



# Transformative Power of Hypnosis: Breaking Myth and Implications for Stress Relief Application

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# **Transformative Power of Hypnosis: Breaking Myth and Implications for Stress Relief Application**

## **Abstract**

This study investigates how perceptions and attitudes towards hypnosis could affect its effectiveness in relieving stress. Despite the growing acceptance of hypnosis as a psychological intervention tool, misconceptions surrounding hypnosis continue to hinder its application. A total of 52 participants were randomly selected and invited to experience a 21-minute hypnotic session, during which they engaged in tasks addressing common myths about hypnosis. Participants completed the Attitudes Towards Hypnosis Questionnaire and self-rated their immediate stress levels and emotional states before and after the session. Statistical analysis revealed a significant reduction in self-rated stress levels, with an average decrease from 3.75 to 2.6 ( $p < 0.01$ ). Additionally, participants exhibited improved attitudes towards hypnosis, with the average score on the Attitudes Towards Hypnosis Questionnaire increasing from 60.48 to 65.69 ( $p < 0.01$ ). Age difference is identified with younger participants demonstrated a greater improvement in stress relief when comparing to older counterparts. These findings suggest that hypnosis could effectively reduce stress and enhance emotional well-being, while challenging the prevalent misconceptions.

## **Introduction**

Hypnosis has emerged as a psychological intervention for stress relief and emotional well-being. Despite its increasing acceptance in therapeutic contexts, misconceptions about hypnosis often hinder its broader application. Many individuals still harbor negative perceptions shaped by cultural myths and sensationalized media portrayals, which may affect their attitudes and responsiveness towards hypnotic techniques. Understanding the relationship between these perceptions and the effectiveness of hypnosis in relieving stress is crucial for enhancing its clinical utility.

### Mechanism of Stress Relief

The mechanism underlying hypnosis involve complex interactions between cognitive, psychological, and physiological factors. Research has shown that the effectiveness of hypnosis is influenced by individual differences in suggestibility, attitudes, and expectations (Lynn et al., 2008). A biopsychosocial model of hypnosis posits that biological, psychological, and social factors collectively contribute to hypnotic responsiveness, which can lead to significant changes in stress perception and emotional states (Barabasz & Barabasz, 2008; Novy et al., 1995).

Numerous studies have demonstrated the efficacy of hypnosis in reducing stress-related symptoms. For instance, a systematic review found that six out of nine randomized controlled trials reported significant positive effects of hypnosis on stress reduction compared to control groups (Häuser et al., 2016). Additionally, meta-analytic evidence has highlighted stress reduction as one of the most consistently effective applications of hypnosis, with substantial effect sizes reported across various studies (Thompson et al., 2019). The physiological effects of hypnosis further support its role in stress relief. Research indicates that hypnosis can lead to reductions in heart rate and blood pressure, as well as alterations in brain activity associated with relaxation and reduced anxiety (Yüksel et al., 2013; Landry et al., 2017). Furthermore, studies have shown that individuals who are highly suggestible experience more pronounced benefits from hypnotic interventions, suggesting that personal characteristics play a critical role in therapeutic outcomes (Bongartz et al., 2002; Fisch et al., 2020).

This study aims to investigate the association between individuals' perceptions and attitudes towards hypnosis and the resulting effects on stress relief following a brief hypnotic session. By

focusing on a randomly selected sample of participants, we seek to provide insights into how these attitudes influence emotional relief and overall mental well-being. The research will utilize a structured approach to assess changes in self-reported stress levels and emotional states, utilizing the Attitudes Towards Hypnosis Questionnaire to gauge participants' beliefs before and after the intervention. Ultimately, this study aspires to clarify the potential of hypnosis as an effective method for improving mental health outcomes.

## **Methodology**

### Participants

A total of 52 subjects were randomly enrolled in this study through an advertisement campaign promoting stress relief via either psychological method or hypnosis. Participants were recruited from diverse backgrounds to ensure a representative sample.

### Procedure

Each subject was first provided with a 4-minute warm-up exercise and then participated in a 21-minute hypnotic session through a recording produced by a certified hypnotherapist. The recording did not only guide them to relieve stress, but also to complete a secret disclosure task. Before the session, subjects were directed to choose their preferred color paper and drew their preferred shapes on the paper without telling the experimenters. The color paper provided were red, blue and yellow. The choice of shapes were limited to rectangle, circle and triangle. The task for subject is to hide their choice during the hypnotic session, where the hypnotherapist will guide the subjects to disclose their choices. Subjects were told that a 20-dollar coupon will be rewarded with successful hiding. The task is designed to test if the common myth of disclosing secret is true about hypnosis.

### Instruments

To assess participants' perceptions and attitudes towards hypnosis, the Attitudes Towards Hypnosis Questionnaire was employed. This validated instrument measures various dimensions of belief regarding hypnosis and captures any changes following the hypnotic experience.

Following the session, each participant completed a questionnaire that included:

- Self-ratings of immediate stress levels
- Self-assessments of specific emotions
- Reflections on thoughts and beliefs about hypnosis

#### *Attitudes Towards Hypnosis Questionnaire*

The Attitudes Towards Hypnosis Questionnaire was utilized to measure baseline attitudes and any changes following the hypnotic intervention. This validated instrument consists of multiple items designed to capture various dimensions of participants' beliefs about hypnosis.

#### *Self-Rated Stress Level Score*

The self-rated Stress Level score is a 7-point scale, which is from point 0 (without any stress) to point 6 (highest level of stress). Higher score implies higher level of immediate stress reported.

#### *Self-Rated Impression Score*

The self-rated impression (SRI) score is a 6-point scale, which is from point 1 (Negative) to point 6 (Positive). Higher score implies more positive impression to hypnosis.

### Data Collection

Demographic information was collected from all participants alongside their questionnaire responses. Observations made by the research team during the hypnotic sessions were also documented for further analysis.

### Statistical Analysis

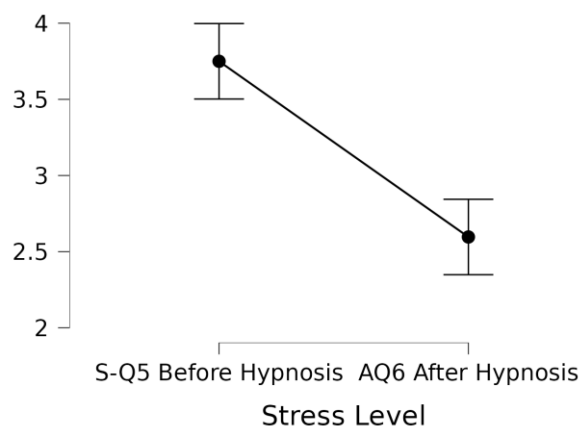
Statistical analysis were conducted using the Statistical Package R and JASP software. The analysis included measures of central tendency (mean, median), variation (standard deviation), and measures of association (correlation coefficients) among variables. The primary variables analyzed included demographic information, parameters related to participants' experiences with hypnosis, and observational data recorded by the research team.

Descriptive statistics were first computed to summarize participant demographics and baseline attitudes towards hypnosis. Changes in self-rated stress levels and emotional states pre- and post-hypnosis were analyzed using paired t-tests or Wilcoxon's signed-rank tests, depending on data distribution. Additionally, correlations between attitudes towards hypnosis and procedural outcomes were assessed using Pearson or Spearman's correlation coefficients as appropriate.

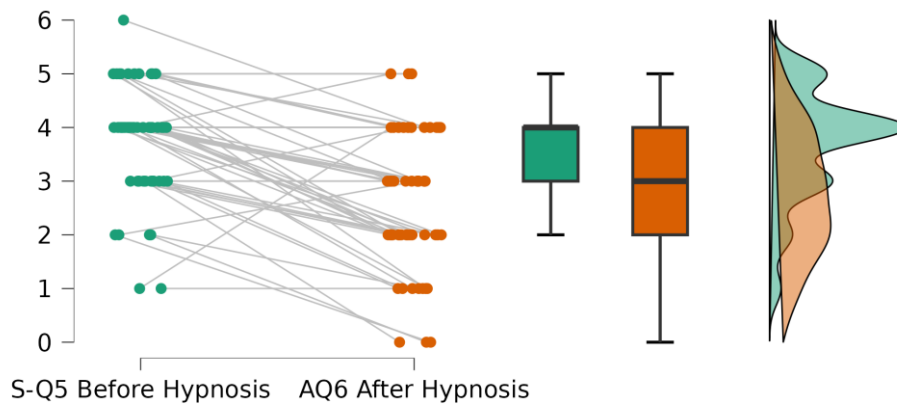
This comprehensive statistical approach aims to elucidate the relationships between perception, attitude, and outcome in the context of hypnosis, contributing valuable insights into its therapeutic efficacy.

### **Experimental Results**

#### The Stress Relief Effect of a 21-minute Hypnosis Experience

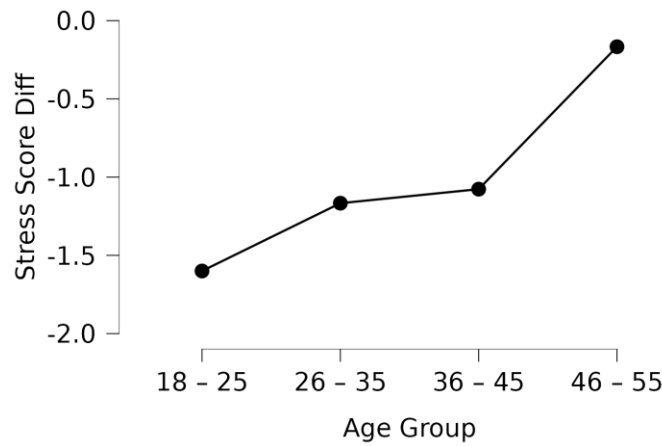


Our study has shown that a 21-minute hypnosis session is sufficient to receive significant stress reduction effect. In the experiment, participants had undergone a single hypnosis experience of 21 minutes and had reported an average decrease in self-rated stress levels from 3.75 (1.046) to 2.6 (1.287) (Wilcoxon signed-rank test  $z = 833$ ,  $p < 0.01$ ).



*Age difference*

The study also indicated that younger participants showed greater improvements in stress scores after the hypnosis experience, suggesting that younger individuals may benefit more from hypnosis as a method of stress relief. Overall, these findings suggest that hypnosis may be effective in reducing participants' stress levels.



**Table 2. Stress Improvement after Hypnotic Session by Age Group**

	Improvement in SR Hypnosis			
	Valid	Missing	Mean	Std. Deviation
18 – 25	15	0	-1.6	0.986
26 – 35	18	0	-1.167	0.985
36 – 45	13	0	-1.077	1.754
46 – 55	6	0	-0.167	0.983

*Implication*

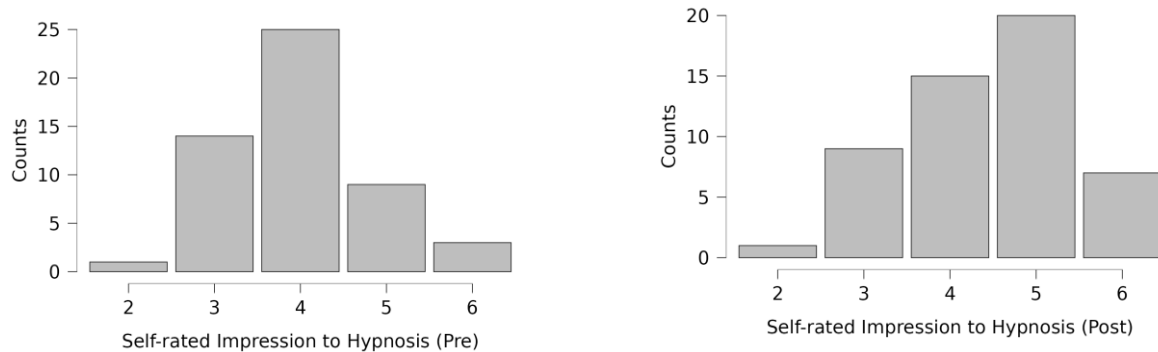
It is evident that hypnosis have a positive impact on reducing stress as psychological intervention measure while age could be a moderator. The difference of stress reduction effects may lie on the varying perceptions of different cohorts towards hypnosis. We then explore the impression and attitudes of subjects towards hypnosis.

### Impression and Attitudes Before and After Experiencing the Stress Relief Hypnosis

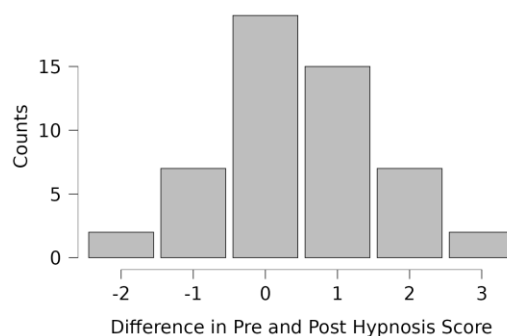
Impression and attitudes towards hypnosis could largely improve after an authentic experience of a 21-minute session. In our experiment, we asked the participants to rate and assess their impression and attitudes before and after the hypnosis session.

#### *Self-Rated Impression Score*

The self-rated impression (SRI) score is a 6-point scale, which is from point 1 (Negative) to point 6 (Positive). Higher score implies more positive impression to hypnosis. The average pre-hypnosis SRI score was 3.98 (0.874) with the range from 2 to 6. After experiencing a single session of hypnosis, the same question was asked again. The average post-hypnosis SRI score was 4.44 (0.998) with the range from 2 to 6. The improvement of the self-rated impression after a single session of hypnosis was significant statistically (Wilcoxon signed-rank test  $z= 134.5$ ,  $p < 0.01$ ). The improvement is also reflected to the measurement of Median (Baseline Median = 4, Post Median = 5), which is consistent with the result mentioned above.



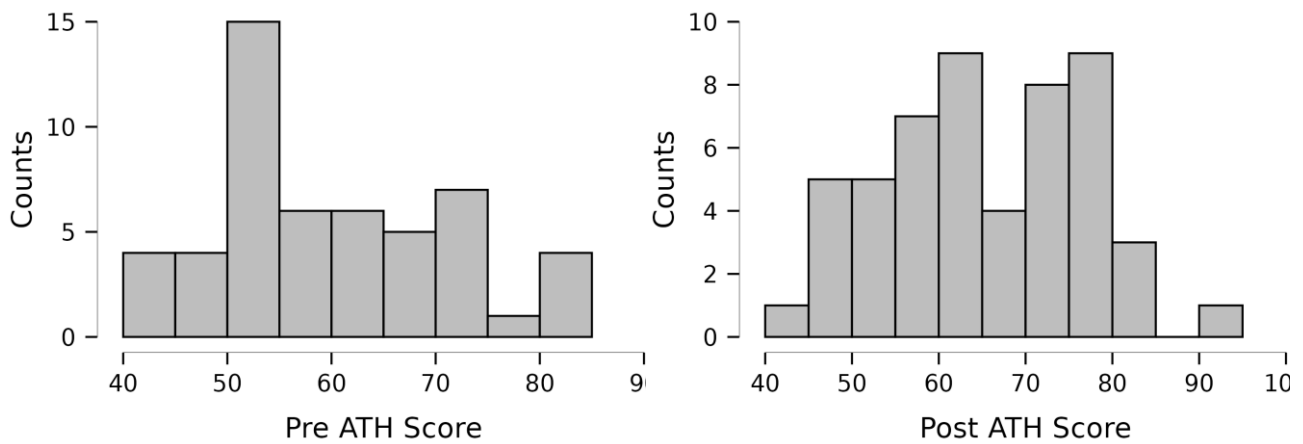
Furthermore, around half (46.1%) of the participants rated higher SRI score compare with the baseline SRI score, implied that majority of the participants had positive hypnotic experience.



#### *Attitude Toward Hypnosis Score*

The Attitude Toward Hypnosis (ATH) Score is a measurement tool in assessing a person's attitude toward hypnosis. The scale is calculated based on 14 statements related to hypnosis, and each statement are rated from 1 (disagreed strongly) to 7 (agreed strongly). Higher score of ATH reflects

more positive attitude, with the maximum score of 98. The baseline average ATH score was 60.48 (11.42) with range from 45 to 85. After the hypnosis session, the participants were asked to rate the same set of statements in ATH and the average after-session ATH score was 65.69 (11.74) with range from 49 to 91.



The average attitude toward hypnosis score had increased 8.6% (M.D. = 5.212) comparing with the baseline ATH score. This improvement was confirmed statistically (Wilcoxon signed-rank test  $z=1056$ ,  $p < 0.01$ ) that is not due to random error.

**Table 1. Score of the individual statement in the Attitude Toward Hypnosis (ATH) measurement (N = 52)**

Statements	Pre-experiment Mean (SD)	Post-experiment Mean (SD)
1. I find the whole idea of becoming hypnotised an attractive prospect.	4.712 (1.177)	4.827 (1.248)
2. I would like to become deeply hypnotised	5.135 (1.415)	5.558 (1.364)
3. I would not mind being known as someone who can be deeply hypnotised	4.808 (1.534)	5.308 (1.408)
4. I am totally open to being hypnotised	5.135 (1.428)	5.654 (1.356)
5. One's ability to be hypnotised is a sign of their creativity and inner strength	3.904 (1.302)	4.538 (1.565)
6*. I wonder about the mental stability of those who become deeply hypnotised	3.173 (1.424)	2.635 (1.495)
7*. Those who are easily hypnotised are weak people	2.096 (1.257)	2.019 (1.379)
8. Those who can become deeply hypnotised are as normal and well adjusted as anyone	5.096 (1.39)	5.308 (1.528)
9*. Intelligent people are the least likely to get hypnotised	2.096 (1.176)	1.865 (1.299)
10*. I have some apprehensions about hypnosis and being hypnotised	3.731 (1.61)	3.096 (1.587)
11*. If someone attempted to hypnotise me, I would tend to hold myself back rather than let myself get carried away by the process	3.308 (1.336)	3.269 (1.457)

12. I am not afraid of becoming hypnotised	4.808 (1.442)	5.25 (1.399)
13*. I am wary about becoming hypnotised because it means giving up my free will to the hypnotist	4.269 (1.548)	3.673 (1.581)
14*. A deeply hypnotised person is robot-like and goes along automatically with whatever the hypnotist suggests	3.442 (1.776)	3.192 (1.794)

The notion asterisk \* mean the statement(s) are reverse scoring

Further analyzing each individual statements, all statements have different levels of improvement after experiencing the single session of hypnosis (Table 1). Each statement in ATH questionnaire is measuring of one of the dimensions, which are positive beliefs, mental stability, and fearlessness (Nicholas et. al, 1987). In our experiment, most of the subjects had positive changes in the dimension of positive beliefs after receiving the single hypnotic session.

**Table 2. Significant Differences in Attitudes Towards Hypnosis of the Experimental Group with Corresponding Dimensions (N = 52)**

		Wilcoxon signed-rank test
	2. I would like to become deeply hypnotised	$z = -2.824, p < 0.01$
Positive Beliefs	3. I would not mind being known as someone who can be deeply hypnotised	$z = -3.606, p < 0.001$
	4. I am totally open to being hypnotised	$z = -3.924, p < 0.001$
	5. One's ability to be hypnotised is a sign of their creativity and inner strength	$z = -2.907, p < 0.01$
Mental Stability	6*. I wonder about the mental stability of those who become deeply hypnotised	$z = 2.655, p < 0.01$
	10*. I have some apprehensions about hypnosis and being hypnotised	$z = 2.908, p < 0.01$
Fearlessness	12. I am not afraid of becoming hypnotised	$z = -2.379, p < 0.05$

The notion asterisk \* mean the statement(s) are reverse scoring

### Sub-Group Findings

#### i. Age Factor

While the average ATH score and self-rated impression score to hypnosis shown significant improvement after the single hypnotic session, the level of improvement varies across age groups (Table 3). In our study, the younger subjects showed greater improvement in the self-rated impression score to hypnosis while older subjects showed less improvement or slightly opposite changes with other age group. It implies that the elder group may be more reluctant to new experience.

**Table 3. Score Improvement after Hypnotic Session by Age Group**

	Improvement in SR Hypnosis				Difference in ATH Score	
	Valid	Missing	Mean	Std. Deviation	Mean	Std. Deviation
18 – 25	15	0	0.8	1.207	5.667	8.05

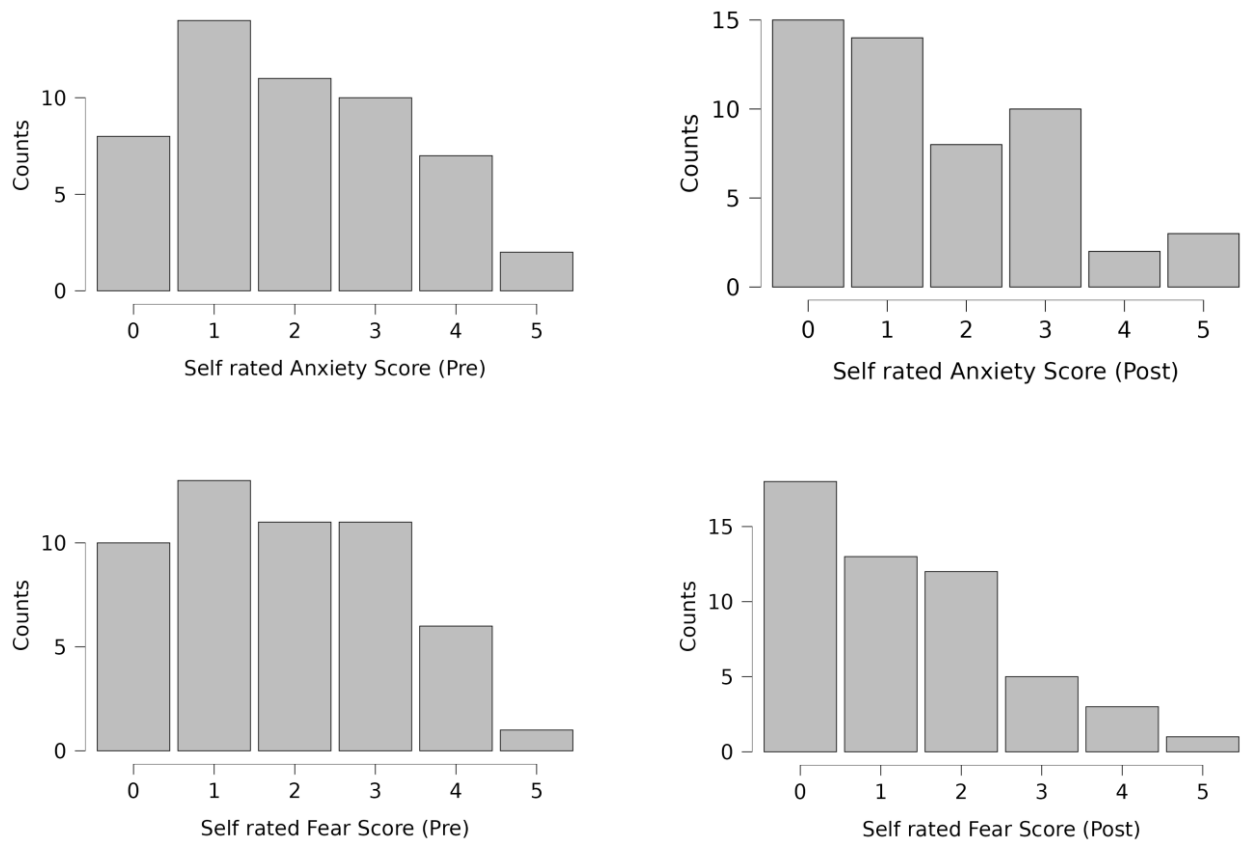


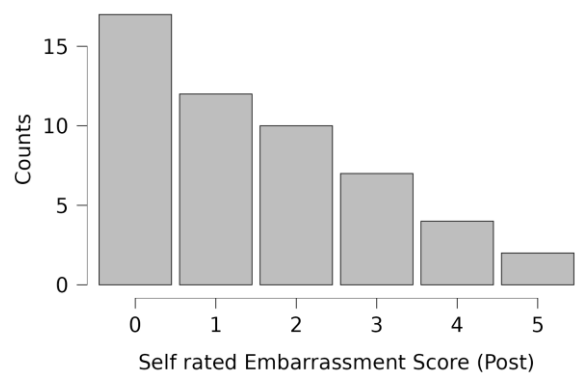
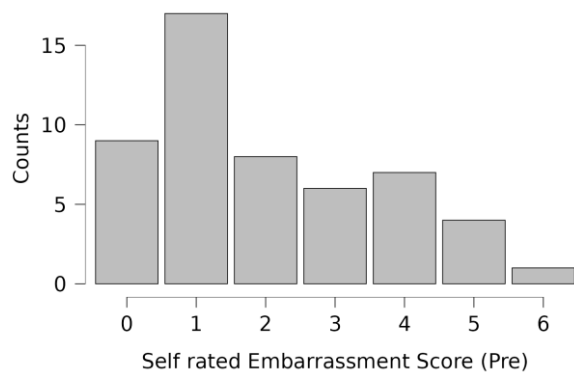
26 –						
35	18	0	0.667	1.188	5.056	7.81
36 –						
45	13	0	0.077	0.954	4.308	9.56
46 –						
55	6	0	-0.167	0.753	6.5	5.822

ii. Self-Rated Score related to the Emotions in Hypnosis

Anxiety, fear, and embarrassment were the top-rated emotions someone experienced when imagining being hypnotized. In the experiment, the participants were asked to rate the level of intensity of particular emotions before and after the hypnotic session. The results showed that majority of the participants rated 0, 1, and 2 across different emotions (63.5% in Anxiety, 65.4% in Fear and embarrassment) before the hypnosis session. After the hypnotic session, all self-rated emotional intensity scores had 0.5 to 1 point decrease in median (Anxiety and Fear:  $M_{Pre} = 2$  and  $M_{Post} = 1$ ; Embarrassment:  $M_{Pre} = 1.5$  and  $M_{Post} = 1$ ), indicate that the intensity of the emotions were reduced after experiencing the hypnosis.

**Table 4. Distribution Plot of Self Rated Level of Intensity of Different Emotions**





### *Implication*

General impression towards hypnosis have improved after having the authentic experience with intensity of negative emotions being reduced. However, given the initially high intensity of negative emotions towards hypnosis, people may be reluctant to choose it as one of the psychological intervention measures. The initial negative feelings towards hypnosis may be attributed to the fallacy as shaped by media. We would like to further discuss on how our research could challenge these fallacies.

### **Further Discussion**

#### Critical Examination of Three Persistent Fallacies Regarding Hypnosis: A Data-Driven Perspective

Using hypnosis as psychological intervention has long been the subject of misunderstanding and skepticism, which have been further fueled by sensationalized media portrayals and cultural myths. However, recent data from our study provide insights that challenge three pervasive misconceptions about hypnosis.

#### *Control over the subject's actions and thoughts*

One of the most pervasive myths surrounding hypnosis is the assumption that the hypnotherapist has absolute control over the subject's actions and thoughts. Our findings indicate that this is not accurate. Out of the 52 participants who have attended the stress relief hypnosis experience, 41 or 78.8% of them successfully kept the secret during the session by either being silent (37) or lying (4). 6 of them partially leak the secret while 5 of them fully disclosed. To understand the reasons behind the behavior, we conducted a questionnaire at the end of the session. For those who have partially or fully disclosed the secret, the major reasons are “the content was not important” and they “forget to keep secret”. It demonstrates that the participants have freewill to decide on the importance of the assigned secret and whether or not to keep it during hypnosis. We may predict that when it comes to the information that subjects identified as important in their real life, e.g. bank account password, they will be more motivated to keep the secret. On the other hand, for those who successfully kept the secret in our research, the major reason is “they believe they hadn’t been hypnotized” while they keep the control of their own behavior. Interesting fact comes when even majority think they are not hypnotized, majority of them have reported reduced stress level with significant decrease in average self-rated stress level from 3.75 to 2.6. The finding matches with clinical observation that sometimes the subjects do not consciously aware of being hypnotized despite the effect. It also shows that hypnosis is a voluntary process whereby participants retain complete control over their behaviors and verbal output while in a relaxed, trance-like state. In contrast to the notion that hypnosis is a form of control, the hypnotherapist's role is that of a facilitator, guiding the subject in the exploration of their emotions and mental state. This process

enables individuals to address emotional issues in a proactive manner, rather than rendering them passive or helpless.

This myth is likely the result of fictionalized portrayals in films and television shows, where hypnosis is often depicted as a tool of manipulation. While such dramatizations may be entertaining, they do not accurately reflect the reality of clinical hypnosis. The sensationalist headlines of certain news stories, such as "Hypnosis Scams," often lead the public to associate hypnosis with coercive techniques involving drugs or other substances. Our findings align with the growing consensus within the psychological community that hypnosis is a therapeutic tool, not a form of mind control. By challenging this misconception, we aim to reduce public fear and hesitation around hypnosis. With accurate knowledge, people are more likely to seek out this valuable mental health resource, understanding that it is a collaborative and conscious process aimed at emotional relief and self-improvement.

### *Darkness required*

A second pervasive myth is that hypnosis must occur in a darkened room with the subject in a recumbent position. This assumption is closely linked to the erroneous notion that hypnosis is analogous to sleep. Indeed, hypnosis can occur in a well-lit environment with the subject comfortably seated. In our research setting, the stress relief hypnosis experience was conducted in a bright room with sufficient exposure of light. Subjects were directed to sit on the chair with comfortable gesture. Despite the setting, significant stress reduction effect was found. It indicates that participants were able to enter a hypnotic state without the necessity of dim lighting or a reclining position, thereby refuting the hypothesis that such conditions are indispensable for the efficacy of hypnosis.

The association between darkness, reclining, and hypnosis may be attributed to the fact that these conditions are analogous to those that facilitate sleep. However, these conditions are not indispensable for the induction of hypnosis. In a clinical setting, it is often optimal for subjects to remain in a seated and alert position in a brightly lit room. This allows for a more discernible differentiation between the hypnotic state and sleep, thus reducing confusion about the hypnotic process and facilitating the maintenance of a restful night's sleep.

Furthermore, the capacity to induce hypnosis under such circumstances permits greater flexibility in its implementation. For instance, individuals experiencing stress or anxiety may engage in self-hypnosis in their everyday environments, such as during their commute home on public transportation. This practical advantage highlights the versatility of hypnosis as a tool for emotional regulation, offering an accessible and portable method of stress relief.

By dispelling the notion that hypnosis necessitates particular physical circumstances, we expand the scope for its utilization. Furthermore, this can assist individuals in recognizing that hypnosis is not a means of inducing sleep but rather a method of promoting relaxation and emotional processing in a conscious state.

### *Commanding and intensive process*

The final myth that we seek to refute is the assumption that hypnosis is a rapid and intensive process, often depicted with sudden movements or commands. Although such portrayals may be effective for dramatic performances or entertainment, they do not accurately represent the therapeutic use of hypnosis. In our experimental setting, we played 2 recordings, one lasts for 4 minutes, which is a practice before the hypnosis that acts as a cue and allows the subjects to be

familiar with the following experience. We then played the formal stress relief hypnosis recording which lasts for 21 minutes. We adapted this approach to allow participants to comfortably enter the hypnosis state which matches with the clinical setting that aims to relieve negative emotions instead of serving entertainment purpose. The final results matches with our aim with significant reduction in self-reported stress. It demonstrates that hypnosis is a gradual and systematic process, designed to facilitate feelings of safety, relaxation, and control in individuals.

The emphasis on rapid inductions and sudden actions in stage hypnosis contributes to the misconception that all hypnosis is performed in this manner. In practice, a qualified hypnotherapist will take the time to ensure that the client is comfortable and at ease, employing techniques that facilitate gradual relaxation. This facilitates the creation of a secure environment for the resolution of emotional challenges, thereby fostering long-term emotional well-being rather than immediate, dramatic changes.

It is of particular importance to refute this misconception in order to promote mental health acceptance, particularly in regions such as Greater China, where hypnosis may still be met with skepticism. By presenting hypnosis as a calm, patient, and professional practice, it is our hope that greater acceptance will be achieved for this as a valid therapeutic tool. Furthermore, it is imperative that the hypnosis industry disseminates accurate information through various media outlets to facilitate public comprehension of the true nature of the practice.

The findings of this study contribute to the ongoing effort to correct public misconceptions about hypnosis. By addressing myths related to control, environment, and intensity, we can foster a deeper understanding of hypnosis as a safe, voluntary, and adaptable therapeutic tool. As public perception shifts toward a more accurate understanding of hypnosis, the field has the potential to become a widely accepted and valuable option for mental health care.

## **Conclusion**

In summary, as a psychological intervention, hypnosis can help individuals to manage stress while having more exposure to the experience can improve attitudes towards it. While breaking the myths on hypnosis, our paper aims to promote hypnosis as a psychological intervention that participants can better cope with challenges and stress in daily life through this state of deep relaxation and focus.

Future research could further explore the effects of hypnosis in different populations and contexts, as well as comparative studies of hypnosis with other psychological interventions. Furthermore, delving deeper into the mechanisms and effects of hypnosis from physiological and psychological perspectives could help elucidate how hypnosis influences brain activity and psychological function, further determining its effectiveness and applicability.

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