

# Frequency of Depression and Anxiety Among Melasma Patients Presented at Tertiary Care Hospital

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## ABSTRACT

**Objective:** To determine the frequency of depression and anxiety in patients with melisma.

**Study Design:** A cross-sectional study

**Place and Duration of Study:** This study was conducted at the Department of Dermatology, Farooq Hospital Islamabad in the duration from October, 2022 to July, 2023.

**Methods:** 160 patients presenting with clinically diagnosed melasma since two weeks of either gender having age between 18 to 60 years. We determined the frequencies for anxiety and depression in patients of melasma.

**Results:** The mean age of the patients presenting with acne vulgaris was 33.41±15.40 years. The frequency of anxiety in our study was 54 (33.3%). The frequency of depression in our study was 30 (18.8%).

**Conclusion:** From our study we conclude that the frequency of depression was 54 (33.3%) and anxiety 106 30 (18.8%). in patients with melasma.

**Key Words:** Anxiety, Depression, Acne vulgaris, Skin disease, Mental health

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## INTRODUCTION

The connection between mental and physical well-being is a complicated phenomenon that continues to grab the interest of researchers and healthcare professionals alike in the intricate tapestry of human health<sup>1</sup>. Melasma is a dermatological illness that causes hyperpigmented patches on the skin. It has become a unique platform to illustrate the strong link between mental health and physical attractiveness. In addition to the outward signs of pigmentation, melasma patients frequently struggle with the equally serious but less obvious problems of worry and sadness<sup>2,3</sup>.

The deep relationship between mental health and melasma demands an understanding of the physiological and psychological components that make up the condition's complex mosaic. The abnormality of melanin synthesis, the pigment that contributes to skin coloring, is the physiological basis of melasma<sup>4</sup>. Hormonal variations are known triggers, especially during pregnancy or as a result of using oral contraceptives, but genetic susceptibility and UV radiation exposure are also important factors. But the journey of melasma goes well beyond the boundaries of its physical roots, entwining itself with the fragile strands of mental health<sup>5</sup>.

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Psychological anguish in those with melasma has been linked to the condition's apparent character. The focus placed by society on having perfect skin as a standard for beauty has brought skin-related issues to the forefront of issues with self-esteem and body image. Melasma patients frequently struggle to navigate a complex emotional web while experiencing feelings of humiliation, low self-worth, and self-consciousness<sup>6,7</sup>. Melasma sufferers' life are long shadowed by depression, which is marked by enduring emotions of despair, hopelessness, and disinterest in once-enjoyed activities. The emotional upheaval is intensified by the expectation from society to live up to beauty ideals, which breeds hopelessness and loneliness<sup>8,9</sup>. The periodic occurrence of melasma typically exacerbates its psychological toll, as flare-ups can occur at any time and add to the emotional strain experienced by those who are affected. Another powerful ally on the path to melasma is anxiety, which shows up as excessive

concern, restlessness, and hypervigilance<sup>10,11</sup>. Melasma is unpredictable, which makes people anxious since they can't stop worrying about when it will happen again or if their current coloring will get worse. The never-ending loop of worry and increased anxiety can have a negative effect on mental health in general<sup>12</sup>.

It is crucial to use a holistic approach that takes into account both the visible and invisible features of melasma in order to unravel the intricate web of anxiety and despair in these patients. The goal of this study was to determine the frequency of depression and anxiety among melasma patients presented at tertiary care hospital. Through an awareness of the complex physiological and psychological factors involved, medical experts can customize interventions to meet the multiple character of melasma, providing comprehensive mental health assistance in addition to dermatological solutions. By taking a complete strategy that promotes skin health and emotional well-being, melasma's shadows can be lifted.

**METHODS**

A cross-sectional study was undertaken at Department of Dermatology, Farooq Hospital Islamabad in the duration from October, 2022 to July, 2023. The research commenced subsequent to obtaining authorization from the hospital's ethics council. Patients were recruited if they satisfied the inclusion criteria. Every patient was informed about the study's objective, as well as the potential hazards and advantages. The recruited patients were instructed to provide their signature on a written consent form. Demographic data, including age, gender, and address, along with pertinent medical records, were obtained, and a physical examination will be conducted.

Patients who received a diagnosis of melasma based on a physical examination underwent an assessment of depression and anxiety. The assessment of anxiety was conducted using the Hospital Anxiety and Depression Scale (HADS), and a diagnosis was made if the score on this scale exceeded 7. Depression is characterized as intense and usually long-lasting emotions of hopelessness and sadness. The assessment was conducted using the HADS scale and categorized as a score over 7.9.

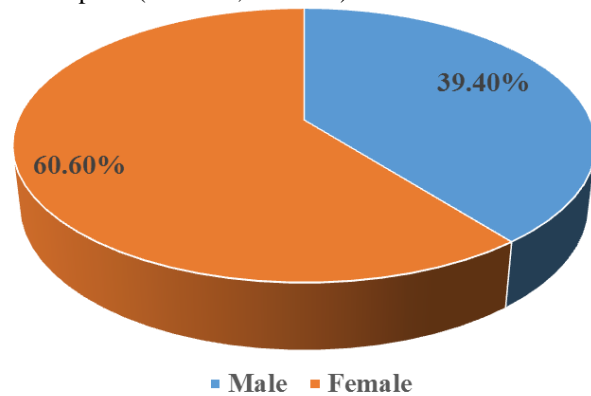
An experienced consultant with a minimum of five years of specialized knowledge in the field supervised the entire process. A pre-designed proforma was utilized to gather comprehensive patient information.

The data analysis was conducted using the software SPSS v.23. The mean and standard deviation (SD) were used to quantify data, such as age. Qualitative variables such as gender, depression, anxiety, marital status, occupation status, and socio-economic status were represented in frequencies and percentages. The study stratified depression and anxiety with gender. Chi-square test was performed with a significance threshold

of 5%. The presentation of all outcomes will be in the form of tables.

**RESULTS**

The mean age of the patients presenting with melasma was 33.41±15.40 years. The mean HADS-A score for anxiety was 8.68±5.60 while the mean HADS-D score for depression was 7.09±4.32. Regarding age distribution there were 99 (61.9%) patients in the age group of 18 to 35 years, there were 39 (24.4%) patients in the age group of 36 to 50 years and there were 22 (13.8%) patients in the age group of 51 to 70 years. According to the gender distribution there were 63 (39.4%) male while 97 (60.6%) female patients in our study. The frequency of anxiety in our study was 54 (33.3%). The frequency of depression in our study was 30 (18.8%). We found that anxiety and depression were significantly more prevalent in female patients presenting with melisma as compared to their male counterparts (P = 0.03; P = 0.04).



**Figure No. 1: Gender distribution**

**Table No. 1: Basic demographics**

Baseline characteristics		N	%
Marital status	Single	93	58.1%
	Married	67	41.9%
Socioeconomic status	Rich	27	16.9%
	Middle class	93	58.1%
	Poor	40	25.0%
Occupational status	Employed	75	46.9%
	Unemployed	85	53.1%
Age distribution	18 to 35 years	99	61.9%
	36 to 50 years	39	24.4%
	51 to 70 years	22	13.8%

**Table No. 2: Frequency of anxiety and depression**

Anxiety/Depression		N	%
Anxiety	Yes	54	33.8%
	No	106	66.2%
Depression	Yes	30	18.8%
	No	130	81.2%

**Table No. 3: Association of anxiety and depression with gender**

Anxiety/Depression		Gender				P value
		Male		Female		
		N	%	N	%	
Anxiety	Yes	15	27.8%	39	72.2%	.03
	No	48	45.3%	58	54.7%	
Depression	Yes	7	23.3%	23	76.7%	.04
	No	56	43.1%	74	56.9%	

## DISCUSSION

Anxiety and depression disorders are commonly occurring ailments that often appear together. Individuals who have both anxiety and depressive conditions simultaneously typically display greater degree of functional impairment, decreased quality of life, and inferior treatment outcomes in comparison to patients who have only one condition.

The investigation of these diseases primarily centers on the concurrent presence of depression and generalized anxiety disorder, with a particular emphasis on understanding their clinical presentation, progression, evaluation, and diagnosis. The diagnosis of these illnesses is complex due to the coexistence of mixed anxiety and mood states, as well as significant similarities in the physical and emotional symptoms of the disorders. The DSM-5 defined anxious distress as a specific category of serious depression. Several dermatologic illnesses significantly affect life quality. At least 30% of individuals with dermatologic diseases experience psychiatric disturbance and psychosocial impairment.<sup>13</sup>

Within the field of dermatology, the psychological effects of melasma have been extensively researched. The impact on the life's quality, as measured by the "SF-36 Health Survey," is similar in patients with melasma and people with chronic illnesses such as heart diseases, arthritis and diabetes. The frequency of depression was notably greater in patients with melasma compared to the general population. A study with a response rate of 61%, observed that 60% of the 2391 persons with melasma had depressed symptoms.<sup>13</sup> Not having enough education, being in young age, and the existence of itch were positively correlated with higher degrees of depressed symptoms. Accurate data regarding the frequency of depression among patients with melasma is lacking due to the utilization of multiple depression scoring techniques or self-reported data in the many research investigating this correlation.<sup>14</sup>

The objective of the present study was to determine the prevalence of anxiety and depression among individuals diagnosed with melasma. Understanding this can

enhance patient care and outcomes by identifying the need for timely supportive or psychological intervention. This intervention can ensure patients' adherence to therapy and improve their social and psychological well-being.

The study documented that 54 patients (33.3%) with melasma had anxiety, whereas 30 patients (18.8%) exhibited symptoms of depression. Our study's findings align with a previous study that reported the occurrence of anxiety at a rate of 16.27% and depression at a rate of 8.69% among patients with melasma<sup>15</sup>. Several prior research have documented the attributes of melasma, with sun exposure identified as the primary contributing cause. A separate study involving 123 melasma patients revealed that 34.96% of them experienced depression, while 36.6% experienced anxiety. The study determined that there is a correlation between melasma and depression and anxiety in roughly 33% of the individuals.<sup>16</sup>

## CONCLUSION

From our study we conclude that the frequency of anxiety and depression in melasma patients was 33.3% and 18.8%. Anxiety and depression were significantly associated with gender. These patients must be provided proper counselling upon the onset of the disease to avoid the severity of the psychological factors.

### Author's Contribution:

Concept & Design of Study: Muhammad Erfan  
 Drafting: Annum Shahzadi, Afshan Sagheer  
 Data Analysis: Ikra Khan, Areeba Jabbar, Seemal Akram  
 Revisiting Critically: Muhammad Erfan, Annum Shahzadi  
 Final Approval of version: Muhammad Erfan

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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