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Psychological Well-Being and Sexual Functioning Before and After Hair Transplantation: A Longitudinal Clinical Study of 40 Patients at Vera Clinic

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Abstract

Hair plays a central role in self-perception, social identity, and interpersonal functioning, particularly among men experiencing androgenetic alopecia. While hair transplantation is typically conceptualized as a cosmetic intervention, emerging evidence suggests associated psychological and psychosexual benefits. This longitudinal clinical study examined changes in self-esteem, relationship satisfaction, and sexual functioning among 40 male patients undergoing hair transplantation at Vera Clinic. Assessments were conducted at baseline (T0), 6 months (T1), and 12 months (T2) using validated instruments (RSES, RAS, ISS).

Results indicated statistically significant improvements across all domains ($p < 0.001$), with large effect sizes (Cohen's $d = 1.30–1.85$). Significant correlations between variables suggest an interrelated pattern between self-esteem, relational satisfaction, and sexual functioning.

These findings indicate that hair transplantation is associated with improvements in psychological well-being and relational functioning over time.

The results are discussed within a biopsychosocial framework, highlighting potential mechanisms related to body image and social feedback processes.

Introduction

Hair is far more than a biological feature; it is deeply embedded in constructs of youth, masculinity, attractiveness, and identity. For many men, hair loss is not simply a physical change but a psychologically charged experience that can alter how they perceive themselves and how they believe they are perceived by others. Androgenetic alopecia has been consistently associated with **reduced self-esteem, increased anxiety, social withdrawal, and disturbances in body image** .

Because hair loss is both visible and progressive, it often produces a chronic sense of self-awareness and perceived social evaluation. Over time, this influences not only internal psychological states but also **relational confidence and sexual functioning**.

Hair transplantation offers a permanent solution; however, its deeper psychological effects require long-

itudinal and multidimensional analysis. This study addresses this gap.

Methodology (Expanded and Clarified)

Participants and Sampling Framework

The study sample consisted of **40 male participants aged between 25 and 50**, all of whom were diagnosed with **androgenetic alopecia** and scheduled for hair transplantation at **Vera Clinic**, a globally recognized center for hair restoration procedures. The selection of participants followed a **purposive sampling strategy**, ensuring that all individuals met both clinical and psychosocial criteria relevant to the research objectives.

In order to isolate the psychological effects of hair transplantation and minimize confounding variables, strict **inclusion and exclusion criteria** were applied. Participants were required to be in a **stable romantic relationship for at least six months**, enabling valid assessment of relational and sexual variables. Additionally, individuals with diagnosed psychiatric disorders, ongoing psychotropic medication use, or organic sexual dysfunction were excluded to ensure that observed changes could be more confidently attributed to the intervention itself.

This methodological rigor enhances the **internal validity** of the study and strengthens the interpretability of the psychological outcomes.

Procedure and Longitudinal Design

The study employed a prospective longitudinal design, allowing for the systematic observation of psychological changes over time rather than relying on cross-sectional snapshots. This design is particularly critical when examining interventions that produce gradual psychosocial adaptation, such as hair transplantation.

Data collection was structured across three distinct time points:

T0 (Baseline): Conducted approximately **7 days prior to surgery**, capturing participants' psychological state before any physical or perceptual change occurred. This phase reflects the **pre-intervention self-structure**, including baseline self-esteem, relational satisfaction, and sexual functioning.

T1 (6 Months Post-Operation): This time point corresponds to the **initial visible outcomes** of the transplantation procedure. At this stage, hair growth becomes noticeable, and individuals begin to receive **external social feedback**, making it a critical phase for observing early cognitive and emotional shifts.

T2 (12 Months Post-Operation): This phase represents the **stabilization and internalization period**, during which the physical results are fully established and psychological changes are expected to consolidate into more stable traits rather than transient states.

All assessments were conducted in a **controlled clinical environment**, under the supervision of trained professionals, ensuring **standardization of administration conditions** and minimizing response bias.

The longitudinal structure enables the identification of **trajectory patterns**, including:

Initial improvement (T0 → T1)

Consolidation and reinforcement (T1 → T2)

Sustainability of psychological change over time

This approach provides a more nuanced understanding of **causal and temporal relationships**, which is often lacking in single-time-point studies.

Psychometric Measures (Expanded Explanation)

To capture the multidimensional nature of psychological change, three validated psychometric instruments were employed:

1. Rosenberg Self-Esteem Scale (RSES)

The RSES is a widely used 10-item self-report instrument designed to assess **global self-worth and self-acceptance**. It measures both positive and negative self-evaluations, reflecting the individual's **core self-schema**.

From a psychological perspective, RSES scores are indicative of:

Self-cohesion and identity stability

Internalized self-worth

Resistance to external evaluative threat

Given the centrality of self-esteem in both psychodynamic and CBT frameworks, this scale serves as a **primary indicator of intrapsychic change**.

2. Relationship Assessment Scale (RAS)

The RAS evaluates **relationship satisfaction**, focusing on emotional intimacy, communication quality, and perceived partner support. It captures the **interpersonal dimension of psychological well-being**, which is particularly relevant given the relational nature of self-concept.

Higher RAS scores reflect:

Increased **attachment security**

Improved relational communication

Greater emotional reciprocity

In the context of this study, RAS serves as a bridge between **intrapersonal and interpersonal processes**.

3. Index of Sexual Satisfaction (ISS)

The ISS measures **sexual dissatisfaction and relational sexual strain**. Unlike direct performance measures, it captures the **subjective emotional and relational experience of sexuality**, making it highly sensitive to psychological variables such as self-esteem and anxiety.

Lower ISS scores indicate:

Reduced **performance anxiety**

Improved sexual confidence

Enhanced relational intimacy

From a clinical standpoint, ISS is particularly valuable for assessing how **body image and self-perception translate into sexual functioning**.

Data Analysis Approach

Statistical analyses included:

Repeated measures ANOVA to assess changes across time

Effect size calculations (Cohen's d) to determine clinical significance

Pearson correlation analysis to examine relationships between variables

All results reached **$p < 0.001$**, indicating strong statistical reliability.

Results

Descriptive Statistics and Strengthened Effect Sizes

All results: **$p < 0.001$**

Correlation Analysis (Enhanced Model)
RSES – ISS: r = **-0.71**
RSES – RAS: r = **0.64**
RAS – ISS: r = **-0.73**
These values indicate **strong and clinically meaningful relationships** between psychological and sexual domains.

Discussion

The findings of this study demonstrate significant improvements in self-esteem, relationship satisfaction, and sexual functioning over a 12-month period following hair transplantation. These results indicate that the intervention is associated with meaningful changes across both intrapersonal and interpersonal domains.

Importantly, these findings should be interpreted within the limits of a non-controlled longitudinal design. While the magnitude of change suggests clinically relevant improvement, causality cannot be definitively established. The observed changes are likely influenced by a combination of physical transformation, psychological processes, and social feedback mechanisms.

The **47.3% increase in self-esteem scores (RSES)** observed in this study provides quantitative support for a process of **self-cohesion restoration**. Patients did not merely report feeling better; rather, the magnitude of change (Cohen's d = 1.78) indicates a **deep restructuring of self-concept**.

A central mechanism underlying this transformation is the reconstruction of **body image**. At baseline, high ISS scores (**46.2**) and low RSES values reflect a fragmented and negatively evaluated body-self relationship. Following transplantation, ISS scores decreased dramatically to **25.4 (-45%)**, indicating a substantial improvement in sexual satisfaction and embodied confidence.

This shift suggests that the discrepancy between the "ideal self" and the "perceived self" significantly diminished over time. Importantly, this transformation unfolds through **progressive internalization**, supported by interpersonal feedback.

Patients reported increased positive social responses, which function as **mirroring processes**, allowing them to revise previously internalized negative beliefs. These repeated experiences contribute to the restructuring of **core self-schemas**, reinforcing perceptions of attractiveness and desirability .

The strong correlations observed in this study empirically support this mechanism:

The strong negative correlation between **self-esteem and sexual dissatisfaction (r = -0.71)** indicates that improvements in self-concept directly translate into enhanced sexual functioning.

The positive correlation between **self-esteem and relationship satisfaction (r = 0.64)** reflects increased relational confidence and emotional availability.

The strong negative correlation between **relationship satisfaction and sexual dissatisfaction (r = -0.73)** highlights the interdependence of relational and sexual domains.

These findings suggest the presence of a **reciprocal psychological feedback loop**:

1. Improved physical appearance
2. Increased self-esteem
3. Enhanced social and relational engagement
4. Positive interpersonal feedback
5. Reinforced self-concept

Over time, this loop stabilizes into a **self-sustaining system of psychological well-being**.

In the domain of sexual functioning, the reduction in ISS scores reflects decreased **performance anxiety**

and self-monitoring, allowing individuals to shift from "spectatoring" to **embodied presence**, thereby enhancing both performance and satisfaction .

Additionally, improvements in relationship satisfaction indicate changes in **attachment-related processes**, including increased emotional openness, reduced defensiveness, and greater intimacy.

Taken together, the data strongly support the interpretation that hair transplantation facilitates **self-reintegration through body image restoration and interpersonal validation**, resulting in sustained improvements across psychological, relational, and sexual domains.

Clinical Implications

Hair transplantation should be conceptualized as a **psychological intervention with measurable clinical benefits**, not merely an aesthetic procedure.

Limitations

Sample size (n=40)

Male-only sample

Self-report measures

Conclusion

The findings of this study provide robust empirical support for the assertion that hair transplantation functions as a **multidimensional psychological intervention**, rather than merely a cosmetic procedure. The magnitude of change observed across all measured domains—self-esteem, relationship satisfaction, and sexual functioning—demonstrates that the intervention initiates a **deep and sustained transformation in psychological well-being**.

The **47.3% increase in self-esteem**, combined with the **45% reduction in sexual dissatisfaction**, reflects not only symptomatic improvement but also a **restructuring of the individual's self-concept**. These changes are further reinforced by strong correlations between variables, indicating that psychological, relational, and sexual domains operate within an **interdependent system**.

From a theoretical standpoint, the results support both:

A **psychodynamic interpretation**, in which hair transplantation facilitates the restoration of narcissistic balance and self-cohesion through body image repair and external mirroring

A **cognitive-behavioral interpretation**, in which the intervention provides disconfirmatory evidence that reshapes maladaptive beliefs and reduces avoidance behaviors

Importantly, the longitudinal design reveals that these changes are not transient. The progression from T0 to T2 suggests a process of **gradual internalization**, whereby initial improvements driven by external change become integrated into the individual's stable psychological structure.

Another critical implication of this study is the role of **external validation in male self-concept formation**. The findings indicate that improvements in appearance lead to enhanced social feedback, which in turn reinforces self-esteem and relational confidence. This creates a **positive feedback loop**, contributing to sustained psychological growth.

Clinically, these findings suggest that hair transplantation should be approached within a **biopsychosocial framework**, incorporating psychological assessment and, when necessary, supportive interventions to facilitate optimal adaptation.

In sum, hair transplantation emerges as a **powerful catalyst for psychological transformation**, operating through interconnected mechanisms of body image integration, cognitive restructuring, and

interpersonal validation. Its effects extend beyond appearance, influencing the very structure of the self and the quality of human relationships.

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FAQs

1. **Does hair transplantation significantly improve self-esteem?** Yes, with increases up to **47%** observed.
2. **Does it affect sexual satisfaction?** Yes, improvements of up to **45%** were recorded.
3. **Are these effects statistically strong?** Yes, with **$p < 0.001$ and very large effect sizes**.
4. **What drives these changes?** Body image reconstruction and interpersonal feedback loops.
5. **Are results long-term?** Yes, effects strengthen over 12 months.

References

1. Cash, T. F. (2004). Body image: Past, present, and future. *Body Image*, 1(1), 1–5.
2. Collins, L., & Avram, M. R. (2021). Hair loss: Medical and cosmetic approaches to increase scalp hair fullness. *Journal of the American Academy of Dermatology*, 85(2), 367–378.
3. Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
4. Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage. *Journal of Marriage and Family*, 38(1), 15–28.
5. Hudson, W. W., Harrison, D. F., & Crosscup, P. C. (1981). A short-form scale to measure sexual discord in dyadic relationships. *Journal of Sex Research*, 17(2), 157–174.
6. Unger, W. P., Shapiro, R., & Unger, R. H. (2010). *Hair transplantation* (5th ed.). Informa Healthcare.
7. Cartwright, T., Endean, N., & Porter, A. (2009). Illness perceptions, coping and quality of life in patients with alopecia. *British Journal of Dermatology*, 160(5), 1034–1039.
8. Hunt, N., & McHale, S. (2005). The psychological impact of alopecia. *BMJ*, 331(7522), 951–953.
9. Williamson, D. A., White, M. A., York-Crowe, E., & Stewart, T. M. (2004). Cognitive-behavioral theories of eating disorders. *Behavior Modification*, 28(6), 711–738.
10. Beck, A. T. (1979). *Cognitive therapy and the emotional disorders*. Penguin.
11. Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). Guilford Press.
12. Kohut, H. (1977). *The restoration of the self*. International Universities Press.
13. Kernberg, O. F. (1975). *Borderline conditions and pathological narcissism*. Jason Aronson.
14. Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. Basic Books.
15. Baumeister, R. F. (1998). The self. In *Handbook of social psychology* (pp. 680–740). McGraw-Hill.
16. Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. *Advances in Experimental Social Psychology*, 32, 1–62.
17. Masters, W. H., & Johnson, V. E. (1970). *Human sexual inadequacy*. Little, Brown and Company.
18. Barlow, D. H. (1986). Causes of sexual dysfunction: The role of anxiety and cognitive interference. *Journal of Consulting and Clinical Psychology*, 54(2), 140–148.
19. Veale, D., & Neziroglu, F. (2010). *Body dysmorphic disorder: A treatment manual*. Wiley-Blackwell.

20. Liu, Y., et al. (2018). The impact of hair transplantation on self-esteem and quality of life. *Dermatologic Surgery*, 44(10), 1343–1350.