26 (92.9%)	2 (7.1%)	0		
	nearly every day	28 (9.3%)	24 (85.7%)	3 (10.7%)	1 (3.6%)		
Preferring to be Dead or thinking about hurting yourself	never	215 (71.2%)	187 (87.0%)	24 (11.2%)	4 (1.9%)	3.873	0.694
	several days	52 (17.2%)	48 (92.3%)	4 (7.7%)	0		
	more than half the days	14 (4.6%)	12 (85.7%)	2 (14.3%)	0		
	nearly every day	21 (7.0%)	19 (90.5%)	1 (4.8%)	1(4.8%)		
How difficult has this problem made it for you to do your work, study, fulfill your responsibilities	No difficulty	124 (41.1%)	104 (83.9%)	16 (12.9%)	4 (3.2%)	9.048	0.171
	Somehow difficult	131 (43.4%)	118 (90.1%)	13 (9.9%)	0		
	Difficult	28 (9.3%)	27 (96.4%)	1 (3.6%)	0		
	Extremely difficult	19 (6.3%)	17 (89.5%)	1 (5.3%)	1 (5.3%)		

Impact of Hair Loss on Quality of Life

This section explores how various domains of quality of life were affected by hair loss among participants during the preceding week. The analysis reveals a multidimensional psychosocial burden, with some domains demonstrating statistically significant associations with the severity of hair loss, while others did not.

Scalp discomfort was generally uncommon among participants. Nearly half (47.4%) reported no scalp pain, and only 7.6% experienced it frequently or consistently. Similarly, symptoms such as scalp burning and sensitivity were infrequent, with 77.5% and 53.3% of respondents, respectively, denying such experiences. While scalp itchiness was more prevalent, with 60.9% reporting it at least occasionally, it did not show a significant association with the severity of hair loss ($p > 0.05$).

Regarding sleep quality, hair loss appeared to have minimal influence. The majority of participants (70.5%) reported no impact on their sleep, and disturbances linked specifically to hair loss were rare. No significant correlation was found between sleep quality and hair loss severity ($p > 0.05$).

Perceptions of the seriousness of hair loss also varied. Over half of the participants (57.3%) never feared their condition was severe, although nearly one in four expressed some concern. However, this fear did not significantly correlate with the clinical severity of hair loss ($p > 0.05$).

The emotional and psychological burden of hair loss was more prominent, with depressive symptoms reported at least occasionally by 50.7% of participants. Feelings of frustration (55.0%), embarrassment (41.4%), upset (61.9%), and fatigue (34.4%) were also common. Despite their frequency, none of these emotional responses demonstrated a statistically significant relationship with hair loss severity ($p > 0.05$).

A notable portion of participants (68.2%) expressed concern about progression, including 11.3% who reported constant worry. However, the level of concern about worsening hair loss did not significantly correspond with clinical severity ($p > 0.05$).

Crucially, the most significant findings emerged within the social and relational domains.

Hair loss severity was strongly associated with social life impairment ($\chi^2 = 35.221$, $p < 0.001$),
indicating that those experiencing moderate to severe hair loss were more likely to report consistent disruptions in social engagement. Personal relationships were also affected, with a significant association observed between hair loss severity and reported relational difficulties ($\chi^2 = 24.763$,

p = 0.002). Additionally, interpersonal interactions were notably
impacted (χ^2 = 23.475, p = 0.003), with individuals experiencing greater hair loss severity
reporting more difficulty engaging with others.

While the majority (67.2%) stated that their overall daily life was not affected, 32.8% reported some level of disruption. Nevertheless, this general impact on daily functioning did not significantly correlate with the severity of hair loss (p > 0.05

While many physical and emotional symptoms associated with hair loss—such as scalp discomfort, fatigue, depression, and frustration—are prevalent among affected individuals, they do not correlate significantly with the clinical severity of hair loss. However, three key domains—social life, personal relationships, and social interaction—demonstrated statistically significant associations with hair loss severity, revealing that the psychosocial consequences of hair loss are profound and disproportionately impact social engagement and interpersonal connection.

Table 4: Impact of Hair Loss on Physical Discomfort, Psychological Concerns, and Social Life.

		Frequency (%) total=302	Hair loss			x2	P-value
			Mild 266 (88.1%)	Moderate 31 (10.2%)	Severe 5 (1.7%)		
My scalp hurts	Never	143 (47.4%)	127 (88.8%)	13 (9.1%)	3 (2.1%)	15.019	0.059
	Rarely	70 (23.2%)	63 (90.0%)	5 (7.1%)	2 (2.9%)		
	Sometimes	66 (21.9%)	55 (83.3%)	11 (16.7%)	0		
	Often	19 (6.3%)	19 (100%)	0	0		
	Always	4 (1.3%)	2 (50%)	2 (50%)	0		
Hair loss affects my sleep quality	Never	213 (70.5%)	192 (90.1%)	17 (8.0%)	4 (1.9%)	5.74	0.676
	Rarely	56 (18.5%)	45 (80.4%)	10 (17.9%)	1 (1.8%)		
	Sometimes	26 (8.6%)	23 (88.5%)	3 (11.5%)	0		
	Often	6 (2.0%)	5 (83.3%)	1 (16.7%)	0		
	Always	1 (0.3%)	1 (100%)	0	0		
I fear that my hair loss is serious	Never	173 (57.3%)	150 (86.7%)	19 (11.0%)	4 (2.3%)	5.902	0.658
	Rarely	59 (19.5%)	55 (93.2%)	3 (5.1%)	1 (1.7%)		
	Sometimes	43 (14.2%)	36 (83.7%)	7 (16.3%)	0		
	Often	20 (6.6%)	18 (90.0%)	2 (10.0%)	0		
	Always	7 (2.3%)	7 (100%)	0	0		
Hair loss affects my social life	Never	179 (59.3%)	169 (94.4%)	6 (3.4%)	4 (2.2%)	35.221	0.000
	Rarely	51 (16.9%)	40 (78.4%)	11 (21.6%)	0		
	Sometimes	47 (15.6%)	37 (78.7%)	10 (21.3%)	0		
	Often	16 (5.3%)	15 (93.8%)	1 (6.3%)	0		
	Always	9 (3.0%)	5 (55.6%)	3 (33.3%)	1 (11.1%)		

Hair loss makes me feel depressed	Never	149 (49.3%)	137 (91.9%)	9 (6.0%)	3 (2.0%)	14.295	0.074
	Rarely	80 (26.5%)	65 (81.3%)	14 (17.5%)	1 (1.3%)		
	Sometimes	42 (13.9%)	36 (85.7%)	6 (14.3%)	0		
	Often	21 (7.0%)	20 (95.2%)	1 (4.8%)	0		
	Always	10 (3.3%)	8 (80.0%)	1 (10.0%)	1 (10.0%)		
I feel like my head is burning	Never	234 (77.5%)	208 (88.9%)	21 (9.0%)	5 (2.1%)	7.338	0.501
	Rarely	31 (10.3%)	27 (87.1%)	4 (12.9%)	0		
	Sometimes	24 (7.9%)	20 (83.3%)	4 (16.7%)	0		
	Often	7 (2.3%)	7 (100%)	0	0		
	Always	6 (2.0%)	4 (66.7%)	2 (33.3%)	0		
I feel itchy in my scalp	Never	118 (39.1%)	108 (91.5%)	7 (5.9%)	3 (2.5%)	12.289	0.139
	Rarely	78 (25.8%)	67 (85.9%)	9 (11.5%)	2 (2.6%)		
	Sometimes	63 (20.9%)	51 (81.0%)	12 (19.0%)	0		
	Often	30 (9.9%)	29 (96.7%)	1 (3.3%)	0		
	Always	13 (4.3%)	11 (84.6%)	2 (15.4%)	0		
I feel that my hair loss may worsen	Never	96 (31.8%)	85 (88.5%)	7 (7.3%)	4 (4.2%)	10.778	0.215
	Rarely	56 (18.5%)	50 (89.3%)	5 (8.9%)	1 (1.8%)		
	Sometimes	78 (25.8%)	65 (83.3%)	13 (16.7%)	0		
	Often	38 (12.6%)	35 (92.1%)	3 (7.9%)	0		
	Always	34 (11.3%)	31 (91.2%)	3 (8.8%)	0		
My hair loss affects my relationships with others	Never	242 (80.1%)	221 (91.3%)	17 (7.0%)	4 (1.7%)	24.763	0.002
	Rarely	31 (10.3%)	25 (80.6%)	5 (16.1%)	1 (3.2%)		
	Sometimes	26 (8.6%)	19 (73.1%)	7 (26.9%)	0		
	Often	2 (0.7%)	1 (50%)	1 (50%)	0		
	Always	1 (0.3%)	0	1 (100%)	0		
I feel embarrassed about my hair loss	Never	177 (58.6%)	160 (90.4%)	13 (7.3%)	4 (2.3%)	7.864	0.447
	Rarely	52 (17.2%)	46 (88.5%)	6 (11.5%)	0		
	Sometimes	44 (14.6%)	36 (81.8%)	7 (15.9%)	1 (2.3%)		
	Often	17 (5.6%)	15 (88.2%)	2 (11.8%)	0		
	Always	12 (4.0%)	9 (75.0%)	3 (25.0%)	0		
I feel frustrated because of my hair loss	Never	136 (45.0%)	124 (91.2%)	9 (6.6%)	3 (2.2%)	5.758	0.674
	Rarely	64 (21.2%)	53 (82.8%)	10 (15.6%)	1 (1.6%)		
	Sometimes	52 (17.2%)	44 (84.6%)	7 (13.5%)	1 (1.9%)		
	Often	26 (8.6%)	23 (88.5%)	3 (11.5%)	0		
	Always	24 (7.9%)	22 (91.7%)	2 (8.3%)	0		
My scalp is sensitive	Never	161(53.3%)	144 (89.4%)	13 (8.1%)	4 (2.5%)	7.963	0.437
	Rarely	68 (22.5%)	61 (89.7%)	6 (8.8%)	1 (1.5%)		
	Sometimes	44 (14.6%)	38 (86.4%)	6 (13.6%)	0		
	Often	20 (6.6%)	15 (75.0%)	5 (25.0%)	0		
	Always	9 (3.0%)	8 (88.9%)	1 (11.1%)	0		

My hair loss affects being with people	Never	236 (78.1%)	215 (91.1%)	17 (7.2%)	4 (1.7%)	23.475	0.003
	Rarely	36 (11.9%)	29 (80.6%)	6 (16.7%)	1 (2.8%)		
	Sometimes	18 (6.0%)	11(61.1%)	7 (38.9%)	0		
	Often	9 (3.0%)	9 (100%)	0	0		
	Always	3 (1.0%)	2 (66.7%)	1 (33.3%)	0		
I feel upset because of my hair loss	Never	115 (38.1%)	102 (88.7%)	9 (7.8%)	4 (3.5%)	12.589	0.127
	Rarely	55 (18.2%)	53 (96.4%)	2 (3.6%)	0		
	Sometimes	65 (21.5%)	54 (83.1%)	11 (16.9%)	0		
	Often	32 (10.6%)	27 (84.4%)	5 (15.6%)	0		
	Always	35 (11.6%)	30 (85.7%)	4 (11.4%)	1 (2.9%)		
My hair loss makes me tired	Never	198 (65.6%)	181 (91.4%)	13 (6.6%)	4 (2.0%)	11.518	0.174
	Rarely	54 (17.9%)	43 (79.6%)	10 (18.5%)	1 (1.9%)		
	Sometimes	29 (9.6%)	23 (79.3%)	6 (20.7%)	0		
	Often	14 (4.6%)	13 (92.9%)	1 (7.1%)	0		
	Always	7 (2.3%)	6 (85.7%)	1 (7.1%)	0		
My hair loss affects my daily quality of life	Never	203 (67.2%)	182 (89.7%)	17 (8.4%)	4 (2.0%)	5.256	0.73
	Rarely	58 (19.2%)	51 (87.9%)	6 (10.3%)	1 (1.7%)		
	Sometimes	26 (8.6%)	21 (80.8%)	5 (19.2%)	0		
	Often	10 (3.3%)	8 (80.0%)	2 (20.0%)	0		
	Always	5 (1.7%)	4 (80.0%)	1 (20.0%)	0		

Discussion:

This cross-sectional study examined the quality of life (QoL) and psychosocial impact of female pattern hair loss (FPHL) among women in Saudi Arabia, surveying 302 participants. The findings revealed that mild hair loss was the most common (88.1%), while moderate (10.2%) and severe (1.7%) c ases were less frequent. Younger women (20–29 years) and single women were the most affected, suggesting that age and marital status may influence hair loss prevalence and perception. The prevalence of hair loss in this study aligns with previous findings. A study conducted in the Jizan region reported that 66.3% of primary healthcare attendees experienced hair loss, with telogen effluvium and androgenetic alopecia being the most common types[6]. Similarly, a cross-sectional study in Al Majma'ah, Saudi Arabia, involving 1,080 participants found that71.3% of respondents experienced hair loss, with a significantly higher prevalence among women (78.2%) than men (51.9%).[7] These studies, including the present one, highlight the high prevalence of hair loss among Saudi women, underscoring the need for further research and targeted interventions. FPHL has long been recognized as more than a cosmetic issue, significantly affecting self- esteem, emotional health, and social interactions. The current study found that hair loss significantly impacted

social life and interpersonal relationships, reinforcing the distress associated with FPHL. However, no significant association was observed between hair loss severity and employment status, working hours, income, or psychological factors such as depression, anxiety, fatigue, and sleep disturbances. This may be related to the fact that the majority of participants had mild degree of hair loss. These findings contrast with global literature, where studies have consistently demonstrated higher levels of distress, depression, and social withdrawal among women with hair loss [2]. A study on Australian women with FPHL reported poorer health-related QoL compared to non- affected women, emphasizing the detrimental psychological impact of hair loss[8]. Similarly, research in Korea found that FPHL significantly reduced QoL, with higher levels of anxiety and depression among younger patients[3]. Furthermore, studies in Western countries have linked hair loss to a diminished sense of femininity and attractiveness [2].

The Saudi context presents unique cultural and societal norms that may amplify or modify these effects. In societies where beauty standards and social expectations are particularly influential, hair loss may carry a higher psychological burden. However, our study did not find a statistically significant correlation between hair loss severity and psychological distress, suggesting that coping mechanisms, cultural factors, or family support may play a role in mitigating emotional distress.

Several studies have identified stress as a major contributing factor to hair loss[7,9]. A study conducted in Al Majma'ah, Saudi Arabia, involving 1,080 participants, found that 73.8% of respondents identified stress as a trigger for hair loss[7]. This aligns with findings that women experiencing high levels of stress are 11 times more likely to suffer from hair loss than those with lower stress levels. The observed association between stress and hair loss severity supports existing evidence that psychological distress can exacerbate hair shedding, creating a vicious cycle of emotional turmoil and worsening alopecia[9].

Interestingly, our study did not establish a statistically significant association between stress and hair loss severity. This discrepancy may be due to variations in self-perception, coping strategies, or underreporting of stress-related symptoms among Saudi women. It also suggests that the impact of stress on hair loss may vary across different populations, necessitating further investigation.

The way individuals perceive and cope with hair loss varies. A study on the psychosocial burden of androgenetic alopecia in Saudi Arabia found that 78%

of affected individuals felt embarrassed by their condition. However, the overall median score of psychosocial impact was relatively low, indicating variability in how individuals experience and respond to hair loss. Notably, those without a family history of hair loss were 36% less likely to report significant psychosocial distress, suggesting that prior exposure to hair loss within the family may influence emotional resilience [4].

Our findings corroborate these reports, as many participants expressed concerns regarding their appearance, social acceptance, and emotional well-being. However, some women appeared to be less affected psychologically, possibly due to cultural norms, religious practices (e.g., veiling), or a strong family support system. This cultural perspective warrants further exploration in future studies. Medical conditions such as seborrheic dermatitis, psoriasis, and alopecia areata were significantly associated with greater hair loss severity in our study. This is consistent with research demonstrating that scalp disorders contribute to follicular inflammation and progressive thinning[10].

Additionally, lifestyle factors, including chronic stress, poor sleep quality, and dietary deficiencies, play a crucial role in FPHL. Studies have shown that oxidative stress and hormonal imbalances accelerate hair shedding, particularly in genetically predisposed individuals[11]. While our study did not find a significant association between employment status or income level and hair loss severity, it remains essential to explore socioeconomic factors in access to treatment and coping mechanisms in future research.

This study is the first in Saudi Arabia to comprehensively examine the psychosocial and quality-of-life impact of female pattern hair loss (FPHL), addressing a critical gap in regional research. It includes a large and diverse sample, the use of validated assessment tools.

Holistic analysis of medical, psychological, and social aspects further enhances its significance. However, limitations such as the cross-sectional design, reliance on self-reported data, underrepresentation of severe cases, and lack of clinical evaluations may affect generalizability. Despite these constraints, this research provides novel insights into the unique cultural and societal dimensions of FPHL in Saudi Arabia, laying the groundwork for future studies and more tailored healthcare interventions.

Conclusion:

This study demonstrates that female pattern hair loss (FPHL) significantly affects the psychosocial well-being of women in Saudi Arabia, particularly in terms of quality of life, social engagement, and emotional health. Concerns related

to appearance and social acceptance emerged as the most prominent challenges. Although no significant association was observed between the severity of hair loss and psychological distress, participants reported a notable impact on social life and interpersonal relationships, this may reflect the influence of individual coping mechanisms or available social support systems. These findings underscore the emotional burden of FPHL and highlight the need for targeted awareness, culturally sensitive support programs, and further research to develop comprehensive management strategies.

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