

THE CHALLENGES OF RESEARCH IN HYPNOSIS

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Abstract

Hypnosis has been vogue over a century in the field of therapeutic treatment throughout the globe and yet it has not received its due deserving importance for various factors, especially in India. For researchers, clinicians, practitioners and therapists, hypnosis has been a challenging proposition because of the very nature of the subject and its multifarious dimension.

In this document, the primary author, who is a practising hypnotherapist and a researcher outlines the challenges of using hypnosis as a research methodology and surveys existing literature on the relative advantages and disadvantages of having hypnosis as a research method. The document also stresses on the current focus on hypnosis research and the strides in future direction, especially with focus in neuroimaging which has revolutionised the landscape of the human brain and the functioning of the mind.

With more awareness and research opportunities, we are sure that strides in hypnosis research will be more far reaching and therapeutically available for future generations.

Keywords: *Research Design, neuroimaging, Intrinsic hypnosis, experimental hypnosis, hypnotisability, hypnotic amnesia, identity delusion.*

INTRODUCTION

There has been over a century of careful scientific study of hypnosis across the world. Researchers, typically in the fields of psychology & medicine, have been interested in finding out what hypnosis is, how it works, and how effective it is as a clinical treatment.

Most academicians concur that there was a general lack of direction and momentum that has been growing till the 1990s with the presence of eminent researchers like Andre' M. Weitzenhoffer (1921–2004), Ernest R. Hilgard (1904–2001), Martin Orne (1927–2000), Theodore X. Barber (1927–2005), Kenneth S. Bowers (1937–1996), Nicholas P. Spanos (1942–1994), Theodore Sarbin (1911–2005), and William Coe (1930–2004)]. Primarily, they were closely associated with institutional research centres.

In the later period, hypnosis research was largely an individual effort. There was a general lack of organised ongoing collaboration and critical exchange between researchers leading to duplication of efforts and leaves difference in individual findings unresolved.

There was also a lack of new comprehensive theories after this period. This somehow represented itself as an impediment to the growth and integration of hypnosis to broader models of human cognition.

It remained a less accepted as a topic of research than similar other phenomenon like meditation and yoga. Of course, myths surrounding hypnosis and the bad publicity promoted by stage hypnotherapy was always counterproductive. In the twentieth century there were teams researching hypnosis at top American universities including Harvard and Stanford, as well as in top English and European universities.

However, there is very little awareness of this wonderful science amongst medical practitioner, psychologists and healers in India. The study of Hypnosis needs to be augmented as a part of academic curriculum in India so that the coming generation, especially with the access to modern technology and neuroscience understand the various nuances and manifestations of the subconscious mind and use hypnosis as a research methodology to garner a holistic understanding of the subject.

In this document, the primary author, who is a practising hypnotherapist and a research scholar underlines the various challenges one comes across in using hypnosis as a research methodology. The document covers briefly the various types of research design and methods used in hypnosis and delineates the challenges and strengths in research designs both when studied in isolation and in relation to other related subject areas.

RESEARCH METHODS USED IN HYPNOSIS

Modern hypnosis research tends to be more divided along two broad categories – Academic or Intrinsic Hypnosis and Clinical or Experimental Hypnosis.

Academic or Intrinsic Hypnosis research deals with what Hypnosis is and how it works. It seeks to understand the phenomena of hypnosis itself and aims to identify the factors that underpin hypnotic responding. This focusses on major theories of hypnosis (like Dissociated – experience, dissociated – control, Socio-cognitive theories, etc.) and attempts to identify the cognitive, social or phenomenological antecedents to hypnotic responding, such as post hypnotic amnesia, post hypnotic suggestion, hypnotic hallucinations, analgesia, etc.

Clinical or Experimental Hypnosis Research studies about hypnosis and hypnotic suggestions used to produce effects of interest to researchers outside the field of hypnosis (Reyher 1962; Cox and Bryant 2008; Oakley and Halligan 2009). In this process hypnosis is used as a tool to investigate other things such as memory, consciousness, pain, smoking cessation, weight loss, issues surrounding surgery, perception, or action, etc.

In the recent literature, hypnosis has been used to explore a wide range of phenomenon including: memory ([Barnier, 2002](#); [Cox & Barnier, 2003](#)), [attention](#) ([Raz et al, 2002](#)); perception & hallucination, pain, voluntary motor control, etc.

The techniques used in intrinsic and instrumental research are generally similar and often there is an overlap in terms of whether particular hypnotic techniques are classified as intrinsic or instrumental. For example, **post hypnotic amnesia** used in both types informs us about the nature of hypnotic forgetting (intrinsic) as well as mimics the type of memory loss seen in clinical conditions such as functional amnesia (instrumental).

Although the majority of discussion and controversy in the literature has surrounded intrinsic hypnosis research, there are enormous benefits of using hypnosis instrumentally. Hypnosis is a technique that also allows pathological conditions to be studied in insolation without interference from the confounding factors associated with broad psychopathologies. In addition, using hypnosis instrumentally promotes links between hypnosis and areas of research that lie

outside the domain of hypnosis. For example, **hypnotic identify delusions** provide a context in which theoretical model of identity delusions can be empirically investigated.

Thus, hypnosis provides a powerful, novel technique for exploring a variety of psychological processes and facilitating research in external areas.

RESEARCH APPLICABILITY AREAS IN HYPNOSIS

Hypnosis research objective is to understand whether there are predictable changes associated with hypnosis which might be exploited by psychologists, sociologists and physiologists in their respective areas of research.

Hypnosis methods has generally been used to create specific effects (e.g., to induce emotion, amnesia or relaxation) although it is increasingly being used as an approach that is complementary to experimental psychology methods. Scientists who understand how hypnosis can be used to explore other content areas in experimental psychology and neuroscience are in a position to investigate a wider range of human phenomena.

In general, hypnosis has been used to detect and test some of the broad areas such as - increased suggestibility, perceived involuntariness, vividness of imagery, fantasy proneness, imagination capability, dissociation, mind-body interaction, lateralization of brain function, access to memories, amnesia, absorption, sense of relaxation, confidence, strategic social enactment, role enactment or “as if” behaviour, changes in attention, cognition, learning and memory, awareness, the stream of consciousness, sense of time, hypnotic relationship, pain, blood supply and clotting, psycho-Neuro Immunology, etc.

RESEARCH DESIGN

We have come across countless case interventions by psychologists and psychiatrists that had the potential for contribution to new theoretical or applied knowledge to the field. This works under the premise that if a specific hypnotic intervention appears to work with one or a few patients, perhaps it will work with others. **Clinical case studies** have been of utmost significance for specific areas of research.

To be useful to others in practice and to contribute to science, clinical case studies generally include:

- Literature surveys
- A clinical diagnosis
- Hypnotisability testing data
- Patients’ history, including previous treatment and the referral source
- Details of hypnotic induction procedures, including specific suggestions given
- Follow up data on treatment outcomes, including unsuccessful as well as successfully treated cases

Experimental Research Designs

They accommodate both within and between group design studies.

- **Within subject designs** use subjects as their own controls in much the same way as clinical case study trials are conducted. For example, subjects may be asked to perform a specific task under some sort of placebo or control condition and then to repeat the task following a hypnotic induction and the difference in response, if any, is recorded.
- **Between group designs** use at least two independent samples of subjects – like, for

instance, a hypnotic procedure with one sample and a non-hypnotic procedure with another sample. Also, a between groups, within subjects split plot design might involve pre- and post-hypnosis measures within subjects, and a comparison between two or more independent groups.

General and Specific Designs:

Sutcliffe (1958) identified a number of important design issues and, in doing so, drew a distinction between general and specific designs. His general design is a comprehensive method involving multiple experimental conditions.

This involved **high and low hypnotizable** who were to receive suggestions for either the presence of non-existent stimuli (e.g., a positive hallucination) or the absence of actual stimuli (e.g., a negative hallucination). Here, suggestions were to be given under the following conditions:

1. Control, waking condition
2. Hypnotic induction condition
3. Hypnotic induction with hypnotic suggestion condition
4. A simulating while awake condition

Although extremely comprehensive, this general design is rarely used as it is extremely expensive and resource intensive and thus researchers use the specific design method which appear to be a practical alternative.

The 5 fundamental hypnosis research design according to Cox and Bryant (2012) are (*Advances in hypnosis research: methods, designs and contributions of intrinsic and instrumental hypnosis* published in The Oxford Handbook of Hypnosis Theory, Research and Practice):

1. **Hypnotisability** of subjects – accounting for the response difference between High and Low hypnotisable
2. Experimentation using **Hypnotic and Non hypnotic states** (supporting or negating the view that hypnosis is an altered state of consciousness)
3. **Suggestion** differences between presence and absence of suggestions as also difference between general and specific suggestions
4. **Demand** characteristics – the subject's subjective experience to the outcome of the experiment and the expectations of the researcher
5. **Experiential responses** of the subject as different from behavioural response

To handle these design challenges, hypnotic researchers use a variety of techniques for investigating hypnotic phenomena that attempts to control a range of confounding variables. These techniques contribute towards our theoretical understanding of hypnosis and provide us with empirical foundations for hypnosis research. Thus, hypnosis researchers are faced with the task of deciding the appropriate and practical technique.

ADVANTAGES AND DISADVANTAGES OF HYPNOSIS AS A RESEARCH METHOD

Levitt and Chapman (1979) listed 6 possible following advantages for hypnosis as a research method although they are yet to be clinically verified. They are:

- Artificial stages could be created or terminated quickly, and intensified or diminished
- Hypnotic suggestion can create amnesia for the research experience

- Different suggested conditions can be examined with the same subjects in within-subjects designs
- Subject's attention can be narrowed for experimental purposes
- Subjects are less self-conscious about what is done to them
- Subjects experience less post experimental disturbance if they had been subjected to stress.

The most common disadvantages of using as a Hypnosis was in relation to **sampling bias**. Sampling Bias is related the responsiveness of the subjects at the time of hypnosis and the personality attributes of the subjects, in general. However, the fact that hypnotisability is associated with a number of personality variables – may become an advantage for investigators who understand the implications of hypnosis responsivity.

Thus, research in recent times has vitiated most of the statements regarding advantages, turned the disadvantages into advantages and provided new understanding of how hypnosis can enable us to answer some of the following important questions in the traditional areas of interest, such as:

- **The study of hypnotic suggestions and hypnotic susceptibility** –This is to find out whether in fact, hypnosis has any special advantage as an experimental manipulation over that which can be created in the form of motivational instruction or use of an alternative strategy (visualisation or relaxation).
- **The effect the researchers in attempting to create an emotion** (fear, joy, etc) may also be contributing to significant changes in cognitive functioning that may influence experimental results in unknown ways.
- **The study of Amnesia** in hypnotic and non-hypnotic state. Instead of supporting the use of within-subjects designs for studying differences between conditions, hypnosis research has often illustrated the vulnerability of such designs to subjective expectancy.
- **The attentional changes promoted by hypnosis** - This has been found to increase in certain conditions (like passive receptive attention, divided attention, and absorption in inner experience) rather than increase in the focusing of attention. As for less self-consciousness of subjects and diminution of possible carryover effects following stress induction procedures, the dearth of relevant research leaves that proposition open for examination.

Elsewhere, researchers studied on the very impact of hypnotic induction in relation to the hypnotisability of a person. With the popularity of indirect hypnotic induction methods devised by Milton Erickson almost anyone can be hypnotised. Erickson had utilised techniques which was both used for induction as well as therapeutic purposes.

Some of them were to deal with the following:

- Techniques – Double dissociation, hypnotic desensitisation, ratification, complimenting, age regression/vivification, visualisation, use of metaphors and symbols, analogy, anchoring, scaling, future pacing, creating amnesia, Law of reversed effect, frustrating response, reframing, distraction and other non-verbal techniques
- Principles and language patterns - - Observation, Utilisation, cooperation, responsiveness, flexibility, resource oriented, unconscious change, strategic, Naturalistic systemic, layered approach, indirect communication, confidence and competence, Internal vs external reality, humour, imagination/realisation, etc.

The use of language patterns also includes indirect communication by being artfully vague by using nominalisations, vague verbs, adverbs, adjectives, loaded words, articles, open ended

suggestions, ambiguity, chunking, mind reading, implications and presuppositions, splitting and linking, etc

CURRENT FOCUS OF HYPNOSIS RESEARCH AND FUTURE DIRECTIONS

According to Cox and Bryant (2012), earlier, the current focus of Hypnosis research was directed in the following areas:

- **Reality monitoring experience of the subject** – perceptual vs contextual detail.

Investigation of reality monitoring in hypnosis is an example of intrinsic research requiring a methodological approach that objectifies subjective experience during hypnosis. The obvious obstacle to understanding reality monitoring during hypnosis has been the possibility that demand characteristics may lead individuals to report reality attributions of salient expectations embedded in the hypnotic suggestions (Spanos, 1986).

Related to this is the phenomenon of hypnotic responding of subjects between high, medium and lows.

- **Functional Blindness** – studies on visual conversion disorder vs hypnotic blindness.

Visual conversion disorder is diagnosed when either a loss or an alteration in visual functioning occurs in a way that suggests a physical disorder, appears to be influenced by psychological factors and is not under voluntary control.

- **Post Hypnotic amnesia** for investigating memory and amnesia vs experience of memory as a result of clinical disorders such as dissociative fugue, dissociative amnesia or dissociative identity disorder. Post hypnotic amnesia can produce similar memory loss, and involves suggesting a hypnotised individual that after hypnosis they will be unable to remember certain things, typically the events of hypnosis. Post hypnotic amnesia shares the following features with functional amnesia.

- Impaired explicit memory
- Dissociation between explicit and implicit memory
- reversibility

- **Suppression of unwanted thoughts and emotions** - Used during hypnosis, this can limit awareness of sensory and cognitive experiences including vision, pain or memory.
- **Study of identity delusions and hypnotic phenomena** - Given the difficulty of studying identity delusions in isolation from other pathological symptoms, hypnosis provides an ideal technique for creating transient **identity delusions** in the laboratory. A prominent feature of identity delusion is the resulting disruption that occurs to **autobiographical memory**. There has been a lack of systematic, empirical investigation of autobiographical memory during an identity delusion.

FUTURE DIRECTIONS

Hypnosis with relation to other fields:

Levitt and Chapman (1979) mentioned that in addition to using hypnosis as a research strategy because of its methodological advantages, researchers may use it because it is **complementary to other experimental approaches**. With the advent of modern technology, hypnosis research forays into areas outside the domains of hypnosis, thereby adding new dimension to the subject. The instrumental value of hypnosis affords researchers the opportunity to examine empirically the features and mechanisms associated with a variety of clinical, cognitive and social psychological phenomena.

Indeed, hypnosis does offer new information when introduced into traditional content areas,

such as in cognitive psychology, psychoneuroimmunology, neuroscience or clinical psychology.

NEUROPSYCHOLOGY

Despite some barriers to hypnosis research, there were huge strides taken in neurophysiological underpinnings of hypnosis in the past two decades, especially in the areas of brain research during response to hypnotic suggestibility. This has helped in managing a host of clinical problems and symptoms. Brain imaging techniques can elucidate if hypnosis is eliciting a response that is distinctive from what we can observe in non-hypnotic condition. There has been increasing evidence that neurophysiological responses during hypnosis or imagery are comparable with responses to actual stimuli.

Kirsch and Lynn (1995) outlined a number of questions that may benefit from neuroscience techniques including:

- Whether hypnosis is a unique state?
- The role of cognitive strategies in hypnotic involuntariness and responding
- Whether hypnosis alters information processing? and
- The physiological substrates of hypnosis

However, there are a number of broad research questions that neuroscience techniques are unlikely to help answer such as:

- Stability of hypnotisability
- Understanding of subjective experience of hypnosis
- Hypnotic response with respect to suggestions and
- Extent to which hypnotic behaviour influenced by intentional compliance.

Thus, hypnosis researchers should carefully consider whether neuroscience techniques will be the most effective means of addressing their research questions.

Five key recommendations for moving the field of hypnosis research forward were identified during the International Congress of Hypnosis in Paris, France in Aug, 2015 where one of the goals of the meeting was to discuss the state-of-the science of hypnosis research from the purview of clinical and cognitive neuroscience

- There was consensus that while the assessment of hypnotic suggestibility may not be needed in clinical settings, researchers should strongly consider the assessment of hypnotic suggestibility in their studies, to help ensure that they are indeed studying hypnotic phenomenon.
- Researchers should strongly consider including participants who score in the middle range of hypnotic suggestibility in their studies, given evidence that these individuals may differ in important qualitative ways from both highs and lows.
- Hypnosis researchers should also give thought to expanding their designs, when indicated and appropriate, to more properly dissociate the roles of inductions and specific suggestions.
- The need for data sharing and
- Redirecting resources away from contrasting state and non-state positions towards research examining the neurophysiological underpinning of hypnotic phenomena.

CONCLUSION

Hypnosis as a research method will continue to benefit from contributions of radically different theoretical views of hypnotic phenomena. Social cognitive psychologists have contributed

significantly toward unifying the fields of hypnosis research and general experimental psychology. At the same time, advances in neurophysiology and psychosomatic medicine employing hypnosis indicate that there is a role for hypnosis as a research strategy, primarily because of its altered-state characteristics.

Findings from research on hypnosis have a great deal to offer the clinical and scientific community. As more is learned about the clinical applications of hypnosis treatments, the more individuals suffering from those conditions can be helped with hypnotic treatments. This has been made possible due to the strides in the field of neuropsychology in studying the mechanisms underlying hypnosis and hypnotic phenomena and the responses influenced by hypnosis, such as amnesia, hallucinations, and delusions.

Despite major advances in hypnosis research in recent years, there has been a curious decline in the prominence of hypnosis research in major research journals. Research does not appear to be having a sufficiently strong impact in the broader domains of psychology, psychiatry and neuroscience. The future of hypnosis research will depend, in part, on the capacity of hypnosis researchers to integrate hypnosis research into the knowledge bases of research broader points. This is required especially so in country like India where there is scant awareness of the wonderful healing potential of hypnosis amongst medical practitioners and psychologists. It urgently needs to be included in the academic curriculum so that more and more people can reap the benefits of the wonderful science of the subconscious. With the advent of knowledge and practice in the field, the world of hypnosis research will no doubt be enriched.

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