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LONG-TERM OUTCOME OF HYPNOTIC-ANALGESIA TREATMENT FOR CHRONIC PAIN IN PERSONS WITH DISABILITIES

MARK P. JENSEN, JOSEPH BARBER, MARISOL A. HANLEY,
JOYCE M. ENGEL, JOAN M. ROMANO, DIANA D. CARDENAS,
GEORGE H. KRAFT, AMY J. HOFFMAN, AND DAVID R. PATTERSON^{1,2,3}

University of Washington, Seattle, Washington, USA

Abstract: Data from 26 participants in a case series of hypnotic analgesia for chronic pain were examined to determine the long-term effects of hypnosis treatment. Statistically significant decreases in average daily pain intensity, relative to pretreatment values, were observed at posttreatment and at 3- and 9-month follow-up but not at 6- or 12-month follow-up. The percent of participants who reported clinically meaningful decreases in pain were 27%, 19%, 19%, and 23%, at the 3-, 6-, 9-, and 12-month follow-up points, respectively. Moreover, at 12-months posttreatment, 81% of the sample reported that they still used the self-hypnosis skills learned in treatment. Overall, the results indicate that about 20% of the sample obtained substantial and lasting long-term reductions in average daily pain following hypnosis treatment and that many more continue to use self-hypnosis up to 12 months following treatment.

Findings from a number of studies support the conclusion that hypnotic-analgesia treatment can benefit many individuals with chronic pain (Montgomery, DuHamel, & Redd, 2000; Patterson & Jensen, 2003). Moreover, the findings from several case reports suggest the possibility that the benefits of hypnosis treatment can last for many

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²Diana Cardenas is now at the Department of Rehabilitation Medicine and the Miami Project to Cure Paralysis, University of Miami Miller School of Medicine, Miami, Florida.

³Address correspondence to Mark P. Jensen, Ph.D., Department of Rehabilitation Medicine, Box 356490, University of Washington, Seattle, WA 98195-6490, USA. E-mail: mjensen@u.washington.edu

30% or more; see Farrar, Young, LaMoreaux, Werth, & Poole, 2001) decrease in average pain relative to pretreatment. We also hypothesized that those patients who were given and those who actually used practice tapes would show greater pretreatment to 12-month decrease in average pain intensity than those who were not given or who did not use practice tapes. Although we did not have specific hypotheses about the extent to which the study participants would practice self-hypnosis, data from this study will allow us to determine, for the first time, the frequency and extent to which patients who are given self-hypnosis training continue to use self-hypnosis for up to 1 year following treatment, as well as the reported effects of this practice on pain relief.

METHOD

Participants

The participants in this study were drawn from a sample used in a previously published case series of hypnotic analgesia that reported the effects of treatment up to 3 months after treatment (Jensen et al., 2005; data from these participants concerning their perception of the beneficial "side effects" of the intervention have also been reported; see Jensen et al., 2006). The primary analysis of the original study was an intent-to-treat analysis ($n = 30$), which presented the findings from all of the participants who had enrolled in the study and for whom data at all time points were available, whether or not they had completed treatment or if an intervening medical problem occurred that might have impacted the outcome variables. Of these 30 participants, 2 did not provide follow-up data at the 6-month assessment point, 1 did not provide data at the 6- and 9-month assessment points, and 1 did not provide data at the 9- and 12-month assessment points, making available data from 26 participants for the current intent-to-treat analysis. Of these 26 participants, 12 had a spinal cord injury, 8 had multiple sclerosis, 5 had an acquired amputation, and 1 had postpolio syndrome. The average age of the participants in this study was 50.2 years (range = 28–79). Of these participants, 14 (54%) were male; 24 (92%) were white, 1 (4%) was African American, and 1 (4%) was Asian American.

Measures

Outcome measures. The outcome measures analyzed for this study included the two that demonstrated significant pre- to posttreatment through 3-month follow-up effects in the original outcome study (Jensen et al., 2005): average pain intensity and pain unpleasantness. Both outcome domains were assessed at each outcome assessment point by contacting the participants four times within a 7-day window and

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asking them to rate their usual pain intensity and pain unpleasantness over the past 24 hours on 0 (*no pain; not bad at all*) to 10 (*the most intense pain sensation imaginable; the most intense bad feeling possible for me*) numerical rating scales. The four ratings for each outcome domain were then combined into composite measures of average pain intensity and pain unpleasantness. If the participant could not be contacted four times within the 7-day window, the composite scores were made up of the average of the 24-hour ratings that could be obtained during the assessment window.

Self-hypnosis practice frequency and effects. During treatment, participants were encouraged to practice self-hypnosis regularly by using a posthypnotic cue (taking a deep breath, holding it, and then letting it go) that was associated in a posthypnotic suggestion with entering the same state achieved during hypnosis treatments and with feelings of relaxation and comfort. Those who received a practice tape (see below) were also encouraged to listen to the tapes regularly, at least once a day if possible. "Self-hypnosis" for the purposes of this study was defined as either (a) using the posthypnotic cue to create an experience of comfort without a practice tape or (b) listening to the practice tape. At each follow-up assessment point, the participants were asked to indicate the frequency and amount of self-hypnosis they engaged in by responding to three questions: (a) On how many days out of the last 30 did you practice self-hypnosis? (b) On the days you practiced, how many times during the day did you practice, on average? and (c) On average, how many minutes did you practice each time you practiced? Two questions were used to assess the effects of self-hypnosis practice: (a) On a 0 to 10 scale, where 0 indicates *no relief* and 10 indicates *complete relief*, how much pain relief do you get when you practice self-hypnosis? and (b) How long does the pain relief usually last (in hours)?

Procedures

The 10-session intervention protocol provided to the participants in this study was described in detail in Jensen et al. (2005). Briefly, the treatment sessions were based on a written script that each clinician read to the patients, although minor wording changes were allowed to facilitate verbal flow. Each session began with a brief induction followed by five suggestions for analgesia (decreased pain, deep relaxation, hypnotic analgesia, decreased pain unpleasantness, and sensory substitution). The treatment-outcome measures were assessed, by telephone interview, twice before treatment (pre- and postbaseline; the baseline period ranged from 2 to 27 weeks), once just after treatment, and again at 3-, 6-, 9-, and 12-month follow-up. The self-hypnosis practice frequency and effects questions were asked at each follow-up assessment point.

Fourteen of the participants were offered practice tapes following the 3- (6 participants) or 6-month (8 participants) assessments. Eleven of these expressed an interest in receiving a practice tape. Two practice tapes were made for and given to each of these 11 participants by their treating clinician, who read the treatment script in the presence of the participant and audio taped each of two additional sessions. At subsequent follow-up points, all of the participants who received practice tapes were asked if they were using their tape as a part of their self-hypnosis practice.

Data Analysis

To test the first study hypothesis (that although some deterioration in treatment efficacy over time will be observed, the outcome variables previously shown to improve with treatment will still show significant improvement, relative to pretreatment, at 6-, 9-, and 12-month follow-ups), we first performed two omnibus repeated measures analyses of variance, with outcome (average pain intensity and unpleasantness) as the dependent variables and time (prebaseline, postbaseline/pretreatment, posttreatment, 3-, 6-, 9-, and 12-month follow-ups) as the independent variable. A significant time effect, which would indicate significant differences in the means of the outcome variables between at least two time points, was then followed up with univariate *t* tests to determine which time points differed significantly from the others. To assess the hypothesized existence at each time point of a subgroup of patients who reported a clinically meaningful (30% or more) decrease in average pain, relative to pretreatment, we computed the percent of participants whose average pain intensity at each assessment was at least 30% less than their pretreatment average pain intensity.

To test the second study hypothesis (that those patients who were given and those who actually used practice tapes will show greater pretreatment to 12-month follow-up decreases in average pain intensity than those who were not given or who do not use practice tapes), we compared the change in the primary outcome variable of this study (average pain intensity) from pretreatment to the 12-month follow-up point, between: (a) those who had and those who had not been given practice tapes and (b) of those who had been given practice tapes, those who did and those who did not report that they were using the tapes in the 30 days prior to the 12-month follow-up assessment point.

Finally, to examine and to describe the frequency and extent of use of self-hypnosis as well as the effects of this self-hypnosis on pain relief, we computed descriptive statistics (means, medians, and ranges) to the responses to each of the five questions about self-hypnosis practice at each follow-up assessment point.

Maintenance of Treatment and Pain Unpleasantness

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RESULTS

Maintenance of Treatment Gains in Average Pain Intensity and Pain Unpleasantness

The results of the repeated measures ANOVAs for average pain intensity and unpleasantness for the intent-to-treat analysis sample ($n = 26$) are presented in Table 1. As predicted, significant time effects emerged for both outcome variables. Also, average pain intensity and unpleasantness were both lower at posttreatment and at each assessment point than they were at either the pre- or post-baseline assessment points. However, average pain intensity was only significantly different from the pretreatment levels at posttreatment and at the 3- and 9-month follow-up assessment points; average pain intensity at 6- and 12-month follow-up were not statistically significantly lower than pretreatment levels. Pain unpleasantness was only significantly different from pretreatment levels at posttreatment and at the 3-month follow-up point. However, the 12-month average pain intensity (but not pain unpleasantness) was significantly less than that reported at *prebaseline*, when these patients were first recruited into the study. The percentages of patients who reported clinically meaningful (that is, greater than 30% reduction) improvement in average pain intensity at posttreatment and at 3-, 6-, 9-, and 12-month follow-up were 35%, 27%, 19%, 19%, and 23%, respectively.

Effect of Using Practice Tapes

The results of the t tests comparing the pretreatment to 12-month change in average pain intensity between participants who had and who had not been given a practice tape showed a significant difference, $t(24) = 2.11$, $p < .05$, with the patients who had been given practice tapes reporting greater decreases in average pain, mean pretreatment to 12-month change in pain intensity = 1.26, $SD = 1.80$, than those patients who were not given tapes, mean change in pain intensity = -0.02, $SD = 1.36$. However, of the 11 patients who had been given practice tapes, there was not a significant difference in pre- to 12-month change in average pain intensity between the 6 participants who said at the 12-month follow-up point that they had used a tape in the previous month (mean pretreatment to 12-month change in pain intensity = 1.17, $SD = 1.85$) and those who reported that they had not used a tape in the previous month (mean pretreatment to 12-month change in pain intensity = 1.45, $SD = 1.95$; $t(9) = 0.24$, $p = ns$). If anything, in fact, those who were not using a tape reported a (slightly) greater decrease in pain, relative to pretreatment, than those who reported that they continued to use a practice tape.

Table 1
Means and SDS of Average Pain Intensity and Pain Unpleasantness at All Assessment Points (n = 26)

Outcome Domain	Prebaseline Mean (SD)	Postbaseline/ Pretreatment Mean (SD)	Posttreatment Mean (SD)	3-Month Follow-up Mean (SD)	6-Month Follow-up Mean (SD)	9-Month Follow-up Mean (SD)	12-Month Follow-up Mean (SD)	F (df)
Average Pain Intensity	4.89 _a (1.82)	4.64 _{ab} (1.95)	3.78 _d (2.35)	3.81 _d (2.31)	4.31 _{abc} (2.54)	3.93 _{cd} (2.45)	4.11 _{bcd} (2.56)	6.81** (6, 20)
Pain Unpleasantness	4.34 _a (2.14)	4.62 _{ab} (2.05)	3.44 _{cd} (2.26)	3.45 _d (2.59)	4.07 _{abc} (2.89)	3.62 _{bcd} (2.40)	3.93 _{abcd} (2.47)	3.07* (6, 20)

Note. Means with different subscripts are significantly different ($p < .05$) from one another.

* $p < .05$, ** $p < .001$.

Patient Description of Use and Effects of Practice

Despite the fact that only a portion (between 19% and 27%) of the study participants reported substantial decreases in pain from pre-treatment to each follow-up point, a large majority of the participants reported that they continued to use self-hypnosis even up to the 12-month follow-up assessment. The numbers (and percent) of participants who reported using self-hypnosis at least once during the 30 days previous to the follow-up were 24 (92%), 21 (81%), 21 (81%), and 21 (81%) for the 3-, 6-, 9-, and 12-month follow-ups, respectively. Table 2 presents the mean, median, and ranges of the responses to the five questions about self-hypnosis practice asked at each follow-up assessment. As can be seen, the average number of days that self-hypnosis was used was between 16 and 17 at each follow-up point (median = 12, 15, 15, and 20, respectively), although there was a great deal of variability (range = 0 to 30 days at each assessment). The participants tended to practice about twice per day, and they practiced on average between 9 and 13 minutes, when they did practice. There did

Table 2
Mean, Median, and Range of Responses to the Follow-up Questions About Self-Hypnosis Practice and Effects

Variable	Follow-up Assessment Point			
	3-Month	6-Month	9-Month	12-Month
Days of practice out of the past 30				
Mean (SD)	16.8 (10.8)	16.33 (1.92)	16.96 (11.22)	16.96 (12.87)
Median	12	15	15	20
Range	0-30	0-30	0-30	0-30
Number of times of practice per day				
Mean (SD)	2.14 (1.39)	2.19 (1.44)	1.95 (1.28)	1.67 (1.11)
Median	2	2	2	1
Range	1-7	1-6	1-6	1-5
Number of minutes of practice per practice session				
Mean (SD)	10.80 (10.00)	12.67 (10.69)	9.13 (7.69)	10.62 (7.67)
Median	10	10	5	10
Range	1-45	4-45	1-30	1-30
Pain relief obtained with practice*				
Mean (SD)	5.71 (2.76)	5.95 (2.77)	6.33 (2.97)	5.52 (2.98)
Median	5	6	7	5
Range	0-10	2-10	2-10	0-10
Hours that pain relief usually lasts				
Mean (SD)	4.45 (7.06)	4.30 (5.70)	3.95 (5.34)	4.05 (6.18)
Median	1	2	2	2
Range	1-24	0-24	0-24	0-24

*On a 0 (no relief) to 10 (complete relief) scale.

not appear to be very much change in the frequency and length of practice from the 3- through the 12-month follow-ups.

The reported relief ratings and the time that pain relief usually lasts provide some clues regarding the reasons for the high frequency of continued self-hypnosis practice, despite the relatively low number of participants who reported substantial decreases in their daily average pain. Although a large degree of variability in the amount of pain relief produced by self-hypnosis practice is evident, the average pain relief rating for those who continued to practice self-hypnosis was greater than 5 (on a 0-to-10 pain-relief scale) at each follow-up point. The average amount of time that the pain relief lasted was about 4 hours. However, it should be noted that the reported length of time that pain relief lasted was positively skewed, such that the median time was either 1 hour (3-month follow-up) or 2 hours (each of the other follow-ups).

DISCUSSION

These long-term follow-up data provide important information about the effects of hypnotic-analgesia treatment for chronic pain over time, as well as important preliminary findings concerning the nature and effects of continued use of self-hypnosis skills. Analyses of average pain intensity and unpleasantness, which were previously reported to decrease in the short term and maintain up to 3 months posttreatment following hypnotic-analgesia treatment (Jensen et al., 2005), showed a slight drifting back in the direction of pretreatment levels by the 12-month assessment point. Although at 12 months, pain intensity and unpleasantness ratings were still less than the pain ratings obtained just prior to treatment, they were neither statistically significantly nor substantially lower than the pretreatment ratings for the sample as a whole. Related to this finding, there was a drop in the percent of participants who reported clinically significant and meaningful changes in their average pain, relative to pretreatment levels, from 35% in this sample of 26 participants to 23% at the 12-month follow-up point. These data are consistent with the conclusion that not everyone shows substantial decreases in average pain intensity from a standardized hypnotic-analgesia treatment, and that some of the patients who do show initial benefit do not necessarily maintain that benefit over the long term. However, the findings are also consistent with the conclusion that there is a subset of patients with chronic pain who report substantial decreases in daily average pain in the short term from hypnotic-analgesia treatment, and that many of them (about two-thirds in the present sample) maintain this improvement for at least 12 months.

The preliminary findings (preliminary primarily because of the low sample size) concerning the effects of giving practice tapes to a subset of these patients is consistent with case reports (e.g., Jensen & Barber,

2000) that suggest that such tapes may help patients maintain their treatment gains over the long term. Interestingly, however, although giving patients practice tapes at the 3- or 6-month follow-up point was associated with long-term (12-month) decreases in pain, the use of those tapes at the 12-month assessment point was not. If anything, those patients who were still using the practice tapes at 12 months posttreatment reported less decrease in average pain than those who had stopped using them (although this difference was not statistically significant). If these findings are replicated in other samples of patients, they would together suggest the possibility that giving tapes may facilitate pain reduction over time. Of course, being given a practice tape does not guarantee use of the tape. Research is needed to determine if the current findings are also obtained in larger samples of patients and to determine if objective measures of tape use are associated with long-term outcomes.

Despite the fact that only a subgroup of patients (23%) at the 12-month assessment point reported substantial and clinically meaningful decreases in their average pain, relative to their pain at pretreatment, a very large percentage of the study participants (81%) reported that they continued to use self-hypnosis at 12-months following treatment. These patients practiced self-hypnosis, on average, on 17 (median, 20) out of the past 30 days, about 1.5 times per day (median, once per day), and for about 10 minutes (median also 10 minutes) each time they practiced. Clearly, most of the participants in this study continue to find something about self-hypnosis useful. An examination of the reported effects of self-hypnosis on pain relief provide a possible reason for the frequency self-hypnosis use; almost all of the participants who use self-hypnosis report at least some pain relief when they use this coping strategy (on average, about 5 on a 0-to-10 pain-relief scale), and the pain relief obtained almost always lasts beyond the practice session (on average, about 4 hours, although the median length of relief is 2 hours). Thus, it appears that even among those study participants who did not obtain substantial decreases in their average daily pain over the long term (pretreatment to the 12-month follow-up), most are able to, and continue to, use self-hypnosis as a way to obtain short-term pain relief.

The limitations of the current study include the relatively low sample size and the fact that the practice tapes, given just after the 3- and 6-month assessment points, were not given to the participants on a random basis. Also, the study design is an uncontrolled case series. The latter weakness prohibits conclusions regarding the efficacy of the hypnosis intervention relative to the effects of time alone or patient expectancy effects, while the low sample size limits the ability of the study to detect changes in pain over time. Finally, the primary outcome variable of this study, average pain intensity, is a conservative

measure of treatment effects. It represents the pain experience of the patients assessed on 4 days during a 7-day window; in order for a treatment to produce changes in this primary outcome variable, it must produce substantial and sustained decreases in pain over a long period of time. Such a measure would unlikely be sensitive to the benefit of self-hypnosis training reported by the majority of subjects; that is, as a pain reduction strategy that lasts for hours. In order to be able to detect the long-term effects of such a treatment on a measure of average daily pain, more than 26 subjects would likely be needed.

Despite the low sample size, however, we were able to find a significant difference in average pain intensity for those patients who were given practice tapes compared to those who were not. However, the fact that random assignment was not used to determine who was and was not offered the practice tapes precludes drawing firm conclusions about the effects of practice tapes on long-term outcomes at this point in time. The findings are consistent with our clinical experience and with previous case reports suggesting some benefit to the provision of practice tapes and also indicate that more research studying the effects (and use) of practice tapes on long-term outcomes is warranted.

The most striking finding from this study, perhaps, was the very large number of patients who continued to use self-hypnosis on a regular basis, even up to 12 months following treatment. Because this is determined by telephone interview, it is not possible to be certain if patients' reports are accurate. For example, it is possible that the participants reported using practice tapes or practiced self-hypnosis without a tape more frequently than they actually did. However, if patient reports in this study are accurate, this high degree of continued use of self-hypnosis suggests that almost all (at least 81% of the sample) viewed hypnosis as valuable. Supporting this conclusion was the finding that almost all of the participants who used self-hypnosis found that it continued to provide pain relief, and that this relief usually lasted for some time after self-hypnosis ended (average a little over 4 hours; median 2 hours). Thus, even for those patients whose daily pain experience did not decrease dramatically from pretreatment levels, most reported that using practice tapes provided short-term pain relief. This suggests that, even when self-hypnosis might not have a substantial impact on daily average pain for the majority of patients, self-hypnosis might be taught as a way to manage pain flare-ups in the short term. It may be that the majority of patients with chronic pain will be able to learn and to use self-hypnosis for this purpose.

At the least, the current findings suggest that future researchers studying the effects of self-hypnosis training for chronic pain include measures of both (a) self-hypnosis practice and (b) the short-term effects of self-hypnosis use as outcome variables. The findings also suggest that clinicians may do well to closely observe the effects of their

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The constraint of the standardized intervention is another limit of this study. Although the advantage of standardization for research purposes is obvious, the clinical disadvantage may be less clear. It is striking that patients are able to experience significant pain relief from an intervention that involves the reading of a script by the clinician-experimenter (who may or may not be an experienced clinician). Although the script was intended to be as effective as possible in a group of patients with a broad range of cognitive abilities and hypnotic talents, the clinician-experimenters frequently believed the intervention would have been more effective had they been able to vary from the script. It is worth keeping in mind, then, that the degree of symptom relief obtained with a standardized script does not likely represent the actual potential of the intervention were it able to be individualized (cf. Barabasz & Barabasz, 2006; Barabasz & Christensen, 2006).

Despite the limitations of this study, the findings suggest that self-hypnosis training is associated with substantial decreases in daily pain in a subset of patients with chronic pain problems associated with disabilities, and that the great majority of patients with chronic pain who receive self-hypnosis training continue to use the self-hypnosis skills they were taught and to report benefits from this use for up to 12 months after treatment.

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Langzeitergebnisse von hypnotherapeutischer analgetischer Behandlung bei chronischem Schmerz von Personen mit Behinderungen

Mark P. Jensen, Joseph Barber, Marisol A. Hanley, Joyce M. Engel,
Joan M. Romano, Diana D. Cardenas, George H. Kraft, Amy J. Hoffman,
und David R. Patterson

Zusammenfassung: Daten von 26 Teilnehmern einer Untersuchung zur hypnotischen Analgesie bei chronischem Schmerz wurden mit dem Ziel ausgewertet, Langzeiteffekte der hypnotischen Behandlung zu ermitteln. Statistisch signifikante Rückgänge des berichteten täglichen mittleren Schmerzniveaus wurden gegenüber Werten vor der Behandlung zu Katamnesezeitpunkten von 3 und 9 Monaten, nicht aber bei 6 oder 12 Monaten berichtet. Die Prozentzahlen von Teilnehmern die klinisch bedeutsame Rückgänge berichteten, lagen bei 27, 19, 19 und 23 Prozent für die 3, 6, 9 bzw. 12 Monats-Intervalle. Darüber hinaus berichteten nach 12 Monaten 81% der Stichprobe daß sie immer noch selbthypnotische Techniken anwendeten, die ihnen während der Behandlung vermittelt worden waren. Insgesamt zeigen die Ergebnisse, dass etwa 20% der Stichprobe eine substantielle und anhaltende Langzeitreduktion im mittleren täglichen Schmerzniveau infolge einer hypnotischen Behandlung erlangten und dass ein Großteil davon Selbsthypnose bis zu einem Jahr weiter anwendet.

RALF SCHMAELZLE
University of Konstanz, Konstanz, Germany

Les résultats à long terme d'un traitement analgésique hypnotique de la douleur chronique chez des personnes handicapées

Mark P. Jensen, Joseph Barber, Marisol A. Hanley, Joyce M. Engel,
Joan M. Romano, Diana D. Cardenas, George H. Kraft, Amy J. Hoffman,
et David R. Patterson

Résumé: Des données recueillies auprès de 26 participants dans une série de traitements analgésiques hypnotiques ont été examinées afin de déterminer

les effets à long terme significatifs de la comparaison après le traitement lors des suivis participants aux points de vue cliniques aux 3e, 6e, 9e et 12e mois d'autohypnose indiquent que les résultats sont remarquables et que le traitement hypnotique a été continué d'utiliser.

El resultado a la

Mark P. Jensen
Joan M. Romano

Resumen: Examinamos los efectos analgésicos de la hipnosis a largo plazo del tratamiento en los valores antes y después de seguir el porcentaje de participantes importantes en el seguimiento, tratamiento y habilidades de los resultados a largo plazo del tratamiento con hipnosis a 12 meses.

les effets à long terme du traitement hypnotique. Une baisse statistiquement significative de la moyenne de l'intensité de la douleur quotidienne, comparativement aux valeurs pré-traitement, a été observée immédiatement après le traitement et lors des suivis effectués 3 et 9 mois plus tard, mais pas lors des suivis effectués 6 ou 12 mois plus tard. Les pourcentages des participants ayant signalé une diminution considérable de la douleur du point de vue clinique étaient de 27%, 19%, 19% et 23% aux suivis effectués aux 3e, 6e, 9e et 12e mois respectivement. De plus, lors du post-traitement du 12e mois, 81% des participants ont dit avoir continué d'utiliser les méthodes d'autohypnose apprises durant le traitement. Dans l'ensemble, les résultats indiquent que près de 20% des participants ont observé une diminution notable et durable de leur douleur moyenne quotidienne à la suite des traitements hypnotiques, et qu'un grand nombre d'autres participants ont continué d'utiliser l'autohypnose jusqu'à 12 mois après le traitement.

JOHANNE REYNAULT
C. Tr. (STIBC)

El resultado a largo plazo del tratamiento hipnótico de analgesia para dolor crónico en personas con discapacidades

Mark P. Jensen, Joseph Barber, Marisol A. Hanley, Joyce M. Engel,
Joan M. Romano, Diana D. Cardenas, George H. Kraft, Amy J. Hoffman,
y David R. Patterson

Resumen: Examinamos los datos de 26 participantes en una serie de casos de analgesia hipnótica para tratar dolor crónico para determinar los efectos a largo plazo del tratamiento de hipnosis. Observamos disminuciones significativas en el promedio diario de intensidad de dolor, con respecto a los valores antes del tratamiento, al finalizar el tratamiento y a los 3 y 9 meses de seguimiento pero no a los 6 o 12 meses de seguimiento. El porcentaje de participantes que informaron disminuciones clínicamente importantes en dolor fueron 27%, 19%, 19%, y 23%, a los 3-, 6-, 9-, y 12-meses de seguimiento, respectivamente. Además, a los 12 meses después del tratamiento un 81% de la muestra informó que continuaban usando las habilidades de auto-hipnosis aprendidas en el tratamiento. En suma, los resultados indican que alrededor de 20% de la muestra obtuvo reducciones a largo plazo considerables y duraderas en el dolor diario promedio después del tratamiento de hipnosis y que muchos más continuaban usando auto-hipnosis 12 meses después del tratamiento.

ETZEL CARDEÑA
Lund University, Lund, Sweden

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