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## **The Impact of Hypnotherapy on Wound Healing and Perceived Stress in Patients Suffering from Abdominal Surgery**

**Seyyed Hamed Vahedi Ardakani<sup>1</sup> , Shirin Kooshki<sup>2\*</sup> , Mohammad Oraki<sup>3</sup> , Amenehsadat Kazemi<sup>4</sup> **

1. Department of Psychology, Psychology and Educational Science Faculty, Central Tehran branch, Islamic Azad University, Tehran, Iran. Email: [s.hamedvahedi@yahoo.com](mailto:s.hamedvahedi@yahoo.com)
2. Corresponding Author, Department of Psychology, Psychology and Educational Science Faculty, Central Tehran branch, Islamic Azad University, Tehran, Iran. Email: [shi.kooshki@iauctb.ac.ir](mailto:shi.kooshki@iauctb.ac.ir)
3. Department of Psychology, Faculty of Psychology, Payame Nour University, Tehran, Iran. Email: [m.oraki@pnu.ac.ir](mailto:m.oraki@pnu.ac.ir)
4. Department of psychology, Faculty of Medicine, Tehran medical sciences, Islamic Azad University, Tehran, Iran. Email: [akazemi@iautmu.ac.ir](mailto:akazemi@iautmu.ac.ir)

### **Extended Abstract**

#### **Aim**

Treatment modalities for physical ailments vary according to the specific therapeutic interventions employed. Surgical intervention is frequently the sole course of action evaluated by the medical staff (Brunicardi et al, 2019). However, there are numerous adverse effects associated with this treatment that, if not adequately monitored, may complicate and impede the treatment of the underlying disease. Therefore, one of the critical measures that the treatment team should contemplate is the management and reduction of the adverse effects associated with this particular treatment modality (Lawrence, 2019). Surgical wound healing-related interventions hold significant importance among these metrics. Consequently, a comprehensive set of physical-psychological treatment approaches should be prioritized over others, necessitating substantial research and clinical application (Nikravan Mofrad, 2021). An additional adverse effect that the patient may experience is stress, which is exacerbated by the more aggressive nature of the surgical procedure compared to alternative treatments. This, in turn, disrupts a negative feedback loop that negatively impacts both the quality and velocity of the recovery process (Contrada & Baum, 2018). Numerous clinical trials have investigated and assessed the physical and psychological effects of hypnotherapy, one of the therapeutic modalities of traditional medicine (Fathi, 2018). Consequently, the effectiveness of hypnotherapy on wound healing and perceived stress among patients who have undergone abdominal surgery was investigated in the present study.

#### **Methodology**

The research methodology was implemented in both intent and data collection approach: a quasi-experimental pre-test-post-test design with a control group follow-up. The statistical population comprised all patients admitted to Golestan Hospital of Tehran in 2020 who were candidates for abdominal surgery. Fifty of these patients, consisting of 24 males and 26 females, were selected at random and divided into two study groups using a readily available sampling method. The initial cohort underwent an 8-session hypnotherapy intervention, while the subsequent cohort served as the control group. Data were gathered on three separate occasions, prior to, following, and at the follow-up, utilizing the Bates-Jensen Wound Assessment Tool (BWAT) and Perceived Stress scale (PSS). The data were analyzed using the SPSS version 23 software. For the descriptive portion, the mean and standard deviation were calculated. For the inferential portion, the normality of the variables was assessed using the Kolmogorov Smirnov test, Mochli's sphericity test, Levene's test of equality of error variances, ANOVA with repeated measurements and Benferoni's post hoc test.

### **Findings**

In the post-test and follow-up phases, hypnotherapy was found to influence the wound healing and perceived stress levels of patients who had undergone abdominal surgery ( $P < 0.05$ ). Significant changes were observed in wound healing and perceived stress across all three measurement stages: pre-test, post-test, and follow-up ( $P < 0.05$ ). Significant interaction effects between stages and group were observed in all three measurement stages, namely the pre-test, post-test, and follow-up ( $P < 0.05$ ). In fact, the changes in perceived stress and wound healing scores among patients undergoing hypnotherapy were significantly different from those of the control group. Additionally, the between-group factors had a significant impact ( $P < 0.05$ ), and a notable distinction existed between the experimental and control groups. In the experimental group, both the wound healing process and perceived stress were enhanced in comparison to the control group.

### **Conclusion**

To elucidate the results, one may make reference to the neuro-psychological pathways that regulate the human body. By inducing hypnotic trance through temperature-based inductions, which subsequently increase blood circulation in the surgical tissue, it is feasible to expedite the healing process by stimulating the sympathetic nervous system. To provide further clarification, it is worth noting that suggestibility increases during a hypnotic trance characterized by theta brain waves (Yapko, 2021). However, to provide an explanation for the results pertaining to perceived stress, it is possible to discuss the stress reduction that occurs during hypnotic deepening and is facilitated by hypnotic techniques such as progressive muscle relaxation and diaphragmatic breathing. By stimulating the parasympathetic system with the aforementioned techniques, this relaxation is produced; furthermore, it is feasible to maintain these conditions even after exiting the hypnotic trance via post-hypnotic inductions. In contrast, an individual can attain a certain degree of detachment from internal stressors through the use of hypnotic inductions induced by mental imagery (James, Feldman & Heugh, 2010). Finally, post-abdominal surgery patients may benefit from hypnotherapy as an adjunctive treatment to enhance wound healing and alleviate perceived stress, according to the results presented here.

**Keywords:** Abdominal Surgery, Hypnotherapy, Perceived STRESS, Wound Healing.

### **Ethical Considerations**

The ethical considerations in the present research (registered with the ethics code IR.IAU.K.REC.1400.083 by the Ethics Committee of Islamic Azad University, Central Tehran Branch) were as follows: every patient had the right to choose participation in the research, and if desired, the patient could withdraw from the study at any stage without being deprived of healthcare services. Additionally, patients were reminded that their personal information is confidential, and any unnecessary or potentially harmful physical or psychological questioning or procedures would be avoided, with compensation for any potential harm. Furthermore, it was explained that if the patient wished, necessary information regarding the implementation of the research plan or any changes to it would be provided. On the other hand, patients were informed that they would not receive any financial compensation for participating in the research, and the importance of honesty and integrity in data analysis and the provision of research results to the patient, if desired, was also emphasized. Finally, the procedure for lodging a complaint with the appropriate authorities in case of any problems was clearly explained to the patient.

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### **Conflict of Interest**

There is no conflict of interest in the present research.

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