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Cognitive Avoidance and Self-differentiation: Predicting Body Deformity Symptoms in Women Visiting Beauty Clinics

Maryam Ilati[1]*, Zohreh Sadeghi Afjeh[2], Mansooreh Shahriary Ahmadi[3]

1. M.Sc., Training and Counseling Department, Central Tehran Branch, Islamic Azad University, Tehran, Iran
2. Assistant Professor, Training and Counseling Department, Central Tehran Branch, Islamic Azad University, Tehran, Iran
3. Assistant Professor, Psychological Department, Central Tehran Branch, Islamic Azad University, Tehran, Iran

*** *Corresponding author:*** Maryam Ilati, Training and Counseling Department, Central Tehran Branch, Islamic Azad University, Tehran, Iran. Email: baroun.know@gmail.com

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Abstract

Background: Body dysmorphic disorder is a psychological condition in which an individual is convinced that there is an imperfection in their physical appearance, causing them significant distress and prompting repetitive actions.

Objectives: The current study aimed to predict body deformity symptoms in women visiting beauty clinics by analyzing cognitive avoidance and self-differentiation.

Methods: The study was conducted based on a correlational descriptive approach. The statistical population included females who attended beauty clinics in District 3 of Tehran in 2023. Convenient sampling was utilized as the sampling method. The required data were gathered using the Differentiation of Self Inventory-Short Form and Revised Yale-Brown Obsessive-Compulsive Scale. The data analysis technique involved Pearson's correlation coefficient and multiple regression. The collected data were analyzed in IBM SPSS version 26.

Results: The findings showed a clear negative relationship between the total self-differentiation score (r=-0.47) and its elements, such as personal identity (r=-0.19), relationships with others (r=-0.39), and emotional reactivity (r=-0.37), and symptoms of body deformity in women seeking beauty treatments.

Conclusion: According to the research results, it can be inferred that cognitive avoidance and self-differentiation play a crucial role in alleviating symptoms of body deformity among women undergoing beauty treatments. Therefore, this information can be used as a basis for developing therapeutic and educational initiatives aimed at addressing these concerns.

Keywords: Body Deformity Symptoms, Cognitive Avoidance, Self-Differentiation, Women

1. Background

In recent years, there has been a growing trend in the popularity of cosmetic procedures. The year 2021 saw an estimated 30.4 million cosmetic procedures carried out globally. Additionally, there is a projected increase in the demand for non-invasive treatments, such as soft tissue fillers and botulinum toxin injections (1). Cosmetic surgery has evolved, shifting from its original purpose of restoring normal function and appearance to focusing more on enhancing beauty (2). Nose surgery, along with other cosmetic procedures, such as eyelid lifts, neck and face lifts, hair transplants, liposuction, breast implants, and nose jobs, is particularly popular in Iran, with the country leading in this field (3). It has been found that the prevalence of body deformity disorder in individuals

seeking surgery ranges from 6% to 24%, with the possibility of reaching 53%. Those with body dysmorphic disorder undergo cosmetic surgery in an attempt to fix what they perceive as a flaw (4). Iran is among the top ten countries for cosmetic and reconstructive surgeries, ranking third globally after the United States and Mexico. Some patients approach surgeons with unrealistic demands, leading many doctors to question their suitability for surgery, both physically and mentally (5).

This heightened anxiety and concern regarding one's appearance can worsen any perceived bodily abnormalities. Surgeons may find it challenging to gauge the level of anxiety about body image in some of these patients (6). Body dysmorphic disorder is characterized by feelings of distress stemming from a perceived flaw in one's physical appearance, whether it is related to the shape or size of a body part or some other personal attribute. Those who experience this disorder regularly feel intensely anxious about these perceived flaws despite them being largely invisible to others. Individuals with body dysmorphic disorder typically harbor a deep-seated belief of being unattractive and are convinced that a specific aspect of their appearance is flawed (7). According to Albert et al. (2019) and Angelakis et al. (2016), body dysmorphic disorder is linked to increased emotional distress, leading to a greater likelihood of suicide (8, 9). In a meta-analysis conducted by Angelakis et al. in 2016, it was found that individuals with body dysmorphic disorder were at a higher risk of having suicidal thoughts and attempting suicide compared to those without the disorder (9). Additionally, a study by McGrath et al. in 2023 suggested that people with body dysmorphic disorder are more prone to dropping out of school and developing psychiatric disorders (10).

Cognitive avoidance is often investigated as a coping mechanism for non-engagement. Coping typically involves emotional, intellectual, or behavioral strategies aimed at managing or eliminating a threatening or harmful situation, or decreasing its impact on an individual. Disengagement coping involves avoiding confronting a threat or evading the feelings associated with stress (11). A recent study by Kuck et al. (2021), titled "Body Dysmorphic Disorder and Self-Esteem: A Meta-Analysis," found a link between body dysmorphic disorder and low self-esteem. The results demonstrated that low self-esteem played a significant role in body dysmorphic disorder, independent of depressive symptoms. It was revealed that negative self-evaluation extended beyond body dysmorphic disorder and also affected other areas of life (12).

The study conducted by Romes and Oliver (2023) in a Spanish sample examined the connection between self-differentiation, emotional intelligence, and self-esteem. The findings revealed a reciprocal relationship among self-differentiation, emotional intelligence dimensions, and self-esteem. Additionally, it was discovered that age correlated with emotional focus, emotional fixing, and self-confidence. Males showed increased emotional distance, while females demonstrated greater emotional sensitivity, emotional focus, and improved emotional understanding (13). The study also found that self-distinction could predict emotional intelligence and self-esteem, with emotional clarity and repair mediating the relationship between self-distinction and self-esteem. Since body dysmorphic disorder is associated with reduced self-worth and self-differentiation can forecast self-worth, one can conclude that self-differentiation may also play a role in body dysmorphic disorder. Struggles with self-identification may cause a mix-up between personal and external feelings, making it challenging to understand and convey emotions correctly. States of emotional distress could potentially be misunderstood as a result, leading to excessive

focus on weight or eating as a coping mechanism (14).

Understanding the development of body deformity symptoms is greatly influenced by one's level of self-differentiation. This concept refers to the ability to manage emotions effectively during times of anxiety. This skill allows individuals to express their thoughts, feelings, and opinions while maintaining healthy relationships with important people in their lives (15). According to a study, having high self-differentiation may help reduce emotional distress, thereby decreasing the risk of developing dysmorphic disorder (16). A recent research study by Doba et al. (2018) explored the connection between self-differentiation and eating disorders during early and middle adolescence (14). The study revealed that the relationship between low self-differentiation and symptoms of eating disorders, as well as psychological aspects linked to eating attitudes, was more significant in early adolescence compared to middle adolescence. These findings indicate that self-differentiation may play a crucial role in understanding psychological distress and alexithymia among individuals with eating disorders (17).

2. Objectives

The research shows a connection between body deformity disorders, eating disorders, and self-differentiation. This study aims to explore the link between cognitive avoidance, self-differentiation, and body deformity symptoms. Despite the association of body deformity disorder and self-differentiation with depression, anxiety, suicide, school dropout, marriage reluctance, and psychosocial issues in young individuals, research on this topic is lacking. Understanding the role of cognitive avoidance and self-differentiation in predicting body deformity symptoms is crucial for clinical practice. Identifying psychological factors that predict body dysmorphic symptoms can enhance prevention programs. Therapists should consider cognitive avoidance and self-differentiation when treating body dysmorphic disorder in individuals visiting beauty clinics. The study aims to predict body deformity symptoms in women seeking beauty clinic services through cognitive avoidance and self-differentiation.

3. Methods

The current study has a fundamental purpose and employs a correlational descriptive approach. The statistical population for this research included all women who visited beauty clinics in District 3 of Tehran in 2023. The samples were selected using a convenience sampling method. The sample size of 169 individuals was calculated using G Power software and considering a 0.05 error probability and a test power of 0.95. These individuals were seeking cosmetic procedures. To cooperate in the research, participants had to provide consent.

To be eligible for participation in the research, individuals had to meet specific requirements, such as being female and having basic reading skills. This study was focused on a cosmetic treatment facility and involved completing a questionnaire to assess body dysmorphic disorder. Participants were required to agree to take part in the research. The study's participants were excluded if they did not give consent to participate or did not complete the questionnaires, which would lead to their data not being included in the analysis.

Initially, the research focused on identifying beauty clinics located in District 3 of Tehran. To ensure proper coordination, the first author personally visited these clinics and explained the research objectives to the management. Once it was confirmed that the clinics were willing to engage, a selection process was conducted to choose the desired samples from among the potential candidates. Before distributing the questionnaires, the participants were given a detailed explanation

of the research goals. They were assured that their responses would be used solely for research and that their information would be kept confidential. Subsequently, the researcher handed out the questionnaires to the participants and supervised them as they completed them. Following the completion of the questionnaire, the researcher collected the responses from the participants. This careful and organized approach ensured that the study was conducted with transparency and respect for the participants' confidentiality.

Cognitive Avoidance Questionnaire: In 2004, Sexton and Dugas developed a 25-item assessment tool aimed at measuring cognitive avoidance from different perspectives (18). These dimensions include thought suppression, thought substitution, distraction, avoidance of threatening stimuli, and the transformation of images into thoughts. Respondents are required to rate their answers on a 5-point Likert scale, ranging from completely false to completely true. Sexton and Dagas (2004) found high internal consistency for the questionnaire, with a Cronbach's alpha coefficient of 0.95. The retest reliability over 6 weeks was reported to be 0.85 (18). Aghajani et al. reported the Cronbach alpha coefficient of 0.86 for the questionnaire. In the present study, the Cronbach alpha coefficient was obtained at 0.79 for the questionnaire (19).

Differentiation of Self Inventory-Short Form: This 20-item questionnaire was developed by Drake (2011) and consists of four subscales. Participants are asked to rate each item on a scale of 1 to 6, ranging from "Not at all like my characteristics" to "Quite similar to my characteristics" (20). The subscales include items related to I-position, fusion with others, emotional cut-off, and emotional reactivity. The questionnaire is designed in a way that items need to be scored in reverse to ensure accuracy in measuring self-distinction. The total score ranges from 20 to 120, with higher scores reflecting a stronger sense of self-distinction, while lower scores demonstrate the opposite. Drake (2011) reported good test-retest reliability for this questionnaire, ranging from 0.72 to 0.85. Concurrent criterion validity and convergent validity were also established, showing a positive correlation between subscale scores and the total score (20). Further validation of the scale was conducted in Iran by Rasoli et al. (2016), revealing that the proposed factors are consistent with Iranian culture. The study confirmed the divergent validity of the scale, with satisfactory correlation coefficients between the factors and the total score. In terms of reliability, Cronbach's alpha coefficients were found to be acceptable for the different subscales, exhibiting the consistency of the questionnaire in measuring self-distinction in various cultural contexts (21).

Revised Yale-Brown Obsessive Compulsive Scale: Yale-Brown Obsessive-Compulsive Scale for Body Dysmorphic Disorder, created and validated by Phillips, Hollander, and Rasmussen in 1997, is a tool consisting of 12 items (22). It has a two-factor structure that includes obsessive-compulsive and obsessive-compulsive factors, as well as items related to insight and avoidance behaviors. Participants respond using a 5-point Likert scale, which ranges from strongly disagree (1) to strongly agree (5). Scores on this scale vary from 12 to 60, with a score of 20 or higher indicating the presence of body dysmorphic disorder. In a study conducted by Phillips et al., the Cronbach's alpha coefficient was calculated to be 0.92. Additionally, the correlation between each item and the total score was deemed positive and significant, ranging from 0.48 to 0.77 after adjusting for the same item's score. Rabiei evaluated the reliability and validity of the Persian version of this scale among a sample of 100 Isfahan University students. The Cronbach's alpha reliability coefficients were

determined to be 0.93, showcasing a high level of reliability. The findings of this study suggested that the Persian version of the Revised Yale-Brown Obsessive-Compulsive Scale is a valid and reliable tool for assessing body dysmorphic disorder among Iranian university students (23).

Data analysis method

The data analysis method employed in this study involved the simultaneous use of Pearson's correlation coefficient and multiple regression. These statistical tools were utilized in both the descriptive statistics section, which focused on calculating the mean and standard deviation of the data, and in the inferential statistics section, where the relationship between the research variables was determined. The statistical analysis was carried out using IBM SPSS version 26, allowing for a comprehensive examination of the data.

4. Results

Table 1 provides information about the demographic information of the participants. Data on the demographics of the participants was provided. The age range of 24 to 30 years had the highest number of individuals, totaling 44 people (26% of the entire sample). In contrast, the age group over 45 had the lowest number, comprising only 25 individuals (14.8%). It was also noted that the most prevalent education level among the participants was individuals with a bachelor's degree, with 58 people (34.3%). On the other hand, those holding a doctoral degree had the lowest frequency, with only 4 individuals (2.4%). Furthermore, the majority of individuals were married, totaling 102 people (60.4%). In contrast, 67 individuals (39.6%) were single. Based on the information presented in Table 1, it can be surmised that the skewness and elongation of the research variables fall within the normal range. This indicates that the magnitude of skewness and elongation for any of the variables does not surpass the threshold of -2 to +2, signifying a normal distribution of data. Consequently, it is appropriate to employ parametric tests for data analysis and hypothesis testing.

Table 1. Descriptive indices of research variables

Variable	Mean	SD	Kurtosis	Skewness
Thought suppression	18.45	4.103	-0.592	0.033
Thought Substitution	14.32	4.473	0.028	-0.728
Distraction	17.78	4.719	-0.477	-0.301
Avoidance of Threatening Stimuli	17.42	4.427	-0.795	0.486
Transformation of images into thoughts	16.53	4.425	-0.388	-0.246
Cognitive avoidance (total)	84.50	16.897	-0.504	0.401
I-position	22.89	4.058	-0.246	-0.453
Fusion with others	15.53	4.516	0.031	-0.549
Emotional cut-off	12.43	3.426	-0.004	-0.798
Emotional reactivity	18.12	5.345	0.080	-0.481
Differentiation (total)	68.97	10.180	-0.031	-0.072
Symptoms of body deformity	25.77	8.611	1.019	1.672

According to the results presented in Table 2, it was discovered that there was no significant relationship between the act of suppressing thoughts and the presence of body deformity symptoms in women who seek services from beauty clinics (r=0.05, P>0.09). Similarly, no significant correlation was found between the practice of substituting thoughts and the manifestation of symptoms. However, a positive and significant connection was observed between thought substitution and body deformities in women visiting beauty clinics (r=0.01, P<0.41). Additionally, a positive and significant relationship was identified between engaging in distraction and experiencing body deformity symptoms among these women

(r=0.05, P<0.16). Furthermore, avoidance of threatening stimuli displayed a positive and significant correlation with the presence of body deformity symptoms in women attending beauty clinics (P<18.05). Conversely, there was no significant association between the transformation of ideas into thoughts and the symptoms of body deformity in women utilizing beauty clinics (r=0.05, P>0.14). Finally, a positive and significant correlation was noted between the total score of cognitive avoidance and the symptoms of body deformity in women seeking services from beauty clinics (r=0.01, P<0.26).

According to Table 3, the research indicates a negative and significant correlation between I-position and the symptoms of body deformity in women seeking beauty treatments (r=0.01, P<0.19). Similarly, there was a negative and significant correlation between fusion with others and body deformity symptoms in women visiting beauty clinics (r=0.01, P<0.38). However, no significant correlation was found between emotional cut-off and the symptoms of body deformity in women who frequently visited beauty clinics (r=0.09, P>0.05). On the other hand, a negative and significant correlation was observed between emotional reactivity and body deformity symptoms in women seeking beauty treatments (r=0.01, P<0.37). Additionally, a negative and significant correlation was identified between the overall self-differentiation score and the symptoms of body deformity in women visiting beauty clinics (r=0.01, P<0.47). The R-value reveals that the linear combination of cognitive avoidance and self-differentiation components accounts for 54% of the variance in body deformity symptoms, with a determination coefficient of 29%. Predictor variables (cognitive avoidance and self-differentiation) explain about 29% of the variance in body deformity symptoms. The Durbin-Watson statistic falls between 1.5 and 2.5, indicating independence between errors and non-correlation.

According to the Table 4 findings of Table 5, there is a statistically significant relationship between the body deformity symptoms variable and the variables of cognitive avoidance and self-differentiation at the 0.01 significance level. This suggests that the predictor variables play a role in explaining some of the variance in body deformity symptoms among women who visit beauty clinics. It is important to highlight that the collinearity assessment indices (tolerance coefficient and variance inflation) in Table 6 indicate that there are no issues of collinearity among the predictor variables in the study. This is because the tolerance coefficient values are below 1, and the variance inflation factor values for each predictor variable do not exceed 5. The results from Table 6 also show that the beta value in the model signifies the extent to which the predictor variables explain the criterion.

Furthermore, based on the standard beta coefficients, it was observed that the explanatory variables of thought substitution, I-position, and fusion with others had significant explanatory power (P<0.05) for body deformity symptoms in the sample group. On the other hand, variables such as thought suppression, distraction, avoidance of threatening stimuli, transformation of images into thoughts, emotional cut-off, and emotional reactivity did not demonstrate significant explanatory power for the symptoms of body deformity.

Table 2.Correlation matrix between self-differentiation and body deformity symptoms

Variable	1	2	3	4	5	6	7
Thought suppression	1						
Thought substitution	0.26**	1					
Distraction	0.65**	0.38**	1				
Avoidance of threatening stimuli	0.58**	0.38**	0.67**	1			
Transformation of images into thoughts	0.330**	0.38**	0.49**	0.60**	1		
Cognitive avoidance (total)	0.73**	0.63**	0.84**	0.85**	0.60**	1	
Symptoms of body deformity	0.09	0.41**	0.16*	0.18*	0.85**	0.26**	1

****Correlation is significant at the 0.01 level.**
*** Correlation is significant at the 0.05 level.**

Table 3. Correlation matrix between self-differentiation and body deformity symptoms

Variable	1	2	3	4	5	6
I-position	1					
Fusion with others	-0.10	1				
Emotional cut-off	0.06	-0.06	1			
Emotional reactivity	0.03	0.55**	0.06	1		
Differentiation (total)	0.38**	0.67**	0.36**	0.80**	1	
Symptoms of body deformity	-0.19**	-0.38**	-0.09	-0.37**	-0.47**	1

**Correlation is significant at the 0.01 level.
*Correlation is significant at the 0.05 level.

Table 4. Multiple correlations in predicting body deformity symptoms based on variables

Multiple correlation coefficient(R)	R-squared(R^2)	Adjusted R-squared	Durbin-Watson statistic
0.54	0.29	0.25	1.92

Table 5. Results of multivariate regression analysis

Model	Sources of variation	SS	DF	MS	F	P-value
1	Regression	3645.16	9	405.01	7.30	0.000
	Error	8812.84	159	55.42		
	Total	12458.00	168			

Table 6. Results of multivariate regression coefficients

Predictor variables	B	Std.Error	Beta	T	P-value	Tolerance coefficient	VIF
Constant	40.88	6.33		6.45	0.000		
Thought suppression	0.030	0.20	0.01	14	0.88	0.47	2.10
Thought substitution	0.49	15	0.25	3.18	0.002	0.67	1.48
Distraction	-0.038	0.19	-0.02	-0.19	0.84	0.41	2.44
Avoidance of threatening stimuli	0.028	0.21	0.01	13	0.89	0.37	2.65
Transformation of images into thoughts	-0.030	0.18	-0.015	-0.16	0.86	0.51	1.92
I-position	-0.40	15	-0.19	-2.55	0.01	0.80	1.23
Fusion with others	-0.50	0.16	-0.26	-3.14	0.002	0.63	1.58
Emotional cut-off	-0.13	0.17	-0.05	-0.78	0.43	0.89	1.11
Emotional reactivity	-0.18	0.14	-0.11	-1.32	0.18	0.59	1.69

In addition, the coefficient of determination (R^2=0.29) indicates that 29% of the variations in the criterion variable, namely body deformity symptoms, can be accounted for by the predictor variables, which include certain aspects of cognitive avoidance and self-differentiation. The remaining variability in body deformity symptoms is attributed to other unexplored factors in the study.

5. Discussion

The primary aim of this study was to predict the indications of body distortion by examining cognitive avoidance and self-differentiation in female clients of beauty clinics. Cognitive avoidance and self-differentiation were considered independent variables, while body deformity symptoms were treated as dependent variables. The findings showed a significant positive association between cognitive avoidance and its components (e.g., thought substitution, distraction, and avoidance of threatening stimuli) and body deformity symptoms in women seeking beauty treatments. This indicates that an increase in cognitive avoidance and its elements would lead to a rise in the severity of body deformity symptoms in women and vice versa. However, no significant link was observed between thought suppression and thought transformation with body deformity symptoms in women visiting beauty clinics.

There have been limited studies directly addressing this issue. Nevertheless, this result is relatively consistent with the findings of Shahmohammadi et al.'s research (2023), suggesting a strong association between avoiding challenging situations and being

dissatisfied with one's appearance, as well as a willingness to undergo cosmetic procedures. They also reported a significant relationship between body image concerns and the inclination to opt for cosmetic surgery (24). In a separate investigation, Gillen and Markey (2021) found that concerns about body image and behaviors related to weight management played a role in influencing young women's attitudes toward cosmetic surgery (25). This research reveals that individuals experiencing symptoms of body deformity tend to avoid situations, emotions, and thoughts that trigger negative feelings. These avoidance strategies, involving cognitive, emotional, and behavioral responses, can be maladaptive, leading to blame, frustration, and further negative consequences. Avoiding important aspects of life, such as health, relationships, education, and family, may result in temporary relief but ultimately exacerbates dissatisfaction with one's physical appearance (26). Concerns of body deformity are often driven by a desire to control negative thoughts and emotions, such as feeling unattractive or unlovable. It is suggested that avoiding or minimizing uncomfortable feelings contributes to the development of body dysmorphic symptoms (27).

A main coping strategy that involves inner dialogue and reevaluating stressful situations and personal qualities is known as cognitive coping. Examples of this include reassurances like "I probably look better than I feel" and "I am being irrational." This type of self-talk aligns with the focus of conventional cognitive-behavioral methods, which aim to restructure irrational thought patterns. This methodology has been prominent in literature discussing interventions for individuals struggling to adjust to having a visible difference (28). Nevertheless, an individual's response to uncomfortable thoughts and feelings that may arise during coping activities could have a greater impact on their tendency to avoid certain behaviors. Avoidance refers to the reluctance to confront distressing thoughts, emotions, memories, and physical sensations, indicating a strong aversion to internal discomfort. It also involves a desire to suppress such distressing experiences or change their content and frequency. Exposure entails facing internal distressing experiences head-on (11).

From a different perspective, the tendency to avoid cognitive processes can lead to an increase in worrying. Worrying involves a focus on ambiguous and anticipated threats that may not exist or have not yet materialized. According to theories on worrying, individuals engage in worry to prevent themselves from encountering unpleasant thoughts or emotions, thus reinforcing the worry cycle. Trying to push away thoughts related to worries can cause them to resurface more frequently and be dwelled upon (29). While cognitive avoidance may offer temporary relief, it is not an effective long-term solution for reducing distress. This avoidance strategy is part of various coping mechanisms that aim to distract from stressors, delaying the processing of the threat and its consequences. Such behavior can lead to greater exposure to the negative effects of stress, ultimately resulting in higher levels of anxiety and depression, lower positivity, compromised psychological well-being, and poorer physical health (30).

Cognitive-behavioral theories of body dysmorphic symptoms focus on how abnormal processing of information plays a key role in maintaining the disorder. These theories suggest that regular concerns are distorted by cognitive biases arising from conflicting beliefs. Excessive preoccupation with appearance leads to strong negative feelings (e.g., anxiety or shame) and behaviors that are harmful in the long run, such as repeatedly checking mirrors, seeking safety through camouflage, or avoiding social interactions. Even though these behaviors provide temporary relief, they reinforce maladaptive beliefs and perpetuate appearance-related concerns in a harmful cycle. Therefore, cognitive-behavioral theories propose a connection between cognitive

biases, negative emotions, problematic behaviors, and the enduring impact of appearance-related issues (31).

Individuals with a high level of differentiation often can maintain autonomy within their relationships and seek intimacy without becoming overwhelmed by emotions. These individuals are less likely to be swayed by others' anxiety or to display signs of trauma brought on by others' issues or failures (17). It can also be argued that differentiated individuals possess a strong sense of self and can navigate through emotional challenges without succumbing to impulsive behavior or irrational decisions, as they can prioritize reason and logic. This process is believed to help prevent symptoms of dysfunction (32).

The research was limited because it relied on self-reported information, leading to the possibility of inaccurate responses from female participants. In addition, factors such as age, level of education, occupation, and marital status were not included in the study. The study's findings cannot be applied to men or individuals from various cultural backgrounds since it primarily focused on women. Future research should explore variations in variables between different genders.

6. Conclusion

The research findings showed a significant connection between cognitive avoidance, self-differentiation, and some of their components and symptoms of body deformity in women seeking beauty treatments.

Acknowledgments: The study followed ethical guidelines and received approval from the appropriate authorities. This research was approved by the Ethics Committee of the Central Tehran branch of the Islamic University under the Ethics Code IR.IAU.CTB.REC.1402.126. Ethical principles were closely followed throughout the study to safeguard the confidentiality and privacy of participant information.

Availability of data and materials: The data used in the research can be obtained by reaching out to the author before or after the study is published.

Conflicts of interests: The authors stated that they have no conflicting interests

Consent for publication: By signing the Consent to Publish form and submitting it to the Publisher, the authors authorize publication of the work.

Ethics approval and consent to participate: This research was approved by the Ethics Committee of the Central Tehran branch of the Islamic University under the Ethics Code IR.IAU.CTB.REC.1402.126. Ethical principles were closely followed throughout the study to safeguard the confidentiality and privacy of participant information.This study was conducted following the principles of the Declaration of Helsinki.

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References

1. Hermans, A.-M., et al., Oops I did it (again): Patient experiences of complications after non-invasive cosmetic procedures. Social Science & Medicine,

2024: p. 116685. https://doi.org/10.1016/j.socscimed.2024.116685 PMid:38359524
2. Sarwer, D.B., Body image, cosmetic surgery, and minimally invasive treatments. Body image, 2019. 31: p. 302-308.. Epub 2019 Jan 28. PMID: 30704847. https://doi.org/10.1016/j.bodyim.2019.01.009 PMid:30704847
3. Loghmani, S., et al., Demographic characteristics of patients undergoing rhinoplasty: a single center two-time-period comparison. World Journal of Plastic Surgery, 2017. 6(3): p. 275. PMID: 29218274; PMCID: PMC5714970
4. de Brito, M.J.A., et al., Prevalence of body dysmorphic disorder symptoms and body weight concerns in patients seeking abdominoplasty. Aesthetic surgery journal, 2016. 36(3): p. 324-332 PMID: 26851144; PMCID: PMC5127455. https://doi.org/10.1093/asj/sjv213 PMid:26851144 PMCid:PMC5127455
5. Niya, N.M., et al., Iranians' perspective to cosmetic surgery: a thematic content analysis for the reasons. World journal of plastic surgery, 2019. 8(1): p. 69.. PMID: 30873365; PMCID: PMC6409151. https://doi.org/10.29252/wjps.8.1.69 PMid:30873365 PMCid:PMC6409151
6. Raeissosadati, N.S., et al., Comparison of frequency of body dysmorphic disorder in applicants of abdominoplasty with applicants of other cosmetic surgeries. World Journal of Plastic Surgery, 2022. 11(2): p. 101. PMID: 36117888; PMCID: PMC9446113. https://doi.org/10.52547/wjps.11.2.95
7. Boychuk, A.V., et al., PrEGNaNt woMEN witH Covid-19 aNd PlaCENta aNGioGENESiS. Polski Merkuriusz Lekarski, 2023. 3(6): p. 441. PMID: 38069843. https://doi.org/10.36740/Merkur202305101 PMid:38069843
8. Albert, U., et al., Suicide in obsessive-compulsive related disorders: prevalence rates and psychopathological risk factors. Journal of Psychopathology, 2019. 25(3): p. 139-148.
9. Angelakis, I., P.A. Gooding, and M. Panagioti, Suicidality in body dysmorphic disorder (BDD): A systematic review with meta-analysis. Clinical psychology review, 2016. 49: p. 55-66.Epub 2016 Aug 28. PMID: 27607741. https://doi.org/10.1016/j.cpr.2016.08.002 PMid:27607741
10. McGrath, L.R., et al., Prevalence of body dysmorphic disorder: A systematic review and meta-analysis. Body image, 2023. 46: p. 202-211. Epub 2023 Jun 21. PMID: 37352787. https://doi.org/10.1016/j.bodyim.2023.06.008 PMid:37352787
11. Sherman, A.D., et al., Approach and avoidant coping among black transgender women who have experienced violence: A qualitative analysis. Psychological services, 2022. 19(S1): p. 45. Epub 2021 Aug 30. PMID: 34460276; PMCID: PMC9891319. https://doi.org/10.1037/ser0000581 PMid:34460276 PMCid:PMC9891319
12. Kuck, N., et al., Body dysmorphic disorder and self-esteem: a meta-analysis. BMC psychiatry, 2021. 21(1): p. 310. PMID: 34130638; PMCID: PMC8207567. https://doi.org/10.1186/s12888-021-03185-3 PMid:34130638 PMCid:PMC8207567
13. Ramos-Luna, M.E. and J. Oliver, Relationship between differentiation of self, emotional intelligence and self-esteem in a Spanish sample. Current Psychology, 2024. 43(8): p. 6797-6806. https://doi.org/10.1007/s12144-023-04822-8
14. Doba, K., et al., Self-differentiation and eating disorders in early and middle adolescence: A cross-sectional path analysis. Eating behaviors, 2018. 29: p. 75-82. Epub 2018 Mar 7. PMID: 29547826. https://doi.org/10.1016/j.eatbeh.2018.03.003 PMid:29547826
15. Süloğlu, D. and Ç. Güler, Predicting perceived stress and resilience: the role of differentiation of self. Current Issues in Personality Psychology, 2021. 9(4): p. 289-298. PMID: 38014407; PMCID: PMC10655777. https://doi.org/10.5114/cipp.2021.106140 PMid:38014407 PMCid:PMC10655777
16. Saab, A., et al., Prevalence of Body Dysmorphic Disorder (BDD) among the Lebanese University students: associated risk factors and repercussion on mental health. Journal of Preventive Medicine and Hygiene, 2023. 64(4): p. E481. PMID: 38379749; PMCID: PMC10876033.
17. Peleg, O., M. Boniel-Nissim, and O. Tzischinsky, Adolescents at risk of eating disorders: The mediating role of emotional distress in the relationship between differentiation of self and eating disorders. Frontiers in Psychology, 2023. 13: p. 1015405. PMID: 36710825; PMCID: PMC9874111 https://doi.org/10.3389/fpsyg.2022.1015405 PMid:36710825 PMCid:PMC9874111
18. Sexton, K.A. and M.J. Dugas, The cognitive avoidance questionnaire: validation of the English translation. Journal of anxiety disorders, 2008. 22(3): p. 355-370. Epub 2007 Apr 25. PMID: 17544253. https://doi.org/10.1016/j.janxdis.2007.04.005 PMid:17544253
19. Aghajani, S., H. SAMADIFARD, and M. Narimani, The Role of Cognitive Avoidance Components and Metacognitive Belief in the Prediction of Quality of Life in Diabetic Patients. Health Psychology, 2017. 6(21): p. 142-156.
20. Drake, J.R., et al., Differentiation of self inventory-Short form: Development and preliminary validation. Contemporary Family Therapy, 2015. 37:

p. 101-112. https://doi.org/10.1007/s10591-015-9329-7
21. Rasoli, M., et al., Factor structure and validation of self-differentiation inventory short form (SDI-SF). Psychometry, 2016. 4(16): p. 1-10.
22. Phillips, K.A., et al., A severity rating scale for body dysmorphic disorder: development, reliability, and validity of a modified version of the Yale-Brown Obsessive Compulsive Scale. Psychopharmacology bulletin, 1997. 33(1): p. 17.
23. Rabiei, M., et al., The investigation of correlation between metacognitive subscales, meta worry, and thoughts-fusion with body dysmorphic disorder. NPWJM 2015; 2 (4) :162-167.
24. Shah Mohamadi, J., et al., The relationship between experimental avoidance with body image concern in predicting positive tendency to cosmetic surgery. Shenakht Journal of Psychology and Psychiatry, 2023. 10(1): p. 19-30. https://doi.org/10.32598/shenakht.10.1.19
25. Gillen, M.M. and C.H. Markey, Body image, weight management behavior, and women's interest in cosmetic surgery. Psychology, Health & Medicine, 2021. 26(5): p. 621-630. Epub 2020 Jun 4. PMID: 32496824. https://doi.org/10.1080/13548506.2020.1776890 PMid:32496824
26. Phillips, K.A. and M.M. Kelly, Body dysmorphic disorder: clinical overview and relationship to obsessive-compulsive disorder. Focus, 2020. 19(4): p. 413-419. Epub 2021 Nov 5. PMID: 35747292. https://doi.org/10.1176/appi.focus.20210012 PMid:35747292 PMCid:PMC9063569
27. Blakey, S.M., et al., Experiential avoidance and dysfunctional beliefs in the prediction of body image disturbance in a nonclinical sample of women. Body image, 2017. 22: p. 72-77. Epub 2017 Jun 29. PMID: 28667898. https://doi.org/10.1016/j.bodyim.2017.06.003 PMid:28667898
28. Lewis-Smith, H., P.C. Diedrichs, and E. Halliwell, Cognitive-behavioral roots of body image therapy and prevention. Body image, 2019. 31: p. 309-320. Epub 2019 Sep 11. PMID: 31519523. https://doi.org/10.1016/j.bodyim.2019.08.009 PMid:31519523
29. Songco, A., J.L. Hudson, and E. Fox, A cognitive model of pathological worry in children and adolescents: A systematic review. Clinical Child and Family Psychology Review, 2020. 23(2): p. 229-249. PMID: 31989444. https://doi.org/10.1007/s10567-020-00311-7 PMid:31989444 PMCid:PMC7192867
30. Sagui-Henson, S.J., Cognitive avoidance. Encyclopedia of personality and individual differences, 2017: p. 1-3. https://doi.org/10.1007/978-3-319-28099-8_964-1
31. Onken R, C.D., Dietel FA, Kneipp C, Hoppen L, Schulz C, Dirksen D, Buhlmann U, Facial symmetry perception and attractiveness ratings in body dysmorphic disorder. Journal of Obsessive-Compulsive and Related Disorders, 2024https://doi.org/10.1016/j.jocrd.2024.100859
32. Vahidi, S., A. Aghausefi, and H. Namvar, Prediction of Happiness upon Neuroticism, Self-descrimination with Mediating Body Image, and Optimism in obese women and men. Applied Family Therapy Journal (AFTJ), 2022. 3(3): p. 237-262. https://doi.org/10.61838/kman.aftj.3.3.14