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What the public think about hypnosis and hypnotherapy: A narrative review of literature covering opinions and attitudes of the general public 1996-2016

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Summary

Objectives: To describe the public's understanding of hypnosis and openness to hypnotherapy.

Methods: A comprehensive search of English language peer reviewed journal articles from 1st January 1996-11th March 2016 was performed over 9 databases (Medline, PubMed, PsycARTICLES, CINAHL, Embase (excerpta medica), PsychInfo, Cochrane, Science citation index-expanded, Conference citation index) and a title-only search of Google scholar. 39 keyword combinations were employed: hypnosis, hypnotherapy, hypnotic, perception, beliefs, knowledge, view, opinion and understanding, in singular and plural where appropriate. A search of the bibliographies of eligible articles was undertaken.

Inclusion criteria – Articles containing original data regarding the general public's attitudes towards hypnotherapy or hypnosis.

Exclusion criteria - Non-therapy hypnosis (forensic, entertainment) materials and those concerned with groups likely to possess prior or professional knowledge of hypnosis, (hypnotists, clinicians and psychologists).

Analysis was conducted in line with the questions.

Results: 31 articles were identified, covering diverse populations. Most people believe that: hypnosis is an altered state which requires collaboration to enter; once hypnotized perception changes; hypnotherapy is beneficial for psychological issues and is supportive of medical interventions; hypnosis can also enhance abilities especially memory. People are open to hypnotherapy subject to validation from the psychological or medical establishment. Similarity of opinion is more apparent than difference.

Conclusion: Most people are positive towards hypnotherapy, and would consider its use under the right circumstances.

1. Introduction

The use of complementary and alternative medicine (CAM) is widespread in the UK with between 21-41% of people using some form of CAM every year.¹ Of the CAM approaches hypnotherapy enjoys only moderate popularity.² Hypnotherapy is however one of only a few CAM therapies included in National Institute of Health & Care Excellence (NICE) guidelines^{3,4} and enjoys the support of general practitioners.⁵ The public's lack of enthusiasm may be because they lack an adequate understanding of hypnotherapy, or that they may distrust it due to negative concepts derived from popular culture.^{6,7,8}

Numerous reviews have been conducted on hypnotherapy, covering such topics as: irritable bowel syndrome,⁹ chronic pain,¹⁰ cancer patients' symptoms,¹¹ insomnia,¹² labour pain,¹³ fibromyalgia,¹⁴ migraine,¹⁵ nausea,¹⁶ anxiety,¹⁷ and temporomandibular disorders.¹⁸ However no review covers the public's conception of hypnotherapy, despite nearly 80 years of research.^{19,20} The motivation behind previous public opinion research has varied, exploring how beliefs predict outcomes,²¹⁻²³ how changing attitudes may affect outcomes,^{24,25} how a patient group perceive hypnotherapy²⁶ and gathering data towards a general picture of CAM.²⁷ Some research has tried to get a picture of the beliefs of the general public^{28,29} but this is inevitably limited to a single population group or culture. A broad understanding of the general public's perception of hypnotherapy would provide valuable information for health practitioners considering referring to or offering hypnotherapeutic services and in particular those considering establishing services, either external to or within an existent healthcare framework.

Therefore the aim of this study is to use existing research to gain an understanding of:

- What people understand by the concept of 'hypnotizability': the ability to enter trance.

- What people understand by the state of hypnosis and the phenomena associated with it.
- Whether people have preferences and biases with regard to who conducts hypnotherapy and where.
- Whether certain population groups have differing perceptions of hypnotherapy.
- Whether people are open to hypnotherapy.

As hypnosis is currently poorly understood even amongst hypnotists,³⁰ only minimal interpretations of the validity of public opinion will be forwarded. A broad definition can be offered in that 'hypnosis' refers to an interaction between a hypnotist and one or more subjects in which the hypnotist focuses the attention of the subject away from their surroundings towards their inner experience and creates changes of perception and experience through suggestion.³¹ Hypnotherapy is when the suggestions are made towards a specific therapeutic outcome.³²

2. Materials and Methods

It was apparent from scoping the literature that several different assessment tools were used in different papers with variable, often uncomparable, outcome measures. In addition, a broad series of aims were proposed for the paper, which would be unachievable in a single systematic review. The narrative review approach, however, can allow the breadth and interpretation required, and was considered appropriate.³³

2.1 Inclusion and exclusion criteria

2.1.1 Types of studies – Studies that included definable cross sectional data, from 1st January 1996 to 11th March 2016, were included. The period was chosen as it covered a sizeable increase in CAM usage.^{34,35}

2.1.2. Type of participant - Adult participants (80% ≥18 years).

2.1.3 Inclusion Criteria - Articles were included if they contained original data regarding the general public's attitudes, opinions and perceptions of hypnotherapy or hypnosis. This did not extend to the characteristics of hypnotherapy users or non-user.

Only English language publications were included, this decision was driven by pragmatic considerations of time and resources.

2.1.4 Exclusion Criteria - Articles were excluded if they were about hypnosis used for non-therapy reasons, such as forensic hypnosis, used predominantly to recover memories in legal proceedings, or for entertainment purposes i.e. stage hypnosis. We excluded articles about groups with participants who predominantly had previous experience of hypnosis. We also excluded groups which were likely to have professionally formed opinions of hypnotherapy, including: hypnotists, who have direct experience; clinicians and post graduate level psychologists who are likely to have encountered hypnosis during training, by being approached by hypnotherapists promoting services or training, or through patient enquiry and as such will have been forced to formulate opinion with a professional slant. No exclusions were made on grounds of quality of study.

2.2 Search Strategy

Relevant literature was identified by a systematic review of computerized databases (Medline, PubMed, PsycARTICLES, CINAHL, Embase (excerpta medica), PsychInfo, Cochrane, Science citation index-expanded, Conference citation index) for English language articles in peer reviewed journals. Several key word combinations were employed (Hypnosis + Perception/s, Hypnosis + attitude/s, Hypnosis + belief/s, Hypnosis + Knowledge, Hypnosis + view/s, Hypnosis + Opinion/s, Hypnosis + understand/ing, Hypnotherapy + perception/s, Hypnotherapy + attitude/s, Hypnotherapy + Belief/s, Hypnotherapy + Knowledge, Hypnotherapy + View/s, Hypnotherapy + Opinion/s, Hypnotherapy + Understand/ing, Hypnotic + Perception/s, Hypnotic + attitude/s, Hypnotic + belief/s, Hypnotic + Knowledge, Hypnotic + view/s, Hypnotic + Opinion/s, Hypnotic + understand/ing.)

A multiple stage process of inclusion/exclusion was undertaken with titles alone examined first, then titles and abstracts or titles and introduction, if no abstract was available, then finally full-text articles. At each stage those articles clearly ineligible were

excluded. Additionally, a series of Google Scholar searches were conducted using the same keyword combinations in 'title only', with citations and patents excluded. This was sorted by the article titles and subsequently by abstract, or introduction if no abstract was available, using the same inclusion / exclusion criteria. Eligible articles' reference lists were searched for further articles that might meet the criteria. Some papers were removed upon close reading of the full article because they failed to meet the criteria. Six articles were unobtainable.

2.3 Data extraction

Data were extracted by one author (MK). A structured quality assessment of studies was not undertaken.

3. Results:

3.1 Characteristics of the studies

Thirty-one articles met the inclusion/exclusion criteria. These fell into three broad types: those which directly addressed people's attitudes, opinions and perceptions of the use of hypnosis (n = 9); those which gathered attitudinal data for some other purposes, such as assessing the differences hypnotic experience makes (n=17); and those which looked broadly at CAM approaches and included some data on hypnotherapy (n = 5). The characteristics of the included studies are in Table 1. The majority of the papers drew exclusively on quantitative data (n=30), specifically survey data with some repetition of standardized tools, such as the Opinions About Hypnosis (OAH) questionnaire³⁶ (n=5), Attitudes Towards Hypnosis (ATH) questionnaire³⁷ (n=3) and variants of the Valencia Scale of Attitudes and Beliefs Towards Hypnosis- Clients Version (VSABTH-C)³⁸ (N=2). A number of studies used both OAH and ATH (N=3).

There was a bias towards undergraduate populations (n= 15). This is ameliorated by the remaining studies being sampled from a variety of patient populations (n=10), and studies which made attempts to recruit diverse populations (n=6). The literature has a general bias towards populations with English as a first language, but includes multiple

nationalities, including samples from Iran, Germany, Hong Kong and non-English speaking U.S. Latinos. Most of the studies had a gender bias with a larger representation of women.

3.2 Hypnotizability

The concept of hypnotizability, meaning the ability to enter the state of hypnosis can be seen to have two distinct elements: the transition from 'normal' state to 'hypnotized'. No information was found on this topic, other than that most people think it requires relaxation.³⁹

A number of studies have addressed the question of control (n=5^{22,28,38,40,41}) within the transition into trance, these have found that the majority of people reject the ideas that the hypnotist is in charge⁴⁰, and that people can be hypnotized against their will.^{22,28} Most believe that collaboration is required for hypnosis.^{38,41}

Of those papers which examined respondents' perception of their own, and other people's, hypnotizability (n=5),^{22,28,42-44} the majority reported that most people felt they could enter a hypnotic state.^{22,42} However, one study found that when asked about their hypnotizability the majority stated that they were 'uncertain'.⁴³ Most people appear to believe that the ability to enter hypnosis is variable.^{22,28,44}

Six papers addressed the question of personal characteristics that people associate with hypnotizability.⁴⁴⁻⁴⁹ These found that people rejected the idea that hypnotizability was associated with mental instability⁴⁴⁻⁴⁹ however a number of the same papers identify modest agreement with the concept that intelligent people are the least likely to get hypnotised, and that those who are hypnotizable are 'weak people'.^{44,46,49}

Overall it can be seen that most people consider that hypnosis is a state which requires collaboration to enter, at the very least the choice not to resist, and one that most people will be able to enter, although the ease with which this happens is inversely related to intellect and strength of mind. There is too little information available about perceptions of the transition from 'normal' to 'hypnotized' to comment.

3.3 Hypnosis and hypnotic phenomena.

A major area of investigation has been people's beliefs about being in hypnosis, the state of hypnosis, the nature of hypnotic control and the phenomena hypnosis can produce.

3.3.1 The Hypnotic State

One question which has historically taxed researchers is whether or not hypnosis is a special state of consciousness or a socio-cognitive construct.⁵⁰ All of the studies which asked if hypnosis was a special state of consciousness found strong positive agreement for the idea.^{26,28,29,44,46,49,51,52} Those studies which asked about socio-cognitive factors and models have found lower levels of certainty for these.^{26,44,46,49,51} It is safe to conclude that on the evidence found people broadly believe hypnosis to be some form of altered state.

Beliefs about the nature of the hypnotic state have also been investigated. Low acceptance of hypnosis as a 'sleep state' has been observed^{28,39} and some studies found modest evidence for recognition of concepts of dissociation and depersonalization.^{20,53}

It can be seen that the public perceive hypnosis to be an altered state of consciousness. They are, however unclear as to the nature of that state with most, but not all, rejecting the sleep interpretation and some suggestion that a dissociative interpretation may be predominant.

3.3.2 Hypnotic Control

Twelve articles contribute material regarding control when already in a hypnotic state.^{20,26,28,29,38-40,44,46,49,53,54} A number of studies (n=11) found tendencies towards the locus of control being with the hypnotist.^{20,28,29,38-40,44,46,49,53,54} The studies which employed OAH questions^{26,44,46,49} show a mixed picture with ideas about hypnotic responses 'happening automatically' and being irresistible being endorsed, whilst the opposite idea is also supported. A more focused form of the control debate can be seen

with those studies (n=6)^{26,28,29,44,46,49} which have explored the phenomenon of compulsive truth-telling in hypnosis. This idea is accepted by the public to varying extents in all of the studies.^{26,28,29,44,46,49} The data explored are not sufficient to say if the public as a whole believe that power lies with the hypnotist or the subject, although there does appear to be a slight tendency towards the hypnotist.

3.3.3 Awareness in hypnosis

Awareness is a subject which seven of the articles touched upon,^{26,28,39,44,46,49,51} five through OAH based questions.^{26, 44,46,49,51} The idea that a hypnotized person has reduced awareness is strongly endorsed^{26,28, 40,44,46,49} and there is also acceptance that hypnotic subjects may possess a 'double awareness',^{26, 44,46,49} however it is unclear whether this undermines or explains the concept of reduced awareness. Within the literature there is significant evidence that the general public believe that hypnosis results in a reduced or internally focused awareness, it is unclear if this is seen as absolute or partial.

3.3.4 Beneficial phenomena

The use of hypnosis in its therapeutic and enhancement capacity is a common theme addressed by fourteen of the studies.^{22,26,28,29,38-40,43,44,46,49,53,55,56} The evidence suggests that hypnosis for psychological problems is strongly endorsed,^{22,44} in particular for anxiety.^{39,40} There is low recognition that hypnotherapy can cure physical illness.^{22,44} There is, however, evidence of a strong endorsement for the use of hypnosis in support of medical treatment.^{43,55} The subject of hypnotic pain control has garnered particular attention, with several studies identifying belief in its efficacy.^{26,38, 43,44,46,49} However, a high variance of opinion is apparent in assessment of its usefulness (9%²⁸-90%³⁹). In some sources this appears to be related to severity of pain⁴³, which may indicate that it is seen as unreliable or only partially effective.

The capacity of hypnosis to enhance abilities, sometimes with implications of the superhuman or esoteric, has been examined in a number of papers, with several finding an endorsement of the concept.^{44,53,56} The strongest endorsements for specific abilities relate to accessing past lives.^{28,44} Memory enhancement attracts particular attention, with six papers reporting an endorsement of the concept.^{26,29,38,44,46,49} Conversely hypnosis's ability to suppress memory is endorsed.^{22,28,40}

The evidence suggests that the general public believe that hypnosis can have psychological, and to a lesser extent, medical benefit, and that hypnosis can enhance human capacity. There is pronounced belief in hypnosis's ability to affect memory and access past life experiences.

3.4 The hypnotist and their setting

Evidence has been gathered regarding the characteristics of the hypnotherapist (9 articles).^{26,28,39,44,46,49,51,54,57} This is focused upon their individual skill in hypnotism and hypnotherapists' association with traditional relevant professions. There is good evidence that people prefer the hypnotist to be connected with the medical or psychological establishment, either through qualification²⁸ or via referral.⁵⁷ Additionally, there is a clear perception that the hypnotist's skill is a factor in the success of the hypnosis.^{26,28,44,46,49,51} No evidence addressed place of practice or personal characteristics, leaving these questions open.

3.5 Perceptual differences in populations

A major question is how consistent are people's perceptions of hypnosis, and whether they vary with nationality, socio-economics, age or gender, however a paucity of data in most of these areas has limited any findings.

3.5.1 Nationality

A number of countries have been studied using the same tools, and some of these have used similar populations (students) making it possible to conduct an international analysis. A comparison of OAH scores for a U.S. population⁵¹ and Chinese population⁴⁴ showed more similarity than difference. An analysis of a study covering the U.S., Iran, Germany and Australia found a similar pattern with only 4 statistically significant differences over 35 questions, and none of these so pronounced as to distinguish any one nation from the others.⁴⁶ Internationally the trend appears to favour similarity over difference.

3.5.2 Age

Only one study provided a finding regarding age, which was that more than double the number of students (young) would like to be hypnotized than retirees (older).²⁸

3.5.3 Gender

Evidence for gender difference is limited; one study which supplied a breakdown of findings by gender,²³ showed no significant differences, however an earlier study⁵¹ identified small but statistically significant gender differences in 2 of 21 questions. As with nationality, similarity is far more apparent than difference.

3.5.4 Education

None of the studies conducted comparisons between highly and less educated populations, nor is there data which allows for this with any reliability. One study did compare psychology students with non-psychology peers, finding the psychology students to be more positive about hypnosis.⁴⁴

3.5.5 Morbidity

Despite a number of studies which recruited from patient populations for methodological reasons, little comparison between patient groups and non-patients is possible. What data is available suggests that psychiatric outpatients were less aware of the medical uses of hypnosis⁴⁰ than general outpatients and that women having an abortion²⁶ give lower scores than their closest non-patient comparator (USA population).⁴⁶

Many of the demographic details explored are on small data sets and as such can only be treated as provisional findings, however where larger bodies of data have been available the apparent theme is one of similarity.

3.6 Are people open to hypnotherapy?

One of the most significant questions is ‘would people use hypnotherapy?’. The literature contains a multiplicity of sources providing evidence for the acceptability and positive regard for hypnotherapy,^{38,41-44,46,48,49,54} however, a minority ranging from 1%-31%^{40,58} rejected it. There also appears to be conditionality to the acceptance of hypnosis as a treatment, with large numbers of respondents choosing ‘more information’ when this option is presented,⁴⁰ and the suggestion of an inverse relationship between severity of intervention and willingness to accept hypnotherapy.⁴³ It would appear from the data examined that there is a positive attitude and openness towards hypnotherapy for the majority of people, however, actual use is conditional and there is a minority which rejects it.

4.0 Discussion

Although a number of areas of investigation (control in trance, hypnotherapist’s characteristics and preference of treatment location), yielded unclear findings, it appears that internationally the public conceive hypnosis as an altered state, which can be entered with the subject’s consent under the guidance of a skilled practitioner. Once hypnotized it appears the perception is that the subject’s awareness is altered to some

degree and that some medical and substantial psychological benefits can be obtained. The majority of people appear conditionally open to the idea of hypnotherapy, and a minority reject it.

Of particular interest is the apparent gap between the low acceptance of hypnosis as a medical therapy and its high acceptance as a mental health therapy. This implies that people possess a Cartesian dualism⁵ of body and mind rather than a 'Mind-body' interactive model⁶⁷. This may present a barrier to the medical use of hypnotherapy which has some of its strongest evidence with pain and gastro-intestinal conditions⁶⁸ both of which are likely to be perceived as bodily conditions. This trend may also apply widely to CAM therapies.

It was apparent that hypnotherapeutic services seem to be more acceptable if referral is made by a clinician. This has implications for increasing usage of hypnotherapy and may provide a counter to the limitation of a perceived psychological treatment being offered for a physical problem. Again this may be generalizable to most CAM therapies.

The resistant minority appear to be problematic for anyone wishing to promote hypnotherapeutic treatments. It may be that this group possesses a negative view of hypnosis derived from media portrayals, however, 3.8% of respondents in one study believed hypnosis could lead to demonic possession,²² suggesting that religious beliefs may be a factor. It is unclear how large this resistant group is and thus how significant a barrier they represent.

4.1 Limitations

The exclusion of non-English language journals will have an effect on the international representativeness of the findings, even though a variety of nationalities have been included. We did not undertake a formal quality assessment of the studies and there

were some limitations. For example, a disproportionate number of articles used psychology students as their primary subjects. As there is tentative evidence that psychology students are more positive towards hypnosis than other students, and further that the young may be more positive towards hypnosis than the old, there is a possibility that the overall impression has a stronger positive slant than may be representative. Equally, a bias towards the female population over the male is apparent, although the significance of this is unclear.

4.2 Recommendations

4.2.1 Recommendations for future research

There is a paucity of data in a number of areas particularly regarding how age and education affect people's attitudes towards hypnosis. Pertinent to informing practice would be a deeper understanding of how factors such as location, patient morbidity and therapists' characteristics affect attitudes to hypnosis.

4.2.2 Recommendation for practice

Most people appear to accept that they are hypnotizable, but there is an apparent concern around control in trance, suggesting the hypnotherapist should emphasize the patient's self-efficacy. For the practitioner looking to increase uptake of hypnotherapy it appears that a significant proportion of people are more willing to consider hypnosis if it is associated with the mainstream medical or psychological world, either through referral or qualification.

5. Conclusion

The research looked at all the identifiable peer reviewed journal articles published in English from 1st January 1996 -11th March 2016, which included primary research into the adult public's perceptions of hypnotherapy. This literature covered multiple nations,

ages, patient groups and both sexes. There was a slight over representation of women and psychology students.

Most people considered hypnosis to be an altered state of consciousness which required a skilled practitioner and the subject's consent to enter. It can be seen that people were open to hypnotherapy under the right circumstances, meaning the presenting condition is mental or treatment is supportive of, but not instead of, a medical procedure, and the hypnotist needs to be identified with either the medical or psychological mainstream through qualification or referral. A number of people appeared to reject hypnosis, the significance of this is unclear as the numbers varied widely.

These findings dispel the concept that most people's attitude towards hypnotherapy is affected by negative media representation and in fact suggest that the public possess a nuanced conceptualization of hypnotherapy. It identifies a possible barrier to hypnotherapy's usage with physical problems which may explain its modest usage.²

Conflict of interest & funding

MK is a hypnotherapist and is not receiving any funding and is unaware of any commercial interest in the findings. SG and KJ are part funded by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care West Midlands. The views expressed are those of the authors and not necessarily those of the NIHR, the NHS or the Department of Health.

Table 1 – Studies including data on public opinion and attitudes towards hypnotherapy

Article	Nation	Population	Process	Type of study and aim	Key relevant findings
Barling, & De Lucchi, (2004). ⁴⁵	Australia.	186 Psychology outpatients. 84 with previous hypnotic experience, 102 non-experienced. 38.2% male 55.8% female 5.8% unknown. All adult (≥18), mean age male 37.9 (2.2), female 39.5 (2.0).	Self-administered questionnaire in psychologists waiting room.	Cross sectional questionnaire study comparing the understanding of experienced hypnotic subjects and non-experienced hypnotic.	Non-hypnotically experienced participants had poor knowledge of hypnosis but were moderately open to and in favour of it.
Boutin et al (2000). ⁵⁹	USA	567 Outpatients. Included ≤5% 18 years. 52% Male, 47%Female 1% unknown Multiracial 60% white, 18% Afro-American	English language survey distributed over 16 municipal medical centres to outpatients & a postal survey for staff physicians about alternative medicine. (250)	To identify frequency of usage and attitude towards use of CAM.	19% think hypnotherapy should be offered.
Capafons, et al (2004). ³⁸	Spain, Cuba, Argentine, Honduras.	2404 Psychology undergraduates. 72.5% female 27.5% male 586. Spain 75% Cuba 15% Argentina 3%	Questionnaire administered to students (circumstances unclear).	Cross sectional, multi-national study of a survey tool Valencia Scale of attitudes and beliefs towards hypnosis- Client version REVISED (VSABTH-C) to run a confirmatory factor analysis	Collective scores of various individual questions suggest a belief that hypnosis is collaborative, is helpful and is of interest. There was low acceptance that

		Chile 3%			it provided a
		Honduras 4%			'magical solution'
		Mean age 22.3 (5.2)			
		years. 13.8% had no			
		previous hypnosis			
		experience.			
Carvalho, et al (2007). ⁵⁴	Portugal	444 Psychology students 172 had experience of hypnosis, 272 had no hypnosis experienced. 21.6% male. 76.8% female. 1.6% unknown Age 18-54 years, 92% under 26.	Questionnaire administered in class and by e-mail.	Cross sectional Survey (VSABTH-C) comparing attitudes of those with and without hypnosis training.	Collective scores of various individual questions which show that the participants believe that hypnosis requires cooperation, and is helpful. It is unclear if results are out of 5 or 6.
Dufresne et al 2009. ²⁷	Canada	350 women ≥18 years, attending for first trimester abortions.	Given questionnaire pre-randomization and again post randomization and post intervention for non-control group. Intervention was a standardized hypnotic analgesia 20 minutes prior to surgery.	Randomised controlled trial of hypnosis for pain and anxiety during an abortion procedure.	Pre-randomised OAH data collection. The clearest findings are that participants believed hypnosis to be an altered state of consciousness in which subjects responded unconsciously and could experience significant mnemonic and analgesic phenomena.
Elkins & Wall (1996). ⁴⁰	USA	191 <u>Outpatients</u> 51% psychiatric, 49% family practice.	Survey conducted by mail with clinicians and solicited during	Cross sectional survey of clinicians & outpatient's perceptions of hypnotherapy	Outpatients expressed positively towards hypnosis,

		Mean age 37 years. 65.4% females, 34.6% males.	outpatient visits for the outpatients		with only 6% rejecting the idea of a referral for hypnosis.
		56 <u>Clinicians</u> Mean age 41 years, 7.1% females, 92.9% males.			
Emslie, Campbell & Walker (1996).⁶⁰	Scotland	341 Public. Demographically stratified to within 5% of the true adult population. 18≤ years.	Postal survey of Grampian, population identified using the community health index	Cross sectional questionnaire study of CAM use and opinions about CAM use covering 8 different CAM therapies.	17% would consider using it and 36.7% thought hypnotherapy should be available on the NHS.
Emslie, Campbell & Walker (2002).⁶¹	Scotland	432 Public. Demographically stratified to within 10% of the true adult population. All of voting age.	Postal survey of people registered to vote in the Grampian area.	Cross sectional questionnaire study of CAM use and opinions about CAM use covering 8 different CAM therapies. A follow up on Emslie, Campbell & Walker (1996) to assess change.	37.7% thought hypnotherapy should be provided on the NHS.
Gaedeke, Tootelian, & Holst (1999).⁶²	USA	900 Public, identified as 'Head of household' .66% female. Age ≥21 years.	Respondents identified via random dialer, verbally questioned.	Cross-sectional survey to identify CAM awareness and use.	35% would consider using it and willingness rose with physician's recommendation. 36.1% felt it was not beneficial. Over half of respondents expressed that information of efficacy was important.

Glaesmer, Geupel, & Haak, (2015).⁶³	German.	102 dental patients. Mean age 46.1 years. 50% Female. 50% Male.	Patients attending a dental practice for a tooth extraction were interviewed about attitudes towards medical hypnosis and then alternatively assigned to treatment as usual (TAU) or Hypnosis+TAU. Intervention was delivered by CD and patients awoken by the dentist. HYP+TAU patients were re-interviewed upon exit.	Randomized control trial (not blinded) to assess the effect of hypnosis on dental anxiety upon tooth extraction patients.	Most had little or no prior experience of hypnosis (68.6%), about twice as many considered hypnosis to be scientifically based (22.5%) as based on 'old traditions' (11.8%), equally about twice as many indicated that 'hypnosis should be used more in medical care' (13.7%) than reported negative attitudes towards it (6.9%).
Gow et al 2006.³⁰	Australia.	279 Public. 55.9% Female. 44.1% Male. >18, 55% over 36 years old.	Participants were identified in their place of residence by researchers knocking on doors. The questionnaire was unique but included both ATH & OAH questions.	Cross sectional survey of attitudes which is primarily concerned with establishing factor variance.	Strong beliefs in hypnosis as an altered state and having mnemonic effects were identified.
Green 2003.³⁹	USA	276 undergraduates. 37.0% males, 63.0% females. Mean age 19.6 (5.7) years.	In class, all participants were administered a variant of the OAH questionnaire. 146 were then put through the HGSHS, it is unclear how this group	Controlled trial to assess the effect of hypnotic experience upon attitudes and opinions.	Pre-intervention there was a strong endorsement of hypnosis as an altered state of consciousness and for automatic responsiveness

			was selected. All 276 were reassessed on the OAH after a month had elapsed.		amongst the hypnotized.
Green 2012. ⁴¹	USA	448 Undergraduates. 50.4% female. 49.6% male Mean age 20.0 (4.6) years.	Participants completed in class VSABTH-C & telegenic absorption scale (TAS), about 7 days later they completed the inventory of childhood memories and imaginings (ICMI) and Harvard group scale of hypnotic susceptibility form A (HGSHS)	Trial to establish the relationship between attitudes and beliefs about hypnosis and hypnotic responsiveness.	Identified a high perception of hypnosis as helpful, having mnemonic effects and low levels of fear of towards it.
Green & Lynn 2010. ²⁴	USA	460 Psychology undergraduates. 50.6% Female. 49.3% Male. Age not supplied.	In classrooms OAH and telegenic absorption scale (TAS) surveys were administered and then followed up on 7-10 days later. Participants gave 'expectancy statements' about hypnosis. 4 randomized conditions were created by varied 'attitude instruction' then assessed with HGSHS form A.	Randomized control trial to assess the effect of the manipulation of attitude expectation upon hypnotic responsiveness.	Pre -intervention data Identified homogeneity in gender attitude towards hypnosis.

Green et al 2006. ⁴⁶	USA, Iran, Australia, Germany.	280 undergraduates, 70 of each nationality 70% female 30% male. Mean age 20.5 years.	A variety of on campus recruitment methods were employed and data collection approaches. The questionnaire combined ATH, OAH, and the Beliefs About Forensic Hypnosis (BAFH) questions.	Cross-sectional survey study to identify cultural difference in attitudes and opinions towards hypnosis.	Attitudes appear broadly similar across different cultures.
Harris & Roberts 2008. ⁵⁷	England	256 IBS sufferers. 73.4% female, 26.6% Male. All over 18, mean age 55.9 (14.8) years.	Postal survey of previously identified IBS sufferers.	Cross sectional study of Irritable Bowel Syndrome (IBS) patient's views, receptivity and inhibitions towards 9 forms of treatment.	163/256 (63.7%) indicated acceptance of hypnotherapy as a treatment, this was weighted towards the younger (≤ 55), with no significant gender, education or employment status bias. Negative respondents questioned efficacy of hypnotherapy. Hypnotherapy was more acceptable if recommended by a clinician.
Hawkins & Bartsch 2000. ⁴²	Australia	77 Psychology Undergraduates. 88% female 12% Male. Mean age 24 years. Only 32 of these provide data	A lecture was given to 44 students on the subject of hypnosis, 9 months later those 44 students and 32 who did not receive the	A controlled trial to assess the impact of education about hypnosis on views and responses to hypnosis.	The non-lecture group, prior to application of HGSHS showed a strong positive view of hypnosis and

		which was eligible for this study, of these the same gender ratio was present but the mean age was 22 (6.7).	lecturer were given a questionnaire which included the ATH and several bespoke questions. The HGSHS was then applied.		strong desire to experience it, and modest lack of fear.
Hermes, Hakim, & Sieg. (2004).⁴³	Germany	310 dental patients. 56.8% female. 43.2% Male. Age ≥16.	Patients were questioned at department of oral and maxillofacial surgery on Schleswig-Holstein university hospital using a bespoke 21 question questionnaire.	Survey of dental patient's knowledge, attitudes and acceptance of the use of hypnosis as part of dental procedures.	The majority of respondents were aware of the medical use of hypnosis and positive or conditionally positive, towards it. A small number (6.1%) rejected medical hypnosis entirely.
Hollingworth, (2012).³⁹	Australia. 67% either Australian or New Zealand.	337 pregnant women. All had been recruited for the Hypnosis Antenatal Training for Childbirth (HATCh) program trial. 16-42 years. 59% had tertiary education (high for the demographic).	Expression of interest forms for the HATCh trial were made available in various antenatal settings. A bespoke questionnaire was administered to participants prior to randomization.	A cross sectional survey study to identify pregnant women's understanding of hypnosis in general and specifically for childbirth.	Strong agreement was found for the ideas that hypnosis reduces anxiety and is good for pain control, strong rejection was observed for: hypnosis as role-play, getting stuck in trance, decreasing maternal control and the need for a hypnotist (although the context of this is unclear)

Johnson & Hauck (1999). ²⁹	USA	272 respondents. Varied population. All participants were undergraduate age or older.	A 27 item questionnaire was distributed to 4 groups each with a different demographic composition. Standardized instructions were given by either the author or group leader.	Cross sectional survey to identify beliefs about and sources of information regarding hypnosis.	The study identified strong recognition for; hypnosis as a 'different state of consciousness', in trance people have limited awareness, mnemonic effects, that both the skill of the hypnotist and the subject's ability are important, and that hypnotherapists have medical or psychological training. There was low recognition for; being hypnotized against your will and being unable to lie in hypnosis.
Miller, Schnur, Montgomery, & Jandorf (2011). ⁵⁸	USA	213 colonoscopy screening patients. Mean age 58.8 (7.2) years. 72.8% female, 17.2% male. 49.3% African-American, 50.7% Latino. 84.5% low income.	Patients were recruited in a primary care clinic in a large metropolitan hospital and were asked 4 questions each on an 11 point Likert scale.	A cross sectional survey conducted to ascertain the level of positive feeling towards having hypnosis for relaxation prior to colonoscopy.	14.1% of participants expressed entirely favorably (40/40) 31.1% of participants expressed entirely unfavorably (0/40) 54.8% of participants expressed somewhere between (1-39/40)

Milling (2012). ⁴⁸	USA	925 Psychology undergraduates. 68% female 32% male. Mean age 19.3 (3.2).	Recruitment details are absent. Groups were tested in batches of 10-40. Factor analysis was conducted of the cumulative results	A cross sectional survey to gain a large enough pool of data to establish normative values for the Attitudes Towards Hypnosis (ATH) Questionnaire.	Participants expressed a mild positive attitude towards hypnosis, a strong belief that the hypnotizable were mentally stable and a non-statistically significant difference between fearlessness of hypnosis between the genders (male 4% higher)
Molina, & Mendoza (2006). ⁶⁴	Spain	80 psychology undergraduates, who signed up for course in hypnosis. 75% female, 25% male. Mean age 24.5 (5.1).	Subjects were given a list of 40 words, half classed favorable, half unfavorable. They identified up to 5 which best described hypnosis and rated from unfavorable (low) to favorable (high). This was repeated after their hypnosis course and responses compared.	Uncontrolled experimental trial to identify stereotype beliefs about hypnosis and the change created by the process of training in hypnosis.	Pre-training respondents identified 'therapeutic' as the second most frequent adjective with a favorability rating of 4.2. 'Relaxing' and 'useful' also scored well and by counter point so did 'discredited'.
Page, Handley, & Green, 1997. ²³	USA	266 Undergraduate psychology students. 54.9% Female, 45.1% male. Mean age 20.7 (5.6) years. 7 participants were dropped from	Participants completed a hypnosis survey. 3 days later they were given a tape recorded version of the HGSHS: A.	Cross-sectional study assessing the relationship of beliefs about hypnosis with perceived hypnotic responsiveness.	High numbers of respondents indicated they believed they would be able to experience hypnosis, very small numbers associated

		the original due to previous hypnotic experience leaving 259 however age and gender figures are based on the original 266.			hypnosis with gullibility and demonic possession. A marked difference was apparent between the belief in hypnosis's ability to help with psychological (62.5%) and physical illness (15.8%).
Pettigrew, King, McGee, & Rudolph, 2004. ⁵⁵	USA	250 women attending a women's health clinic. Mean age 31 (12.3) years.	Women waiting for appointments with physicians & midwives were approached by a registered nurse data collector to complete the questionnaire.	Cross-sectional study to identify women's understanding of, their perceived effectiveness of and sources of information about CAM	196 / 250 rated the perceived effectiveness of hypnosis as 3.04/5.
Pires, Pires, & Ludeña, 2013. ⁵²	Portugal	152 students of the faculty of psychology and educational science. Of whom 115 went through the full procedure. No gender or age details supplied.	No details of recruitment methods. In a group session Each participant completed the VSABTH-C questionnaire. In a second session (2-4 weeks later) the participants were assigned to either an imagination condition or a hypnosis condition.	An experimental study attempting to understand the difference in opinions engendered towards hypnosis by experiencing hypnosis or an imaginal equivalent.	'Belief in the altered state of consciousness.' 30.2/54 (SD 3.54)

Shimizu 2014. ⁵³	Japan	1104 undergraduates on a psychology course. 49.2% Female, 50.4% Male, 0.4% unspecified. Mean age 19.9 (2.0) years. A subgroup of 180 conducted the full experiment.	Students who were willing completed the BHSQ in class, and a proportion completed a modified ATH, some volunteered to go forward to go through the and SES in groups of 1-5. Exploratory factor variance was then conducted between all four measure	A Cross-sectional study that assess the relationship of beliefs about hypnosis with perceived hypnotic responsiveness.	Strong beliefs in 'loss of control, and 'therapeutic expectation' and moderate endorsement of 'Dissociation' and 'arousal of extraordinary abilities'
Shimizu 2016. ²¹	Japan	360 undergraduates. 53% Female, 47% Male. Mean age 19.4 (1.5) years. A subgroup volunteered to conduct the full experiment of 106, 66% female 34% Male.	Method of recruitment is unclear. All subjects completed the BHSQ-R & TRS, 106 subjects completed the HGSHS:A and SES in groups of 1-4, in a sound proof environment. Exploratory factor analysis was conducted for the TRS, TRS- BHSQ-variance, and volunteer – non-volunteer variances for TRS and BHSQ were calculated.	Cross-sectional study assessing the relationship of beliefs about hypnosis with perceived hypnotic responsiveness.	Strong beliefs in 'loss of control, and 'therapeutic expectation' and mild endorsement of 'Dissociation' and 'arousal of extraordinary abilities' very similar findings to Shimizu 2014.

Wang, Caldwell-Andrews & Kain 2003. ⁶⁵	USA	1235 respondents from a broad demographic base. 61% female, 39% Male. Mean age 51 range 18-92 years.	Questionnaires were distributed to all patients presenting for non-emergency surgery at Yale-New Haven Hospital. The inpatient and outpatient responses were compared.	Cross-sectional Survey assessing comparative usage and interest in CAM approaches in out and in surgical patients	21% were willing to incorporate hypnosis into anesthesia care.
Yu 2004. ⁴⁴	China	457 undergraduates. 43.3% psychology majors. 66.5% female, 33.5% male. Mean age 21.3 (2.3) years.	Method of recruitment is unclear, but participants were volunteers. They filled questionnaires out in silence. The questionnaire contains elements of OAH & AST	A cross-sectional survey study of Chinese student's attitudes and beliefs about hypnosis with comparison with western equivalents and internal comparison of psychology and non-psychology students.	No statistically significant difference was observed between the attitudes of the psychology undergraduates and the non-psychology undergraduates regarding the general beliefs about hypnosis. In the AST psychology majors were more positive towards hypnosis than non-majors, this was statistically significant for questions 1,3,4,7, 12.
Yu 2007. ⁴⁹	China	120 psychology undergraduates. 74% female, 26% male. Mean age 21.6 (2.8)	Subjects were randomly chosen from a pool of psychology majors, then assigned, using a stratified and	Randomized controlled trial to establish the effect of the CIS test on perceptions of hypnosis	Subjects showed a high degree of belief in involuntariness in hypnosis and a high degree of control by

years.	random allocation method to experimental (75%) or control condition (25%). Both conditions completed a survey based on the AST and OAH prior to the experimental condition subjects receiving the CIS, whilst the control subject waited, then both groups were retested with the questionnaire.	the hypnotist over the subject. They also showed a high level of belief in the altered state of consciousness. The lowest expressions of belief were noted for the hypnotic response being mainly about the skill of the hypnotist and the idea that suggestions cannot be rejected when in trance.
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Abbreviations;

ATH = Attitudes Towards Hypnosis Questionnaire

BHSQ = Beliefs about Hypnotic State Questionnaire

BHSQ-R = Beliefs about Hypnotic State Questionnaire- revised

CAM = Complementary and Alternative Medicine

HGSHS:A = Harvard Group Scale of Hypnotic Susceptibility Form A

OAH = Opinions and Attitudes about Hypnosis questionnaire

SES = Subject Experience Scale

TRS = Therapeutic Reactance Scale

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