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Hypnosis in General Dental Practice. What Do Patients Think About That?

Hipnoza w praktyce stomatologicznej. Co sądzą o tym pacjenci?

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Abstract

Background. Medical treatment of the oral region under local anaesthesia is causing intense anxiety. Clinical hypnosis could be a non-invasive therapeutic option to increase treatment comfort and surgical circumstances. Such hypnosis treatment depends to a great extent on the active cooperation of the patient.

Objectives. To collect information concerning the general degree of acceptance of hypnosis in dental patients and moreover to quantify the individual motivation towards acceptance of such a treatment option under conditions of dental treatment.

Material and Methods. 1134 dental patients from 12 practices in 3 Federal States of Germany were involved in a survey on the acceptance of clinical hypnosis, and filled out a questionnaire consisting of 21 questions.

Results. Despite a low level of specific knowledge among participants, study results proved a high degree of acceptance of hypnosis by patients treated in a dental practice.

Conclusions. Low usage of clinical hypnosis in dentistry cannot be explained by low acceptance on behalf of patients. The effectiveness of this treatment option should be examined in valid clinical studies (**Dent. Med. Probl. 2009, 46, 1, 41–48**).

Key words: dental anxiety, hypnosis, acceptance.

Streszczenie

Wprowadzenie. Skuteczność leczenia stomatologicznego w hipnozie zależy zdecydowanie od akceptacji i aktywnego współdziałania pacjenta.

Cel pracy. Zbadanie stanu wiedzy i ogólnego nastawienia pacjentów do hipnozy klinicznej oraz ocena sposobu korzystania z leczenia w hipnozie.

Materiał i metody. Do badania ankietowego włączono 1134 pacjentów z 12 publicznych gabinetów stomatologicznych w trzech landach. Każdy z pacjentów wypełnił kwestionariusz składający się z 21 pytań.

Wyniki. Analiza odpowiedzi w badaniu ankietowym dowodzi dużej teoretycznej akceptacji ze strony pacjentów leczonych stomatologicznie i małej wiedzy na ten temat wśród ankietowanych.

Wnioski. Rzadkiego stosowania hipnozy w stomatologii nie można wyjaśniać małą akceptacją przez pacjentów tej metody leczenia. Skuteczność hipnozy powinna być oceniona w badaniach klinicznych (**Dent. Med. Probl. 2009, 46, 1, 41–48**).

Słowa kluczowe: lęk przed leczeniem stomatologicznym, hipnoza, akceptacja.

Despite all of the technological and pharmacological progress made so far, a trip to the dentist is still associated with bad feelings and a varyingly intense fear of treatment for a majority of the population. So, particularly in dentistry, there is a major interest in cost-effective, rationally applicable, low-side-effect methods for anxiolysis during treatment that are acceptable to patients, and

which lead to a lasting abolition of the prevailing fear of the dentist.

Clinical hypnosis is a method that requires no drugs and, in principle, satisfies all of the requirements characterized above, but has hardly managed to gain a foothold in dentistry so far. In times of medicine rooted predominantly in the natural sciences, the reason for this could be an insufficient

“basis of evidence” for hypnosis, and accordingly low acceptance among dentists. It is also conceivable that demonstrations of hypnotic applications for non-medical purposes in the lay media (“show hypnosis”) promote a negative to antagonistic attitude among practitioners and patients alike. The study presented here was conceived as a way of gaining a better understanding of the specific attitudes of dental patients towards clinical hypnosis.

When measuring acceptance of clinical hypnosis among dental patients, it is of interest:

- what extent of general or specific knowledge dental patients have of hypnosis,
- how the general acceptance of using hypnosis in medicine ranks among patients,
- how great the motivation of patients is to undergo adjuvant hypnosis during their own (dental) medical treatment,
- whether the abovementioned attitudes among patients differ at all between different age groups or between the sexes.

Material and Methods

To be admitted into the study, the subjects had to be undergoing a current dental examination or treatment, have adequate fluency in German and be at least 18 years of age. Criteria for exclusion were mental illness, insufficient fluency in the language and a history of psychic or psychiatric illness. The survey was held at a total of 12 general dental practices without a nominal area of specialization, in 12 cities within 3 Federal States of Germany (North Rhine-Westphalia, Bavaria, and Saxony). At the time of the investigation, all practices in the study had been established for at least 10 years and treated 500 patients per quarter on average.

The data was acquired using a questionnaire developed by *Hermes* for measuring acceptance of hypnosis among oral and maxillofacial surgery (OMS) patients [7]. The test instrument, slightly modified for dental survey participants, had 20 closed (multiple-choice) questions and 1 open question. The survey participants were asked about their own knowledge on hypnosis (6 items), their principles on medical use of hypnosis (5 items), their own general/specific motivation for opting for hypnosis during (dental) medical treatment (8 items) and reasons for possibly refusing to make use of medical hypnosis (1 item).

Over a period of 2 months (15 Aug–15 Oct), the set of questionnaire sheets was continually handed out to all patients at the studied practices, who, after standardized explanation, voluntarily participated in the study. The sample was differentiated by sex and age of those surveyed.

Furthermore, a distinction was made between survey participants from practices that had already been offering treatment under hypnosis for at least 5 years at the time of the survey (hypnosis practices, $n = 6$) and practices without such an offer (control practices, $n = 6$). No survey participant was receiving dental treatment under hypnosis at the time of the study.

The statistical analysis of the data was done using SPSS 14.0 for Windows. In addition to calculating frequency distributions and averages, differences between nominal data of appropriate spot samples were investigated by χ^2 test. Statistical analysis was defined as $p \leq 0.05$.

Results

Patient population

The sets of questionnaires from a total of 1134 patients (man = 714, 63.0%; woman = 420, 37.0%) were analyzed, of which 621 survey participants (54.8%) were among the hypnosis group and 513 (45.2%) among the control group (Fig. 1).

Knowledge on Hypnosis

65.3% of those questioned admitted to having given little thought to hypnosis so far. Every fourth patient (23.5%) knew someone who had been hypnotized; 7.4% of those asked ($n = 8$) had already had personal experience of hypnosis.

Nearly half of the participants in the study (48.2%) had gained their existing knowledge on hypnosis from television, and 28.8% from magazines. One quarter of the patients (25.5%) knew of hypnotic treatments from hearsay, while knowledge from a specific acquaintance (14.4%), doctor (13.4%) or books (12.2%) took a subordinate position. One quarter of study participants (25.5%) admitted to having no knowledge of such nature. A majority of patients were aware that hypnosis can be used in medicine to calm patients (78.2%), or to treat pain (65.7%).

Acceptance of Hypnosis

Nearly two thirds of the entire sample group considered the use of hypnosis for medical purposes to be “sensible” (41.1%) or “very sensible” (21.1%), one third of the entire sample group (31.1%) was indecisive on this matter, 6.7% of the surveyed dental patients considered the medical use of hypnosis as “not sensible” (Fig. 2).

The vast majority of those surveyed consider hypnosis to be an enrichment of medical therapy

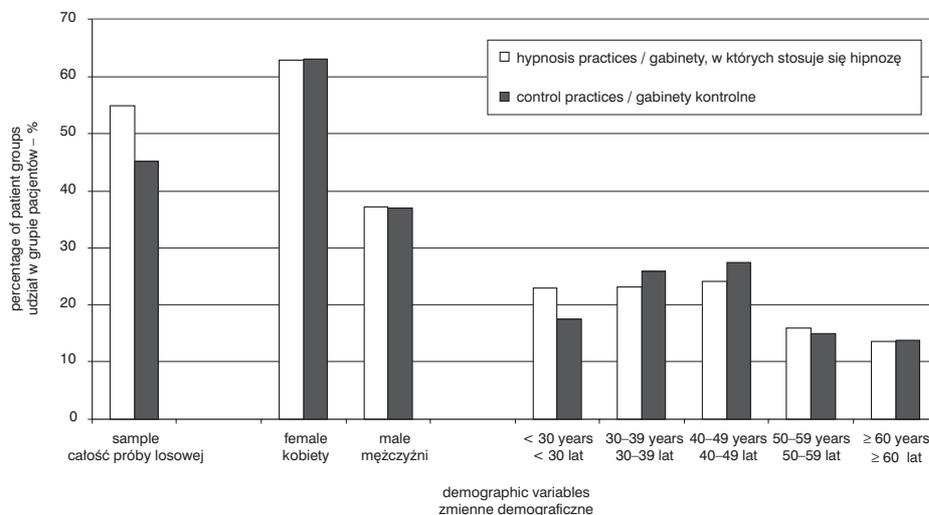


Fig. 1. Breakdown of the patient population (n = 1134)

Ryc. 1. Podział badanych pacjentów (n = 1134)

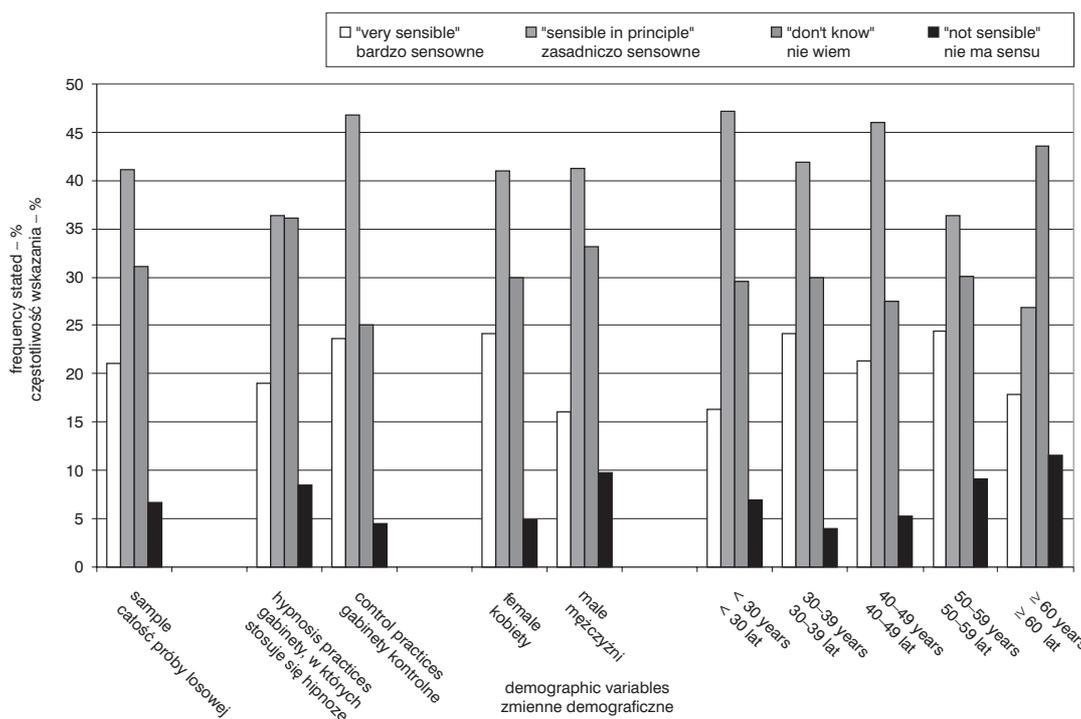


Fig. 2. Attitudes of patients towards the use of hypnosis in medicine

Ryc. 2. Stosunek pacjentów do hipnozy w medycynie

(74.9%) and consider further investigations about possible applications of the method to be “worthwhile” (83.4%); 4.5% or 3.6% of the survey participants answered these questions negatively. Analogously, 72.4% of patients would personally like to know more about the possible medical applications of hypnosis, while 14.2% of those surveyed responded negatively to this.

When looking at potential reasons as to why patients might reject the use of hypnosis in medicine, the reasons stated were (in decreasing order of frequency): lack of information on the part of the patient (57.2%), the uncertain effectiveness of hypnosis (50.1%), a feeling of being “at someone’s mercy”

(49.8%), potential costs (37.4%), lack of trust in hypnosis (30.0%), the time it takes (15.7%) and the more effective action of drugs (10.8%).

Motivation to Undergo Hypnosis

Two thirds of those surveyed (66.8%) were unsure of their own ability to be hypnotized; 20.9% of dental patients consider themselves to be “not” hypnotizable and 12.2% “easily” hypnotizable. 15.0% of the entire sample group would “definitely” be ready for medical treatment under

hypnosis; 41.7% would make their decision depending on the type of treatment. Nearly one third (31.3%) would “possibly” agree to treatment under such a state, whereas every tenth person surveyed (11.9%) would “definitely not” (Fig. 3). The motivation of the patients to undergo various dental treatments under combined local anaesthetic/hypnosis differs depending on invasiveness (Tab. 1).

In turn, 42.9% of patients would decide to undergo treatment under purely “hypnotic anaesthesia” depending on the treatment, 31.4% would “possibly” be prepared to undergo such treatment without pharmacological anaesthetic and 8.0% “definitely not”. Nearly half (46.3%) of those surveyed would “gladly try” self-hypnosis for treating pain after medical treatment, one third (33.2%)

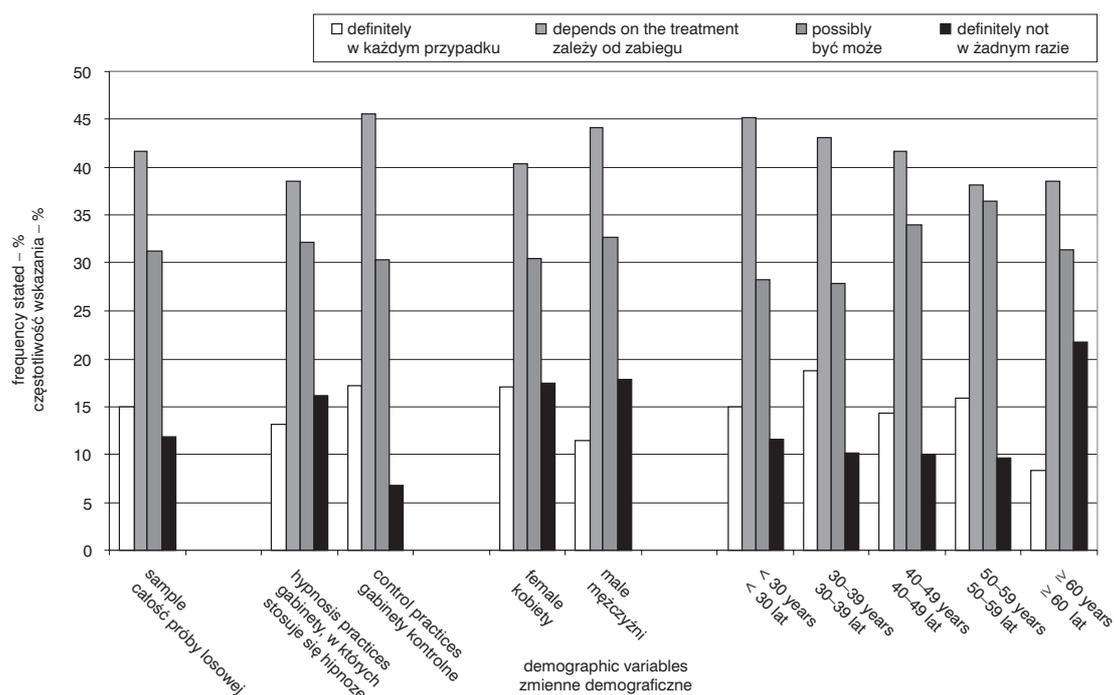


Fig. 3. Willingness of patients to undergo personal medical treatment under hypnosis

Ryc. 3. Gotowość pacjentów do wykonywania poszczególnych zabiegów stomatologicznych pod hipnozą

Table 1. Motivation of survey participants towards special dental treatment under hypnosis

Tabela 1. Motywacja do stosowania hipnozy w poszczególnych rodzajach leczenia stomatologicznego

	Fillings (Wypełnianie) %	Crowns (Korony) periodontologiczne) %	Periodontal surgery (Leczenie periodontologiczne) %	Tooth pulling/jaw surgery (Usuwanie zęba/ zabieg na wyrostku) %
“Definitely” (“W każdym przypadku”)	26.5 HG 24.5/KG 29.0	20.3 HG 16.5/KG 25.0	22.0 HG 19.3/KG 25.3	18.3 HG 15.3/KG 22.0
“Possibly” (“Być może”)	44.7 HG 42.8/KG 47.0	46.5 HG 46.8/KG 46.2	45.9 HG 44.0/KG 48.1	38.0 HG 35.9/KG 40.5
“Don’t know” (“Nie wiem”)	11.9 HG 13.7/KG 9.7	16.0 HG 17.1/KG 14.8	15.8 HG 16.6/KG 14.8	17.5 HG 18.4/KG 16.6
“Definitely not” (“W żadnym razie”)	16.8 HG 19.0/KG 14.2	17.1 HG 19.7/KG 14.0	16.3 HG 20.1/KG 11.7	26.1 HG 30.4/KG 20.9
χ^2	10.75	16.14	18.49	18.91
p	0.013	0.001	≤ 0.001	≤ 0.001

HG: Hypnosis group/grupa gabinetów stosujących hipnozę.

KG: Control group/grupa kontrolna.

Table 2. Different characteristic attributes according to demographic variables**Tabela 2.** Analiza różnych charakterystyk względem zmiennych demograficznych

Item (Kwestia)	Sex (Płeć)	Age (Wiek)	Practices (Gabinety stomatologiczne)
Personal prior knowledge on hypnosis (Własna wcześniejsza wiedza na temat hipnozy)	female > male ($\chi^2 = 19.20$; $p < 0.001$)	40–49 years > other ($\chi^2 = 15.61$; $p < 0.001$)	ns.
Attitude towards use of hypnosis in medicine (Nastawienie do stosowania hipnozy w medycynie)	female > male ($\chi^2 = 18.46$; $p < 0.001$)	30–49 years > other ($\chi^2 = 38.40$; $p < 0.001$)	control > hypnosis ($\chi^2 = 27.83$; $p < 0.001$)
Estimation of own ability to be hypnotized (Oszacowanie własnej zdolności ulegania hipnozie)	female > male ($\chi^2 = 8.37$; $p = 0.015$)	ns.	ns.
Attitude towards further research about the applicability of hypnosis in medicine (Nastawienie do dalszych badań nad zastosowalnością w medycynie)	female > male ($\chi^2 = 6.65$; $p = 0.036$)	30–49 years > other ($\chi^2 = 21.42$; $p = 0.005$)	control > hypnosis ($\chi^2 = 28.57$; $p < 0.001$)
Attitude towards hypnosis as an enhancement of medical treatment (Nastawienie do hipnozy jako wzbogacenia terapii medycznej)	ns.	30–49 years > other ($\chi^2 = 22.67$; $p = 0.004$)	control > hypnosis ($\chi^2 = 25.2$; $p < 0.001$)
Desire for more patient information (Życzenie, aby pacjenci byli lepiej poinformowani)	female > male ($\chi^2 = 9.01$; $p = 0.011$)	30–59 years > other ($\chi^2 = 28.26$; $p < 0.001$)	control > hypnosis ($\chi^2 = 9.74$; $p = 0.008$)
Willingness to undergo medical treatment under hypnosis generally (Gotowość poddania się zabiegowi medycznemu pod hipnozą)	female > male ($\chi^2 = 10.30$; $p = 0.016$)	30–39 years > other ($\chi^2 = 28.2$; $p = 0.005$)	control > hypnosis ($\chi^2 = 26.90$; $p < 0.001$)
Willingness to undergo dental treatment under hypnosis (Gotowość poddania się zabiegowi stomatologicznemu pod hipnozą)	ns.	30–59 years > other ($\chi^2 = 22.02$; $p = 0.005$)	control > hypnosis ($\chi^2 = 19.00$; $p < 0.001$)
Willingness to perform special dental treatments under hypnosis – see Tab. 1 (Gotowość poddania się specjalistycz- nemu zabiegowi stomatologicznemu pod hipnozą – zob. tab. 1)	ns.	30–39 years > other ($\chi^2 = 29.27$ – 42.57 ; $p < 0.001$ – 0.022)	control > hypnosis ($\chi^2 = 21.43$ – 32.15 ; $p < 0.001$ – 0.015)
Willingness for dental treatment under hypnoanaesthesia (without LA) (Gotowość poddania się zabiegowi stomatologicznemu z zastosowaniem hipnoanestezji – bez znieczulenia miejscowego)	female > male ($\chi^2 = 10.30$; $p = 0.016$)	hypnosis > control ($\chi^2 = 16.80$; $p = 0.001$)	ns.
Willingness to perform pain-relieving self-hypnosis after treatment (Gotowość skorzystania z autohipnozy po zabiegu)	female > male ($\chi^2 = 14.29$; $p = 0.001$)	30–39 years > other ($\chi^2 = 24.4$; $p = 0.018$)	control > hypnosis ($\chi^2 = 19.68$; $p < 0.001$)

n.s. – nieistotne.

ns. – insignificant.

are undecided on this and 19.2% of patients prefer to trust the anaesthetic.

When differentiating the entire sample group ($n = 1134$) according to the defined dependent

variables (sex, age, practice), these characteristic attributes on the whole betray significant collective differences (Tab. 2). For example, a comparably high acceptance of hypnosis was seen among

female patients within the middle age group. The same applies to 9 out of 11 items for patients from practices in which no hypnosis was offered at the time of the survey.

Discussion

A survey performed in 2000 by the Institute for Demoscopy in Allensbach, Germany showed that the health consciousness of Germans had significantly increased over the preceding 10 years. What was generally desired was gentle treatment with few side-effects [1].

In the times of “patient-centric medicine”, a course of therapy of such nature is also desirable for dentists, yet particularly difficult to achieve. Treatment of the facial or oral region involves particular psychic stresses, among other things due to a particularly densely innervated and highly emotionally charged area of treatment and a constant invasion of personal space during the treatment. Jöhren and Sartory [2] assume that only 20–30% of all patients turn up to a dental appointment free from anxiety. International studies have proven over more than 50 years that 46–59% of all patients feel considerable fear of dental treatment and up to 27% of patients can be deemed highly fearful. According to the various authors and studies, up to 11% of all dental patients suffer from a manifest dental phobia, i.e. a severe psychic response [2–4] that dominates the patient’s personality. Overall, dental treatment is so frequent, reproducible and psychically stressful that its emotional and physiological effects are presently attributed the role of an “acute stressors model” of its own [5], which has established itself as a test model for the evaluation of the effects of analgesics, sedatives, anxiolytics and psychotherapeutic intervention [5–7].

However, dental fear leads not only to negative effects for the patient being treated: in international studies, more than 60% of dentists considered their own profession as particularly stress intensive compared to other professions [8] and the dental treatment of fearful patients as the most intensive stress factor in their daily practice [8, 9]. In a German study on “stress management”, 81.2% of dentists surveyed admitted that dealing with fearful patients on a daily basis would more or less cause them stress [10].

Concurrently to pharmacological and technological innovation, there is accordingly a great interest within the dental medical community in methods for reducing stress and anxiolysis. Pharmacological options established in somatic medicine (premedication, sedation, analgesic

sedation, nitrous oxide inhalation, general anaesthetic) are afflicted with not insignificant disadvantages due to their organizational and technical complexity, side-effects, risks and costs, and are also not normally available to dentists. Psychological approaches (behavioural therapy, cognitive therapy) are disqualified at least for routine use in dental practice given their low acceptance, timely preparation and expense and uncertain effectiveness.

Since there has clearly been no rationally applicable – and particularly no limitless – therapy option available to practitioners, it seems appropriate to test unconventional alternatives for applicability and effectiveness also. “Clinical hypnosis” is such an alternative. This psychological method uses suggestion (lat. *suggerere*: put under, furnish, suggest) to activate a special state of consciousness in the patient for the duration of the invasive treatment. The aim of such a “trance” actively evoked by the patient and supported by the dentist is a detachment of varying intensity from the treatment situation, with physical/mental relaxation, anxiolysis and temporal distortion.

The use of hypnotic techniques in dentistry has been recorded since 1763 [acc. 11]. While hypnotically turning off pain was in the foreground of interest up until the beginning of the 20th Century, the range of indications for hypnosis in dentistry expanded concurrently with the development of modern local anaesthetics.

Although applying this method presents a series of conceivable advantages, and current studies from dentistry, oral surgery and OMS describe interesting perspectives on applying the method, hypnosis is still not used everywhere in dentistry to date. The reasons for this could be low acceptance of the method among practitioners and patients. In literature, there are only a few, older studies to be found that deal with the acceptance of hypnosis among dentists. The German Kuhner [12] established in 1962 that the frequency of combined treatments (LA/hypnosis) rose over time among the majority of dentists offering hypnosis. However, 20% of those surveyed ($n = 40$) ceased such originally offered treatments, the most important reason given for this being a lack of acceptance among dental colleagues. One year earlier, Borland and Epstein [13] established that dentists who offered hypnosis were not infrequently accused of suffering from psychic disorders. In 1999, Chaves [14] came to the conclusion that the acceptance of hypnosis both in professional circles and in the public eye had considerable room for improvement, in particular due to a lack of empirical substantiation, mystical explanations of the hypnotic phenomenon, exaggerated and

misleading claims about its clinical effectiveness, insufficient or incorrect use of its clinical potential and a lack of educational capacity.

In fact, patients' acceptance of the method at dental/OMS establishments routinely offering such treatment appears to be positively high [15, 16]. The present study was accordingly designed to investigate this subjective observation more closely.

The results of the survey of 1134 dental patients show that, with overall low specific knowledge, only a small minority of the participants in the study were generally antagonistic towards applications of hypnosis for medical purposes. Analogously to an OMS survey done in 2002 [16], the greater majority of survey participants had an open or positive attitude towards hypnosis, complained of incomplete knowledge of the subject and wished for more patient information. Female patients were already more informed prior to the study than male patients, and consistently betrayed a more positive attitude towards general/specific application of hypnosis. The same applies to patients aged between 30 and 49. The reasons for these statistical correlations could be that, as shown by international studies, both of these subgroups of dental patients consistently betray a particularly high degree of dental fear, which could result in a comparably greater motivation to make use of fear-reducing methods.

Quite remarkable, and difficult to explain off-hand, was a significantly more positive attitude

from some of the patients from surveyed practices in which no hypnosis was offered. These patients, however, admitted more frequently to have given the method some thought already (37.0% vs. 32.9%), more frequently knew someone who had already undergone hypnosis (27.5% vs. 20.1%) and also had more frequent personal experience with hypnosis (10.7% vs. 4.7%). It therefore appears conceivable that an initially unexpected, group-specific higher degree of primary/secondary knowledge about hypnosis among this sample group accounts for a higher acceptance of the method. Another explanation could be that patients of dentists trained in hypnosis could rather expect an offer of such treatment. The lower acceptance of these survey participants speaks not so much against the use of the method in dental practice, and much in favour of improved patient information – desired even by the study participants themselves. At dental hypnosis practices, after realistic consultation about the possibilities and limits of hypnosis, hardly any patient refuses the offer of non-pharmacological anxiolysis to accompany the treatment.

The authors concluded that general dental patients appear to have only little specific knowledge on clinical hypnosis. Nevertheless, there is a majority of open to positive attitudes towards the method and considerable motivation to make use of adjuvant clinical hypnosis during (dental) medical treatment.

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