

# Self-Hypnosis to Strengthen Coping Skills During Cancer Therapy – a Case Report

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## Abstract

Hypnotherapeutic interventions for psychological support in stressful situations show promising effects in many areas. This case report discusses some of the results of a feasibility pilot study of brief psycho-oncological interventions during cancer treatment, focusing on the effects of self-hypnosis. Despite some methodological limitations of the study, there is evidence that self-hypnosis interventions may have lasting impacts on strengthening coping skills

**Key words:** *Coping with Cancer; Emotional Distress; Self-Hypnosis; Resource Activation; Brief Interventions in Psycho-Oncology*

## Introduction

The most common feelings that individuals with cancer suffer from are emotional distress, anxiety, fear of progression or relapse, and depressive moods. These subsyndromal symptoms occur in over 50% of oncological patients [1]. The severity of emotional distress can range from “normal” feelings of vulnerability or sadness to episodes of major depression and anxiety disorders [2]. Side effects and physical symptoms such as nausea, loss of appetite and digestive problems, pain, sleep disorders, cognitive impairment, and the symptom complex of weakness and exhaustion are particularly present during oncological therapy. The therapeutic context is sometimes experienced as a “problem trance,” with narrowed, focused attention to threatening issues, persistently circling thoughts, loss of control, and a cognitive dissociation from helpful resources. Hypnotherapeutic interventions have been shown to provide beneficial results in coping with these stresses [3-5]. However, there is still a need to clarify how short interventions with a few sessions can be integrated into oncological therapy. To better support individuals with cancer and enhance coping skills, we have developed a short psycho-oncological program (HypRa) based on

resource activation [6-7] to accompany clinical therapy and tested its feasibility [8].

## Case Report

The HypRa (Hypnosystemic Resource activation) pilot study program, a unique offering of brief Cognitive Behavioral Interventions (CBI) or Hypnotherapeutic Interventions (HTI), was specifically tailored for individuals with cancer undergoing chemotherapy or immunotherapy. The program was conducted at the oncology outpatient clinics of the Ulm University Hospital.

HypRa was positioned to help clients find perspectives on well-being and solutions to cope with stress by activating their abilities. Of the approximately 200 individuals who were offered participation in the study, 34% expressed interest in taking part. The sample of N=60 participants who completed the study was distributed as follows: 13 male (22%), 47 female (78%); mean age 55.87 years (SD=10.83); oncological diseases: breast or gynecological 27 (45%), gastrointestinal 18 (30%), other 15 (25%); mean duration of disease was 21.88 month, ranging from 1 month to 243 months (SD 42.09, median=8 months); initial diagnosis 38 (63%), recurrence 22 (37%).

Participants were assigned to the two intervention groups—CBI or HTI—based on their available time windows. Importantly, this assignment was irrespective of the oncological diagnosis and duration of illness. Individuals who expressed interest in the study but could not participate in the interventions during the first recruitment phase were assigned to a waiting control group with the opportunity to join the program later. In the meantime, they received CAU (care-as-usual).

Compared with established cognitive behavioral interventions, the pilot study focused on the applicability of brief hypnotherapeutic interventions, particularly self-hypnosis. The interventions consisted of three individual one-hour sessions every two weeks.

Both interventions, HTI and CBI, started with psychoeducation to explain the psychophysiological mechanisms of individual stress experiences, encouraging participants to modulate these mechanisms by activating personal resources [9, 10]. The cognitive behavioral intervention (CBI) then focused on methods based on mindfulness, self-care, and communication skills. These methods are considered the 'gold standard' in supportive psycho-oncological treatment associated with emotional relief and stabilization, better coping with cancer distress, and enhanced quality of life [11, 12].

The hypnotherapeutic intervention (HTI) began with an introduction to a first trance experience, e.g., a journey to a personal "place of well-being" combined with a guided imagination promoting beneficial emotional experiences with a "representative technique" [13]. The representative figures metaphorically symbolize resources such as power, release, safety, trust, hope, and clarity and allow individuals more straightforward access to their emotional resources. Participants were asked to continue practicing the trance experience as self-hypnosis using a pre-recorded take-home audio file containing imaginations about well-being, safety, trust, and hope. In the second session, an individual trance story was developed and recorded with the participant for further practice at home. In the third session, the self-hypnosis experiences were evaluated and, if necessary, modified for further individual coping with stress. Finally,

patients were encouraged to practice self-hypnosis in stressful situations, as a tool available at any time, in any place, independent of the presence of a hypnotist. For example, patients can hypnotize themselves in the operating room, during radiotherapy, in an infusion suite, in a hospital bed, or at night if they are having trouble falling asleep [5].

In both intervention groups, participants received homework to reflect on personal resources, strengths, and skills for coping with stress and crises. The reflection ideas were discussed at the beginning of the second and third sessions. At the end of the final session, the reported experiences and findings during the interventions were summarized, and participants were informed that another questionnaire would be sent approximately three months after this session.

## Results

Resource activation and stress management capabilities were measured using standardized questionnaires. The Bern Resource Inventory (BRI) assesses a certain level of activating personal resources [14]. The Inventory of Perceived Stress Management Skills (ISBF) measures personal stress management abilities, covering cognitive strategies, use of social support, relaxation strategies, anger regulation, and perception of bodily tension [15]. Changes were examined at three measurement points (T0: baseline, T1: 1 month after treatment, T2: 3 months follow-up). Multi-level linear regression models with mixed effects were used and adjusted for diagnosis and duration of illness since initial diagnosis. Preliminary results, interpreted with great caution, support the effectiveness of both methods, while self-hypnosis appears to have a longer-lasting effect.

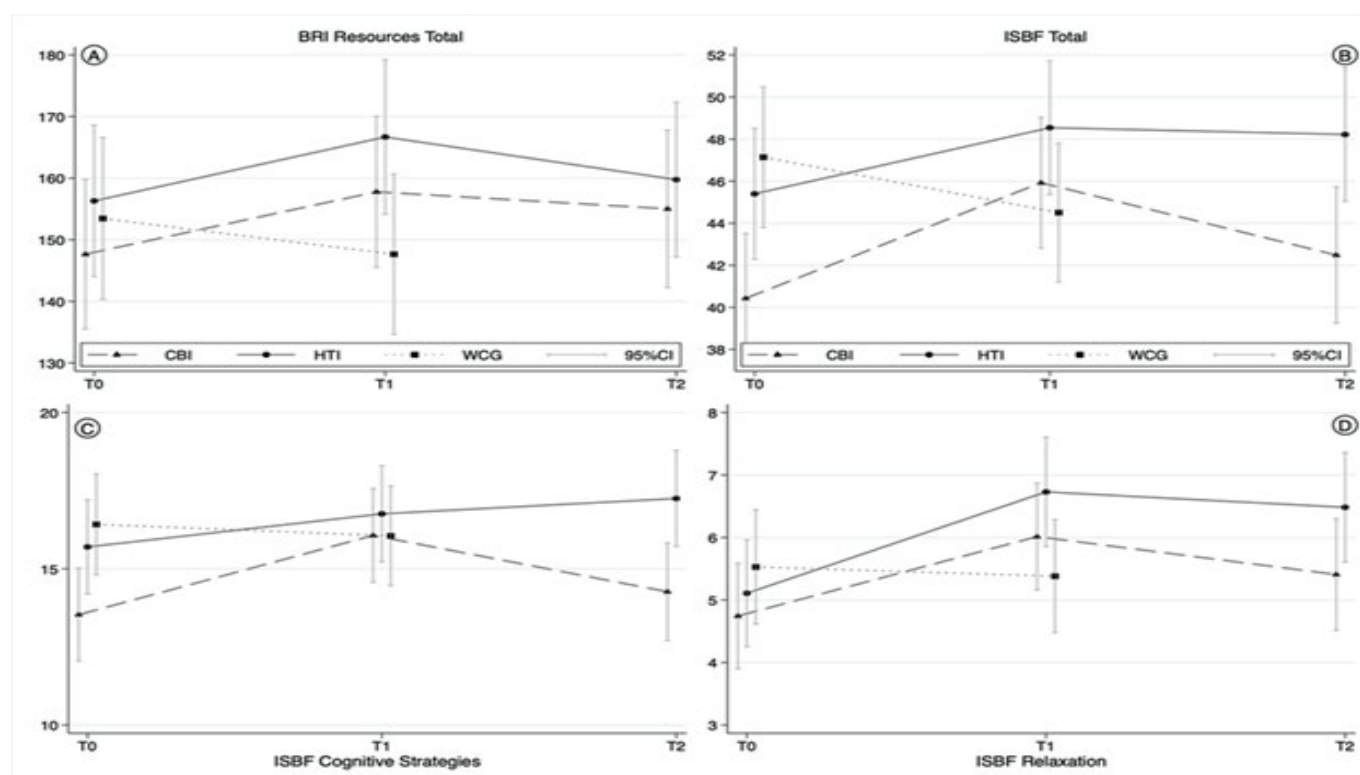
Concerning activating their resources, both groups showed higher scores at T1 compared to T0 ( $p \leq 0.05$ ), measured by the BRI (see contrasts in *Table 1*). The total score for stress management skills as measured by ISBF increased for both groups from T0 to T1 ( $p \leq 0.001$  for CBI,  $p \leq 0.01$  for HTI). The score for CBI returned almost to baseline ( $p \leq 0.01$ ), while the increase for HTI persisted at T2 ( $p \leq 0.05$ ). For CBI, the stress management subscore on cognitive strategies increased from T0 to T1 ( $p$

$\leq 0.001$ ) and decreased again at T2 ( $p \leq 0.01$ ), while the score for HTI increased continuously from T0 to T2 ( $p \leq 0.01$ ). The stress management subscore for relaxation skills increased at T1 for CBI and HTI ( $p \leq 0.001$ ). For HTI, this score increased significantly from T0 to T2 ( $p \leq 0.001$ ). For WCG, there were no significant changes from T0 to T1 (see Table 1).

**Table 1:** Contrasts within predictors

Variables	Comparison within HTI			Comparison within CBI		
	T1 vs T0	T2 vs T0	T2 vs T1	T1 vs T0	T2 vs T0	T2 vs T1
BRI Resources Total	10.36*	3.73	-6.62	10.15*	6.97	-3.18
ISBF Total	3.12**	3.00*	-0.12	5.52***	1.68	-3.84**
ISBF Cognitive Strategies	1.06	1.56**	0.50	2.54***	0.72	-1.82**
ISBF Relaxation	1.62***	1.39***	-0.23	1.27***	0.63	-0.64

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$



**Figure 1:** Results from linear mixed-effects regression models for resources and stress management skills A) BRI Resources (Total Score), B) ISBF (Inventory for Stress Management Skills) total score, C) ISBF Cognitive Strategies, and D) ISBF Relaxation Techniques. Models were adjusted for diagnosis and duration of disease. Models were adjusted for diagnosis and duration of disease. For ethical reasons, there was no catamnesis in the WCG participants, especially since there were no changes between the measurement times T0 and T1. If interested, these individuals should be able to participate in the intervention program offered as soon as possible.

## Discussion

When interpreting the results, it is crucial to acknowledge the limitations of the study design, including the small number of participants and incomplete randomization. These constraints necessitate a cautious discussion of the findings' implications, but they may guide future investigations.

After three individual sessions, the CBI and HTI groups significantly improved stress management and emotional well-being, surpassing the WCG. In particular, the self-hypnosis intervention appeared to have lasting effects on stress management skills, including cognitive strategies, problem-solving abilities, and relaxation techniques. The lasting effect of the self-hypnosis intervention can also be interpreted as mental prophylaxis for dealing with possible future crises.

This remarkable aspect raises an interesting question: What factors make self-hypnosis a practical complementary therapy approach? At its core, hypnotherapy is a resource-based approach that helps increase self-efficacy by promoting a sense of control and resilience by discovering individual solutions and problem-solving strategies. While the level of impairment and suffering from the burden of disease may vary over time, emotional vulnerability, sometimes with critical escalations, often persists [16]. So, individuals may also be more susceptible to negative or positive suggestions. In this context, hypnotherapeutic interventions seem to be ideally suited to freeing patients from this "problem trance" and enabling a positive change of perspective. They are relatively easy and inexpensive to provide, have a plethora of beneficial "side effects" (such as an increased sense of control over pain and its impact and an increased sense of well-being), and have very few adverse side effects [17]. Hypnotherapeutic interventions can utilize the client's imagination to induce a resource-activating trance state through calming visual journeys or mental images. These procedures are non-invasive and deeply relaxing. They enhance the client's capacity to respond to suggestions without physical effort [18, 19].

Even individuals with severe illness can benefit from these interventions. They help with the physical and emotional representation of experiences that arise through imaginative work in a trance, providing access to resource experiences lost during illness and treatment. For many cancer patients, their bodies have become alien throughout the disease, usually just a source of discomfort and pain. However, the (re)activation of an experience of physical well-being through imagination in a trance can change this perception. It allows

the patient to realize that such a physical experience is still possible, regardless of the discomfort. This realization often has a motivating effect and allows hope to grow.

Moreover, hypnotherapy plays a crucial role in cognitive work, ensuring an embodied anchoring (consolidation) of the therapeutic content. The activation and consolidation of the work done in self-hypnosis in the sense of such an embodiment contribute significantly to the change processes being able to take effect more quickly, holistically, and often more sustainably. This aspect of hypnotherapy is particularly beneficial, making it a valuable addition to behavioral therapy and psychodynamic working methods [4].

We were encouraged to take this approach as many studies already report positive effects in the hypnotherapeutic treatment of symptoms in cancer patients [3-5]. These studies typically focus on distress associated with medical procedures [20], nausea and vomiting [21, 22], hot flashes [23], and pain [24-26]. According to the results, there are some indications that just a few hypnotherapeutic sessions are enough to bring about lasting relief from physical symptoms.

One fascinating area of research is the investigation of the effectiveness of short interventions, such as those consisting of only three sessions, in a clinical setting and comparison to other approaches as a relatively new area of research [27-30], and the potential findings could significantly advance our understanding of the role of hypnotherapy in cancer treatment.

The hypnotherapeutic approach of the HypRa program harnesses individually significant resources, reactivating them to instill feelings of strength, hope, or comfort in the patient. These resources, unique to each individual, are identified, applied, and trained through self-hypnosis. The effectiveness of self-hypnosis has been extensively documented in various clinical areas and is even considered a 'first-line' treatment for many chronic health conditions [17, 31, 32]. What sets self-hypnosis apart is its practicality in everyday situations, such as sports [33, 34], making it a low-threshold and relatively easy method. It empowers the client with a sense of self-control, a crucial aspect, especially for oncology patients. Another

advantage is its flexibility, as it can be practiced outside the clinical environment, for instance, at home. However, for lasting effectiveness in a clinical context, the procedure must be taught and learned under the guidance of an experienced therapist [35].

The learning process is a crucial aspect to highlight here. It could also explain the possible sustained positive catamnesis effect for the hypnotherapeutic group in this study. According to Diamond and Frankel, hypnosis is a 'learnable coping style'. To elaborate, the authors suggest that elements such as patient preparation, demystification of hypnosis, attitudinal factors, an excellent therapeutic context, and the teaching of cognitive strategies to enhance hypnosis can all contribute to a patient's ability to learn hypnosis, even if they don't initially possess imaginative solid skills. This implies that someone's susceptibility to hypnosis is likely a learned coping style [36, 37].

## Outlook

Cognitive-behavioral approaches, including psychoeducational methods, are widely used and well-established in psycho-oncology. Some studies have already designed combined cognitive behavioral and mindfulness approaches with hypnotherapeutic interventions in psycho-oncology settings. The results are promising and underline our recommendation for a combination, as hypnosis and mindfulness seem to enhance the efficacy and benefits of other therapeutic approaches [38-42].

Eason (2013) argues that (many) hypnotherapists also incorporate hypnosis into other well-established psychotherapeutic interventions. "The same can be said about how we apply self-hypnosis. For example, hypnosis goes well with cognitive behavioral therapy (CBT) because many of the processes and techniques used in cognitive behavioral therapy (the mental imagery techniques) have real parallels to those used in hypnosis and self-hypnosis ... The results of the Kirsch et al. (1995) meta-analyses of 18 studies that compared CBT with and without hypnosis as an adjunct found fairly significant improvements when hypnosis was used as an adjunct to the treatment [39]. (So) it seems to make sense that we can therefore employ a number of strate-

gies from the field of CBT within our self-hypnosis sessions" [43]. Grégoire et al. (2020) found that an intervention combining self-care and self-hypnosis improved cancer patients' self-esteem, emotional distress, emotion regulation strategies, and mindfulness abilities. Self-hypnosis was seen as a facilitator for these changes [44].

## Conclusion

In a pilot study, the feasibility of integrating a short psycho-oncological program called "HypRa" into the outpatient care of cancer patients was tested. This case report discusses the potential benefits of the program, with particular emphasis on self-hypnosis. Although the methodology had some limitations, there is promising evidence that cognitive behavioral therapy with mindfulness or self-hypnosis can improve coping skills after three sessions. Additionally, self-hypnosis interventions could have lasting effects. Based on the resource activation principle described in this report, we suggest a brief intervention approach that combines cognitive-behavioral self-care, mindfulness, and hypnotherapeutic interventions to develop the HypRa program further. We recommend investigating this approach in a larger randomized controlled trial.

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## Declaration of Interest

The authors declare that they have no known

competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

The protocol of the study was approved by the Institutional Review Board of Ulm University (No. 431/16, 08/02/2017) and registered at the German Trials Register (DRKS00019095). The study complied with the Declaration of Helsinki, the Guideline for Good Clinical Practice, and local regulatory requirements.

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