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Does 'hypnosis' by any other name smell as sweet? The efficacy of 'hypnotic' inductions depends on the label 'hypnosis'

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Abstract

Hypnosis is associated with profound changes in conscious experience and is increasingly used as a cognitive tool to explore neuropsychological processes. Studies of this sort typically employ suggestions following a hypnotic induction to produce changes in perceptual experience and motor control. It is not clear, however, to what extent the induction procedure serves to facilitate suggested phenomena. This study investigated the effect on suggestibility of (a) a hypnotic induction and (b) labelling that procedure 'hypnosis.' Suggestibility of participants was tested before and after an adapted hypnotic procedure, which was either labelled as 'hypnosis' or as 'relaxation.' The hypnotic procedure produced a modest increase in suggestibility when it was called 'relaxation,' but a very significant increase if it was labelled 'hypnosis.' The results are important for both clinical and experimental applications and indicate that labelling an induction procedure 'hypnosis' is an important determinant of subsequent responses to suggestion.

Keywords: Suggestion; Suggestibility; Hypnosis; Hypnotizability; Induction; Labelling; Expectancy; Consciousness; Involuntariness; Effect size

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1. Introduction

What's in a name? that which we call a rose,
By any other name would smell as sweet.
W. Shakespeare, *Romeo & Juliet*, 1595–96.

Hypnosis procedures are able to produce dramatic, but reversible, changes in the way in which individuals experience themselves, the environment and the voluntariness of their own actions. The resulting hypnotic phenomena present challenges for our understanding of conscious experience but also hold the promise of new insights. Commenting on a recent study by Haggard, Cartledge, Dafydd, and Oakley (2004) in which hypnosis was used to create the experience of involuntariness during the execution of a voluntary finger movement Pockett (2004) concluded that the reported effects had "far-reaching implications for questions about the nature of hypnosis, the role of belief in brain function and the means by which we perceive our own body movements, as well as the neurophysiology of free-will" (p. 624).

Despite its intrinsic interest, its potential as an adjunctive procedure in therapy and more than 200 years of scientific investigation, hypnosis has remained an elusive concept for science and on the periphery of mainstream psychology. More recently, however, it has become accepted that cognitive theories of willed and automatic behaviour (e.g., Bargh & Barndollar, 1996; Hilgard, 1977; Norman & Shallice, 1986; Shallice, 1988) are central to an understanding of the mechanisms that underlie hypnotic phenomena and contemporary scientific theories of hypnosis (e.g., Brown & Oakley, 2004; Hilgard, 1977; Kirsch & Lynn, 1997; Oakley, 1999; Spanos & Chaves, 1989; Woody & Bowers, 1994) based on these cognitive concepts provide promising frameworks within which we can use hypnosis procedures to explore, manipulate, and control normal neuropsychological processes. There have also been recent attempts to assess systematically the efficacy of hypnosis as an adjunct to psychological and pharmacological therapies, (e.g., Kirsch, Montgomery, & Sapirstein, 1995; Patterson & Jensen, 2003) as well as its cost-saving role in health care (e.g., Lang et al., 2000; Lang & Rosen, 2002).

Most importantly though in relation to the study to be presented below, there has also been an upsurge in interest in the use of hypnosis as a tool to study cognitive phenomena. Recent studies have integrated experiential–phenomenological methods and neuroscience (e.g., Price, Barrell, & Rainville, 2002; Singer et al., 2004) and this has undoubtedly contributed to a supportive climate for using a procedure such as hypnosis in this way as a cognitive tool. Hypnosis has been shown to modulate pain perception (Faymonville et al., 2000; Rainville, Duncan, Price, Carrier, & Bushnell, 1997); visual perception (Kosslyn, Thompson, Constatini-Ferrando, Alpert, & Spiegel, 2000); auditory perception (Szechtman, Woody, Bowers, & Nahimas, 1998); attention (MacLeod & Sheehan, 2003; Raz, Shapiro, Fan, & Posner, 2002); intentionality (Halligan, Athwal, Oakley, & Frackowiak, 2000; Oakley, Ward, Halligan, & Frackowiak, 2003; Ward, Oakley, Frackowiak, & Halligan, 2003); and awareness of control (Blakemore, Oakley, & Frith, 2003; Haggard et al., 2004). The fact that many of these studies have incorporated functional neuroimaging techniques has been particularly influential in raising the profile of hypnosis as an effective cognitive tool.

With the increasing use of hypnosis in clinical practice and the harnessing of hypnosis by cognitive neuroscientists as a means of illuminating mental processes, a central issue that arises for

the practical application of hypnosis concerns the use of hypnotic induction procedures and their efficacy. Hypnotic inductions are communications used with the intention of facilitating the elicitation of hypnotic phenomena by means of suggestion (Edmonston, 1991). However, research has yet to establish the role of induction procedures in achieving these suggested effects or the mechanisms by which they might exert their influence (Braffman & Kirsch, 1999; Kirsch & Braffman, 2001; Lynn, Vanderhoff, Shindler, & Stafford, 2002).

One of the key elements in formal hypnotic induction procedures is the use of the label 'hypnosis.' Hypnotic inductions are usually explicitly labelled as such and as a consequence participants' perception of inductions are influenced by their lay beliefs, expectations and motivations concerning hypnosis, and its effects on behaviour and experience. Glass and Barber (1961) found that when other variables were held constant, a higher level of responsiveness to suggestion was obtained when the experimental situation was defined to participants as 'hypnosis' rather than as a 'control' experiment. Barber and Calverley (1964, 1965) conducted a series of studies that were aimed to evaluate the effects on suggestibility of the labelling of the situation as hypnosis. In these studies, participants were assigned to a 'hypnosis' or 'control' group and were informed that they were to be hypnotised or not hypnotised. Although participants in a 'hypnosis' group were informed that they were to be hypnotised, these participants as well as those in a 'control' group, *did not* receive a hypnotic induction. They found that participants told they were to receive hypnosis were in general more responsive to standardised test suggestions than those told that they had been assigned to a control group.

These results indicate that the hypnotic label is capable of increasing responsiveness to suggestion, even in the absence of formal induction procedures. A recent study by Lynn et al. (2002) supports this view reporting findings that indicate that ''hypnotic inductions are no more effective than suggestions alone elicited in a hypnotic context'' (p. 239). Indeed, there is evidence to suggest that non-hypnotic or 'neutral' procedures labelled as hypnosis may produce equivalent levels of 'hypnotic' responsiveness (e.g., Baker & Kirsch, 1993; Council, Kirsch, Vickery, & Carlson, 1983; Glass & Barber, 1961).

A question that has yet to be addressed, however, is whether hypnotic inductions themselves continue to be as effective when not labelled 'hypnosis.' To our knowledge, the effect of a standardised hypnotic induction, independent of the label 'hypnosis' has not been previously examined. Given that hypnotic inductions seem likely to be increasingly used clinically and experimentally, it is essential to determine the degree to which the effect of hypnotic induction procedures is a function of the technique itself or due to the label 'hypnosis.'

The current study aimed to investigate systematically the effect that a hypnotic induction has on responsiveness to suggestion and to determine the extent to which the magnitude of this effect is altered by labelling the procedure 'hypnosis.' Participants were initially presented with a suggestibility measure in the absence of any mention of hypnosis. They were then given either a hypnotic induction which was explicitly labelled as relaxation (RX condition); a hypnotic induction which was explicitly labelled as hypnosis (HYP condition); or an extract from a psychology text book (CON condition) before being presented with the suggestibility measure for a second time. Behavioural, subjective, and experienced involuntariness measures of responsiveness to suggestion were obtained. Naivety concerning hypnosis was maintained throughout the study for participants in all three groups with the sole exception that the word 'hypnosis' was used when introducing the induction procedure to those in the HYP condition. Importantly, the set of expectations for those

participants involved in the 'hypnotic' procedure labelled hypnosis (HYP condition) were different to those involved in the 'hypnotic' procedure labelled relaxation (RX condition).

2. Method

2.1. Design

A 3 × 2 (condition × context) between-within design was employed, with induction condition as the three level independent variable (CON vs HYP vs RX). Changes in behavioural, subjective, and experienced involuntariness suggestibility scores from the first suggestibility assessment (SA_1) to the second (SA_2) were the principle dependent variables.

2.2. Instruments

Suggestibility was measured on the Waterloo-Stanford Group Scale of Hypnotic Susceptibility Form C: (WSGC; Bowers, 1993, 1998; Kirsch, Milling, & Burgess, 1998). The WSGC is a group adaptation of the individually administered Stanford Hypnotic Susceptibility Scale, Form C (SHSS:C; Weitzenhoffer & Hilgard, 1962). The WSGC consists of twelve test suggestions, however, four test suggestions were deemed unsuitable for repeated presentation (age regression; negative visual hallucination; posthypnotic suggestion; and amnesia), and consequently were not used in this study. The adapted WSGC[1] consisted of eight suggestions in total and included two ideomotor suggestions (hand lowering; moving hands together), two challenge suggestions (arm rigidity; arm immobilization), and four cognitive suggestions (dream, mosquito hallucination; music hallucination; and taste hallucination).

Two versions of the scale were created with the same items in different testing orders, which were counterbalanced and presented across the conditions. However, the relative order of ideomotor, challenge, and cognitive suggestions was always maintained across the two tests. The scale was used to measure suggestibility before the induction manipulation (SA_1) and after the induction manipulation (SA_2).

The scoring of suggestibility items was adapted from the WSGC, assessing both behavioural (Bowers, 1998) and subjective measures (Kirsch et al., 1998). Self-reported behavioural scores on the WSGC are obtained by having participants complete a questionnaire on which they indicate whether they had made the behavioural response called for by the suggestion (0 = *no*; 1 = *yes*). Behavioural responsiveness to suggestion were assessed as the sum of these ratings (range 0–8). Subjective scores on the WSGC are obtained by having participants rate the degree to which they felt the subjective effects called for by each suggestion (e.g., arm lowering, arm rigidity) on a 5-point Likert scale (1 = *not at all*; 5 = *to a great degree*). Subjectively experienced responsiveness to suggestion was expressed as the sum of these ratings (range 8–40).

Existing scales, with the exception of one (the Carleton University Responsiveness to Suggestion Scale: CURSS: Spanos, Radtke, Hodgins, Stam, & Bertrand, 1983) do not measure whether

[1] Although the validity of the WSGC is well established, the authors acknowledge that the adapted WSGC used in the current study is yet to be fully validated.

responses to suggestions are experienced as involuntary or not, i.e., the 'classic suggestion effect' (Weitzenhoffer, 1953). Consequently, in addition to the behavioural and subjective scores of the WSGC, self-reported experienced involuntariness was assessed. The scoring of experienced involuntariness was adapted from the CURSS. Experienced involuntariness scores were obtained by having participants rate the degree to which their response to each suggestion was experienced as being involuntary (0 = *not at all*; 4 = *great degree*). In line with the CURSS, participants were only scored as experiencing involuntariness, for each suggestion, if the classic combination of behavioural occurrence and non-volitional experiencing occurred. Therefore, a score of 1 was given, if the behavioural indicator occurred and involuntariness was either rated moderate or rated high. Otherwise a score of 0 was given. Overall, experienced involuntariness of responding to suggestion was assessed as the sum of these ratings (range 0–8).

2.3. '*Hypnotic*' *inductions*

The hypnotic induction procedure administered was adapted from the one accompanying the WSGC, with the 20 mentions of 'hypnosis' and 'hypnotised' being changed to the words 'absorption' or 'absorbed.' This was done to maintain naivety concerning the nature of the experiment, as well as to retain the authenticity and nature of the induction, without using the words hypnosis. The words 'absorption/absorbed' were used, as the construct of absorption (Tellegen & Atkinson, 1974) is often cited as a core feature of hypnosis, and is widespread within the field. Traditionally it has represented the most significant point of convergence between theories of hypnosis (Spanos & Barber, 1974). Participants in the HYP condition and RX condition received identical hypnotic inductions with the only difference being that the hypnotic induction was either labelled 'hypnosis' or 'relaxation.'

For participants in the HYP condition, the re-worded 'hypnotic' induction was preceded by the following instructions, adapted from the instructions used by Braffman and Kirsch (1999):

> 'In this second part of the study, we want to assess your ability to experience the same suggestions, only this time we will ask you to experience them *whilst in hypnosis*. So in this version, the suggestions will be preceded by a *hypnotic induction* to help you become *hypnotised*.'

For participants in the RX condition, the same 'hypnotic' induction was preceded by the following instructions:

> 'In this second part of the study, we want to assess your ability to experience the same suggestions, only this time we will ask you to experience them *whilst being relaxed*. So in this version, the suggestions will be preceded by *relaxation instructions* to help you become *relaxed*.'

Participants in the CON condition did not receive a 'hypnotic' induction. Instead, they received an extract on the capacities of the newborn infant from 'Hilgard's Introduction to Psychology' (Atkinson, Atkinson, Smith, Bem, & Nolen-Hoeksema, 2000, p. 73–76). The book extract was preceded by the following instructions:

'In this second part of the study, we want to assess your ability to experience the same suggestions. Before the second part of the study begins, we would like you to concentrate and listen to the words of an extract from a book.'

2.4. Participants

In all 105 participants (58 males and 47 females) took part in this study. All participants were undergraduate university students, with the majority being recruited from university College London. The age of participants ranged from 18 to 37 years, with a mean age of 22.41 years ($SD = 3.82$). All signed up for an experiment entitled, "The Influence of State and Context on Behaviour," and participated in one of the following three conditions: CON ($N = 35$, 21 = male, 14 = female); HYP ($N = 35$, 19 = male, 16 = female) or RX ($N = 32$, 18 = male, 17 = female). Participants were randomly allocated to conditions on the day of assessment and were tested in small groups of 2–5 participants. Psychology students were excluded from this study due to their experience with hypnotic procedures during their course and familiarity with the investigators.

2.5. Procedure

After reading the study information sheet and providing consent, all participants were presented with SA_1. Participants were informed that it was a measure of imagination (see Barber, 1965; Braffman & Kirsch, 1999). After scoring SA_1, participants received a hypnotic induction that was either labelled as 'hypnosis' or 'relaxation' or no hypnotic induction at all, depending on which experimental condition they had been assigned to. SA_2 was then presented and behavioural, subjective, and experienced involuntariness measures of responsiveness to suggestion were scored. Finally, when all measures had been completed, participants were asked to respond to a set of questions that asked what they thought the experiment was about: (i) before they arrived at the testing session; (ii) after the first set of suggestions; and (iii) after the second set of suggestions. These questions were asked to assess participants' awareness of hypnosis or hypnotic-like procedures. All assessments and instructions were recorded on audiotape for maximum experimental control.

2.6. Data analyses

For each measure of suggestibility (behavioural, subjective, and involuntariness) a paired samples Student's t test was performed comparing suggestibility scores for the first suggestibility assessment (SA_1) with suggestibility scores for the second suggestibility assessment (SA_2). The effect of condition on changes in suggestibility was tested using a 3×2 (condition $\times$ context) between-within analysis of covariance (ANCOVA), taking suggestibility scores at SA_1 as the covariate. Planned comparisons (controlling for baselines scores through ANCOVA) were performed to determine any differences between the conditions with regard to each measure of suggestibility. A rejection region with at least a value of $p < .05$ was selected and used throughout (Tabachnick & Fidell, 2001).

3. Results

No participants from any of the three experimental conditions reported that the experiment may have been or was related to hypnosis after the first set of suggestions had been administered (SA_1). Naivety concerning the experiment involving 'hypnosis' and 'hypnotic procedures' was maintained throughout the study for the majority of participants in the 'Relaxation' and Control groups. Five participants from the 'Relaxation' group and three participants from the Control group reported that the experiment *might have* involved hypnosis after the second set of suggestions had been administered (SA_2). Means and correlations were calculated for both the full sample and the sub-sample of participants who reported no awareness or suspicion that the study concerned hypnosis. The patterns of means and correlations were virtually identical for the two data sets, so only analyses of the full sample are reported here.

As an important part of the analyses, quantification of the effect of condition on responsiveness to suggestion was calculated. Effect sizes, means, and standard deviations are presented in Table 1.

The ANCOVA for behavioural scores revealed a significant main effect for condition [$F_{(2,101)} = 3.94$, $p < .025$]. Planned comparisons (controlling for baseline scores through ANCOVA) revealed the change in behavioural suggestibility scores in the HYP condition was significantly different to that observed in the CON condition [$F_{(1,67)} = 8.23$, $p < .01$]. The difference between: (1) the RX and CON conditions [$F_{(1,67)} = 2.47$, p;= .12]; and (2) the HYP and RX conditions [$F_{(1,67)} = 0.78$, $p = .38$], on behavioural suggestibility change was not significant. Paired samples t tests indicated that behavioural suggestibility scores from $SA_1$to SA_2, significantly increased for the HYP condition [$t_{(34)} = 2.89$, $p < .01$] but not the RX condition [$t_{(34)} = 1.08$, $p = .29$]. A non-significant decrease in behavioural scores from SA_1 to SA_2 was found for the CON condition [$t_{(34)} = -0.39$, $p = .70$].

As with behavioural scores, the ANCOVA for subjective scores indicated a significant main effect for condition [$F_{(2,101)} = 21.31$, $p < .001$]. Planned comparisons revealed the change in subjec-

Table 1
Means (standard deviations) of responses to suggestions for the first suggestibility assessment (SA_1) and the second suggestibility assessment (SA_2)

	Behavioural			Subjective			Involuntariness		
	SA_1	SA_2	Effect size (d)[a]	SA_1	SA_2	Effect size (d)	SA_1	SA_2	Effect size (d)
CON	3.17 (1.40)	3.09 (1.76)	−0.05	19.34 (4.82)	18.94 (4.94)	−0.08	2.20 (1.41)	2.11 (1.47)	−0.06
HYP	3.14 (1.93)	4.06 (1.68)	0.51	19.46 (4.47)	25.80 (6.16)	1.18	2.11 (1.43)	3.71 (1.84)	0.97
RX	3.69 (1.83)	4.00 (1.93)	0.16	21.11 (5.48)	22.66 (5.77)	0.28	2.77 (1.66)	3.17 (1.99)	0.22

Note. Behavioural scores are ratings of behavioural responses to suggestions and are defined as the number of suggestions passed out of eight.
Subjective scores are ratings of degree to which participants felt the subjective effects called in each suggestion and were rated out of 40 (i.e., measured on a scale of 1–5 for each of the eight suggestions).
Involuntariness scores are ratings of subjective involuntariness of suggestions and defined as the number of suggestions passed out of eight.

[a] As recommended by Dunlap, Cortina, Vaslow, and Burke (1996) pooled standard deviations were computed using standard deviations for the means at SA_1 and SA_2, rather than using paired t test values. The latter gives an inflated estimate of effect sizes.

tive experience suggestibility scores was significantly different between: (1) the HYP and CON conditions [$F_{(1,67)} = 40.78$, $p < .001$]; (2) the HYP and RX conditions [$F_{(1,67)} = 13.07$, $p < .001$]; and (3) the RX and CON conditions [$F_{(1,67)} = 6.75$, $p < .025$]. Paired samples t tests, again as with behavioural scores, revealed a significant increase in subjective scores from $SA_1$to SA_2, for the HYP condition [$t_{(34)} = 6.79$, $p < .001$], but not the RX condition [$t_{(34)} = 1.97$, $p = .06$]. A non-significant decrease in subjective scores was found for the CON condition [$t_{(34)} = -0.71$, $p = .48$].

The ANCOVA for experienced involuntariness scores indicated a significant main effect for condition [$F_{(2,101)} = 17.56$, $p < .001$]. Planned comparisons revealed the change in experienced involuntariness suggestibility scores was significantly different between: (1) the HYP and CON conditions [$F_{(1,67)} = 40.45$, $p < .001$]; (2) the HYP and RX conditions [$F_{(1,67)} = 11.79$, $p < .001$]; and (3) the RX and CON conditions [$F_{(1,67)} = 4.06$, $p < .05$]. Once again, paired samples t tests indicated a significant increase in experienced involuntariness suggestibility scores from SA_1 to SA_2, for the HYP condition [$t_{(34)} = 7.35$, $p < .001$] but not the RX condition [$t_{(34)} = 1.69$, $p = .10$]. A non-significant decrease in experienced involuntariness scores was found for the CON condition [$t_{(34)} = -0.57$, $p = .57$].

4. Discussion

The purpose of this study was to assess the effect a hypnotic induction has on responsiveness to suggestion and determine the extent to which 'hypnotic' responsiveness to suggestions is affected by the induction procedure itself and the effect of labelling the procedure as 'hypnosis.' As in previous studies (Barber & Glass, 1962; Braffman & Kirsch, 1999; Brown, Antonova, Langley, & Oakley, 2001; Hilgard & Tart, 1966; Hull, 1933; Weitzenhoffer & Sjoberg, 1961), the present results indicate that a hypnotic induction increases suggestibility by a relatively small amount. However, this effect was moderated by whether the induction was labelled 'hypnosis' or 'relaxation.' Neither behavioural, subjective, nor involuntariness measures of responsiveness to suggestion significantly increased following the use of a hypnotic induction that was labelled as 'relaxation' (RX condition). In contrast behavioural, subjective, and involuntariness measures of responsiveness to suggestion, increased significantly following the use of the same hypnotic induction when it was labelled as 'hypnosis' (HYP condition). These results indicate that the significant effect hypnotic inductions have on suggestibility is dependent on the label 'hypnosis.'

The generalisability of results from studies, such as this one, involving hypnotic induction procedures is not without question. Although most studies use inductions that involve mental and physical relaxation, there is enormous variation in other components of procedures that are termed 'hypnotic inductions.' They may, for example, involve embedded suggestions for visual imagery or ideomotor responses (e.g., non-volitional eye closure) as well as instructions to remain alert or to relive experiences. It remains unclear, which if any of these, with the exception of the label 'hypnosis,' are necessary and which are redundant. Future research will need to address this issue through well-designed studies, using different hypnotic induction procedures. As noted by Oakley and Halligan (2005), this also raises a practical concern for studies involving hypnotic induction procedures, as it becomes essential to describe hypnotic procedures in detail, which is not consistently done in experimental or clinical studies.

Although this discussion so far, as well as previous research, has characterised the increase in suggestibility produced by hypnotic inductions as being small, but significant, this is not a true reflection of the efficacy of hypnotic inductions, as the size of the experimental effect has not been considered (Kirsch, 1997). Effect sizes allow us to calculate the relative magnitude of an experimental treatment (Rosnow & Rosenthal, 1996). Cohen (1992) describes effect sizes of: 0.20 as small; 0.50 as medium; and 0.80 as large. In the present study, the mean effect sizes of labelling a hypnotic induction 'hypnosis' on suggestibility varied from 0.51 (behavioural) to 1.18 (subjective) and thus fall clearly in the 'large' end of the range. In contrast, the mean effect sizes of the hypnotic induction procedure itself (i.e., not labelled 'hypnosis') on suggestibility varied from 0.16 (behavioural) to 0.28 (subjective) and are therefore to be regarded as 'small.' If we consider that the mean effect size for psychological treatments in general is 0.47 and the mean effect size of medical outcomes (other than mortality) ranges from 0.24 to 0.80 (Lipsey & Wilson, 1993), the effect of adding an induction that is perceived to be hypnosis (i.e., labelled hypnosis) is very substantial indeed.

Re-analysing the various samples reported by Barber and Calverley (1964, 1965), reveals that mean effect sizes of labelling a non-hypnotic or 'neutral' procedure 'hypnosis' vary from 0.29 to 0.50. These effects sizes are on the whole lower than the ones reported in the current study, which suggests that labelling a 'hypnotic' induction procedure 'hypnosis' has a greater effect on suggestibility than labelling a non-hypnotic procedure 'hypnosis.' A possible explanation for this may be that, despite the 'hypnotic' induction itself having only a small effect on suggestibility, induction procedures may enhance the credibility and perception of the definition of the situation as hypnosis. Future studies could incorporate a measure of 'typicality' to assess how authentic 'hypnotic' induction procedures are perceived to be.

In summary, the hypnotic induction itself only produced a moderate increase in responses to suggestions. However, the increase was significant if the induction procedure was labelled 'hypnosis.' On the basis of these data at least the extent to which suggestion affects conscious experience appears to depend more on the individual's perception that the context can be identified as 'hypnosis,' and on the beliefs and expectations that this raises, than it does on intrinsic properties of the induction procedure itself. This may also reassure both clinicians and researchers that they do not necessarily need to rely on elaborate inductions to produce suggested experiences (e.g., hallucinations, amnesia, and analgesia), as the most significant element of such inductions appears to be the label 'hypnosis.' The mean effect size of the label 'hypnosis' on suggestibility is considerable, indicating that if the label can be reasonably and plausibly applied to an appropriate clinical or experimental procedure that employs suggestion to achieve its effects, then it should be used. These results are also supportive of the substantial data on the clinical efficacy of procedures labelled as hypnosis when they are used as an adjunct to psychological and pharmacological therapies, which has been shown for many different conditions, including those which can be functional or psychosomatic in origin, or at least exacerbated by anxiety, stress or psychological factors (see Kirsch et al., 1995).

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