

IMPACT OF A LECTURE ABOUT EMPIRICAL BASES OF HYPNOSIS ON BELIEFS AND ATTITUDES TOWARD HYPNOSIS AMONG CUBAN HEALTH PROFESSIONALS

Shortened version of the title: Lecture's impact on attitudes and beliefs of hypnosis

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Abstract

The aim of this study is to examine whether a lecture on hypnosis can modify attitudes and misconceptions about hypnosis. The sample consisted of 97 health professionals from institutions of Havana City. Group 1 consisted of 46 participants who received a lecture on hypnosis. Group 2 consisted of 51 participants who received a lecture about Urology. The Valencia Scale of Attitudes and Beliefs toward Hypnosis –Therapist was applied before and after the lecture. Results indicated that there were significant differences between the groups in which Group 1 showed more positive attitudes toward hypnosis. However, both groups showed similar misconceptions about hypnosis and memory, which changed significantly in Group 1 after receiving the lecture about hypnosis, but not in Group 2. Therefore, the lecture about hypnosis had a significant impact in correcting participants' misconceptions about memory and hypnosis.

Key words: hypnosis, beliefs, attitudes.

Resumen

El objetivo de esta investigación fue determinar si una conferencia sobre hipnosis puede modificar las actitudes y creencias erróneas sobre la misma. La muestra estuvo constituida por 97 profesionales de la salud de La Habana. El Grupo 1 estuvo integrado por 46 participantes que recibieron una conferencia de hipnosis, y el Grupo 2 de 51 profesionales que recibieron una conferencia de Urología. La Escala de Valencia de Creencias y Actitudes hacia la Hipnosis –Terapeuta se aplicó antes y después de la conferencia. Se encontraron diferencias significativas entre los grupos, teniendo el Grupo 1 actitudes más favorables, aunque ambos fueron similares en creencias erróneas sobre hipnosis y memoria. Éstas cambiaron significativamente en el Grupo 1 tras la conferencia, no en el Grupo 2. La conferencia de hipnosis tuvo un impacto significativo en rectificar las creencias erróneas sobre hipnosis y la memoria.

Palabras clave: hipnosis, creencias, actitudes.

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Attitudes, expectancies, and beliefs about hypnosis are thought to be relevant to obtaining better outcomes in therapeutic interventions (Barber, Spanos y Chaves, 1974; Chaves, 1999). Likewise, the way hypnosis is introduced to the client has been reported to be important (Capafons, 2001; Capafons & Mazzoni, 2005) in order to foster adequate beliefs about hypnotic techniques and realistic expectancies of the outcomes to be achieved (Capafons, 2001).

Hypnosis *per se* is not dangerous, however, its use by lay therapists or hypnotists may result in iatrogenic effects, since they convey –whether deliberately or not- misconceptions about hypnosis to patients (Capafons, 1998; 2001; Frauman, Lynn, & Brentar, 2000). Among other risks, these therapists' practices may generate false memories in the client by using hypnosis as a means of recovering forgotten or repressed information (Capafons & Mazzoni, 2005).

There are published studies in the literature about therapists' beliefs and attitudes toward hypnosis, as well as the way of promoting correct beliefs and adequate attitudes. For instance, in Thompson's study (2003), approximately 300 health care professionals were given an educational intervention on the nature of hypnosis and its therapeutic applications that consisted of a didactic lecture supplemented by slides, videotapes, handouts and a question and answer period. Following the lecture, those participants who agreed were hypnotized for the purpose of relaxation. Beliefs and attitudes toward hypnosis were assessed using three questionnaires at pre-intervention, post-intervention, and three-month follow up. The author concluded that the attitudes of health care professionals concerning hypnosis were significantly different before and immediately following their attendance at the educational intervention and that this change persisted over time. However, it has to be

taken into account that the generalizability of this study is limited by the fact that the health care professionals attended the educational intervention since they were interested in hypnosis.

Echterling and Whalen (1995) examined the impact of both a lecture on hypnosis and a stage hypnosis show on beliefs and attitudes toward hypnosis in audience members. They concluded that both experiences increased attendees' motivations to use hypnosis and decreased their belief that hypnotic suggestibility reflects lower intelligence. Furthermore, the lecture increased beliefs that hypnotic suggestibility reflects creativity and inner strength. However, whereas the lecture decreased the belief that hypnotized people are robot-like and automatically acts on all suggestions, the stage hypnosis show increased this attitude among its audience members.

Mendoza, Capafons, and Espejo (2009) examined the influence of receiving scientific information about hypnosis on Spanish psychologists' beliefs and attitudes toward hypnosis. The Valencia Scale on Attitudes and Beliefs toward Hypnosis-Therapist (VSABH-T, Capafons, Espejo, & Mendoza, 2008) was administered. Between the retest and the second retest administrations a monograph issue focused on hypnosis and written by several authors (*Papeles del Psicólogo*, December, 89, 2004, although in the paper version the year cited is 2005) was published in a journal that all members of the Spanish Psychological Association received. Results indicated that more information resulted in more change in positive attitudes, since both participants who read the monograph and who acquired information from other sources during the time between the retest and the second retest showed more rational beliefs and more positive attitudes.

Molina and Mendoza (2006) carried out a study that used a different methodology, namely, the adjective check list, to assess the changes of attitudes toward hypnosis among undergraduate and graduate Psychology students after attending a training program. Participants received information about what hypnosis is and how it works from a cognitive-behavioral perspective, myths about hypnosis were dispelled, and they learned how to administer hypnotic techniques to each other while supervised by an instructor. Results

showed that, after the training program, participants' negative attitudes towards hypnosis had vanished, positive ones that already existed were reinforced, and a number of new positive attitudes associated with the contents of the training appeared. The authors concluded that the training program helped dispel misconceptions about hypnosis and fostered positive attitudes toward hypnosis and a proper use of hypnosis by health professionals (Molina & Mendoza, 2006). A limitation of this study, as well as of the above mentioned ones, is that there was no control group to compare the results.

In contrast to other studies, Capafons et al. (2005) administered the Valencia Scale on Attitudes and Beliefs toward Hypnosis –Client Version (VSABH-C) to a sample of participants who had showed a negative attitude toward hypnosis. Those who agreed to participate in the study were randomly assigned to three groups: a control group received minimum information about the safety of hypnosis and its usefulness; another group received a cognitive-behavioral presentation of hypnosis that did not refer to hypnosis as a trance, an altered or a dissociated state of consciousness; and a third group received a presentation in which hypnosis was introduced in the same way as in the second group but was defined as an altered state of consciousness or trance. Subsequently, participants were offered to learn a self-hypnosis method (all of them accepted), and the Barber Suggestibility Scale (BBS; Barber, 1965; Barber & Wilson, 1979) was administered to them. Results showed that all three groups corrected their misconceptions about hypnosis (Capafons et al., 2005). However, the predicted differences were not found, namely, that the trance group would show fewer changes in negative attitudes than the others. The authors speculated that the fact of labeling the situation as self-hypnosis may have reduced the fear of losing control in all groups.

In a later study (Capafons et al., 2006), the same scale and experimental design were used, but participants, instead of being offered to learn a self-hypnosis method, were hypnotized by the experimenter, who also administered the BBS to them. Differences between cognitive-behavioral and trance presentations were found. The former produced more positive changes in attitudes toward hypnosis and fostered the ideas that hypnotized people

keep control over their behavior and that hypnosis, when well used, is a helpful technique (Capafons et al., 2006). Furthermore, the trance group, as compared to the control group, produced significantly more dropouts of participants than the other two presentations that did not differ from each other.

The previously mentioned studies report evidence supporting that providing information by different means (i.e. lectures, training courses, and exercises aimed to change attitudes) can change negative attitudes and misconceptions about hypnosis. However, as it has been pointed out, studies using lectures or training courses have not counted on a control group.

Therefore, the goal of this research is to determine whether attitudes and misconceptions about hypnosis of health professionals change more after receiving a lecture given by a specialist in the topic than after receiving a lecture of a topic not related to hypnosis.

The hypothesis posed is the following: participants receiving scientific information given by a specialist in hypnosis will learn which of their ideas are misconceptions about hypnosis, and, consequently, will modify them according to the new information, and their attitudes toward hypnosis will be more adjusted to such information. Therefore, we predict that those participants receiving scientific information about hypnosis will reduce their misconceptions, reinforce their adequate ideas, and adjust their attitudes toward hypnosis (from being too negative or too positive to a realistic view of what may be expected from it according to the available evidence) significantly more than participants who receive a scientific lecture on a topic not related with hypnosis.

Other predictions are as follows: participants who previously have more information about scientific hypnosis will show fewer misconceptions about hypnosis and their positive attitudes will be more adjusted in the pre-intervention assessment, no matter which group they will be assigned, than those professionals who do not have any information about hypnosis or their knowledge about it is not scientific. Participants with more training in scientific hypnosis will have fewer changes in their attitudes and beliefs about hypnosis than those who do not have information about scientific hypnosis or who do not have any information at all, after receiving the lecture on scientific hypnosis.

METHOD

Participants

The sample consisted of 97 health professionals from different institutions from Havana, who were divided into two groups. Group 1 consisted of 46 participants who were invited to receive a lecture about scientific hypnosis given by a specialist at the Hospital Hermanos Ameijeiras de la Ciudad de la Habana in July 2007. Group 2 (control) consisted of 51 professionals enrolled in a superior course of Urology given at the Hospital Docente Clínico Quirúrgico 10 de Octubre de La Habana, who received a lecture about Urology by an expert of this topic in November of the same year.

Sample selection criteria were the following: willingness to respond to the questionnaire and to be a health professional working in medical assistance. In Group 1, 90% of participants (N = 41) were physicians of different specialties, 5% (N = 2) were psychologists specialists in Health Psychology, and the other 5% were other professionals such as nurses, physical therapists, and social workers. In Group 2, 100% of participants were physicians.

In Group 1, 71.7% (N = 33) of participants were women, and 28.26% (N = 13) were men. In Group 2, 49% (N= 25) were women, and 51% (N = 26) were men. The average age was 42.83 (SD = 12.14) in Group 1, and 42.89 (SD = 9.48) in Group 2. Descriptive statistics of age in both groups are shown in Table 1.

--- Please insert Table 1 about here ---

In Table 2, participants' characteristics regarding academic degree, knowledge, experience, and interest in hypnosis are shown.

--- Please insert Table 2 about here ---

On the other hand, less than half of participants (N = 42, 43.3%) reported the source of their knowledge about hypnosis. The sources that participants mentioned more often were:

university, training courses, and scientific journals (Table 3). As is shown in Table 3, participants who received the lecture about Urology and reported to have knowledge about hypnosis said that their source of information was TV, whereas there were more participants whose source of information was the university among those who received the lecture about hypnosis.

--- Please insert Table 3 about here ---

Measure

The Valencia Scale on Attitudes and Beliefs toward Hypnosis –Therapist Version (VSABH-T) was used to assess the most popular misconceptions and negative attitudes toward hypnosis. It contains a questionnaire developed to obtain information about the participants. It consists of several demographic questions (name, age, gender, marital status, occupation, etc.), as well as questions related to their knowledge and experience with hypnosis (such as whether they have ever been hypnotized, if so, by whom, whether they have training in hypnosis and its source). The scale consists of 37 items grouped into 8 factors: FEAR whose content is associated with being afraid of losing control while hypnotized, of being under the control of the hypnotist, of becoming trapped in a hypnotic trance and not being able to “come out” of it; MEMORY that indicates the belief that hypnotized people are in a trance state that allows them to have access to memories of past events that otherwise they would not remember. It also refers to the description of hypnosis as a means of forcing people to tell the truth about everything they would normally lie about; HELP that describes hypnosis as a helpful technique to obtain therapeutic outcomes; CONTROL that indicates that hypnotized people control their acts and that hypnotic responses are voluntary; COLLABORATION whose content refers to the need for collaboration between the hypnotist and the hypnotized person to achieve hypnotic responses; INTEREST that concerns the interest and pleasure that somebody shows for hypnosis or for being hypnotized; MAGICAL that describes hypnosis as a magical solution to overcome problems, effortlessly and without regarding other necessary factors for changing; and MARGINAL whose content includes the

beliefs that hypnosis is beyond the scope of scientific research, and that the hypnotized person has some characteristics that are not normal. The internal consistency of the scale was superior to .80 for all factors. Test-retest reliability was also adequate (Capafons, Morales, Espejo, & Cabañas, 2006; Capafons et al., 2008; Mendoza, 2008).

The scale was reviewed in order to adapt the wording of some items to the Cuban sociolinguistic connotations (for instance, the word client was substituted by patient). This version had been previously used in a study on beliefs and attitudes toward hypnosis in Cuban students (López-Vázquez, 2007), in which the factor structure obtained in other countries was replicated.

Procedure

A quasi-experimental study with two groups of participants was conducted. Group 1 participants were invited through different means to attend a lecture about scientific hypnosis that was given for free at the Hospital Hermanos Ameijeiras. Participants of Group 2 were the physicians enrolled in a Postgraduate course of Urology given at the Hospital Docente Clínico Quirúrgico 10 de Octubre by Dr. Armando Iturralde Codina, professor of Urology of the School of that hospital. The topic of his lecture was the diagnostic aspects in Urology. Both hospitals are in Havana City, Cuba.

All participants filled out the VSABH-T immediately before and after listening to their group corresponding lecture. Likewise, participants were asked to participate in exchange for receiving the lecture, but the intention and the hypotheses of the study were not explained to them. Confidentiality was assured and the decision of participating in the study was voluntary.

The lecture about hypnosis was given by the second author of this article. It was a two-hour lecture in which the presenter talked about the experimental and empirical evidence of the efficacy of hypnosis along the same line as the updated information published subsequently by Mendoza and Capafons (2009). An emphasis was made for the usefulness and efficacy of hypnosis as an adjunct as opposed to a unique intervention, especially in pain

management, preparation for surgery, and increasing the efficacy and/or efficiency of cognitive-behavioral interventions, both in Health and Clinical Psychology. The limitations of the current research relative to the efficacy of hypnosis in certain areas were also described. Likewise, the lecturer described the available empirical evidence that justifies the use of hypnosis in pain management and preparation for surgery for its established efficacy, and as an adjunct in smoking cessation, obesity, hypertension, irritable bowel syndrome, and some anxiety disorders, since the evidence of its efficacy in these areas to date is promising.

It was also discussed in the lecture the experimental information available in the literature to dispel misconceptions about hypnosis, especially based on the myths and their alternative views put forth by Capafons (1998). Thus, it was explained and discussed the information dispelling that hypnosis is a field of study outside psychological or medical science; that people who use hypnosis are charlatans or do not have a professional qualification; that people who improve when being treated with interventions that add hypnosis are gullible or dependent; that hypnosis causes, boosts or “makes explicit” diseases and disorders; that hypnosis can make people experience exceptional reactions that would be impossible to achieve without hypnosis; that hypnosis is a trance or a sleep state in which the hypnotized person can get trapped; and that hypnosis is a fast and efficacious therapy in itself that does not require of any effort from the patient but only that he or she is highly hypnotizable.

Moreover, detailed information was given about the risks of misconceptions and the generation of false memories through the use of hypnosis. Along with the relevance of the misleading questions in generating false memories, it was also emphasized the iatrogenic effect of believing and accepting the following misconceptions: that hypnosis increases the accuracy and amount of memories; that people experiencing age regression through hypnosis behave in the same way they did when they were that age; that hypnosis gives access to the subconscious where all the memories are faithfully recorder, etc. This information was based on the ideas described by Capafons and Mazzoni (2005).

Accordingly, in this part of the lecture it was explained that hypnosis has no influence over recall, dispelling the myths of hypermnesia, and stressing the risks of generating false

memories and their implications for psychological therapy and forensic hypnosis. Once the lecture was finished, attendants' questions about hypnosis were answered, such as the potential of hypnosis to increase learning in mentally disabled children (the lecturer replied that there is no research concerning that topic), the hypnosis capability of increasing sport performance, and the forensic use of hypnosis.

Group 2 was comprised of physicians who were attending a postgraduate course of Urology. The lecture was the second one of this course and took place in the above mentioned hospital. As previously agreed with Professor Iturralde, the collaboration of the attendants was solicited before starting the lecture.

Both experts have national and international recognition for their achievements in their fields of expertise.

Analyses

First, chi-square tests were conducted in order to verify the similarity in the groups before receiving the lectures with regard to academic degree, interest, practical experience, and knowledge about hypnosis. Moreover to test differences in how many participants agree and disagree with each factor of the VSABH-T before the lectures chi-square tests were carried out. A t-test was performed on each factor of VSABH-T before the lecture to assess the possible existence of significant differences between the two groups.

A Multivariate Analysis of Variance was used in order to examine significant differences in factors between participants who had previous knowledge of hypnosis and those who did not have that knowledge. Dependent variables were the score in each factor of VSABH-T before the lectures, and independent variables were the previous knowledge level of hypnosis (with and without knowledge) and the group (1-2).

Finally, a Wilcoxon signed-rank test for related samples was performed to determine significant changes in the frequency of participants who agreed or disagreed with every factor of the scale after the lecture. Statistical analyses were performed using SPSS version 15.0 for Windows.

RESULTS

Descriptive results

In the pre-test, significant differences were found between the groups. Group 1 showed a higher academic level (chi-square = 16.358, $p = .000$), containing more doctors and masters and participants with knowledge of hypnosis (chi-square = 22,602, $p = .000$), and more professionals who apply hypnosis in their practice (chi-square = 16.34, $p = .000$). However, regarding the interest in receiving more information about hypnosis, only 5 participants of the Control Group did not show interest, which resulted in a significant but not valid chi-square, since actually 90% of participants of Group 2 and 100% of participants of Group 1 showed interest for hypnosis.

Scores of the Groups in factors before the lectures

Table 4 shows descriptive statistics of factors of VSABH-T before the lecture for each group, as well as the results of the t-test for independent samples. As can be seen, there are significant differences in all factors except for the Memory factor.

--- Please insert Table 4 about here ---

For a qualitative analysis, Table 5 illustrates the percentage distribution of participants that scored lower than 3.5 (i.e. scores indicating disagreement) in each factor of the VSABH-T and the results of the chi-square comparisons. As can be seen, in Group 1 there is a low percentage of participants who disagree with the Help factor whereas in Group 2 the disagreement is higher. For the Control factor, the disagreement is shown by most of the participants in Group 2, whereas in Group 1 it is only indicated by half of the participants.

Moreover, in Group 1 the disagreement with the factors of Fear, Marginal, and Magic is higher than in Group 2, in which nearly half of participants indicated agreement. This result shows that Group 1 had more participants with positive attitudes toward hypnosis. Nevertheless, there were no significant differences between groups for the Memory factor.

To sum up, there were differences between the two groups before the lectures, with participants of Group 1 having attitudes more positive toward hypnosis. However, both groups were similar with regard to misconceptions about memory and hypnosis.

--- Please insert Table 5 about here ---

Differences in beliefs and attitudes toward hypnosis according to previous knowledge of hypnosis

As mentioned, among both groups there were participants with previous knowledge of hypnosis, although in Group 1 the proportion of them was higher.

Multivariate Analysis of Variance did not result in any statistically significant interaction. Likewise, all factors of the VSABH-T showed significant differences according to the group variable (except for the Magic factor), but not according to the previous knowledge variable (except for the Help factor) (Tables 6 and 7).

--- Please insert Table 6 and 7 about here ---

Scores in Factors after the lectures

Table 8 shows the frequency distribution of participants with scores higher (i.e., agree) and lower (i.e., disagree) than 3.5 in factors before and after the lectures in each group.

--- Please insert Table 8 about here ---

Wilcoxon tests performed indicated that significant differences were only found in the Memory Factor ($z = -2.449$, $p = .014$). In this way, before the lecture half of the participants of Group 1 showed scores higher than 3.5 (i.e., they agree with the misconceptions that the items of this factor assess), whereas after the lecture this percentage decreased to 9.5%.

DISCUSSION

The differences found in academic level, knowledge and experience in hypnosis between groups were foreseeable, since this is a quasi-experimental study with no prior intent to create equivalent groups on a number of variables. It is worth mentioning that before the lecture, Group 1 showed positive attitudes toward hypnosis and few misconceptions about the benefits of hypnosis, but also showed an irrational overestimation of such benefits, which can be determined by participants' responses in agreement with misconceptions of the effects of hypnosis over memory and personal control. Similar data have been found in previous studies with Cuban samples (Díaz-Purón, 2008; López-Vásquez, 2007; Rodríguez-Rodríguez, 2003).

Nevertheless, our results suggest that this overestimation may be increased in people with more interest in hypnosis, as it is the case in this study. These professionals attended voluntarily a lecture on hypnosis, and many of them had to invest a large amount of resources and time to travel to the place where the lecture was given (in Cuba going from one place to another is not as easy as in Europe, and it may involve great effort even traveling in the same city). This group, that may be called a group of "enthusiasts", is different than the other one, which may be more skeptical relative to the benefits of hypnosis, since their attitudes and beliefs of hypnosis were assessed within a context where their interest and efforts were addressed to attend a lecture about urology and not hypnosis. In this group, that may be called "not-enthusiasts", is where there are more participants admitting that they are afraid of hypnosis (more than half), and more participants scoring low in the Interest factor (that is comprised of the following items: 26. I would like to be hypnotized; 27. I would allow myself to be hypnotized if the opportunity presented itself; and 28. I would like to be very hypnotizable), although in both groups positive attitudes prevail. This result is consistent with previous studies that have shown that in Cuba there is an attitude of acceptance of hypnosis (Capafons et al., 2005). The reasons may be historical, given that hypnosis in Cuba was introduced and popularized by physicians and dentists, it

may determine that it has been well accepted in health professional settings and that there is tradition of its use (Marrero, in preparation).

Differences in attitudes and beliefs of hypnosis were not relevant between those professionals who referred to have knowledge and those who said they did not. However, it is worth pointing out that, in this study, the data about the previous knowledge about hypnosis were obtained through participants' self-report, as a response to that question included in the first part of the VSABH-T. Even though it is with the responses to the scale that it is assessed to what point is true that a participant has knowledge of scientific hypnosis, several studies have repeatedly been found that people who refer to having knowledge of hypnosis on the questions of the scale, show fewer misconceptions and more positive attitudes toward hypnosis (Capafons, Alarcón, Cabañas, & Espejo, 2003; Capafons, Cabañas, Espejo, & Cardeña, 2004; Capafons, et al., 2008; Capafons et al., 2006). Consequently, it appears that responses reflect the person's actual knowledge, at least the one offered in his or her country. For instance, in Cuba even educated people hold myths about hypnosis, especially about memory (Capafons, Espejo, & Cabañas, 2005), which is also shown in this study.

These results are different than those obtained in other studies, and may be due to the Cuban cultural peculiarities, since the main source of information referred by participants is academic, which has also been confirmed in previous studies with Cuban professionals and students (López-Vásquez, 2007; Díaz-Purón, 2008). Nevertheless, hypnosis is not included in the official educational programs of universities or post-graduate studies, as is the case of many other countries. This may suggest that the mentioned academic activities (i.e., university, courses) are non-official courses and may not adhere to accurate definitions and descriptions of scientific hypnosis. Even though these courses may increase the professional prestige of hypnosis, they may perpetuate the misconceptions about memory and control due to a lack of an updated review of the available current hypnosis research.

It is also possible that participants have responded according to their social desirability bias regarding the source of their knowledge, taking into account that the setting where the study

took place was a professional-academic one. However, as has been pointed out, in these conditions participants tend to be honest, even more having been assured the confidentiality of their identity.

Subsequent studies should determine and examine the kind of sources of information that are accessible to Cuban professionals linked to hypnosis, since most of the professionals indicated interest in this topic.

Results indicate that after the lecture, the percentage of participants of Group 1 that agreed with misconceptions of the Memory factor decreased significantly. Therefore, it can be assumed that the lecture on hypnosis had an impact in correcting the misconceptions and in reaffirming right beliefs about memory. It has to be highlighted that the lecturer had participated in previous studies about beliefs and attitudes toward hypnosis in Cuba, and consequently made efforts to correct those misconceptions about memory and hypnosis, which are those with the highest iatrogenic potential. In the lecture, he gave compelling and complete information about this topic based on updated research.

Even though there were no quantitative changes in the other factors, it is worth describing an analysis of the qualitative changes observed. Thus, relative to Fear factor, it is reasonable that there are no changes because before the lecture 95% of participants had scores lower than 3.5 in this factor. That is, they disagreed, and after the lecture this opinion was maintained. The same happened with the Help, Collaboration, and Interest factors, since their contents are referring to attitudes of acceptance that are not increased by the lecture because the previous level was already high.

Furthermore, it is interesting that even though there was no statistically significant change in the Control factor, there was a qualitative change in the sense of increasing among 20% of professionals scoring high in this factor.

It is important to point out that this study also provides additional information about the validity of the VSABH-T, which shows it to be sensitive to changes in attitudes and beliefs as a result of the exposure to new information about hypnosis. At the same time this research

confirms that the retest effects are not significant if the person does not receive new information.

The fact that a lecture can change potentially iatrogenic misconceptions and attitudes toward hypnosis supports the relevance of giving information about this topic. In this case, the use of a control group (unlike other previous studies) increases the confidence in that it is the lecture, and not other variables, what produced the changes.

Nevertheless, this study presents some limitations. For instance, it is not possible to know whether the changes resulting from the lecture are maintained over time. It is also difficult to determine the influence over the results of the characteristics of the lecturer of hypnosis, who is a foreign expert with international prestige in the topic and was well-known by the attendants.

Finally, taking into account the results of this study and the previous research that indicate that having knowledge of hypnosis and experiencing to be hypnotized foster correct beliefs and positive attitudes toward hypnosis, it would be positive to include both theoretical and practical training in universities to disseminate scientific knowledge of hypnosis and, consequently, to prevent iatrogenic uses of it. Although this training could differ depending on the characteristics of each country, we propose courses of 60 hours, in which 40 hours would include empirical research of the efficacy of hypnosis, experimental bases, theories, demythification, induction methods, types of suggestions, etc., and 20 hours would focus on the specifics for each profession, namely, Psychology, Medicine, and Nursing. This would help to counteract the harmful influence of lay hypnotherapists, as well as to boost an efficacious use of hypnosis in those areas where it is established that it is a useful adjunct to medical and psychological interventions (Barabasz, Olness, Boland, & Kahn, 2009; Mendoza & Capafons, 2009).

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TABLES

Table 1: Mean, standard deviation, and age for each group

	Group	N	Minimum	Maximum	Mean	Standard Deviation
1	Age	46	24	69	42.83	12.14
	N valid	46				
2	Age	48	27	65	42.79	9.48
	N valid	48				

Table 2. Percentage of participants of each group regarding their academic level, knowledge, practical experience, and interest in hypnosis.

Group	Academic Level (%)			Knowledge (%)		Application of hypnosis (%)		Interest (%)	
	Graduate	Master	Doctor	Yes	No	Yes	No	Yes	No
1	40.5	23.8	35.7	71.7	28.3	28.3	71.7	100	0
2	73.5	22.4	4.1	23.5	76.5	13.5	86.5	90	10

Table 3. Distribution of sources of information about hypnosis in each group.

Group		Source of knowledge about hypnosis							TOTAL
		University	Courses	Master	Scientific Journals	Readings	TV	Others	
1	N	12	7	1	7	6	0	0	33
	% group	36.4	21.2	3.0	21.2	18.2	.0	.0	100.0
2	N	0	0	0	2	1	4	2	9
	% group	0	0	0	22.2	11.1	44.4	22.2	100.0
Total	N	12	7	1	9	7	4	2	42
	% group	28.6	16.7	2.4	21.4	16.7	9.5	4.8	100.0

Table 4: Descriptive statistics of factors in groups before the lecture and results of t-test for independent samples.

Factor	Group	N	Mean	SD	t	p-value
Fear	1	41	2.25	.89	-8.26	.000
	2	51	3.50	.54		
Memory	1	38	3.52	.91	1.02	.307
	2	50	3.35	.67		
Help	1	41	5.01	.77	12.25	.000
	2	49	3.46	.40		
Control	1	39	3.65	1.07	2.08*	.040
	2	45	3.29	.44		
Interest	1	45	4.43	1.22	5.01	.000
	2	51	3.43	.69		
Collaboration	1	22	4.68	.93	4.91	.000
	2	51	3.72	.67		
Magic	1	44	2.59	1.20	-2.77	.007
	2	51	3.20	.96		
Marginal	1	43	2.29	1.01	-5.47	.000
	2	51	3.34	.84		

Table 5: Distribution of percentages of participants who disagree with the factors of the VSABH-T in the groups before the lecture.

Factor	Group 1	Group 2	Chi-Square	P
Fear	95.1	45.1	25.88	.000
Memory	50	52	0.35	.853
Help	4.9	59.5	27.20	.000
Control	43.6	80	11.89	.001
Interest	22.2	52.9	9.52	.002
Collaboration	9	35.3	5.30	.021
Marginal	90.7	58.8	12.14	.000
Magic	81.8	47.1	12.26	.000

Table 6: Results of Multivariate analysis of factors of the VSABH-T in the pretest.

Source	Dependent Variable	F(1, 60)	p	MCE	η
Group	Fear	59.86	.000	11.98	.499
	Control	10.63	.002	11.60	.51
	Help	66.91	.000	13.11	.527
	Collaboration	16.52	.000	5.50	.216
	Interests	8.47	.005	7.19	.124
	Magic	4.79	.032	9.91	.074
	Marginal	23.23	.000	6.50	.279
	Knowledge of hypnosis	Fear	1.72	.194	11.98
Control		.40	.528	11.60	.007
Help		10.98	.002	13.11	.155
Collaboration		.68	.411	5.50	.011
Interests		2.88	.095	7.19	.046
Magic		.23	.633	9.91	.004
Marginal		.60	.439	6.50	.010
Group * Knowledge of hypnosis		Fear	3.66	.060	11.98
	Control	.01	.897	11.60	.000
	Help	2.45	.122	13.11	.039
	Collaboration	.01	.893	5.50	.000
	Interests	.00	.936	7.19	.000
	Magic	.20	.654	9.91	.003
	Marginal	3.14	.081	6.50	.050

Table 7: Descriptive statistics of factors of the VSABH-T in the pre-test for each group and previous knowledge of hypnosis.

	Group	Having Knowledge of hypnosis	N	Mean	SD
Memory	1	Yes	6	15.00	2.60
		No	8	13.12	4.12
		Total	14	13.92	3.56
	2	Yes	3	17.33	2.08
		No	22	18.27	2.16
		Total	25	18.16	2.13
Help	1	Yes	6	37.83	4.79
		No	8	31.00	3.81
		Total	14	33.92	5.38
	2	Yes	3	24.66	2.08
		No	22	25.00	2.79
		Total	25	24.96	2.68
Collaboration	1	Yes	6	16.33	2.65
		No	8	14.12	1.80
		Total	14	15.07	2.40
	2	Yes	3	14.00	3.00

		No	22	11.31	2.21
		Total	25	11.64	2.41
Interest	1	Yes	6	14.83	3.97
		No	8	12.75	2.25
		Total	14	13.64	3.15
	2	Yes	3	11.66	3.78
		No	22	10.50	2.01
		Total	25	10.64	2.21
Magic	1	Yes	6	6.16	3.71
		No	8	5.37	2.44
		Total	14	5.71	2.94
	2	Yes	3	11.00	1.73
		No	22	10.63	1.86
		Total	25	10.68	1.81
Marginal	1	Yes	6	5.66	2.94
		No	8	7.87	3.18
		Total	14	6.92	3.17
	2	Yes	3	10.33	.57
		No	22	10.00	1.51
		Total	25	10.04	1.42
Fear	1	Yes	6	10.16	4.16
		No	8	14.62	7.15
		Total	14	12.71	6.28
	2	Yes	3	21.00	2.64
		No	22	21.68	2.66
		Total	25	21.60	2.61
Control	1	Yes	6	26.50	6.02
		No	8	24.62	5.47
		Total	14	25.42	5.57
	2	Yes	3	21.66	2.08
		No	22	20.63	2.66
		Total	25	20.76	2.58

Table 8. Frequency distribution of participants scoring higher (i.e., agree) and lower (i.e., disagree) than 3.5 in the factors of the VSABH-T before and after the lectures in each group.

FEAR				
Group	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	95.1	4.9	95	5
2	45.1	54.9	56	44

MEMORY

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	50	50	90.5	9.5
2	52	48	44.9	55.1

HELP

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	4.9	95.1	0	100
2	59.5	40.5	52.5	47.5

CONTROL

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	43.6	56.4	23.8	76.2
2	80	20	76	24

INTEREST

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	22.2	77.8	23.8	76.2
2	52.9	47.1	76	24

COLLABORACIÓN

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	10.1	90.9	7	93
2	35.3	64.7	38.3	61.7

MAGIC

	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	81.8	18.2	9.1	90.9
2	47.1	52.9	47.1	52.9

	MARGINAL			
	Before		After	
	% of participants scoring >3.5	% of participants scoring < 3.5	% of participants scoring >3.5	% of participants scoring < 3.5
1	90.7	9.3	85.7	14.3
2	58.8	41.2	51	49