Efficacy of hypnosis in the management of non-procedural pain: systematic review

Eficácia da hipnose no manejo da dor não procedimental: revisão sistemática

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ABSTRACT

BACKGROUND AND OBJECTIVES: Pain has great impact on public health and presents a social cost which transcends the financial aspect. Hypnosis is a focal, quick and low-cost resource with effective change possibilities in pain management. The objective of this study was to identify evidence of the efficiency of hypnosis in pain management.

CONTENTS: This study consists of a systematic literature review held in February 2020. Search was carried out in the Pubmed, Cochrane, LILACS, Scielo and PsycInfo platforms, using the keywords "clinical trials", "hypnosis", "pain management", "pain intensity", and "quality of life", totalizing 18 studies after peer review. Most articles are randomized, controlled by comparing hypnosis to standard treatment or other integrative practices, and focus mainly on the aspects of intensity, quality and interference of pain as an outcome variable. Six studies mention quality of life and only two refer catastrophization as an important intervening variable.

CONCLUSION: Hypnosis is an effective technique for pain management, considering that there was an improvement in pain management with the improvement of at least one aspect, be it intensity, interference or quality of pain. However, it's necessary to highlight important limitations of the studies, such as the small sample size and the complexity of systematizing subjective techniques, which highlights the need for more clinical trials, including multicentric studies, so that larger samples can be obtained.

Keywords: Hypnosis, Pain management, Non-procedural pain.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A dor tem um amplo impacto na saúde pública, apresentando um custo social que extrapola o financeiro. A hipnose mostra-se como recurso focal, breve e de baixo custo, com possibilidades efetivas de mudança no manejo da dor. O objetivo deste estudo foi verificar a eficácia da hipnose no manejo da dor não procedimental.

CONTEÚDO: Trata-se de uma revisão sistemática da literatura realizada em fevereiro de 2020. As buscas foram realizadas nas plataformas Pubmed, Cochrane, LILACS, Scielo e PsycInfo, utilizando-se os descritores "ensaio clínico", "hipnose", "manejo de dor", "intensidade de dor" e "qualidade de vida", totalizando 18 estudos após a avaliação de pares. A maioria dos estudos era randomizada, controlada por comparação da hipnose com tratamento padrão ou outra prática integrativa e centrava-se principalmente nos aspectos de intensidade, qualidade e interferência da dor como variável desfecho. Seis estudos fazem menção à qualidade de vida e apenas dois se referem à catastrofização como variável interveniente importante.

CONCLUSÃO: A hipnose é uma técnica eficaz no manejo da dor, considerando que houve melhora no manejo da dor a partir da melhora em, pelo menos, um aspecto, seja intensidade, interferência ou qualidade da dor. No entanto, é preciso ressaltar importantes limitações dos estudos, como o tamanho reduzido das amostras e a complexidade de sistematização das técnicas subjetivas, o que evidencia a necessidade de mais ensaios clínicos, inclusive multicêntricos, de modo a garantir amostras maiores.

Descritores: Dor não procedimental, Hipnose, Manejo da dor.

INTRODUCTION

Pain is currently considered a disease in itself and is the most frequent cause of suffering and disability, compromising the quality of life (QoL) of millions of people worldwide[1]. Studies present evidence that 25 to 30% of the United States population suffer from chronic pain[1]. Brazilian studies found similar results, with 42% of the sample affected by chronic pain in general[2] and 25,6% by temporomandibular joint pain[3].

As it is recognized as an essentially subjective and multifactorial experience, pain must be evaluated both in its physical aspects and in the associated emotional and behavioral aspects. This is corroborated by the current tendency to use - in terms of technological innovation in health centered on pain management - techniques that prioritize the update of interpersonal relationship modes and the strengthening of transdisciplinary processes in

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the production of knowledge among health professionals. From this perspective, it's possible to highlight the various elaborations around the notion of integrality, with the consequent "technologies of integration" of health practices[4]. The first Integrative and Complementary Health Practices (ICHP) were implemented in 2006 with a proposal to improve, in the long term, the QoL of the population assisted by the Brazilian public health system (SUS). Hypnosis is recognized as an integrative practice by the *Política Nacional de Práticas Integrativas e Complementares* in SUS (PNPIC-SUS, National Policy of Integrative and Complementary Practices) in 2018.

Hypnosis is described as a unique form of communication, established through a relationship of trust (rapport), in which the patient is more receptive to the ideas presented by the hypnologist, showing more motivation to explore their internal resources for the management of their responses and behaviors regarding the illness[5].

Among the expected effects of hypnosis at the individual level are: favoring the process of change; stimulating neuronal plasticity; more effective communication; improving relationships/connections; expanding sensations, perceptions, thoughts, and behaviors; breaking limiting beliefs, and learning through access to the unconscious. Based on these premises, the hypnosis technique can be taught and self-applied, helping the user to be effectively involved in their treatment, also with the possibility of becoming a multiplier in their community[5].

In the collective sphere, there is evidence that hypnosis is a therapeutic approach of simple application, low cost, good reception, and effectiveness, which can reduce hospitalization when used in Primary Health Care in addition to restricting the abusive prescription of drugs and requests for complementary exams, changing hospital morbidity[6].

Some of the hypnotic procedures used in pain management are: 1) direct hypnotic suggestion for total pain suppression; 2) indirect hypnotic permission for pain suppression; 3) hypnotic amnesia; 4) analgesia and anesthesia; 5) substitution of symptom and sensation; 6) time distortion and reframing; 7) indirect hypnotic anesthesia via dissociation[5].

Studies observed that hypnotic induction is not restricted only to the analgesic aspect and has proven to be superior when compared to other practices in some studies due to its significant factor of impact in reducing anxiety, depression, and stress associated with pain[7,8]. In a meta-analysis, at least six studies were identified in which hypnosis showed superior results in the management of different types of chronic pain[9] when compared to other psychological interventions.

As a contribution to the diffusion of hypnosis as a clinical practice in the context of Brazilian public health, it's necessary to highlight two experiences in universities in São Paulo. Firstly, at the Teaching Hospital of the University of São Paulo Medical School (USP), which has been using hypnosis techniques since 1995 to help in the treatment of patients with anxiety and chronic pain, parturients, and in cases of sedation for small and large surgeries. Later, in 1999, the Hypnosis Study Group of the Federal University of São Paulo (GEH-UNIFESP) was created, an entity whose main objective is to provide a space for the exchange of knowledge, reflections, research, and therapeutic practices among professionals in the health field and related areas about hypnosis and other modified states of consciousness.

However, despite the existence of a considerable academic production that portrays the evidence of this clinical practice, the scientific production on hypnosis in Brazil has privileged the elaboration of theoretical dissertations or observational studies, leaving the field of experimental studies still little explored. This justifies the need to resort to foreign productions to deepen the knowledge about hypnosis in this specific field.

An initial analysis of this material showed that in the reviews and meta-analysis researched there is an undifferentiated inclusion of studies in which hypnosis is applied both in situations in which pain manifestation occurs spontaneously and in those in which pain is the result of a procedure, surgeries, or dressing changes, or is induced artificially, as in the case of pain induced by pressure, shocks, or exposure to cold.

Given the understanding that pain is a highly subjective process, influenced by both biological and psychosocial factors, the need to investigate how effective the hypnotic technique is arises specifically in the management of spontaneous pain, named, for the purposes of this research, as nonprocedural pain.

In order to contribute to the resumption of knowledge production on the topic, the present systematic review sought to collect, from conducted clinical trials, evidence pointing to the effectiveness of hypnosis in pain relief with the aim of strengthening integrative practices through the insertion of clinical research in the gold standard of evidence quality.

CONTENTS

The PICO strategy was used in the study design, in which controlled trials were selected according to three types of control: 1) taking multiple measurements from the same group over the course of an intervention, before-and-after studies; 2) placebo groups, when a neutral approach is applied, and 3) comparison to other therapies, always associated with a standard treatment, in which hypnosis is evaluated for its effectiveness in pain management. The search included only clinical trials in which one of the primary outcomes was pain intensity/interference/quality and/or QoL.

Exclusion criteria were studies published before 2000, as well as duplicates and studies that did not provide access to their full contents. Review and meta-analysis articles were also excluded. For having been evaluated as an important source of bias for this research, articles in which the painful stimulus was artificially provoked - not a natural response to a previous clinical condition - as well as studies in which pain was restricted to a procedural intervention were also excluded.

The pain intensity, interference, and quality variables were defined as primary outcomes. For the purposes of this review, an improvement in at least one score of these variables would be considered to constitute an improvement in the quality of pain management. Some studies used pain scales specific to the type of disease analyzed, such as the Multidimensional Haemophilia Pain Questionnaire (MHPQ)[10]. However, some instruments

were recurrently used such as: self-report of pain, Visual Analog Scale (VAS), Numerical Rating Scale (NRS), Brief Pain Inventory (BPI) and McGill Pain Questionnaire. The QoL variable also figured as an important secondary outcome and, although many articles refer to it, few actually include it in their final analysis. However, when included, the Health-Related Quality of Life (HRQOL) instrument, the SF-36 QL questionnaire in its two versions, and questionnaires developed specifically for certain diseases were applied.

Search strategy

The search followed the "Methodological guidelines: preparation of systematic reviews and meta-analysis of randomized clinical trials", from the Brazilian Ministry of Health[11]. It uses the Cochrane and Consort checklists and the GRADE system as references to establish the search filters for clinical trials, as well as the guidelines for data collection. The search was conducted in the following electronic databases: Pubmed, Cochrane Library, LILACS, Scielo and PsycInfo. The search was performed in February 2020 with the following descriptor combinations: (((((randomized controlled trial [pt] OR controlled clinical trial [pt] OR randomized controlled trials [mh] OR random allocation [mh] OR double-blind method [mh] OR single-blind method [mh] OR clinical trial [pt] OR clinical trials[mh] OR ("clinical trial"[tw]) OR ((singl*[tw] OR doubl*[tw] OR trebl*[tw] OR tripl*[tw]) AND (mask*[tw] OR blind*[tw])) OR (placebos [mh] OR placebo* [tw] OR random* [tw] OR research design [mh:noexp] OR comparative study [pt] OR evaluation studies as topic [mh] OR follow-up studies [mh] OR prospective studies [mh] OR control* [tw] OR prospective* [tw] OR volunteer* [tw]) NOT (animals [mh] NOT humans [mh])))))) AND (((((((((("hypnoses") OR "hypnose") OR "hypnosetherapie") OR "hypnosuggestion") OR "hypnosis") OR "hypnotherapie") OR "hypnotherapy")))) AND "pain management") AND (((((("pain intensity") OR "pain intensity/interference") OR "pain quantity")))) OR ((((("quality of life") OR "life stile") OR "value of life"))).

A second search was conducted in November 2020 in order to check for new publications between February and November 2020. However, all studies that were published in this period were excluded either because they were still in progress or because they did not have accessible full reports. The references of the primary articles were examined and included at the end of the preliminary analysis, respecting the inclusion/exclusion criteria. The references from the systematic reviews and meta-analyses found in the initial search were analyzed and included.

Data selection/extraction and quality of evidence

All references were submitted to the analysis of two independent reviewers, according to the inclusion/exclusion protocol, followed by a conciliation meeting with subsequent submission to a third reviewer when necessary. Then, a database was created in Excel to record, organize, and synthesize the essential information for the study and to facilitate subsequent analysis. The following variables were collected and recorded: author, title, journal or magazine of publication, year of publication, disease associated with pain, type of placebo control, standard treatment or other integrative intervention, number of participants, pain intensity/interference primary outcome variable, QoL secondary outcome variable, instruments used to measure outcome, studies results/conclusions.

As for the risk of bias assessment, the Cochrane collaborative tool[12] was chosen as guideline, stipulating six domains for subjective assessment: 1) selection bias, subdivided into random sequence generation, randomization, and allocation concealment; 2) performance bias by blinding of participants and professionals; 3) detection bias by blinding of outcome evaluators; 4) attrition bias with incomplete outcomes; 5) reporting bias by report of selective outcomes; and 6) other biases. Each of these domains was assigned a rating relative to categories of low risk, high risk, or uncertain risk. Because of their complexity, and as recommended by the Cochrane tool, domains 4, 5, and 6 - because they are more subjectively complex - were assessed by two independent evaluators.

Included studies

The search in the virtual databases indicated a total of 107 potential studies: Pubmed (63); Cochrane Library (27); LILACS (2); Scielo (0); and PsycInfo (15). After eliminating duplicate studies, 88 records were counted. Of these, one article didn't provide a complete report and was therefore excluded. Twenty articles were selected for full report evaluation, but only 18 met the inclusion/exclusion requirements for submission to qualitative analysis. Figure 1 shows the flowchart of the search and selection process performed for this review.

The total sample size obtained from the 18 selected studies was 1426 patients, ranging from 8 to 527 participants per study. The mean age of the participants was approximately 48 years.

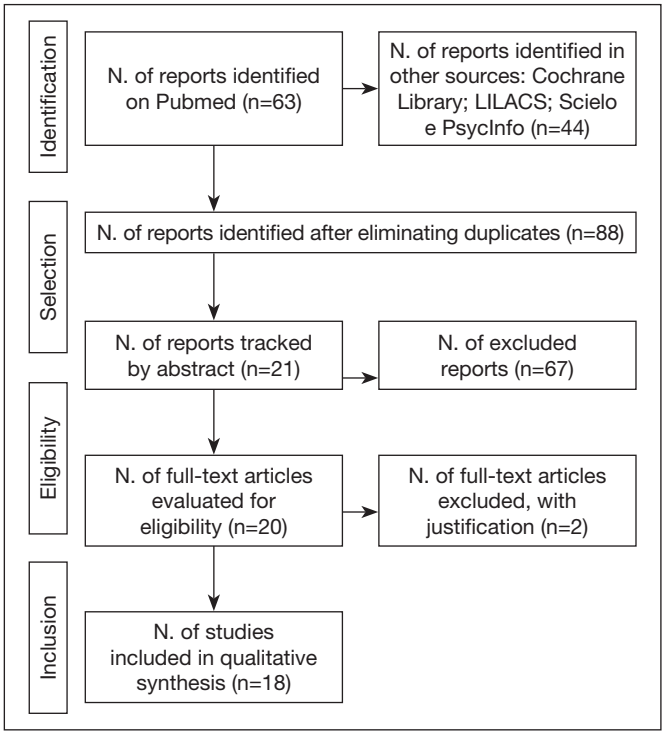

Figure 1. Flowchart of the studies search and selection
Source: Prepared by the authors.

The diseases associated with pain were: three studies on multiple sclerosis[13-15]; three on cancer[16-18]; one on hemophilia[10]; one on burns[19]; one on fibromyalgia[20]; one on brachial plexus injury[21]; one on chronic pain in the elderly[8]; one on intolerable pain[22]; one on disability[23]; one on post-traumatic injury[24]; one on spinal cord injury[25]; one on muscle pain[26]; one on patients in palliative care[27]; and one on chronic low back pain[28]. Table 1 shows the summary of the main characteristics of the included studies.

Table 1. Characteristics of studies included in decreasing chronological order

References	Baseline disease	Control	Results/Conclusions
10	Hemophilia	Standard	The EG (n=8) showed greater reduction than the CG (n=10) (d=-0.267) in pain interference. A greater improvement in HRQol (EQ-5D index: d=0.334; EQ-5D VAS: d=1.437) and a trend toward better hemophilia-related QoL were also evident in the EG.
21	Brachial plexus injury	Acupuncture	There was statistically significant improvement in mean pain intensity from pre-treatment to post-treatment scores in both groups. Pain intensity increased four months later; however, it was still significantly reduced compared to pre-treatment scores.
16	Post-operative breast cancer	Standard	Between T1 and T4, there were significant differences between the groups in patient-reported outcomes according to PROMIS, favoring the SCT group compared to the standard treatment (p=0.005, p=0.023 and p=0.021, respectively). The results suggest that the use of SCT in the perioperative period decreased pain perception, fatigue and inflammatory cytokine secretion.
19	Adult men with burns	Placebo	There was no significant difference between the groups in reducing background pain intensity, but there was in background pain quality and pain anxiety in the intervention group during the four hypnosis sessions.
22	Adults with intolerable pain	Mindfulness/ Psychoeducation	The mind-body intervention group presented significantly lower pain intensity post-intervention than the psychoeducation group (p<0.001, percentage pain reduction: mindfulness = 23%, suggestion = 29%, education = 9%).
13	Women with multiple sclerosis	Standard	Repeated measures analysis showed significant difference between the groups; pain was lower in the self-hypnosis group, but was not maintained after four weeks.
17	Cancer patients or cancer survivor patients	Educational intervention	There was significant improvement in pain intensity/interference after the active treatment compared with the control condition on all result measures. Treatment gains were maintained at three-month follow-up. However, the findings need to be replicated in larger samples of cancer survivors.
8	Elderly with chronic pain	Massage	Mean measured pain presented the greatest decrease in the hypnosis group compared to the massage group during hospitalization, confirmed by the pain intensity measure before each session, which decreased only in the hypnosis group over time (p=0.008). There was no effect in any in the three months after hospital discharge.
27	Chronic pain in palliative care	Physiotherapy/ Psychoeducation/ Physiotherapy + Psychoeducation/ Standard	The most prominent results were obtained for patients allocated to the self-hypnosis/self-care group. These patients presented significant benefits in the areas of pain intensity, pain interference, anxiety, depression, and QoL, as well as a greater effective economic benefit from this treatment compared to the other interventions.
28	Veterans with chronic low back pain	Biofeedback	The combined EGs reported significantly greater reduction in pain intensity than the CG. There was no significant difference between the three hypnosis conditions. More than half of the participants who received hypnosis reported clinically significant reductions (≥30%) in pain intensity and maintained these benefits for at least six months after treatment.
18	Women with cancer	Before and after outcomes	Analyses revealed (a) significant pre and post-treatment decreases in pain intensity, fatigue, and sleep problems, and (b) that pain intensity continued to decrease from post-treatment to the six-month follow-up.
14	Multiple Sclerosis	Educational Intervention/Cognitive Restructuring	The worse pain intensity and pain interference were lower after HYP than before treatment or after CONT or CR. These differences reached statistical significance when HYP was compared to CONT and HYP before treatment for worse pain intensity and when HYP was compared to CONT for pain interference.
24	Post-traumatic injury	Standard	The pattern of findings as indicated by the effect of the Time × Treatment Condition interaction was statistically significant for the lower pain intensity ratings, but not for the mean pain ratings.
25	Spinal Cord Injury	Biofeedback	Participants in both treatment conditions reported substantial decreases in pain intensity before and after the treatment sessions. However, only HYP reported statistically significant reductions in mean daily pain pre and post-treatment, and these were maintained at three-month follow-up.

Continue...

Table 1. Characteristics of studies included in decreasing chronological order – continuation

References	Baseline disease	Control	Results/Conclusions
15	Multiple Sclerosis	Progressive Relaxation	HYP condition participants reported significantly greater pre and post-session as well as pre and post-treatment decreases in pain and pain interference than PMR condition participants, and the gains were maintained at three-month follow-up.
26	Muscular pain	Standard	The EG improved from their symptoms (change from 62.5 to 55.4), while the CG deteriorated (change from 37.2 to 45.1), (p=0.045). The 12 patients showed a mean improvement from 51.5 to 41.6 (p=0.046). One year later, the corresponding score was 41.3, indicating persistent improvement.
20	Fibromyalgia	Relaxation	Focused hypnosis with analgesic suggestions has a greater effect on pain intensity than focused hypnosis with relaxation suggestions or on relaxation itself.
23	Disability	Before and after outcomes	Analyses showed significant before and after treatment changes in average pain intensity, which were maintained at the three-month follow-up. Significant changes were also found in pain unpleasantness and perceived control over pain, but not in pain interference or depressive symptoms. Hypnotizability, treatment concentration (e.g., daily versus weekly), and initial response to treatment were not significantly associated with treatment outcome.

CONT = An education control condition; CR = Cognitive restructuring; VAS = Visual Analog Scale; CG = Control Group; EG = Experimental Group; HRQol = Health Related Quality of Life Questionnaire; HYP = Self-hypnosis training; PMR = Progressive muscle relaxation; PROMIS = Patient-Reported Outcomes Measurement Information System; SCT = Self-care toolkit; T = Time; QoL = Quality of life.
Source: Prepared by the authors.

Primary variables

Pain

Of the selected clinical trials, there are different nomenclatures for the outcome variable regarding the ''quantity of pain". Some instruments use the term ''pain intensity" when measuring the level of pain itself, and ''pain interference" when measuring the level of impact of pain in the patient's daily life. For the present research, the significant reduction of at least one of these variables was considered to be a positive management of pain.

Most studies applied more than one pain descriptor as outcome. Fifteen studies used ''pain intensity" and seven ''pain interference". Only one study included the ''quality of pain" category, without, however, defining the expression. Three studies evaluated the pain intensity through the VAS[19,20,27] and seven used the NRS[13-15,17,18,24,25]. Four studies used the McGill Pain Questionnaire for measuring pain[8,13,19,20] and six used the BPI[8,14,15,21,23,28]. Study 1 also used the Patient-Reported Outcomes Measurement Information System (PROMIS) and study 5 used the Privately Completed A Brief Self-Report Assessment of Patient-Reported Outcomes (PROs). Study 9 used The Pain Disability Index (PDI), while study 16 used a questionnaire created by the authors. Of the 18 studies chosen, 16 identified a significant reduction in pain intensity or interference. Only one study found no statistically significant difference between the groups regarding pain intensity, although they report the occurrence of a significant reduction in quality of pain[19]. It was not possible to identify the resolution of the outcome variable in one of the studies[26].

Secondary variables

Quality of life

Six studies mentioned QL as a secondary outcome variable[10,13,16,21,26,27], but two of them did not report the outcome of these variables throughout the article[13,26]. Three point to a significant improvement in QoL[10,21,27] and one found no significant difference between the groups[16].

The instruments adopted were: Haemophilia-Related Quality-of-life (A36-Hemoflia QoL)[10] by one study, European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQC30)[16] by one study, General Health Questionnaire-28[13] by one study, one of the versions of the Short Form Health Survey (SF36)[21,27] by two studies, and one study used its own questionnaire[26].

Other variables

Catastrophizing

Some studies assessed anxiety and depression. However, a variable that stands out as a significant interference in pain perception is catastrophizing. The study of the role of catastrophizing is relatively recent in the gray literature and for this reason only one of the most recent studies presents this variable as one of the primary outcomes.

Risk of bias

The Cochrane collaboration tool was used for evaluation of the articles for low, high or uncertain risk of bias, subdividing the risks into seven different domains. Figure 2 presents a summary of the risks per domain for each study, while Figure 3 displays the percentages related to the reviewers' judgment for each domain. It's worth noting the practical and methodological differences between pharmacological and non-pharmacological clinical trials. Groups such as the Consort already have specific checklists to address the specifics of non-pharmacological trials. Many integrative practices, due to their clinical complexity, make the blinding of participants and professionals difficult, which does not necessarily compromise the quality of evidence. In this review, one trial[13] showed high blinding bias, compromising the quality of the results. A common point in

the articles was observed during the analysis: the lack of description of the allocation concealment process, which justifies that 55.5% of the studies were classified with uncertain risk regarding this domain. Only one of the studies[16] had a low risk of bias classification in all domains. However, it's possible to say that, in general, the studies had, regarding methodological quality, a low risk of bias.

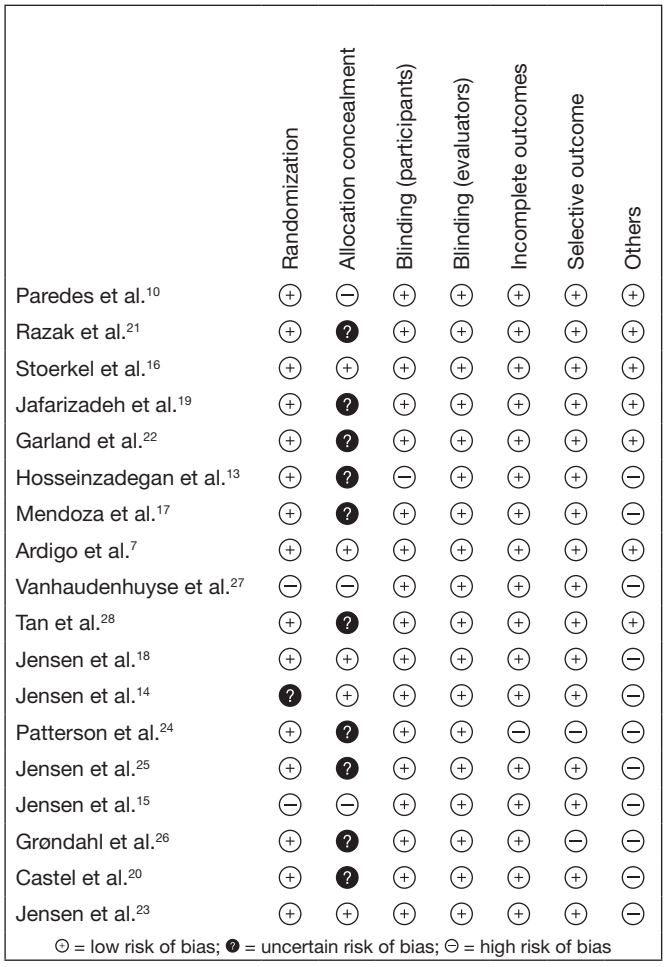

Figure 2. Analysis of the risk of bias according to the Cochrane tool in decreasing chronological order

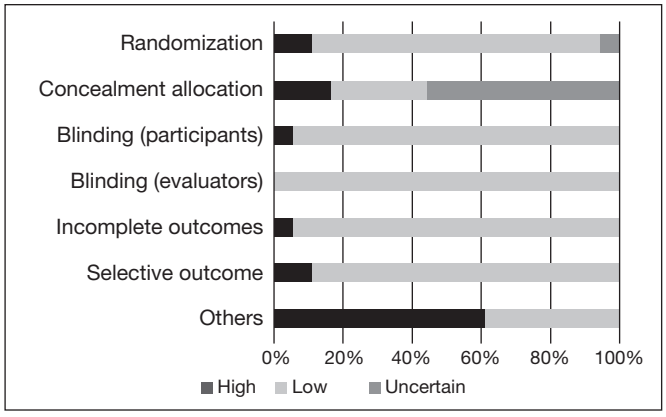

Figure 3. Risk of bias percentage for each domain according to the Cochrane tool

DISCUSSION

Hypnosis can be used in different approaches, including: distraction techniques, use of metaphors, guided visualization, anesthesia/analgesia induction, use of sub-modalities and self hypnosis. Some studies compared different hypnotic approaches, but all showed similar pain management results. One study, however, compared an intervention performed with a media kit and another intervention in which the professional applied or taught the technique in person, revealing a superiority of the face-to-face intervention and an even greater effectiveness when combining the two approaches.

Therefore, the use of media kits as tools for a hypnotic approach enables the expansion of the number of study participants, showing positive results, but does not replace the direct guidance of a qualified professional.

Three types of studies were identified regarding clinical trials using hypnosis: sequential studies, in which the control group is the intervention group itself, with comparisons between measurements throughout the study; crossover studies, in which the intervention and control groups are interchanged at a given time during the study; and parallel studies, in which one or more controls are used for a given intervention. Sequential and crossover studies have the limitations of the time variable, but enable the visualization of the maintenance of the effect of the intervention in the medium and long term. Parallel studies allow the analysis of the superiority of hypnosis treatment compared to other approaches.

The controls found in these studies were: acupuncture, mindfulness, educational approaches, relaxation, massage, physical therapy, cognitive restructuring, placebo, and standard treatment.

Unlike the pharmacological approach, the use of integrative practices, due to its highly subjective character, presents difficulties regarding the blinding of participants. However, in the studies evaluated in the present review, the conclusion was that blinding had a low-risk bias for the interpretation of the results obtained.

As for the primary outcomes, it's possible to verify through the analysis of the included studies that hypnosis has shown good efficacy in pain management when associated with the standard, usually pharmacological, treatment. It's noteworthy that this integrative practice is not intended to replace pharmacological treatment, but it can, however, interfere in the required dose, since it acts in reducing pain intensity. Even when compared to other integrative approaches, hypnosis presents a superiority in terms of effectiveness in reducing pain intensity/interference.

As for secondary outcomes, some studies have shown an improvement in QoL simultaneous with the reduction of pain intensity/interference. However, one study indicated no significant difference in QoL between the two groups, even with reduced pain.

This can be explained by what more recent studies have identified as an important source of bias in QoL findings: the catastrophizing variable. This variable has a significant impact

on the participants' perception of QoL. High scores on the catastrophizing thoughts scales are usually related to low QoL scores, especially in the emotional and social segments of the questionnaires.

Current studies have an inclination to include the control of this variable in their protocols, as well as control of the anxiety and depression variables, which is why the use of questionnaires and scales that measure these variables has been increasingly used, even when they are not considered as an outcome.

Many experts believe that hypnotizability, that is, an individual's ability to respond to hypnotic suggestion, is an important variable, but no significant correlations have been observed with pain management.

As for side effects, no selected studies identified potential risks of hypnosis use nor consecutive adverse effects for users.

Some limitations present in this study prevent the realization of a meta-analysis. Although many of the studies have a low risk of bias, there is significant heterogeneity among the types of controls used, as well as the hypnosis modalities described, which makes comparison unfeasible.

The choice was to privilege articles published from the year 2000 on due to the greater rigor presented in the study designs and improvement in the quality of evidence observed in this period. However, one factor observed pointed to an important bias: a considerable part of the evaluated studies is limited to the same circle of researchers and specific journals. Some studies took advantage of sample banks drawn from previous studies. It was found that older studies presented greater availability of data sharing, while more recent studies adhere less frequently to open data policy. A resumption of interest in studying the topic within the scientific community was noted, given the increase in written productions after a period of stagnation. The inclusion of hypnosis as an integrative practice of care policy of SUS in 2018 is an incentive for specialists in Brazil to commit to quality clinical research and increasingly contribute to the expansion of scientific knowledge of this technique that has survived for over a century and has been modernizing itself to maintain its effectiveness and low cost in promoting health and QoL for the population.

CONCLUSION

Hypnosis seems to be an effective technique for the management of nonprocedural pain, presenting clinical superiority in results both in comparison to the use of standard treatment alone and in comparison to other integrative practices. In its various modalities, hypnosis has been shown to be a feasible, safe, and low-cost technique, with good satisfaction rates among users. However, future clinical trials are needed in order to investigate the real interference of the catastrophizing variable, as well as possible ways to control it. Further studies on cost and effectiveness are necessary to understand the impact of integrative practices such as hypnosis in strengthening the Brazilian public heath care system's principles of humanization and integrality.

AUTHORS' CONTRIBUTIONS

Renata Seixas Machado
Statistical Analysis, Conceptualization, Project Management, Research, Methodology, Writing - Preparation of the original, Writing - Review and Editing
Josinete Cabral da Silva
Methodology, Writing - Review and Editing
Alexandre Sousa da Silva
Statistical Analysis, Project Management, Methodology, Writing - Review and Editing

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