Psychosocial Burden of Melasma in Women: A Review of Its Impact on Quality of Life and Self-Perception

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***Abstract*—Background**
Melasma is a common acquired disorder of facial hyperpigmentation that predominantly affects women and is characterized by symmetrical brown to grey-brown macules and patches, particularly over the malar regions, forehead and chin. Although melasma is medically benign, its visibility and chronic, recurrent nature may result in substantial psychosocial consequences. The condition may affect self-perception, confidence, social interaction and overall quality of life.
Objective
To review the available literature concerning the psychosocial burden of melasma in women, with particular emphasis on quality of life, self-esteem, self-perception, emotional well-being and social functioning.
Methods
A narrative review of published literature concerning melasma, quality of life, psychological impact, self-perception and psychosocial burden was undertaken. Relevant clinical studies and validated assessment tools used to evaluate quality of life in patients with melasma were considered.
Results
The available literature indicates that melasma can have a significant psychosocial impact despite its benign physical nature. Facial pigmentation may influence appearance-related self-consciousness, emotional well-being, social confidence and interpersonal functioning. Women may report embarrassment, frustration, dissatisfaction with appearance and concerns regarding how their facial pigmentation is perceived by others. The psychosocial burden may be influenced by disease severity, visibility, chronicity, recurrence and treatment response. Dermatology-specific quality-of-life instruments, particularly the Melasma Quality of Life Scale (MELASQoL), have been developed to quantify these effects.
Conclusion
Melasma should not be regarded solely as a cosmetic pigmentation disorder. Its psychological and social consequences may substantially influence quality of life, particularly among women. Incorporating patient-reported outcomes alongside objective measures such as mMASI may provide a more comprehensive assessment of treatment response. Future studies should evaluate both the physical and psychosocial dimensions of melasma.

***Index Terms*—Melasma; women; psychosocial burden; quality of life; self-perception; self-esteem; psychological impact; MELASQoL; facial pigmentation; dermatology.**

I. INTRODUCTION

Melasma is an acquired disorder of hyperpigmentation characterized by symmetrical brown or grey-brown macules and patches, most commonly involving the face. The forehead, malar regions and chin are frequent sites of involvement.

The condition is particularly prevalent among women, especially during reproductive years. Hormonal influences, ultraviolet radiation, visible light, genetic predisposition and other environmental factors have been implicated in its development and persistence.

From a medical perspective, melasma is generally benign and does not usually produce physical symptoms such as pain or pruritus. Nevertheless, its location on the face makes it highly visible.

This distinction between medical benignity and psychosocial significance is important.

A patient may have no physical discomfort but may experience substantial distress because of changes in facial appearance.

The face plays an important role in personal identity, communication and social interaction. Consequently, visible pigmentation may influence how individuals perceive themselves and how they believe others perceive them.

For women in particular, concerns regarding facial appearance may contribute to embarrassment, reduced confidence, dissatisfaction with appearance and avoidance of social situations.

Therefore, assessment of melasma should ideally extend beyond pigmentation severity and include the patient's subjective experience.

II. WHY THE PSYCHOSOCIAL IMPACT OF MELASMA MATTERS

The clinical severity of a skin disorder does not necessarily correspond directly to its psychological burden.

Two patients with similar pigmentation scores may experience very different levels of distress.

For example:

- One patient may regard the pigmentation as a minor cosmetic concern.
- Another may become highly self-conscious and avoid social interactions.
- A third patient may experience significant anxiety regarding recurrence despite relatively mild pigmentation.

This demonstrates that objective severity and perceived burden are not interchangeable concepts.

Consequently, treatment studies that evaluate only changes in pigmentation may fail to capture an important component of therapeutic benefit.

III. IMPACT ON SELF-PERCEPTION

Facial appearance contributes substantially to self-perception.

Because melasma usually affects visible areas of the face, patients may become increasingly conscious of their appearance.

Common experiences may include:

- dissatisfaction with facial appearance;
- increased attention to facial pigmentation;
- frequent mirror checking;
- concern when photographed;
- comparison with others;
- concern regarding comments from family or friends;
- reduced confidence in social situations.

Some patients may perceive their pigmentation as more severe than objective clinical assessment suggests.

IV. IMPACT ON SELF-ESTEEM

Self-esteem refers broadly to an individual's evaluation of their own worth.

Visible facial pigmentation may influence self-esteem through concerns regarding attractiveness and social appearance.

Patients may report thoughts such as:

- "My face looks dull."
- "People notice the pigmentation."
- "I don't feel confident without makeup."
- "I don't like photographs of myself."

However, the psychological response is highly individual and is influenced by personality, social environment, cultural expectations and previous experiences.

V. EMOTIONAL CONSEQUENCES

5.1 Embarrassment: Patients may feel embarrassed when pigmentation is particularly visible.

5.2 Frustration: The chronic nature of melasma and frequent recurrence may lead to frustration, especially after unsuccessful treatments.

5.3 Anxiety: Patients may become concerned about:

- worsening pigmentation;
- treatment failure;
- recurrence;
- progression during pregnancy;
- appearance in photographs or social events.

5.4 Sadness and low mood: Persistent dissatisfaction with appearance may contribute to emotional distress in some individuals.

5.5 Loss of confidence: Patients may feel less comfortable participating in social or professional situations.

Importantly, the presence of emotional distress should not automatically be interpreted as a psychiatric disorder. Psychological responses exist on a spectrum and should be assessed appropriately.

VI. SOCIAL IMPACT

Because melasma primarily affects exposed facial skin, it may influence social interaction.
Patients may report:

- reluctance to attend social events;
- reduced confidence meeting new people;
- avoidance of photographs;
- increased dependence on makeup;
- concern about being judged;
- reluctance to appear without cosmetic coverage.

Some patients may alter their clothing or lifestyle to minimize sun exposure.

For example, they may:

- avoid outdoor activities;
- use hats or umbrellas;
- reduce time spent outdoors;
- plan activities around sunlight exposure.

Although sun protection is medically appropriate, excessive avoidance motivated by appearance-related anxiety may have broader lifestyle consequences.

VII. IMPACT ON PROFESSIONAL LIFE

The face is frequently visible during professional interactions.
Patients whose occupations involve frequent interpersonal communication may experience greater concern about facial pigmentation.
Examples include:

- teachers;
- healthcare professionals;
- sales professionals;
- hospitality workers;
- customer-service employees;
- public-facing professionals.

VIII. IMPACT ON INTERPERSONAL RELATIONSHIPS

Melasma can influence interpersonal relationships indirectly through changes in self-confidence.
Patients may become:

- more self-conscious around partners;
- reluctant to appear without makeup;
- concerned about attractiveness;
- sensitive to comments regarding facial appearance.

Again, the psychosocial impact is highly individual.
The presence of melasma does not necessarily cause relationship difficulties, but appearance-related distress may influence interpersonal confidence.

IX. MELASMA QUALITY OF LIFE SCALE (MELASQOL)

The Melasma Quality of Life Scale (MELASQoL) was developed specifically to evaluate the impact of melasma on quality of life.
It addresses several domains, including:

- emotional well-being;
- social relationships;
- leisure activities;
- appearance;
- skin condition-related dissatisfaction.

The development of disease-specific instruments such as MELASQoL reflects recognition that general quality-of-life questionnaires may not adequately capture the unique psychosocial consequences of melasma.
MELASQoL can therefore complement objective clinical measures such as MASI or mMASI.

X. OBJECTIVE SEVERITY VERSUS SUBJECTIVE BURDEN

An important concept in melasma research is the distinction between:
Clinical severity and Patient-perceived severity.
A clinician may observe moderate pigmentation, while the patient may experience severe distress.
Conversely, another patient with similar pigmentation may report minimal psychosocial impact.

Therefore:
mMASI measures the appearance and severity of pigmentation, whereas a quality-of-life instrument measures the patient's experience of the disease.
These outcomes answer different questions and should not be considered interchangeable.

XI. FACTORS INFLUENCING PSYCHOSOCIAL BURDEN

The psychosocial impact of melasma is unlikely to be determined by pigmentation severity alone.

Potential contributing factors include:

- Age: Younger women may experience greater appearance-related concern, although this is not universal.
- Disease duration: Long-standing disease may contribute to frustration because of repeated treatment attempts.
- Visibility: Pigmentation involving the central face may be particularly noticeable.
- Recurrence: Repeated recurrence can lead to treatment fatigue and frustration.
- Cultural expectations: Cultural perceptions regarding skin tone and facial appearance may influence psychological burden.
- Social environment: Family, peer and workplace attitudes can modify the patient's experience.
- Previous treatment experiences: Repeated unsuccessful treatment can increase anxiety and dissatisfaction.
- Pregnancy and hormonal changes: Women may experience changes in pigmentation during pregnancy or other hormonal states, which can increase concern regarding recurrence.

XII. COSMETIC BEHAVIOUR AND MAKEUP

Many women with melasma use cosmetic products to camouflage pigmentation.

Makeup can provide:

- immediate improvement in perceived appearance;
- increased confidence;
- reduced self-consciousness.

However, some patients may become psychologically dependent on cosmetic coverage and feel uncomfortable appearing without makeup.

XIII. TREATMENT EXPECTATIONS AND PSYCHOLOGICAL BURDEN

Melasma is often difficult to treat completely.

When these expectations are not met, they may experience:

- disappointment;
- frustration;
- repeated treatment seeking;
- unnecessary switching between therapies;
- increased anxiety regarding recurrence.

Therefore, appropriate counseling should form part of management.

Patients should be informed that:

- melasma is chronic;
- recurrence can occur;
- sun protection is important;
- treatment may require time;
- improvement does not necessarily mean permanent clearance.

XIV. IMPORTANCE OF PATIENT-CENTERED MANAGEMENT

A patient-centered approach should recognize both

Clinical outcome: "How much has the pigmentation improved?"

Patient outcome: "How much has the patient's life improved?"

These are related but distinct questions. A comprehensive treatment assessment should therefore ideally incorporate: Clinical assessment + Patient-reported outcome + Photographic documentation

XV. ROLE OF PATIENT-REPORTED OUTCOME MEASURES

Patient-reported outcome measures (PROMs) allow the patient to directly describe the impact of disease and treatment.

For melasma, relevant domains include:

- appearance;
- emotional well-being;
- social interaction;
- self-confidence;
- treatment satisfaction;
- fear of recurrence.

Disease-specific instruments such as MELASQoL can make these domains measurable.

This is particularly important in conditions where physical symptoms may be minimal but psychosocial consequences substantial.

XVI. PSYCHOSOCIAL OUTCOMES IN CLINICAL RESEARCH

Clinical studies of melasma traditionally emphasize changes in pigmentation.

Objective outcomes

- mMASI;

- MASI;
- standardized photography;
- instrumental pigmentation assessment.

Subjective outcomes
- MELASQoL;
- patient satisfaction;
- perceived improvement;
- confidence;
- treatment-related distress.

This combined approach would provide a more comprehensive assessment of treatment benefit.

XVII. RELEVANCE TO WOMEN

The predominance of melasma among women makes the psychosocial dimension particularly important. Women may experience social and cultural expectations concerning facial appearance and skin tone. These expectations can amplify the emotional effect of visible pigmentation. However, it is important not to assume that all women with melasma experience psychological distress. The appropriate approach is to assess individual patient experience rather than generalize.

XVII. MELASMA AND BODY IMAGE

Body image refers to the individual's perception and emotional response toward their physical appearance. Facial pigmentation can influence body-image satisfaction because the face is highly visible and central to personal identity.

Patients may develop increased awareness of:
- facial symmetry;
- skin tone;
- pigmentation intensity;
- photographs;
- reflections;
- comments from others.

XIX. PSYCHOLOGICAL DISTRESS AND SCREENING

Clinicians should remain attentive to signs of significant psychological distress.

Potential warning signs include:
- severe social withdrawal;
- persistent sadness;
- excessive preoccupation with appearance;
- inability to function normally because of appearance concerns;
- marked anxiety;
- repeated reassurance seeking;
- avoidance of work or social activities.

When significant psychological symptoms are suspected, appropriate mental-health assessment or referral should be considered. A dermatological consultation should not attempt to substitute for formal psychiatric evaluation when clinically indicated.

XX. PROPOSED INTEGRATED ASSESSMENT MODEL

A useful approach for future clinical studies is:

Step 1: Clinical diagnosis
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Step 2: Baseline mMASI
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Step 3: Baseline quality-of-life assessment
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Step 4: Treatment
↓
Step 5: Serial mMASI assessment
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Step 6: Serial quality-of-life assessment
↓
Step 7: Patient satisfaction assessment
↓
Step 8: Final clinical + psychosocial outcome

This model allows researchers to determine whether objective improvement is accompanied by meaningful improvement in the patient's life.

XXI. CONCLUSION

Melasma is medically benign but may have a substantial psychosocial burden, particularly because it affects the visible facial region and predominantly affects women.

Its impact extends beyond pigmentation itself and may involve:
- self-perception;
- self-esteem;
- emotional well-being;
- social confidence;
- interpersonal relationships;
- professional interactions;

- quality of life.

The severity of pigmentation measured by clinical scores such as mMASI does not necessarily correspond directly to the patient's perceived burden.

Consequently, comprehensive evaluation of melasma should incorporate both objective clinical assessment and patient-reported outcomes.

The combination of mMASI with a validated quality-of-life instrument such as MELASQoL can provide a more complete understanding of treatment response.

For future clinical studies, particularly those investigating individualized therapeutic approaches, assessment of psychosocial outcomes may provide valuable information that cannot be captured by pigmentation scores alone.

Ultimately, successful management of melasma should aim not only to reduce visible pigmentation but also to improve the patient's confidence, emotional well-being and quality of life.

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