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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

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GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებშიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и http://www.nlm.nih.gov/bsd/uniform_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned
Requirements are not Assigned to be Reviewed.**

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრაფიების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგების ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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DEEP SELF-REGULATION METHOD: A HYPNOTHERAPEUTICAL AND COACHING APPROACH TO STRESS AND BURNOUT

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Abstract.

Background: High intensity of information flows deplete the adaptive resources of specialists are quickly, which leads to the systemic collapse of self-regulation mechanisms and the development of professional burnout.

Purpose: The study provides a theoretical substantiation and experimental verification of the effectiveness of the integrative method of deep self-regulation in overcoming burnout and restoring the adaptive potential of socio-economic specialists.

Method: The study was based on a randomized controlled trial. The sample included 120 people (experimental and control groups of 60 participants each), selected according to the criteria of high stress levels and signs of emotional exhaustion. The study was conducted from September 2024 to June 2025. The experimental group (EG) underwent a six-week programme combining hypnotherapy and coaching modules, while the control group (CG) received standard psychoeducation. The data were collected using standardized questionnaires of perceived stress, burnout, and self-regulation, as well as through in-depth interviews at the stages before, after, and one month after the experiment. The analysis was conducted using non-parametric statistical criteria and the thematic analysis method.

Results: The results revealed a statistically significant decrease in the level of stress (PSS-10) from 28.4 to 17.9 points and emotional exhaustion from 32.5 to 20.1 points in the EG. Self-regulation significantly increased from 101.5 to 127.2 points, demonstrating stability after a month. A strong positive relationship ($r_s = 0.72$) was established between the quality of the “re-signing stress contracts” procedure and the increase in self-regulation. Qualitative analysis confirmed the transformation of bodily sensitivity and the rethinking of the participants’ meaning-based attitudes.

Conclusion: The integration of hypnosuggestive interventions and algorithmic coaching within the proposed method is an effective alternative to traditional approaches, ensuring resistance to professional destruction.

Key words. Professional burnout, DSR Method, hypnotherapy, coaching, stress contracts, adaptive potential.

Introduction.

In view of global digitalization and cognitive overload, the problem of professional burnout has become a systemic threat to the mental health of modern specialists. The labour market is currently characterized by a high intensity of information flows, which depletes the adaptive resources of the individual and destabilizes self-regulation mechanisms. According to international studies, the level of professional deformation of critical indicators requires a revision of existing therapeutic

paradigms [1-3]. Taking into account the high relevance of the issue, the condition of specialists whose activities are associated with constant meaning and emotional stress deserves special attention [4]. According to the current academic vision, traditional methods of psychological support often focus on external symptoms of burnout, ignoring the deep neuropsychological determinants of stress resistance [5]. So, studying self-regulation not only as a behavioural skill, but also as a multi-level process of constructing meaning that ensures the integrity of personal experience, becomes relevant.

The authors of this study see a significant gap between theoretical models of stress and practical tools for their correction. Most existing intervention methods do not take into account the phenomenon of perceptual filtering, due to which an exhausted subject loses the ability to adequately process incoming signals [6-8]. This leads to a state of “knowledge without feeling” in which cognitive understanding of the problem is not transformed into real behavioural changes. That is why the lack of integrative methods that combine deep work with unconscious contracts and applied coaching creates a shortage of effective rehabilitation protocols [9].

The aim of the study is to theoretically substantiate and experimentally verify the effectiveness of the integrative DSR Method in overcoming professional burnout and restoring the adaptive potential of socio-economic specialists. The aim was achieved through the fulfilment of the following research objectives. First of all, it was planned to analyse the dynamics of indicators of emotional exhaustion and depersonalization in participants under the influence of the three-circuit model of self-regulation. The next stage of the study was aimed at verifying the effectiveness of the “re-signing of stress contracts” protocol, which was considered as a key tool for deconstructing maladaptive psychological patterns of the personality. Special attention was paid to assessing the viability of the developed self-regulation strategies in the post-therapeutic period, which was carried out through the implementation of the integrative coaching system — DSR Method.

Research hypothesis. It is assumed that the implementation of the DSR Method is associated with a decrease in the manifestations of professional burnout and an increase in the effectiveness of self-regulation mechanisms in specialists whose activities are characterized by high cognitive and emotional load.

The academic novelty of the study is, first of all, the development of a method of deep self-regulation that integrates hypnosuggestive interventions and algorithmized coaching into a holistic system of psychological correction of burnout. The authors substantiated the concept of deconstruction of

unconscious determinants of professional exhaustion through work with the meaning structures of the personality. The possibility of ensuring a sustainable transformation of the subject's perceptual filters through the use of a three-circuit model was established. This creates the necessary conditions for long-term adaptation in conditions of high load. The obtained results expand the vision of the mechanisms of restoring the adaptive potential of specialists, offering a range of new tools for bridging the gap between cognitive understanding and behavioural changes.

Theoretical Framework.

For this study, stress is defined as a dynamic process of disruption of the psychophysiological homeostasis of a subject under the influence of intense external and internal determinants [10,11]. It should be noted that burnout in this context is interpreted as a limiting stage of exhaustion of adaptive resources, which is characterized by a systemic collapse of self-regulation mechanisms [12,13]. It is considered that the outlined phenomena are viewed through the prism of degradation of perceptual filters, which makes it impossible to adequately process incoming stimuli and further integrate meanings [14-16]. It is also noted that these states are the result of a prolonged loss of contact with key circuits of life under high cognitive load [17,18].

The "stress contract re-signing" protocol in this study is considered as a key tool for deconstructing maladaptive unconscious personality guidelines [19,20]. The "stress contract re-signing" protocol can be considered a key tool of the deep self-regulation method (DSR Method). Its goal is to deconstruct maladaptive unconscious personality guidelines that were formed as early adaptive decisions. It involves deep work in a state of hypnosuggestion aimed at reviewing and transforming internal obligations ("contracts") that underlie emotional exhaustion and automatic stress reactions. It should be noted that this is a review of early adaptive decisions, which become the fundamental cause of emotional exhaustion in adulthood [21]. So, this method makes it possible to transform the internal commitments of the subject, which ensures the restoration of cognitive flexibility and energy resources. It is also important to emphasize that the procedure helps to overcome the state of "knowing without feeling" through deep emotional and meaning reintegration of experience [22,23].

Analysis of international experience indicates the dominance of cognitive-behavioural approaches, which provide only a short-term effect in overcoming symptoms of exhaustion. The research of the theoretical landscape of the study gave grounds to trace the evolution of academic views on the nature of burnout and self-regulation mechanisms, starting from classical works and ending with the concepts of digital humanities. The fundamental level of the review is based on the classical triadic model of Maslach and Jackson [24], which identified emotional exhaustion and depersonalization as key vectors of professional destruction. The outlined opinion is complemented by the works of Selye [25] on the general adaptation syndrome, which allowed the authors of our study to consider burnout as an energy deficit of the self-regulation system. The psychotechnological aspect of the method is based on the legacy of Erickson [26] on trance modification of psychophysiological processes and the

theory of self-reflection of Bandura [27], which substantiates the possibility of conscious management of behaviour.

Ha et al. [28] propose a meaning physics model in which meaning is interpreted as a dynamic phenomenon subject to conservation laws and phase transitions. This line intersects with the study by Liu et al. [29], who emphasize the phenomena of "knowing without feeling", indicating a gap between perceptual fixation of a stimulus and its awareness.

A significant contribution to the understanding of the attentional nature of self-regulation was the study of Cooper et al. [30], which analyses the collapse of resistance under the information overload. Similar mechanisms were recorded in the studies of Ding et al. [31] and Yang and Baayen [32], who proved the neurobiological reality of trance states as a tool for restoring cognitive resources. In turn, the study of Hou et al. [33] focused on the limits of natural language processing (NLP). The researchers point to a fundamental difference between formal representation and holistic interactive experience. The authors of this study identified a distinct trend in the recent academic literature towards a shift in focus from the descriptive clinical picture of burnout to an in-depth analysis of regulatory mechanisms, in particular the phenomenon of perceptual gating. It should be noted that this mechanism described in detail in the study by Kim and Lee [34], appears to be a key node of intersection between biological and artificial information processing systems. It is stated that a delay or functional failure of attentional resources makes it impossible to successfully translate a signal to the phase of full meaning articulation.

So, the proposed synthesis of classical stress theory with modern cognitive models enables to effectively overcome the existing methodological gap in understanding the nature of self-regulation of the individual. It is also important to emphasize that the study by Al-Khayri et al. [35] emphasizes the fractal vulnerability of meaning structures under stress, which cannot be eliminated using only the tools of conscious logic. It should be noted that the use of isolated hypnotherapeutic techniques, despite their positive relaxation effect, is usually devoid of the necessary structural basis for the sustainable integration of the obtained states into professional activities.

To overcome the identified contradictions, the authors of this study developed the deep self-regulation method (DSR Method). The proposed approach is based on the synthesis of hypnosuggestive interventions and structured coaching, which allows working simultaneously with the bodily, emotional, and meaning contours of the individual.

Materials and Methods.

Participant characteristics and research design:

The study had a randomized controlled trial design. A randomized controlled trial model with pre- and post-testing was used. Participants were randomly assigned to groups using a computer-based random number generator (simplified randomization); however, blinding of participants and facilitators was not feasible due to the nature of the hypnotherapeutic intervention. Blinding of participants and therapists was not feasible because the hypnotherapy and coaching interventions required active participation and awareness of the treatment condition. Each participant was a socionomic specialist with

professional burnout symptoms. The sequential selection method helped to form the initial group. The inclusion criterion was Perceived Stress (PSS-10) scores above 20 points. The presence of signs of emotional exhaustion according to the MBI-GS questionnaire was also mandatory. All participants provided informed consent for hypnotherapy procedures. Exclusion criteria were diagnosed psychotic disorders. Active forms of chemical dependence also led to exclusion. Participation in other therapeutic programmes was excluded. The exclusion criteria included incomplete completion of the intervention. Change of residence was also a reason for exclusion.

Sampling:

Geographically, the sample was formed among socio-economic workers in Ukraine from three regions: the city of Kyiv, Lviv, and Odessa regions. In the study, socio-economic professions are supposed to mean activities with intensive communication and emotional stress: teachers and school teachers, nurses, social workers, IT project managers. The target population was specialists with a high level of communication and emotional stress. Representatives of education, healthcare, IT sector, and management were involved in the study.

The minimum sample size was calculated using the formula for comparing two means. The significance level α was set at 0.05. The statistical power of the study was 90%. The calculations determined the minimum size of each group at 44 participants. Taking into account potential dropout, 20% was added. The planned total number was 53 people per group.

The selection process was implemented through partner organizations in each region (IT cluster KyivTechHub, Lviv Regional Centre for Social Services for Youth and Family, Odessa Regional Institute for Teacher Improvement). To prevent information bias, different intervention sites were used.

The practical selection procedure included three stages. In the first stage, information was disseminated through professional associations and online platforms. Potential participants completed an electronic application form. In the second stage, screening was conducted using standardized questionnaires. Filtering of questionnaires according to inclusion criteria was carried out using an automated system. In the third stage, individual online interviews were conducted with each candidate. The total number of people who passed the screening was 214. After applying the inclusion criteria, 132 candidates remained. The final 120 participants who met all criteria were randomized into an EG ($n=60$) and CG ($n=60$) using a computer-based random number generator (simplified randomization). Subsequent testing revealed no statistically significant differences between the groups on key demographic and professional indicators, confirming the equivalence of the groups. The groups were balanced on key demographic and professional indicators.

The EG ($n=60$) consisted of: 22 university teachers, 18 general practitioners, 15 project managers in IT companies, and 5 social workers. The mean age was 41.3 years ($SD=8.1$). Gender distribution: 68% women, 32% men. The mean professional experience was 12.4 years ($SD=5.7$).

The CG ($n=60$) consisted of: 20 school teachers, 17 nurses, 16 software developers, and 7 department heads. The mean age

was 39.8 years ($SD=7.6$). Gender distribution: 65% women, 35% men. The mean professional experience was 11.9 years ($SD=5.2$). No statistically significant differences were found between the groups in terms of demographic indicators. All participants had a complete higher education. The level of job status was equivalent in both groups.

The study was based on the principles of the Declaration of Helsinki. The authors adhered to the rules of respect for the dignity and autonomy of all participants. Prevention of harm was a priority principle at all stages. A fair approach was guaranteed for both groups through identical assessment conditions. The ethics committee approved the study protocol. Approval code: DSR-2023-01/EC. All participants provided informed written consent. Data confidentiality was guaranteed by anonymization. Each respondent had the right to withdraw from participation at any time.

Intervention according to the study protocol:

The study lasted from September 2024 to June 2025. The locations were counselling centres in Kyiv, Lviv, and Odesa. Participants were enrolled in three sequential cohorts (September 2024, January 2025, and March 2025) due to logistical constraints and the availability of hypnotherapists and coaches. For each participant, the total individual study cycle (pre-test, 6-week intervention, post-test, one-month follow-up, and 90-day follow-up) lasted approximately 4 months. The overall study duration of 10 months reflects the sequential enrolment of the three cohorts rather than a single 10-month intervention period for any individual participant. The independent variable of the study was the method of deep self-regulation. The CG received standard psychoeducation in the form of two lectures lasting 60 minutes each. The lectures covered the basic academic principles of stress management.

The EG received a structured author's programme — DSR Method. The integrative intervention combined hypnotherapy and coaching. The three-contour model of self-regulation (bodily, emotional, and meaning-making contours) was its theoretical basis and was directly implemented in the first hypnotherapy session. Individual sessions of the programme were conducted by qualified specialists: a certified hypnotherapist with clinical experience in working with stress disorders and an accredited professional coach specializing in the prevention of professional burnout. The work experience of both specialists is over 10 years. The total duration of the programme was six weeks. The first module included two hypnotherapy sessions. Each session lasted 60-90 minutes. The first session was devoted to the three-contour model of self-regulation. It considers a person through the interaction of three main contours: bodily (physiological sensations, breathing), emotional (feelings, affect), and meaning (cognitive attitudes, values) [36]. Its goal is to restore balance and integration between these levels, which ensures holistic self-regulation, where bodily sensitivity becomes the basis for emotional accessibility and meaning reconstruction. The bodily, emotional, and meaning contours were activated. The second session focused on the progressive decompression protocol. The essence of the protocol was to work with the outer, middle, and inner layers of stress, which is consistent with the general approach of step-by-step reduction of stress load. The procedure for re-signing stress contracts was a key element.

The second module consisted of four coaching sessions. Sessions were held at weekly intervals lasting 60 minutes. The first coaching session introduced the DSR-Cycle system. An individual stress profile was determined. The second session was devoted to building a map of stress contours. Visualization of the load by areas of life was the main tool. The third session integrated the obtained hypnotic experience. Specific behavioural protocols were developed for daily use. The fourth session consolidated the 4×4 burnout prevention protocol. A system of actions in four life zones was formed. The participants were provided with individual materials for independent work. Access to audio recordings of relaxation techniques was also provided.

Data collection methods and tools:

Data collection included several stages. In the first stage, data were obtained from anonymous screening questionnaires. In the second stage, data were collected directly during the intervention. The study used four main blocks of instruments. The first block consisted of demographic characteristics of the participants. Age, education, professional experience and industry were recorded at baseline.

Quantitative assessment tools included standardized questionnaires. The Perceived Stress Scale (PSS-10) was used to subjectively measure stress load [37]. The internal consistency of the scale in the sample was $\alpha = 0.87$. The Maslach questionnaire in the general version (MBI-GS) was used to diagnose the degree of burnout. The emotional exhaustion and cynicism subscales were analysed [38]. The self-regulation questions (SRQ) assessed the ability to exercise conscious self-control [39]. The internal consistency of the scale was $\alpha = 0.80$. All questionnaires were completed by participants online before the intervention (T1). Retesting was conducted immediately after the completion of the 6-week programme (T2). A delayed control measurement was carried out 30 days after T2 (T3). The test results were analysed using nonparametric statistical methods, in particular, the Mann-Whitney U-test for between-group comparisons and the Friedman test with subsequent post-hoc analysis to assess within-group dynamics over time.

Qualitative research tools were used at T2 and T3. Semi-structured in-depth interviews were conducted with each EG participant after the completion of the programme. The interviews focused on the subjective experience of using the method. The participants of the study freely expressed their opinion on the feeling of stress. The sessions lasted from 45 to 60 minutes, which allowed them to delve into the subjective experience without time restrictions. The reformation of professional and personal meanings was a separate block of questions.

Tools for assessing the duration of the effect were used outside the main protocol. A telephone survey using the shortened form of the PSS (5 items) was conducted 90 days after T1. The authors analysed stress resistance in everyday life. The regularity of using the learned self-regulation techniques was monitored. Data on possible stressful events during this period were also collected.

To compute the Spearman correlation between protocol quality and changes in self-regulation (Δ SRQ), qualitative

interview data were systematically transformed into an ordinal quantitative score. Each semi-structured interview transcript was independently coded by two researchers using a predefined rubric with four criteria: (1) depth of emotional engagement during the contract-renegotiation procedure (0–3 points), (2) clarity of identified maladaptive contract (0–3 points), (3) degree of reported meaning restructuring (0–3 points), and (4) self-reported integration into daily life one month post-intervention (0–3 points). The sum of these four subscales yielded a total "protocol quality score" ranging from 0 to 12 points (0–3 = low quality, 4–7 = moderate quality, 8–12 = high quality). Inter-rater reliability was high (Cohen's $\kappa = 0.85$, 95% CI [0.78–0.92]). Disagreements were resolved through consensus discussion. This ordinal score was then used as the variable in the Spearman rank-order correlation with Δ SRQ and Δ PSS-10.

Data analysis:

The data were entered after editing and coding. Excel was used for primary tabulation. Further analysis was performed in the SPSS 29 statistical package. Statistical processing of the test results was carried out taking into account the violation of the normality condition of the distribution, confirmed by the Shapiro-Wilk test. In this regard, non-parametric analysis methods were chosen. Comparison of baseline indicators between the EG and CG at the beginning of the study was carried out using the Mann-Whitney U-test for quantitative variables and the χ^2 test for categorical data. The Friedman test was used to assess the dynamics of changes within each group at three stages of measurement (T1, T2, T3). Post-hoc pairwise comparisons with the Bonferroni correction were used to determine specific pairwise differences between time points. Intergroup differences in final and delayed indicators (at stages T2 and T3) were again assessed using the Mann-Whitney U-test. The relationship between variables (e.g., protocol quality and self-regulation growth) was examined Spearman's rank correlation coefficient (r_s) was calculated. The statistical significance level (α) for all criteria was set at 0.05. The analysis was performed using the statistical package SPSS 29. The study set the alpha level at 0.05. The confidence interval was 95%.

Qualitative data were transcribed and analysed separately. The Brown and Clark thematic analysis method was used. A six-step procedure ensured consistency. The reliability of coding was checked by calculating the kappa coefficient. An integrative thematic map was constructed to visualize the results. Triangulation of methods increased the validity of the obtained conclusions.

Results.

The results of the study structurally correspond to the research objectives. Quantitative data reflect the statistical dynamics of key psychological indicators. Qualitative analysis reveals the content of the subjective transformations of the participants. The first research objective involved analysing the dynamics of emotional exhaustion and depersonalization. For this purpose, the results of three dimensions in two groups were compared. Table 1 demonstrates the main quantitative results of the study.

Data analysis revealed statistically significant positive dynamics only in the EG. The values of stress and emotional

Table 1. Comparison of stress (PSS-10), burnout (MBI-GS) and self-regulation (SRQ) indicators between the EG and CG at three stages.

Indicator	Group	T1: M (SD)	T2: M (SD)	T3: M (SD)	Overall dynamics in the group (χ^2 , p)	Post-hoc comparison (EG, p)*	Between-group difference at T3 (U, p)
PSS-10	EG	28.4 (5.1)	18.7 (4.3)	17.9 (4.1)	$\chi^2(2)=42.15$, p<0.001	T1-T2: p<0.001	U=987.5, p<0.001
	CG	27.9 (4.8)	26.1 (5.0)	25.3 (4.7)	$\chi^2(2)=3.82$, p=0.148	T1-T2: p=0.463	
MBI: Emotional Burnout	EG	32.5 (6.2)	21.8 (5.4)	20.1 (5.0)	$\chi^2(2)=38.72$, p<0.001	T1-T2: p<0.001	U=1024.0, p<0.001
	CG	31.8 (5.9)	30.2 (6.1)	29.5 (5.8)	$\chi^2(2)=2.45$, p=0.294	T1-T2: p=0.312	
SRQ	EG	101.5 (12.3)	124.8 (11.6)	127.2 (10.9)	$\chi^2(2)=40.56$, p<0.001	T1-T2: p<0.001	U=956.0, p<0.001
	CG	103.1 (11.8)	105.3 (12.1)	104.7 (11.5)	$\chi^2(2)=1.92$, p=0.383	T1-T2: p=0.754	

Table 2. Correlation between the assessment of the “resigning contracts” and the increase in self-regulation (Δ SRQ) / decrease in stress (Δ PSS) in the EG (n = 60).

Protocol quality assessment	Δ SRQ (T2-T1)	Δ PSS-10 (T1-T2)
Correlation coefficient (rs)	0.72	-0.68
p-value	< 0.001	< 0.001

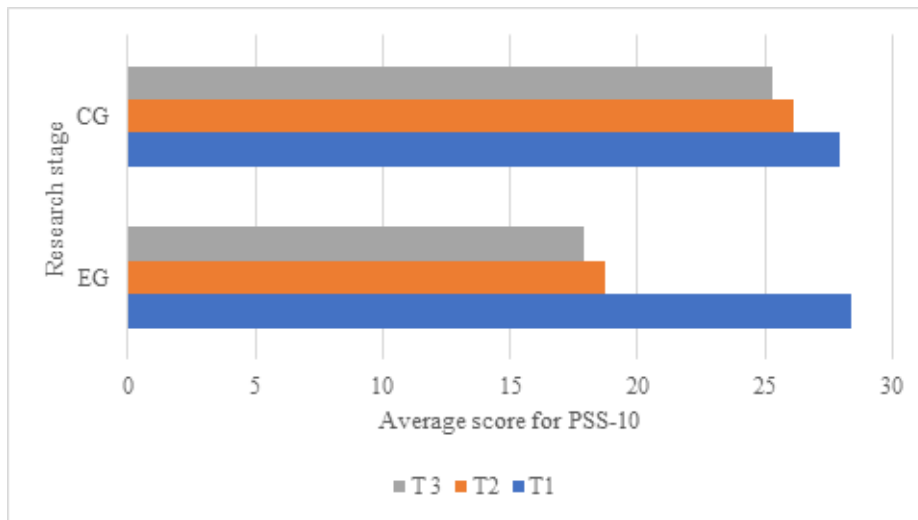


Figure 1. Visualization of the dynamics of the average stress level (PSS-10) in the EG and CG.

exhaustion significantly decreased by the T2 stage. The effect of reducing stress and burnout demonstrated stability at the delayed measurement T3. Self-regulation in the EG increased significantly and remained high after a month. Data analysis revealed statistically significant positive dynamics only in the EG. Post-hoc pairwise comparisons with Bonferroni correction after the significant Friedman test confirmed that the values of stress (PSS-10) and emotional exhaustion (MBI-GS) significantly decreased between the T1 and T2 stages. At the same time, no statistically significant changes were found between T2 and T3, which indicates stabilization of the effect. The effect of reducing stress and burnout, as well as increasing self-regulation, demonstrated stability at the delayed measurement T3. In the CG, none of the pairwise comparisons reached statistical significance.

A graph was constructed to visually illustrate the changes in the main stress indicator. Figure 1 presents the comparative dynamics of the mean values on the Perceived Stress Scale (PSS-10).

The graph clearly illustrates the different trajectory of changes in the study groups. The curve of the EG demonstrates a steep decline between the initial and final measurements. The control group did not show a clinically significant improvement in the

condition. The visual representation confirms the statistical findings.

The second objective focused on verifying the effectiveness of the key component of the method — the “resigning stress contracts” protocol. For this purpose, the relationship between the quality of professional duties and changes in the condition of the participants was investigated. The subjective assessment of the quality of the protocol was obtained by coding the interviews. The data of the correlation analysis are presented in Table 2.

The results indicate a strong statistical relationship. The higher the subjective quality of contract work, the greater the increase in self-regulation. The strong negative correlation confirms that the depth of this work is also directly related to stress reduction. The obtained data confirmed the hypothesis of the key role of deconstruction of unconscious patterns.

The third objective was to assess the sustainability of the acquired skills. An additional survey was conducted 90 days after the start of the intervention. It aimed to find out whether the tools of the method were integrated into everyday life. The results reveal the practical viability of the DSR Method coaching module.

Table 3. Frequency of use of self-regulation strategies by EG participants after 90 days (T4, n=60).

Strategy	Use regularly	Use occasionally	Do not use
4×4 Prevention Protocol	52%	33%	15%
Breathing/Body Techniques	65%	25%	10%
DSR-Cycle Algorithm	35%	48%	17%

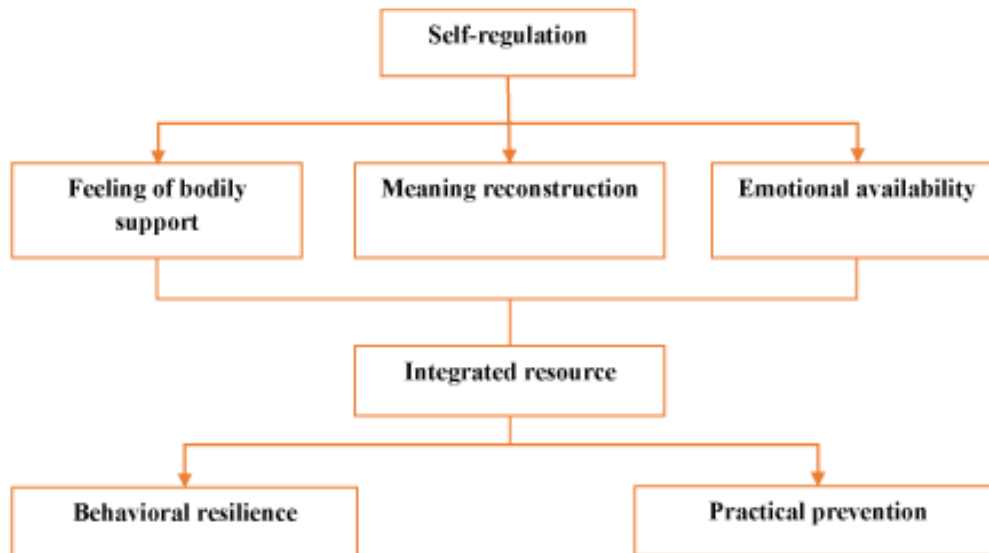


Figure 2. Integrative thematic map of qualitative analysis of participants' experiences (based on interview data).

The data show that most participants continue to actively use the acquired tools. Simple body and breathing techniques were the most integrated into everyday life. Structured coaching systems (DSR-Cycle) require more conscious effort, so they are used somewhat less often. However, the overall level of strategy use remains high after three months.

Qualitative analysis revealed a clear sequence of internal changes. Reconnecting with bodily signals was the first step of transformation. This created the basis for a freer circulation and awareness of emotions. The key chain in changing the experience was the rethinking of deep meaning-based attitudes. The synthesis of these three aspects formed a new integrated psychological resource, which is manifested in specific behaviour.

Discussion.

The results of this study confirm the effectiveness of the integrative method of deep self-regulation (DSR Method). The obtained data indicate the achievement of the main goal — experimental verification of the method for overcoming professional burnout and restoring adaptive potential. A statistically significant decrease in stress and emotional exhaustion in EG confirms the hypothesis of the study. A strong positive relationship between the quality of work under the “stress contract re-signing” protocol and the increase in self-regulation verifies the key mechanism of the method. The high frequency of use of the learned strategies after three months proves the viability and practical integration of the coaching module tools.

The results of the study are confirmed and receive a deeper interpretation in the context of the world psychological academic discourse. A significant decrease in scores on the

emotional exhaustion subscale is consistent with the data of the study, which confirms the sensitivity of this tool to therapeutic changes [40]. This demonstrates the impact of the DSR Method on the core component of the pathology, and not just on peripheral symptoms. The method’s emphasis on restoring self-regulation as a central mechanism finds empirical support in the study by Pillay et al. [41]. The researchers indicate that self-regulation acted as a serial mediator between positive affect and psychological resilience. One can conclude that the increase in SRQ scores in this study should be viewed as a restoration of a fundamental process underlying adaptation.

The strong relationship between the quality of work under the “resigning contracts” protocol and improvement in the condition directly confirms the ideas expressed by Tragantzopoulou et al. [42]. The matter is about the critical role of unconscious, often early, determinants in the development of burnout even in professional psychotherapists. So, it can be understood that the effectiveness of the method is in accessing deep irrational biases that are not realized by the participants themselves. The neurophysiological justification for the described process is offered in Campos Barbosa et al. [43], where hypnosis is considered as a means of modulating key brain networks. The researchers noted that the hypnotic state can temporarily reduce the activity of the default mode network associated with introspection and anxiety, and increase control from the executive control network. The identified neurodynamic change is capable of creating an optimal state of plasticity for reforming “stress contracts” and integrating new, more adaptive patterns of self-regulation at the bodily, emotional, and meaning levels.

However, the interpretation of the unique contribution of the hypnosuggestive component requires caution in conclusions.

According to Hamal et al. [44], various mind-body practices, such as hypnotherapy, meditation, and yoga, often demonstrate similar end effects. This is explained by common pathways of influence on the autonomic nervous system and stress mediators. This circumstance makes it difficult to identify the specific mechanism of action of hypnosis in the complex intervention of the DSR Method. The importance of the limiting factor of the cultural and social context is also worth noting. The study by Van Hoy et al. [45] clearly demonstrates that the level of burnout and its correlates vary significantly between countries due to social, economic, and professional norms. Therefore, the results obtained on a sample of Ukrainian specialists require further verification in other socio-cultural environments. It is also important to consider the potential influence of socially desirable responses on self-regulation, a known limitation of instruments such as the SRQ [39]. Changes may partly reflect not only actual improvement but also participants' desire to meet the researchers' expectations after intensive work.

The novelty of this study is the systematic operationalization of a theoretical model that integrates deep unconscious work with a clear behavioural structure. This made a contribution to psychological science [46], offering a step-by-step protocol that combines existential-semantic and purely practical levels. The practical significance is reinforced by the possibility of adapting the method to an online format, which corresponds to the global trend towards telemedicine and expands the accessibility of the intervention [47]. In addition to the individual therapeutic effect, the results have implications for the organizational level. The study by Sripada et al. [48] emphasizes that institutional support and the provision of resources for evidence-based practice are key factors in preventing burnout among specialists. So, the DSR Method can be considered as a specific tool that organizations can integrate into their mental health support programmes for employees.

This study provided empirical support for the proposed three-contour model of self-regulation. The findings support the idea that the key mechanism of therapeutic change is the process of renegotiating unconscious stress contracts. This extends the theoretical understanding of the underlying determinants of burnout. The results also integrate the hypnotherapy and coaching paradigms into a single conceptual framework.

The developed DSR Method protocol is ready for implementation in the format of individual online sessions for specialists. The method demonstrates effectiveness as a tool for remote psychological support under professional workload. The coaching components of the protocol have proven themselves as viable strategies for long-term self-prevention. The protocol can be adapted for use in corporate mental health programmes.

The main limitation of the study is related to the lack of blinding (participants and facilitators were aware of group assignment) due to the nature of the hypnotherapeutic intervention. Although randomization was performed, the absence of a sham or placebo control condition limits internal validity. The subjective nature of most measurement tools is another limitation. The use of neurobiological methods (such as fMRI or EEG) is recommended for further investigation of the mechanisms of action of the DSR Method to objectively assess changes in the functioning of the brain's self-regulation

networks. Further studies should also include an active CG receiving another substantiated therapy (e.g., CBT) to compare relative effectiveness. Long-term follow-up (e.g., after 6 or 12 months) will make it possible to finally assess the stability of the achieved results and draw conclusions about the preventive potential of the method. Despite the equivalence of general experience and status, differences in operational requirements for teachers, doctors, educators, nurses, and IT specialists could determine different sensitivity to the intervention, limiting the extrapolation of the findings to all subgroups of socio-economic professions. So, in further studies it is appropriate to ensure greater homogeneity of the sample or integrate the professional factor into the statistical analysis as a covariate.

A notable methodological limitation concerns the substantial disparity in contact time between the experimental and control groups. The EG received approximately 6–7 hours of direct professional attention (two hypnotherapy sessions of 60–90 minutes each plus four coaching sessions of 60 minutes each), whereas the CG received only two 60-minute psychoeducational lectures (total of 2 hours) with no personalized interaction. Consequently, the observed improvements in the EG may be partially attributable to the greater amount of therapist attention, the therapeutic alliance, and non-specific factors (the "attention placebo effect"), rather than to the specific active ingredients of the DSR Method. Future studies should include an active control group that receives a matched amount of professional contact (e.g., supportive counselling or a structured relaxation protocol) to isolate the unique contribution of the hypnotherapeutic and coaching components [49-51].

Conclusion.

The obtained results demonstrate an effective reduction in the level of professional burnout and stress due to the Deep Self-Regulation Method (DSR Method). The study revealed a decrease in perceived stress (PSS-10) in the EG from 28.4 to 17.9 points, while the stress level only slightly decreased from 27.9 to 25.3 points in the CG. Emotional exhaustion according to the MBI-GS decreased in the EG from 32.5 to 20.1 points, in contrast to the CG, where it remained almost unchanged (from 31.8 to 29.5 points). Self-regulation (SRQ) significantly improved, demonstrating an increase from 101.5 to 127.2 points. The key mechanism of change is considered to be the "resigning stress contracts" procedure, the effectiveness of which correlated with the main result ($r_s=0.72$). An integrative protocol combining hypnotherapy and coaching may be an alternative to traditional approaches in the prevention and correction of professional burnout among socio-economic specialists. Further research prospects may include a randomized controlled trial to directly compare the effectiveness of the DSR Method with other academically grounded interventions. It is also appropriate to study the neurobiological correlates of the effect of the method using functional MRI, in particular, changes in the activity of the default mode network and the prefrontal cortex. Validation of the protocol for a group online format and its adaptation for specific professional groups remain relevant practical tasks.

Conflict of interest.

No conflict of interest.

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Authors Contributions.

Liliia Sali: conceptualization, methodology, data collection, formal analysis, writing – original draft, writing – review and editing, approval of the final version.

Tetiana Sali: supervision, study design, methodology, validation, writing – review and editing, approval of the final version.

Ethical Considerations.

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

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Метод глубокой саморегуляции: гипнотерапевтический и коучинговый подход к стрессу и выгоранию.

Введение: Высокая интенсивность информационных потоков быстро истощает адаптивные ресурсы специалистов, что приводит к системному коллапсу механизмов саморегуляции и развитию профессионального выгорания. Цель: Данное исследование предоставляет теоретическое обоснование и экспериментальную проверку эффективности интегративного метода глубокой саморегуляции в преодолении выгорания и восстановлении адаптивного потенциала специалистов социномической сферы.

Метод: Исследование проводилось на основе дизайна с рандомизированным контролируемым исследованием. В выборку вошли 120 человек (экспериментальная и контрольная группы по 60 участников в каждой), отобранных по критериям высокого уровня стресса и признаков эмоционального истощения. Исследование проводилось с сентября 2024 года по июнь 2025 года. Экспериментальная группа (ЭГ) прошла шестинедельную программу, сочетающую модули гипнотерапии и коучинга, в то время как контрольная группа (КГ) получила стандартное психообразование. Данные были собраны с использованием стандартизированных анкет по воспринимаемому стрессу, выгоранию и саморегуляции, а также посредством углубленных интервью на этапах до, после и через месяц после эксперимента. Анализ проводился с использованием непараметрических статистических критериев и метода тематического анализа.

Результаты: Результаты показали статистически значимое снижение уровня стресса (PSS-10) с 28,4 до 17,9 баллов и эмоционального истощения с 32,5 до 20,1 баллов в экспериментальной группе. Саморегуляция значительно повысилась со 101,5 до 127,2 баллов, демонстрируя стабильность через месяц. Была установлена сильная положительная корреляция ($r_s = 0,72$) между качеством процедуры «переподписания стрессовых контрактов» и повышением саморегуляции. Качественный анализ подтвердил трансформацию телесной чувствительности и переосмысление участниками своих смысловых установок. **Заключение:** Интеграция гипносуггестивных вмешательств и алгоритмического коучинга в предлагаемый метод является эффективной альтернативой традиционным подходам, обеспечивая устойчивость к профессиональному выгоранию.

Ключевые слова: профессиональное выгорание, метод DSR, гипнотерапия, коучинг, стрессовые контракты, адаптивный потенциал.