



The Psychological Effect of Tattoos on People with Physical Injuries and Skin Defects

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Abstract

The study aims to identify the psychological effects of tattooing on individuals with skin injuries or defects. Its relevance is defined by the growing interest in medical and camouflage tattooing as a method of emotional and behavioral rehabilitation. The objective is to examine changes in self-perception, confidence level, and capacity for social interaction among patients following tattooing procedures on areas of damaged skin. The methodological foundation consists of a review of specialized publications, systematization of clinical techniques—including the practical experience of the Ink Revive project—and analysis of original case studies. The results demonstrate a reduction in anxiety and social fears, as well as a sustained increase in self-esteem and overall quality of life among participants. In this context, tattooing is perceived not merely as a means of defect concealment but also as a tool for restoring body-image integrity and integrating personal resources. The scientific novelty of the study lies in the systematic synthesis of empirical data on the therapeutic potential of tattooing and the substantiation of its role within comprehensive psychocorrectional programs. The findings presented will be of interest to psychologists, psychotherapists, aesthetic medicine specialists, and professional tattoo artists.

Keywords: Medical Tattooing, Scar Camouflage, Psychology of Tattooing, Bodily Trauma, Skin Defects, Post-Traumatic Recovery, Self-Esteem, Body Positivity, Rehabilitation, Art Therapy.

INTRODUCTION

The issue of body self-perception and the associated psychological comfort occupies a central place in contemporary psychological and psychiatric research. Physical injuries, scars, burn defects, consequences of surgical interventions, and congenital skin anomalies can exert considerable psychological pressure on the individual, generating feelings of inadequacy, heightening social anxiety, and potentially triggering the development of depressive states. According to the World Health Organization, each year a large number of people worldwide encounter bodily injuries that leave lasting marks, underlining the necessity for effective strategies of psycho-emotional adaptation [1]. Current trends reveal a steady increase in interest in tattooing not only as a means of self-expression but also as a method for the aesthetic camouflage of skin defects. Statistics for 2024 indicate that approximately one quarter of all visits to professional tattoo studios in developed countries involve services for scar coverage or correction of poorly executed older designs, demonstrating the growing demand for such interventions [2].

Despite the widespread adoption of camouflage tattooing, its psychological consequences remain insufficiently studied.

Most existing research focuses on the sociocultural and artistic dimensions of tattooing, whereas its therapeutic potential in the context of recovery from skin injuries has not been systematically examined. The scientific literature lacks a comprehensive analysis of the impact of cover-up tattooing on variables such as self-esteem, anxiety levels, social adaptation, and overall life satisfaction in patients presenting with visible skin damage.

The objective of the present study is to assess changes in self-perception, confidence levels, and capacity for social interaction in patients following tattooing procedures on areas of damaged skin.

The scientific novelty of this research consists in the systematic consolidation of empirical data regarding the therapeutic capabilities of tattooing and in substantiating its role within comprehensive psychocorrectional programs.

The author's hypothesis posits that, when psychological characteristics of the client and anatomical features of the damaged area are taken into account, tattooing can not only conceal a scar but also modify its subjective perception, transforming the traumatic experience into a resource for personal development and the construction of a renewed

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identity. The key mechanism underlying this effect is the collaborative process between artist and client in developing the design sketch, which enables reflective processing of the trauma and its integration into a cohesive sense of self.

MATERIALS AND METHODS

In recent years, interest has grown in the psychological impact of tattoos on individuals who have experienced bodily trauma and present with skin defects. On one hand, global data from the World Health Organization demonstrate the scale of trauma and violence that require both medical and psychological support [1], and the American Society of Plastic Surgeons' annual report confirms a rising demand for aesthetic and reconstructive procedures following injury [13]. On the other hand, the tattoo removal technologies market, as described in a Market Research Future analytical report, reveals a bifurcation within the industry between methods of "concealing" defects and approaches that actively compensate for them through tattooing [2].

The literature identifies two principal groups of empirical investigations. The first comprises quantitatively oriented studies focusing on self-esteem, personality traits, and post-tattoo regret. Hashemi M., Sangi F. [3] employed standardized self-esteem inventories and the Big Five personality framework, uncovering a positive correlation between tattoo presence and enhanced self-confidence, mediated by social media engagement. Morlock R., Morlock A. [9] conducted a nationally representative survey in the United States, demonstrating that tattoo prevalence and the incidence of regret are closely associated with age and educational attainment, thereby underscoring the cognitive-emotional risks inherent in making irreversible bodily decisions. Garnham W. [11], in a monograph on the psychology of physical attraction, treats tattooing as a form of social marking that influences perceived attractiveness through cultural connotations and individual preferences. Finally, a systematic review by Roy N. et al. [10] addresses the psychological aspects of breast reconstruction after mastectomy, emphasizing the role of aesthetic restoration in reducing stress and depression, though it only briefly considers tattooing of the implant-areola complex.

The second group comprises qualitative and narrative studies exploring patients' subjective experiences. Tyerman C. et al. [6] employed interpretative phenomenological analysis to examine the experiences of women following burns, demonstrating that medical tattooing serves as a means of identity reconstruction and social reintegration. Daly A., Karl J., Dunne S. [8] conducted in-depth interviews with tattoo artists working with oncology patients, revealing the therapeutic potential of "tattoo therapy" via an art-based approach that enhances the sense of control over the body and recovery process. Swann-Thomas B., Owen A., Buckley E. [4], in a narrative systematic review, analyse memorial tattoos as a way of transforming individual loss into collective memory, emphasising the role of symbolism and ritual in grieving processes. Crompton L. et al. [14] report similar findings in

their study of "post-trauma tattooing" as a mechanism for converting personal suffering into narratives of overcoming, highlighting the importance of public storytelling and identity consolidation.

A distinct subgroup is devoted to applied medical interventions. Maselli D., Torreggiani M., Guberti M. [5] described a comprehensive areola and nipple tattooing intervention following mastectomy, utilising a TIDieR analysis for a structured description of the protocol and implementation reports in nursing practice. Bassiouny D. et al. [7] conducted a clinical trial demonstrating that cosmetic camouflage makeup tattooing significantly improves quality of life and reduces social anxiety in patients with vitiligo.

The methodological foundation of these studies is predominantly qualitative, including interpretative phenomenological analysis, narrative systematic review and social-media ethnography (netnography), as detailed by Kozinets R. V., Gretzel U. [12] in the Sage Handbook of Qualitative Research. Their approach offers a deep cultural and contextual analysis of online communities comprising individuals with bodily impairments and trauma.

Thus, the literature reveals a wealth of approaches—from quantitative correlational studies of self-esteem to in-depth qualitative analyses of the therapeutic effects of tattooing. However, contradictions emerge: some authors emphasise increases in self-esteem and social reintegration, while others document experiences of regret and heightened psychological vulnerability following unsuccessful tattooing. Long-term psychosocial support for patients after medical tattooing remains underexplored, and data are insufficient regarding the influence of cultural and gender differences on the perception of such interventions.

RESULTS AND DISCUSSION

The analysis of empirical data and the detailed examination of clinical cases indicate that tattooing used to camouflage various dermatological and surgical defects acts as a catalyst for profound psychosomatic transformations. Its impact extends beyond mere visual concealment: a new cognitive-affective structure of self-identity is formed, the focus of self-perception shifts, and previous beliefs about the "ideal" body are reassessed.

A vivid example of this transformation is the use of permanent makeup of the nipple-areolar complex within a comprehensive post-mastectomy rehabilitation program. The presence of a large scar and implant asymmetry led to the development of a severe inferiority complex, a loss of femininity, and difficulties in intimate relationships. The procedure of realistic simulation of the nipple and areola through tattooing—during which pigment was carefully selected and all anatomical features were taken into account to achieve maximum naturalness—resulted in a radical change in the patient's psychological state. The patient reported once again "feeling whole," which enabled the restoration of self-confidence and the harmonization of her

relationship with her partner. Reproduction of the natural color and textural nuances of the skin not only eliminates visual dissonance but also symbolically restores the lost “fragment of the integrated self,” returning to the patient a sense of control and self-sufficiency [5, 10].

Similar processes are observed in the artistic camouflage of scar tissue arising from various causes. Clients often report feelings of shame and reluctance to expose their bodies even in intimate settings. A key aspect of the work in these cases is the development of an individualized design that not only conceals the scar but also aesthetically incorporates it into a larger, harmonious composition. The technique involves placing the darkest, most saturated areas of the tattoo directly over the scar tissue, while using the surrounding healthy skin to create lighter, more ethereal elements. This approach prevents the “black spot” effect and preserves the elegance of the treated area—for example, on the abdomen. Figure 1 below illustrates an example of this technique.



Fig. 1. Example of covering a scar with a tattoo

This approach essentially constitutes a form of art therapy: the negative emotional valence of the scar disappears, and in its place emerges a source of aesthetic enjoyment and pride. Patients who previously concealed the defect begin to readily display the new “picture” on their skin, indicating full resolution of their complex and acceptance of their own body.

Particular significance is attributed to the covering of outdated or low-quality tattoos. Such clients often experience psychological discomfort no less severe than that of individuals with scars. An old tattoo, created in youth or by an unqualified artist, may be perceived as a “stigma,” a symbol of past mistakes that hinders self-presentation in the present. In this case, the cover-up procedure also assumes a therapeutic character. Creating a new, beautiful, and meaningful composition over the old one enables the individual to symbolically “rewrite” their history, rid themselves of an unwanted image, and affirm a new identity.

This mechanism resembles an internal “reset”—a renewal of self-perception that strengthens self-confidence.

The key factor in the success of therapeutic tattooing is the carefully constructed methodology of interaction between the artist and the client. The Ink Revive project illustrates such a holistic approach: here, the process does not merely involve a technical procedure but fosters an atmosphere of trust and support. Clients arrive with personal trauma narratives, and the artist’s role is to find a visual form that corresponds as closely as possible to the profound meaning of these experiences. In Figure 2, the scheme of the client-interaction methodology within the Ink Revive project is presented.

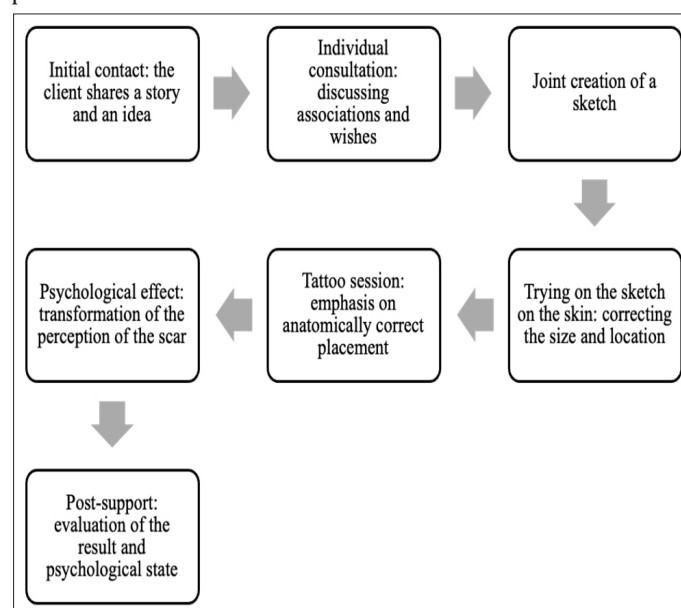


Fig. 2. Scheme of the author’s methodology for working with a client within the framework of the “Ink Revive” project.

This model demonstrates a phased, client-centered approach that significantly surpasses conventional tattooing protocols. At its core are principles of collaborative creativity, which grant clients an active role and transform them into co-authors of their own restoration process. The method’s efficacy is confirmed not only by participants’ subjective impressions but also by objective indicators. Three to four clients seek cover-up procedures each week, reflecting high demand and the method’s proven effectiveness. Many also report savings in financial and time resources compared to laser removal or abrasive dermabrasion of scars, both of which require numerous sessions and do not always yield the expected aesthetic result.

It should be emphasized that this approach is not a universal solution: it places high demands on the tattoo artist not only in terms of artistic and technical expertise, but also in the ability to exercise empathy and possess basic knowledge of trauma mechanisms. The proprietary training methodology through which thirty-six specialists—now practicing in leading studios across Europe—were prepared emphasizes precisely these competencies, ensuring continuity and high quality in therapeutic tattooing.

In a broader theoretical perspective, the phenomenon of therapeutic tattooing should be considered through the lens of body-oriented psychotherapy, in which the body is understood not merely as a biological substrate but as the Leib — the “lived body” that retains imprints of emotions and sensations. The scar functions as a repository of bodily memory of the experienced trauma, whereas the design applied atop it does not erase that memory but offers its reappraisal; in this way, the traumatic experience becomes integrated into a new, positively valenced life narrative.

From the standpoint of symbolic interactionism, the tattoo operates as a powerful means of redefining the semantics of physical marks within social interaction: by transforming the meaning of scars on the skin, individuals reconstruct their self-image and the perceptions of others, thereby dismantling barriers of alienation and reinforcing interpersonal bonds.

Table 1 illustrates the primary advantages, limitations and prospective applications of tattooing for enhancing the psycho-emotional well-being of individuals with physical injuries and skin defects.

Table 1. Advantages, Disadvantages, and Future Trends in the Use of Tattooing to Enhance the Psychological Well-being of Individuals with Physical Injuries and Skin Defects

Advantages	Disadvantages	Future Trends
Improvement in self-esteem and body image: participants with medical tattoos reported significantly lower levels of body-image distress, depression, anxiety, and perceived stress compared to those without tattoos.	Risk of infection and allergic reactions: pigment components may induce contact dermatitis or granulomatous inflammation.	Development of biodegradable and nanotechnology-based pigments to enhance safety and stability.
High patient satisfaction: a systematic review demonstrated consistently high satisfaction across multiple clinical contexts (ASPS recommendation grade B).	Pigment migration and fading, necessitating subsequent correction procedures.	Three-dimensional restorative tattoos (3D): employing light and shadow to simulate dermal depth.
Emotional healing and sense of control: camouflage procedures contribute to emotional rehabilitation and restoration of personal agency.	Procedural pain and potential re-injury of scar tissue.	Ultraviolet-fluorescent tattoos for medical camouflage and radiotherapy markers: improving body perception and patient privacy.
Non-invasiveness and cost-effectiveness compared to additional surgical interventions.	Insufficient standardization and regulation of protocols, resulting in variability in service quality.	Integration with regenerative medicine: combining micropigmentation with stem-cell therapies to restore skin pigmentation.
Long-lasting results with minimal need for touch-up sessions.	High expenses and limited insurance coverage.	Robotic and AI-guided pigment application to increase precision and reduce procedural discomfort.
Customizable coloration and texture to achieve optimal aesthetic outcomes.	Social stigma associated with tattoos in certain cultural and professional settings.	Wearable electronic tattoos for real-time monitoring of scar healing and biosensing functions.
	Unrealistic expectations and the potential for increased psychological distress if outcomes are unsatisfactory.	Expansion of insurance coverage and standardization of protocols informed by high-quality clinical research.

Empirical research validates that employing tattooing as a response to physical trauma constitutes a legitimate and remarkably potent form of psychological support. Its full therapeutic efficacy, however, unfolds only when the procedure is meticulously tailored to the individual, grounded in genuine empathic connection and enriched by artistic interpretation—thereby elevating it from mere scar concealment to an act of creative transformation and profound psychological restoration.

CONCLUSION

The conducted study provided a comprehensive analysis of the psychological consequences of employing camouflage tattooing for the correction of skin injuries and aesthetic

defects. Based on a critical review of current scientific literature and the systematization of practical experience, the following conclusions can be drawn.

Camouflage tattooing demonstrates a pronounced salutogenic effect on patients’ psycho-emotional state: a significant increase in self-esteem, gradual attenuation of social anxiety, and a comprehensive improvement in quality of life have been recorded, indicating a profound transformation of self-perception and bodily attitudes.

The pivotal factor underlying the success of this technique is the precisely calibrated methodology and personalized approach, which includes collaborative development of an aesthetic solution that takes into account the anatomical

characteristics of the defect as well as individual biographical and symbolic parameters, thereby elevating the procedure beyond mere concealment toward an art-therapeutic intervention that facilitates symbolic trauma resolution.

Moreover, camouflage tattooing serves as a sought-after alternative to traditional dermatological surgical methods—such as laser resurfacing or surgical excision of scar tissue—since, in addition to aesthetic enhancement, it stimulates the reappraisal of traumatic experience and its integration into a positive life narrative.

Thus, the research objective has been achieved, and the hypothesis regarding the possibility of transforming traumatic experience into a resource through camouflage tattooing has been confirmed. The practical significance of these findings lies in expanding the potential for interdisciplinary collaboration among specialists in psychology, medicine, and tattoo artistry in organizing psychological rehabilitation processes and enhancing the quality of life for individuals with bodily injuries.

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