Update on hypnotherapy for psychiatrists

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SUMMARY

Although hypnosis has played a part in psychotherapy for a long time, it is not yet seen as an evidence-based therapy and is absent from many practice guidelines when it comes to the treatment of psychiatric disorders. At present, the applications and methods of hypnotherapy are poorly understood and other methods of psychotherapy tend to be favoured. This review article aims to introduce the role of hypnotherapy and its application for certain common psychiatric presentations, as well as examine its efficacy by summarising recent evidence from high-quality outcome studies and meta-analyses.

LEARNING OBJECTIVES

After reading this article you will be able to:

- demonstrate an understanding of hypnotherapy as a form of psychotherapy by outlining some of the techniques used
- provide an overview of current evidence examining the efficacy of hypnotherapy in practice
- provide recommendations on future research involving hypnotherapy.

KEYWORDS

Randomised controlled trial; individual psychotherapy; outcome studies; cognitive-behavioural therapies; education and training.

Hypnosis is a unique way for human beings to explore their inner world. We can enter our subconscious depths through hypnosis and perceive the content of consciousness that we usually do not perceive. Through deep hypnosis, we can quickly achieve the effects of relieving psychological distress, promoting physical health and improving our quality of life. Although hypnosis has only been studied from a scientific perspective for about 100 years, it has been a part of human activities since ancient times, having been widely used in medical and religious activities. Box 1 gives a brief outline of the key players in the field of clinical hypnosis.

Hypnosis and the hypnotic state

Hypnosis has been defined by the American Psychological Association Division of Psychological Hypnosis (1993) as a procedure during which a health professional or researcher suggests that an individual experiences changes in sensations, perceptions, thoughts, feelings or behaviour. It is characterised by a triad of absorption (in an imaginative experience), dissociation (from the environment) and suggestibility (to the therapist's suggestions). Under such circumstances, the hypnotherapist utilises special techniques such as relaxation and monotonous stimulation to induce the individual into a hypnotic state, which is a special state of consciousness.

Under hypnosis, the hypnotised person generally has the following characteristics, which are explored in a little more detail in Box 2:

- increased acceptability of suggestion and blind obedience of the hypnotist's instructions
- narrowed focus of attention and reduced stimulation by the surrounding environment
- enhanced memory
- perceptual distortion and hallucination
- 'experience amnesia'.

It should be noted that there is a fundamental difference between hypnosis and sleep. Hypnosis is a unique state of physical relaxation and conscious unconsciousness, which is different from the normal state of sleep. In this state, the hypnotised mind will be directed to the body or focused on the subjective feelings at hand. During hypnosis, the individual's defence mechanism is reduced, such that the subconscious is highly open and the scope of consciousness is extremely narrow, thus only responding to the hypnotist's instructions. The individual can clearly hear a wide range of guidance instructions from the hypnotist and carry out them irresistibly, and so is very easily compelled and influenced by the hypnotist.

Hypnotherapy and hypnotisability

Hypnotherapy can be described as the use of hypnosis as part of a therapeutic intervention to enhance an individual's engagement with psychotherapy. Alladin (2010) explains that hypnosis can focus on the unconscious restructuring and reframing of dysfunctional cognitions that lead to the disorder at hand, and thus acts as a useful adjunct for

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BOX 1 Key players in the history of hypnosis

- Franz Anton Mesmer (1734–1815), an Austrian doctor, was a pioneer in the use of hypnosis to treat disease by believing in a process known to him as mesmerism.
- James Braid (1795–1860), a Scottish surgeon, was the first to explain hypnosis from a psychological perspective, calling it 'neurogenic sleep', as he believed that individuals were in a trance.
- Sigmund Freud (1856–1939), the founding father of psychoanalysis and its accompanying methods, developed the theory of personality and the free association technique on the basis of the practice of hypnotic psychotherapy. Although Freud later claimed to have given up hypnotism, the psychoanalytic treatments he pioneered, such as free association, do actually contain hypnotic elements (Radovancević 2009).
- Milton Hyland Erickson (1901–1980) is considered the greatest hypnotist of recent times. He developed natural hypnosis and founded the American Society of Clinical Hypnosis. As a result of his efforts, hypnotism gained legal status and a place in the palace of science.

conventional psychotherapies such as cognitivebehavioural therapy (CBT). Although hypnotherapy has been explored in the treatment of various physical and mental disorders, there is a notable lack of evidence-based research on its efficacy, aside from a few highly quoted clinical trials. This may be attributed to the nature of hypnosis, in that the bond between the patient and the hypnotherapist is a close-knit one so as to generate a relaxed environment for the patient to be induced into a hypnotic state; consequently it would be difficult to recreate it in the gold standard research model using a randomised double-blinded trial. The type of hypnotic technique used also varies from patient to patient and is difficult to standardise, with many therapists using different techniques initially to find out which one is the most suitable for the patient.

Hypnotic susceptibility (or hypnotisability) plays a part in this. This refers to 'an individual's ability to experience suggested alterations in physiology, sensations, emotions, thoughts or behavior during hypnosis' (Elkins 2015). The Hypnotic Induction Profile (HIP) is a popular clinical assessment instrument that groups individuals according to their level of hypnotisability (high, medium and low) in order to indicate their likely ability to respond to hypnotic suggestions and modify their behaviour accordingly. People who are more hypnotisable understandably experience a greater effect or have a quicker response to hypnotherapy, whereas those lower in hypnotisability may need more sessions to achieve

BOX 2 Key characteristics of the hypnotic state

- Increased acceptability of suggestion and blind obedience of the hypnotist's instructions: the individual will even accept obviously illogical preaching or instructions and act completely according to them (McGill 2010)
- Decreased active response (Goldberg 2006)
- Narrowed focus of attention and reduced stimulation by the surrounding environment: the individual no longer pays attention to their surroundings, paying attention only to the instructions of the hypnotist so as to maintain a close relationship (Chen et al 2017)
- Enhanced memory: the individual is often unable to recall old memories when awake, but can clearly narrate them in the hypnotic state (Tai 2007)
- Perceptual distortion and hallucination: the individual can follow the hypnotist's instructions to enact or modify their original character in role-play situations in which complex behaviours that are consistent with the person's character may be displayed (McGill 2010)
- 'Experience amnesia': under the guidance of the hypnotist, the individual forgets all the experiences of the hypnotic site when brought out of its (Tai 2005).

a similar response or the clinician may need to experiment with a wider range of hypnosis techniques (Elkins 2015). Elkins (2021) challenges the validity of the HIP as an assessment of hypnotisability and concludes that an improved formal assessment of hypnotisability will lead to better clinical research outcomes and integration into hypnosis intervention protocols.

Therapeutic applications of hypnosis

Since Erickson, hypnotherapy has entered a stage of rapid development. Hypnosis techniques have been more prevalent in the 21st century and have been widely used in the treatment of addiction disorders and affective disorders such as anxiety and depression. There is a larger evidence base to show that hypnotherapy has a far-reaching and compelling effect, which will be further discussed below.

Anxiety disorders

Several trials have been conducted with the aim of establishing the efficacy of hypnotherapy as a therapeutic intervention for anxiety disorders, especially regarding its use as an adjunct therapy to CBT, psychotherapy and behavioural therapy. In 1995 Kirsch et al published an influential meta-analysis of 18 controlled studies comparing CBT with CBT + hypnosis as a treatment for various medical disorders (cited in Alladin 2016). This reported a mean effect size of 0.87 s.d., and the authors thus concluded that the addition of hypnosis significantly increased the effectiveness of CBT. However, it is worth noting that only three of the studies in the meta-analysis were relevant to anxiety disorders, although the effect was reliable and present throughout.

More recently, Valentine et al (2019) pioneered a meta-analysis involving 15 studies utilising 17 trials of hypnosis to alleviate the symptoms of anxiety, in order to quantify its effect. There was a significant mean weighted effect size of 0.99 s.d. for seven of the studies with a long follow-up period, indicating that, compared with other techniques, hypnosis was more effective in reducing anxiety. Furthermore, there was a larger effect size (1.25 v. 0.70) when hypnosis was combined with other interventions compared with when used as a stand-alone treatment, confirming its value as an adjunct therapy.

The incorporation of CBT + hypnosis into integrative psychotherapy for anxiety disorders has been highly recommended by Alladin (2014) in the treatment of anxiety disorders, particularly of the wounded self'. Alladin & Amundson (2016) further expanded on this method in 'mindfulnessbased cognitive hypnotherapy', an assimilation of CBT + hypnosis and mindfulness strategies that aimed to broaden the use of hypnotherapy for various purposes. A recent case report by Daitch (2018) suggested that such an approach would be beneficial to address patients' multifaceted needs, specifically those with generalised anxiety disorder. However, owing to a lack of empirical data to validate the efficacy of such an integrated approach to anxiety disorders, further development of treatment techniques is needed for future application.

The integration of behavioural therapy (rather than cognitive-behavioural therapy) and hypnotherapy to treating anxiety disorders has not been successful. There have been limited empirical data to establish that hypnotherapy could act as a successful adjunct to behavioural therapy, and in an early review Spinhoven (1987) concluded that the effectiveness of hypnotherapy as an adjunct to behavioural therapy was influenced by treatment credibility and expectancy of success. To him, the genuine therapeutic effect of hypnosis still needed to be validated by more research - which more than three decades later has yet to be done. Furthermore, its therapeutic effect may be linked to a more individualised approach, in which the patient's level of hypnotisability comes into play as there was a significantly positive correlation between this and the outcome of hypnotherapy in four anxiety-related studies reviewed.

Lastly, Chen et al (2017) conducted a meta-analysis of 20 studies studying the effect of hypnosis on anxiety in patients with cancer, which demonstrated a positive effect size of 0.46 that was not only significant but also sustained. This is an encouraging step in the use of hypnosis to relieve stress related to medical procedures, with a recent randomised controlled trial (RCT) evaluating the efficacy of hypnosis in relieving anxiety related to rigid cystoscopy in 90 male patients that also demonstrated a significant decrease in post-procedural anxiety and pain (Tezcan 2021).

Post-traumatic disorders

Post-traumatic stress disorder (PTSD) is difficult to treat and a high proportion of individuals do not engage in or prematurely drop out of treatments such as trauma-focused psychotherapy owing to chronic avoidance behaviours or intolerance (Wahbeh 2014). Hypnotherapy is considered a compelling intervention for PTSD as people with post-traumatic conditions are considered more hypnotically suggestible and higher levels of hypnotisability have been associated with therapeutic success (Bryant et al 2001).

A study conducted by Abramowitz et al (2008) evaluated the use of supplementary symptombased hypnotherapy versus zolpidem to treat insomnia in 32 people with chronic PTSD. There was a significant mean reduction of 13.6% in post-traumatic symptoms in the hypnotherapy group, which was preserved at 1-month follow-up. Intrusion and avoidance reactions also decreased in the hypnotherapy group compared with the zolpidem group, accompanied by global improvement on all sleep variables assessed. Bryant et al (2005) conducted a 3-year follow-up assessment of 87 participants with acute stress disorder in an original study comparing CBT, CBT + hypnosis and supportive counselling, in which they predicted that the addition of hypnosis would reduce the occurrence of PTSD symptoms at long-term follow-up. Although findings showed that CBT and CBT + hypnosis were superior to supportive counselling when it came to reduction of PTSD symptoms, no difference was evident between CBT and CBT + hypnosis at both 6-month and 3-year follow-ups. However, this may be due to the hypnotic techniques used, which were limited to imaginal exposure.

Seventy-two patients with severe post-traumatic disorders (dissociative disorder, PTSD) underwent brief intensive trauma therapy with a hypnotic component, in which the patient assumed the role of a 'hidden observer' such that closure could be attained from the traumatic event (Gantt 2007). The clinical outcome showed that 45% recovered completely, and the remaining 44% achieved some level of improvement, based on the resolution of typical

symptoms such as intrusive, avoidance and arousal symptoms.

Poon (2009) conducted a similar study involving four patients with backgrounds of complex trauma symptoms, which made use of a split-screen hypnotic technique to facilitate trauma reprocessing. Positive suggestions of toleration and coping throughout visualisation of the disturbing images were utilised such that desensitisation of the traumatic event could occur. All four patients demonstrated good progress under this treatment, and there was persistent relief in post-traumatic symptoms, as evidenced by the significant drop in scores on clinical measures post-treatment.

Two comprehensive meta-analyses of hypnotherapy and the treatment of PTSD symptoms have been conducted. Rotaru & Rusu (2016) analysed six studies, four of which were purely hypnotherapy-based and two were focused on ego-state therapy that involved a hypnotic induction and hypnotically induced abreactions. There was a large weighted mean effect (d=1.17) in the four studies that reported post-test results, as well as large effects (d=0.93-3.61) in follow-ups ranging from 12 weeks to 2 years. Similarly, six studies were analysed by O'Toole et al (2016), who reported a decrease in PTSD symptoms on average of >1 s.d. post-treatment across studies. Therefore, all results reflected a positive impact of hypnotherapy in reducing immediate and long-term PTSD symptoms, as demonstrated by the generally large effect sizes in the samples included in both meta-analyses. It was noted by both researchers that future large RCTs would be required for a stronger approach.

Depressive disorders

Depression is considered one of the main contributors to the global burden of disease. There has been a renewed interest in hypnotherapy as a therapeutic intervention for depression over the past few years. Alladin & Alibhai (2007) conducted a pioneering RCT comparing the effectiveness of cognitive hypnotherapy and CBT in a group of 84 people with depression. Outcomes were measured using the Beck Depression Inventory, Beck Anxiety Inventory and Beck Hopelessness Scale. Although both interventions produced significant reductions in depressive symptoms both post-treatment and at follow-up, there was a significantly larger effect size observed in the cognitive hypnotherapy group. There was a 6% greater reduction in depression, 5% greater reduction in anxiety and 8% greater reduction in hopelessness in the cognitive hypnotherapy group compared with the CBT group, which also proved the additive effect of hypnotherapy to CBT.

Another study involved 46 individuals with longterm depressive disorders randomised to three groups: meditation with yoga, group therapy with hypnosis or psychoeducation alone. The study reported remission for 62% of the hypnosis group at the 9-month follow-up, but there was no statistically significant improvement in overall symptomlevel reduction over the course of the study (Butler 2008).

Dobbin et al (2009) used a partially randomised preference (PRP) study design to evaluate the effectiveness of self-hypnosis in a primary care setting compared with standard antidepressant treatment. Out of the 58 patients who were offered randomisation of their treatment preference (self-hypnosis or medication), 93% (P < 0.01) chose self-hypnosis over medication, and they showed a similar treatment response when compared with benchmarked trials of CBT and medication. The authors pointed that the results supported the use of a PRP study design in future studies of depression treatments instead of the gold standard RCT, in which patients are often unwilling to participate.

A recent meta-analysis Milling et al (2019) analysed 13 trials in which hypnotherapy was compared with a control therapy such as CBT or interpersonal therapy in treating symptoms of depression. They concluded that there was a mean weighted effect of 0.71 for all trials of hypnosis at the end of the treatment, hence the average participant who received hypnosis showed significantly greater improvement than around 76% of control participants. Fuhr et al (2021) rightly pointed out that studies involving patients with the primary diagnosis of major depression were not included in the meta-analysis. They carried out an RCT seeking to compare the efficacy of hypnotherapy and CBT in 152 individuals with mild to moderate major depression. Although the results confirmed the non-inferiority of hypnotherapy to CBT, the mean percentage symptom reduction was only 38% and a considerable number of patients reported no change in symptoms. However, this trial is an influential addition to existing hypnotherapy research owing to its rigorous methodological standards and it opens up new avenues for further research.

Eating disorders Bulimia nervosa

The use of hypnosis as a treatment for bulimia nervosa came about after the emergence of literature providing evidence for high hypnotisability among women with bulimia or anorexia, with greater hypnotisability seen in those with purging-type disorders due to their high dissociative capacity (Bryant et al 2001). For example, a study by Barabasz

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(1991) in which 40 women with bulimia nervosa scored significantly higher on the Stanford Hypnotic Susceptibility Scale, Form C (SHSS-C) than the control group. As regards to anorexia nervosa, it was generally accepted (Barabasz 1991) that although women with restrictive anorexia nervosa were less hypnotisable than those with bulimia nervosa, women with binge-purge anorexia nervosa were more hypnotisable than those with the restrictive subtype but no less than those with bulimia nervosa.

Recently, Bachner-Melman et al (2016) published a study examining the pathology behind hypnotisability and disordered eating in 50 participants, which demonstrated a positive and significant correlation between the two factors. The authors suggested that this may be due to such individuals' high susceptibility to suggestions in the form of interpersonal messages (social cues and expectations), and further research should be done to explore the link between hypnotisability and eating disorders to improve the efficacy of hypnotherapy as a treatment.

Griffiths and colleagues have conducted several studies on 'hypnobehavioural treatment' (HBT) for bulimia nervosa. A 2-year follow-up of a preliminary investigation of a brief HBT programme (Griffiths 1995) was the only study that lacked a control group. Of the 14 participants, 8 (57%) reported abstinence from bingeing and 10 (71%) reported abstinence from vomiting at the interim 6-week follow-up. There was significant reduction in bulimia nervosa-specific symptomatology at the 2-year follow-up but there was no difference in scores on general psychopathology. The other two studies compared non-hypnotic cognitive-behavioural treatments (CBT) with HBT in 78 participants randomised to either CBT, HBT or a waiting-list control over an 8-week period (Griffiths 1994, 1996). Both the CBT and HBT groups showed statistically significant differences in reduction of bulimia nervosa symptoms compared with the waiting-list group.

Anorexia nervosa

Fewer trials have been conducted to assess the efficacy of hypnotherapy in anorexia nervosa. Baker & Nash (1987) used a multifaceted treatment approach combining self-hypnosis and other hypnotherapeutic interventions to strengthen the patient's sense of self in order to correct bodyimage distortions. This approach was tested successfully on women with anorexia nervosa, and follow-up data at 6 and 12 months indicated symptom remission and stabilisation of weight gain in 76% of the 36 women in the treatment group, compared with 53% of those in the control group. However, there have been no recent largescale trials conducted that replicate these results, with only case study examples presented that suggest hypnotherapy has some measure of success as an intervention for anorexia nervosa.

Summary

Overall, the trials examined indicate that hypnotherapy is efficacious in the treatment of bulimia nervosa, but more research is required on its efficacy in anorexia nervosa.

Sleep disorders

Although CBT is usually the mainstay of treatment for sleep disorders such as chronic insomnia, hypnotherapy has begun to gain recognition as a potentially beneficial treatment for insomnia patients because of its flexibility. However, there is a notable lack of empirical evidence comparing the efficacy or integration of CBT and hypnosis in the treatment of insomnia disorder (Graci 2007).

Lam et al (2015) spearheaded an influential metaanalysis assessing RCTs evaluating the effect of hypnotherapy on insomnia. They selected 13 RCTs, involving 503 participants in total, with 6 studies focusing on hypnotherapy and 7 on autogenic training or guided training. Although meta-analyses showed that hypnotherapy and autogenic/guided training had similar outcomes in that sleep onset latency was significantly shortened compared with waiting-list control conditions, there was no difference compared with sham intervention. Moreover, 11 of the studies were deemed to be of low methodological quality and were assessed to have a high or uncertain risk of bias according to Cochrane's Risk of Bias tool. The authors noted that despite the positive findings suggesting that hypnotherapy may be efficacious for insomnia, further research would be needed to overcome the small sample size and methodological limitations mentioned.

In response, Chamine et al (2018) conducted another systemic review to gain a comprehensive view of the effects of hypnosis interventions on sleep problems. Of the 24 studies analysed, 14 (58.3%) reported that hypnosis was beneficial for sleep, with this effect being sustained when only studies with lower risk of bias were analysed. Again, the methodological quality of the studies was varied as studies of different designs were included alongside RCTs, and quality would need to be enhanced in future research.

Lam et al (2018) conducted an RCT to examine the effectiveness of different types hypnotic suggestion in insomnia. They randomised 60 participants to receive 4 weeks of therapist-assisted onceMCO answers 1 c 2 b 3 a 4 d 5 d weekly hypnotherapy with either disease-specific or generic hypnotic suggestions. Both types of suggestion produced marked improvements with a moderate to large effect size of 0.69–0.90, with no significant between-group differences.

Generally, current research indicates that hypnotherapy shows promise as a therapeutic method for combating insomnia, and additional studies addressing the issues raised, such as sample size and follow-up period, are warranted.

Neurophysiology of hypnosis and hypnotisability

Neuroimaging techniques have been employed as a means of understanding the physiological mechanisms underlying hypnosis and hypnotisability. Resting-state functional magnetic resonance imaging (fMRI) analysis has shown that increased connectivity between the dorsolateral prefrontal cortex and the insula enhanced somatic and emotional control during hypnosis and was generally present in individuals who demonstrated higher hypnotisability (Jiang 2017). Positron emission tomography (PET) has also been used to study brain mechanisms and hypnosis. Landry et al (2017) conducted a meta-analysis of 16 studies that used neuroimaging techniques to map out hypnotic phenomena, predicting that the main frontal neural networks contributed to the hypnotic state. However, the results indicated that hypnosis was associated with activation of the medial lingual gyrus, which is usually involved in higher-order processing such as mental imagery, and this led them to suggest that mental visualisation might be being used to produce reliable hypnotic responses. Further research would be needed to explore this theory.

Conclusions

Hypnosis techniques have been greatly developed in recent decades and have been widely used in various fields of treatment. They are particularly effective in treating anxiety disorders and show promise for affective disorders such as depressive orders and post traumatic stress disorder. It can be expected that hypnotherapy will have more optimistic prospects in the future. It should be pointed out that the current research on hypnosis is more about the clinical treatment of certain diseases, rather than the physiological mechanisms of hypnosis and the physiological mechanisms of hypnotherapy. In future research, we should continue to use neuroimaging techniques to explore the neurophysiology of hypnosis, to inform a better understanding of the neural processes involved and enable us to tailor specific hypnotic techniques to strengthen the field of hypnotherapy.

Author contributions

N.C. compiled the relevant studies and drafted the paper. Z.Z., G.Y. and Z.L. wrote and referenced the hypnotherapy protocol. R.C.H. oversaw the review process and corresponded with the journal.

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Select the single best option for each question stem

1 The first doctor to explain the effect of hyp-

2 Which of the following is not a technique to

nosis from a psychological perspective was:

MC0s

a Freud

c Braid

b Mesmer

d Wallace

e Frickson

a relaxation

sleep b

induce hypnosis?

c concentrated attention **d** imagination

e monotonous stimulation.

3 Someone in the hypnotic state shows:

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Chinesel

- a increased suggestibility
- b increased attention level
- c increased defence mechanism
- d increased stimulation
- e increased recall of recent events.
- 4 The strongest evidence base for the addition of CBT to hypnotherapy is in:
- a eating disorders
- sleep disorders b
- c PTSD
- d anxiety disorders
- e depressive disorders.

- 5 The brain region thought to play an active part in the physiological mechanism of
- b frontal cortex
- insula С
- e right temporal lobe.

- hypnosis is the: a corpus callosum

- d medial lingual gyrus

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