Clinical Use of a Novel Audio Pillow With Recorded Hypnotherapy Instructions and Music for Anxiolysis During Dental Implant Surgery: A Prospective Study

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Published online: 03 Mar 2011.


To link to this article: http://dx.doi.org/10.1080/00207144.2011.546196

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CLINICAL USE OF A NOVEL AUDIO PILLOW WITH RECORDED HYPNOTHERAPY INSTRUCTIONS AND MUSIC FOR ANXIOLYSIS DURING DENTAL IMPLANT SURGERY: A Prospective Study

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Abstract: A prospective, comparative study of a novel audio pillow with hypnosis text and relaxation music was conducted in 82 dental-implant surgery patients to relieve anxiety over a 6-month period. Visual analogue scales combined with the Aachen Dental Treatment Fear Inventory (AZI) questionnaire were used to quantify patients’ subjective feelings of fear. Blood pressure, heart rate, and capillary oxygen partial pressure were measured before, during, and after surgery. The AZI scores decreased in the hypnotherapy group (n = 44) and increased slightly in the control group; scores were significantly different between the groups (p = .000). During surgery, the average diastolic blood pressure and heart rate decreased in the hypnotherapy group and increased in controls. Thus, this audio pillow with relaxation music showed anxiolytic effects in patients during dental implantation procedures.

The use of dental implants to replace missing teeth is a common dental technique, and the number of patients undergoing this procedure has increased in recent years. However, fear of oral surgery, as well as pain and nervousness during the procedure and in the first postsurgical days, is still a concern for many implant patients (Eli, Schwartz-Arad, Baht, & Ben-Tuvim, 2003; Hashem, Claffey, & O’Connell, 2006).
Currently, anxiolysis for dental implantation usually involves pharmacological sedation in combination with local anaesthesia. During the procedure, the patient is in a drug-induced sedated state; however, in contrast to general anaesthesia, the patient can breathe independently and has a limited ability to comply with instructions (Flanagan, 2004). Alternatively, endotracheal anaesthesia is sometimes used for complex and extensive surgical interventions to eliminate pain and to calm the patient (Birken, 1999).

Acupuncture is an alternative to pharmacological sedation and is used as a treatment-supporting procedure by some dentists. Acupuncture in the ear is especially useful in dentistry due to the accessibility of the pressure points. Relaxation techniques, such as autogenic training or progressive muscle relaxation, can also be used by patients without medical help. After mastering these techniques, a patient can reduce stress before and during the dental procedure.

Hypnotherapy has been used in dentistry for many years, with qualified dentists using hypnotherapy to manage pain and anxiety (Eitner, Wichmann, Paulsen, & Holst, 2006; Schaerlaekens, 2003). Tape recordings are often used for general hypnotherapy to strengthen suggestibility. Hypnotherapy audio recordings are also recommended during both surgery preparation and surgery to reduce fear and pain and to mitigate postsurgical discomfort (Wicks, 2001).

The desire to use music to induce a hypnotic trance state has led to the development of “relaxation music.” Such background music is recommended to support dental hypnotherapy and to strengthen patient suggestibility. The loud grinding noises typically produced by the instruments used in dentistry, such as drills, must be also considered, because relaxation music must be audible over these noises (Burk, 1989). We hypothesized that the use of an audio recording comprising spoken hypnosis-promoting words plus original music could reduce fear in patients during dental implant surgery. Towards this end, we developed a “music pillow” that incorporated speakers that would play such a recording to a patient before and during the dental surgery. Depending on the patient’s state of mind beforehand, this treatment could reduce stress and make the surgery more pleasant for the patient.

The following questions had to be considered:

1. Is dental implantation surgery more comfortable for patients using the music pillow than for patients without intraoperative hypnosis?
2. Can an anxiolytic effect of the music pillow be shown using a self-questionnaire immediately before and after surgery in both groups of patients?
3. Is the anxiolytic effect of the music pillow reflected by physiological parameters such as blood pressure, heart rate, and SpO₂?
Method

Materials

The recordings used in this study were original compositions (both the spoken text and the music) that were recorded using professional digital audio equipment. The final “hypnosis composition” was one hour and six minutes long. A pillow with two small speakers, called the “Head and Neck Support - Music Pillow,” was developed in cooperation with Funke Medical GmbH (Raesfeld, Germany). The music pillow was based on a pillow developed in 2001. That pillow, called the “Head and Neck Support®,” is an anatomically shaped visco-elastic foam pillow that can be attached to nearly every dental chair using Velcro. This pillow is intended to increase the patient’s comfort level and to provide gentle support for the head and neck (Figure 1).

The music pillow is a modified version of this pillow that had two small passive speakers at ear level on the left and right sides of the pillow. An mp3 digital player, such as an iPod®, can be connected by cable after placement in a side pocket. The speakers were chosen so that they were small (so as to still be comfortable in the pillow) but of sufficient quality to be long lasting and to produce intelligible audio (Figures 2 and 3).

The hypnosis text was meant to induce a dissociated dream state. Using breathing techniques, the patient is encouraged to go into a very light trance state that is then deepened using specific suggestions.

Figure 1. Head- and neck-support Music Pillow with an iPod® shuffle in a sterile pouch. (Figure available in color online.)
This allows the patient to go as far into a trance state as is comfortable. Interruptions, such as brief communications with the dentist about the effects of the local anaesthetic, serve as fractionated trance strengthening. The patient is asked to dissociate (i.e., “to leave the body in thoughts”). This mental separation of bodily sensations and consciousness is further encouraged using suggestive visual, auditory,
and kinesthetic descriptions. An “internal guard” is introduced to provide an additional feeling of security as a subconscious controlling authority for the patient. The patient is asked to mentally proceed to a restful place. Again, the spoken text uses visual, auditory, and kinesthetic suggestions to establish this dream trip; this dissociated state is dissolved only when the surgical treatment has been completed.

Within the background music, a 60-beats-per-minute rhythm was used to help slow and synchronize the patient’s heart rate and breathing. The harmony was based on a piece of baroque music, Johann Pachelbel’s (1653–1706) “Canon in D Major.”

The purely contrapuntal chord modulations were intended to strengthen the rhythmical sedative effect without provoking an aversion based on any previous negative experiences with relaxation music. An ostinato figure, that is, a repeated chord sequence, was used first. The single segments of the music segue into each other and repeat over and over again to prevent the patient from focusing on the background music. In addition, changes in the text were tied to harmonious changes in music. To make sure that the language and music were loud and clear enough to be understood, the composition was checked in the recording studio using the same speakers used in the cushion. In addition to other sound editing software- and hardware-supported tools for the treatment of audiomaterial, the Audio-Midi-Sequencer-Software “Logic per 7.1 ®” (Apple Inc., Cupertino, CA, USA) was used. Different measurements were carried out for general quality improvement and to avoid overlapping of the middle- to high-frequency noises of the dental instruments. Extensive postprocessing was necessary to optimize the audio recording.

The study included patients who were candidates for dental implants under local anesthesia at a local dental office over a 6-month period. Cases requiring general anesthesia were excluded, and there was no preselection in terms of extent and type of implant surgery.

Patients were randomly assigned to the hypnotherapy or control group using practice management software (Charly, Solutio GmbH, Holzgerlingen, Germany) and patient numbers that were randomly assigned: Patients with even numbers comprised the hypnotherapy group, patients with odd numbers comprised the control group. Written informed consent was obtained from all patients, and the protocol was approved by the Ethics Committee of the Friedrich-Alexander University of Erlangen-Nuremberg, registration number 2689.

For the hypnotherapy group, the music pillow was installed on the dental chair and tested for function and volume reproducibility. Immediately before the beginning of surgery, the pretreatment AZI questionnaire was filled out by the patient in the dental chair, and then the audio began along with the commencement of the operation (which involved insertion of at least one implant in the patient’s jaw). During the surgery, communication with the patient was limited.
After treatment ended, the audio was faded out at a suitable place, for example, during a speech break, and the patient was led back to full awareness with a few sentences. The second AZI questionnaire was then administered. In the control group, the treatment was the same as in the hypnosis group only without music and hypnotherapy. To avoid effects due to the presence of the visco-elastic foam pillow itself, patients in the control group also used this pillow. Communication with the patient was also limited in the control group.

After administration of the first AZI questionnaire, a blood pressure cuff and a SpO2-finger sensor were put on the patient to record blood pressure, heart rate, and SpO2. Premonitoring was carried out for 10 minutes before hypnotherapy (for the hypnotherapy group) and dental treatment began. During the surgery, the agitation parameters were continuously recorded. After the end of treatment, postmonitoring was carried out for 10 minutes. Heart rate, blood pressure, and SpO2 were checked every 3 minutes. For each patient, the average blood pressure values before and during dental treatment were calculated, and the premonitoring average value was subtracted from the average value during treatment. This difference was converted into a percent (increase or decrease), and the average difference in values was calculated for the hypnotherapy and control groups. Capillary oxygen partial pressure measurement was automatic (using a finger sensor); at no time during the dental treatment did SpO2 go under the threshold value (<90%) that was programmed into the device.

The AZI is a scale that was modified from the Corah’s Dental Anxiety Scale. The AZI is a German-language questionnaire intended to quantify fear of dental treatment. The following six items are used to assess affective, cognitive, and somatic reactions:

1. Feeling tense (affective);
2. Asking oneself whether the dentist makes everything right (cognitive);
3. Sweating hands (somatic);
4. Asking oneself whether the treatment is or was painful (cognitive);
5. Feeling excited (affective);
6. Having a sinking feeling in the stomach (somatic).

The patient records reactions using a visual analogue scale with this (continuous) response range: “very much,” “quite a bit,” “a little,” or “not at all.” In addition, two items reflect fearfulness components (cognitive, affective, and somatic) to indicate how the feelings of fear are manifested. Fear scores specific to the situation (i.e., dental surgery) can be determined using the AZI. To evaluate the score for a particular question, the visual analogue scales were divided into ten 1-cm segments. Answers that were not precisely on the division lines were rounded up to the higher value. There was thus the possibility of
11 scores, ranging from 0 to 10. A summed score was determined for each questionnaire by adding the scores of each question, with the total score ranging from 0 to 60.

To include other aspects of patient compliance, the AZI questionnaire was extended by the following questions (also based on visual analogue scales):

Before the dental treatment:

1. “Do you have any experience with relaxation techniques?”
2. “How long do you estimate the required surgery will take?”

After the dental treatment:

1. “Would you undergo another implantation?”
2. “Could you understand the music/spoken words?”
3. “Did you feel that the audio recording was helpful?”
4. “How would you estimate the usefulness for yourself for other implantations?”
5. “Would you recommend use of this audio relaxation music/text during dental treatment?”
6. “How long do you estimate that the surgery lasted?”

The hypnotherapy group patients were given all six additional questions after dental treatment, while the control group patients were only given questions 1 and 6. To address the study questions (see the Introduction), pre- and posttreatment scores were compared by subtracting the pretreatment score from the posttreatment score.

The Levene test and the t test were used as parametric methods and the Mann-Whitney U-test was used as a nonparametric method for statistical evaluation of the results. Similar to the analysis of AZI questionnaire scores pre- and posttreatment for the hypnotherapy and control groups, physiological measurements were also analyzed pre- and posttreatment. The additional patient questions were evaluated using descriptive analysis. The level of significance for all tests was set at 5%, meaning that a $p$ value < .05 was considered significant.

**Results**

A total of 82 patients took part in this study. The average age was 50.7 years (range: 19–80 years); 68.3% ($n = 56$) were female ($M_{\text{age}} = 51.2$ years) and 31.7% ($n = 26$) were male ($M_{\text{age}} = 49.5$ years). The AZI questionnaire was administered before and after dental treatment and included six questions: two affective questions (1 and 5), two cognitive questions (2 and 4), and two somatic questions (3 and 6). In the hypnotherapy group ($n = 44$), the average score before treatment
was 29.23 ± 9.83 (range: 10–52); after treatment, the average score was 15.29 ± 7.59 (range: 6–38) (Figure 4). In the control group, the average score before treatment was 29.58 ± 7.94 (range: 13–49); after treatment, the average score was 30.18 ± 7.42 (range: 12–45) (Figure 5).

The AZI scores for the hypnotherapy and control groups were compared (Figure 6 and Table 1) using a parametric t test for average equality and the Levene test for equality of variance. Both methods showed a significant difference \( p = .00014 \) between the groups. In the hypnotherapy group, there was an average increase of 4.11% in the systolic blood pressure during the dental procedure compared to the 10 minutes before the procedure; in the control group, systolic blood pressure rose an average of 11.41%. In the hypnotherapy group, diastolic blood pressure decreased about 7.79% compared to before the procedure, but, in the control group, diastolic blood pressure increased about 7.44% (Table 2). While there was no significant difference in the change of the systolic blood pressure between the hypnotherapy and control groups \( p = .0735 \), there was a significant difference in diastolic blood pressure \( p = .045 \).

In the same way, average blood pressure was compared during and after dental treatment. In the hypnotherapy group, the systolic blood pressure decreased 2.72% and the diastolic blood pressure decreased 0.99%. The control group showed an average decrease of 5.48% for systolic blood pressure and a decrease of 3.98% for diastolic blood pressure (Table 3). There were no significant differences in systolic and diastolic blood pressure between the hypnotherapy and control groups.

In the hypnotherapy group, there was a 4.74% decrease in the average heart rate during treatment compared to premonitoring and an

![Figure 4](image-url)  
**Figure 4.** Total AZI questionnaire scores before and after implantation in the study group of patients \( n = 44 \) who used hypnotherapy. Every point corresponds to a total score (range: 0–60 points; x-axis: number of patients, y-axis: score value). (Figure available in color online.)
additional decrease of 4.67% during posttreatment monitoring. In the control group, the average heart rate increased 9.71% during treatment compared to premonitoring and decreased 2.17% during posttreatment monitoring (Table 4). There was a significant difference between the hypnotherapy and control groups ($p = .024$) in terms of change in the average heart rate before and during treatment.

There were only slight variations in oxygen partial pressure in both groups, and there was no significant difference between the groups. In
Table 1

*Differences in the AZI Scores Before and After Dental Treatment for the Study and Control Group*

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretreatment</td>
<td>Posttreatment</td>
</tr>
<tr>
<td>Hypnotherapy group</td>
<td>29.23</td>
<td>15.29</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>9.83</td>
<td>7.59</td>
</tr>
<tr>
<td>Control group</td>
<td>29.58</td>
<td>30.18</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>7.93</td>
<td>7.42</td>
</tr>
</tbody>
</table>

*Note.* Negative results indicate a decrease of the parameters to below baseline values (0–60).

Table 2

*Mean Differences in Average Systolic and Diastolic Blood Pressure Measurements Before and During Treatment*

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systolic BP</td>
</tr>
<tr>
<td>Hypnotherapy group</td>
<td>+4.11%</td>
</tr>
<tr>
<td>Control group</td>
<td>+11.41%</td>
</tr>
</tbody>
</table>

*Note.* Negative results indicate a decrease of the parameters to below baseline values.

Table 3

*Mean Differences in the Average Systolic and Diastolic Blood Pressure During and Posttreatment*

<table>
<thead>
<tr>
<th></th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Systolic BP</td>
</tr>
<tr>
<td>Hypnotherapy group</td>
<td>−2.72%</td>
</tr>
<tr>
<td>Control group</td>
<td>−5.48%</td>
</tr>
</tbody>
</table>

*Note.* Negative results indicate a decrease of the parameters to below baseline values.

the hypnotherapy group, there was an average increase of 0.36% from premonitoring compared to treatment; in the control group, there was a 0.5% decrease. Oxygen partial pressure decreased 0.21% in the hypnotherapy group during postmonitoring compared to treatment, while
Table 4
Mean Differences in the Average Heart Rate Before and After Treatment

<table>
<thead>
<tr>
<th>Mean Difference</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypnotherapy group</td>
<td>-4.74%</td>
<td>-4.67%</td>
</tr>
<tr>
<td>Control group</td>
<td>9.71%</td>
<td>-2.17%</td>
</tr>
</tbody>
</table>

Note. Negative results indicate a decrease in the parameters to below the baseline values.

it increased 0.23% in the control group. There were no significant differences between oxygen partial pressure values in the hypnotherapy and control groups.

The additional questions in the patient questionnaires were analyzed in the same way that the AZI items were analyzed. The mean score for the question “Do you have any experience with relaxation techniques?” was 3.32 (range: 0–10) for the hypnosis group, where a score of 0 meant “not at all” and a score of 10 meant “a lot.” The mean score for this question in the control group was 2.13 (range: 0–10); this was 1.19 points lower than in the hypnotherapy group. Additional questions about the intelligibility of the audio, whether the hypnosis audio was helpful, the benefit of hypnosis audio for other implantation procedures, and whether the patient would recommend use of the relaxation music were answered only by patients in the hypnotherapy group (Figure 7). The average score for the question “Would you undergo another implantation?” was 7.9 (range: 0–10) for the hypnotherapy group and 6.41 (range: 0–10) for the control group.

Discussion

This study addressed the hypothesis that the use of an audio recording comprising spoken hypnosis-promoting words plus original music would reduce fear in patients during dental implant surgery. Forty-four of 82 patients used a hypnotherapy audio recording for anxiolysis during dental implantation, and the effectiveness of this approach was evaluated.

The group of 82 examined patients had an average age of 50.7 years, similar to the average age of patients in other studies. The patients were randomly assigned to hypnotherapy and control groups (Gonzales-Santana, Penarrocha-Diego, Guarinos-Carbo, & Balaguer-Martinez,
Johansson and Berggren (1992) administered two questionnaires regarding dental treatment anxiety and fear to 94 patients at a dental practice. These questionnaires, the Dental Anxiety Scale and the Dental Fear Survey, showed high correlation in both patient groups. The authors recommended use of both questionnaires due to this high correlation and because they were suitable instruments for recording the individuals’ treatment anxiety. Krueger et al. (2005) determined the saliva cortisol levels in 19 female patients who also completed the Dental Anxiety Scale (DAS). They found that the endocrine release of cortisol correlated with the DAS scores.

Eitner et al. (2006) noted that cortisol determination prior to oral surgery is not recommended because blood admixtures invalidate the saliva cortisol measurements. Nevertheless, Schmitz-Hüser (2006) argued that the Dental Anxiety Scale did not sufficiently differentiate the levels of fear experienced by patients and that affective and cognitive reactions were not distinct in terms of answer possibilities.

Humphris and Hull (2007) investigated the possibility that use of the Modified Dental Anxiety Scale questionnaire (which is derived from Corah’s Dental Anxiety Scale) increased the patient’s feelings of fear. An increase in treatment anxiety was observed after the questionnaire was completed, both for those with dental phobia as well as those without. In addition, the use of the same questionnaire in the control group reduced the possibility of interference. “State anxiety”
scores were used rather than “trait anxiety” scores in the present study because they were more appropriate for the questions addressed here. Thus, an additional questionnaire was used to assess the patients; this questionnaire was developed by Lehnartz (2003) and is analogous to the AZI.

The AZI (state anxiety) questionnaire scores for hypnotherapy group patients showed an average decrease of 13.94 points during treatment, corresponding to 23.3% of the maximum score. In the hypnotherapy group, affective, cognitive, and somatic fear parameters showed similar reductions. Schmitz-Hüser (2006) used the AZI questionnaire to determine state anxiety in 100 patients undergoing different dental prophylaxis and treatment procedures at three dental offices. The greater decrease in the hypnotherapy group in the present study could be explained by the use of the hypnotherapy audio recording. The control group and hypnotherapy group AZI scores were similar before treatment, but the control group’s scores were nearly the same after treatment.

In contrast to the results of the study of Schmitz-Hüser (2006), in the present study there was no decrease in treatment anxiety in control group patients who lacked anxiolytic measures. This reflects the fear-inducing effect of facial/dental surgery, which was observed by Hermes, Saka, Bahlmann, and Mathes (2006) in a multicenter study of 600 patients who completed questionnaires.

In the present study, the effectiveness of the hypnotherapy was reflected by the AZI scores in the hypnotherapy group, which were significantly reduced ($p = .000$) compared to the scores of the control group. Three physiological parameters—blood pressure, heart rate, and capillary oxygen partial pressure—were monitored using the PC-supported monitoring system narco.doc blue®. During dental treatment, the systolic blood pressure of patients in the hypnotherapy group increased slightly (4.11%) while the blood pressure of patients in the control group rose by 11.41%. This increase was presumably due to increased catecholamine release that occurred as the patients became tense during surgery. Even if intraoperative administration of local anaesthetics with a vasoconstricting effect caused a small blood pressure increase, this could not explain the sustained increase throughout the 3-minute measurements. Diastolic blood pressure decreased by an average of 7.79% in hypnotherapy group patients during surgery but increased by 7.44% in the control group patients. A trance state, which is the goal of anxiolytic hypnotherapy for patients, causes peripheral vasodilatation in addition to other neurophysiological changes (Eitner, Wichmann, Schultze-Mosgau, et al., 2006). It reduces myocardial afterload and leads to a reduction in diastolic blood pressure. These objective measurements confirmed the self-reported subjective patient responses that were recorded using the AZI questionnaire. During
postmonitoring, systolic as well as diastolic blood pressure decreased in both groups. This hypotension was stronger in the control group than in the group of patients with hypnotherapy, but the control group also showed a bigger increase during dental treatment. Heart rate measurements showed a steady decrease in heart rate in patients in the hypnotherapy group.

Spintge (2000) postulated that music with a tempo of approximately 60 beats/minute would have a sedative effect, and this may have been the case in this study. In 1988, Lehnen observed that slow background music reduced the heart rate of dental patients during treatment. In the present study, the heart rate increased about 9.71% in control group patients (premonitoring versus treatment); it only decreased during posttreatment monitoring. Similar to the increase of systolic and diastolic blood pressure, this was probably due to catecholamine release, which would have been greater in control patients than in those using hypnotherapy. Only minimal variations in capillary SpO₂ were observed. Because this value depends on both respiratory rate and on breath volume, we did not expect to see bigger variations in this value in the present study.

Eitner, Wichmann, Schultze-Mosgau, et al. (2006) reported that in 45 highly anxious and nonanxious patients, dental hypnotherapy provided subjective anxiolysis. Using a larger cohort and measuring many physiological factors, the authors showed a significant decrease in diastolic blood pressure and respiratory rate in patients using hypnotherapy. In that study, the study group showed EEG patterns characteristic of a hypnotic trance. In spite of the differences between that study and the present study, our results confirmed Eitner’s main conclusion that hypnosis is effective in reducing the anxiety of dental patients.

Hermes, Gerdes, Trubger, Hakim, and Sieg (2004) conducted a comparative study of 50 patients using commercially available functionally straightened background music for hypnotherapy during oral surgery. The hypnotherapy group showed a significantly higher reduction of intraoperative anxiety compared with the control group ($p = .000$). The present study also confirmed these results, even though Hermes et al. used earphones rather than a music pillow. It is difficult to compare the effects of hypnosis-induced anxiolysis with those of pharmacological sedation because the different test instruments do not allow direct comparison. However, Thom, Sartory, and Johren (2000) found in a study of 50 very anxious patients that psychological methods were effective for longer than benzodiazepine sedation was. Extending these findings to the use of hypnotherapy during dental implant surgery could increase acceptance of the use of this technique in dentistry. In addition, there are currently some efforts to use a combination of pharmacological and hypnotherapeutic sedation for other medical indications (Lu, 1994).
Conclusion

This study showed that for patients undergoing dental implant surgery, anxiolysis was substantially stronger for patients who listened to special hypnosis texts and music using the Music Pillow compared to patients who did not use hypnotherapy. Specifically, the hypnosis patients had lower intraoperative diastolic blood pressure and heart rates than did the control group patients. Most patients who used the Audio Pillow® reported that the surgery was comfortable.

The Music Pillow is uncomplicated and easy to use. The music may have drowned out some of the treatment and drilling noises, lessening the anxiety that these sounds can elicit. The relaxation music supported by hypnotherapy strengthened the suggestibility of the patient, resulting in anxiolytic effects that were reflected by the measured physiological parameters.

This study showed that the newly developed Music Pillow with its original relaxation text and music had anxiolytic effects in patients undergoing dental implantation compared to other anxiolytic methods. Objective and subjective parameters indicated that the anxiolytic effects were due to the patients’ trance state. Further studies involving a larger patient sample are warranted to confirm these observations.

References


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Klinische Verwendung eines neuartigen Audio-Kissens mit aufgenommenen Hypnotherapie-Instruktionen und Musik zur Anxiolyse während Zahnimplantat-Operationen: Eine prospektive Studie

Stephan Eitner, Biljana Sokol, Manfred Wichmann, Julia Bauer und David Engels

Abstract: Bei 82 Zahnimplantat-Patienten wurde eine prospektive Vergleichsstudie über ein neuartiges Audio-Kissen mit aufgespieltem

Jan Mikulica
University of Konstanz, Germany

Utilisation clinique d’un nouvel oreiller audio avec instructions hypnothérapeutiques et musique enregistrées pour combattre l’anxiété durant l’insertion d’un implant dentaire : Une étude prospective

Stephan Eitner, Biljana Sokol, Manfred Wichmann, Julia Bauer et David Engels

Résumé: Une étude prospective comparative d’un nouvel oreiller audio avec paroles hypnotiques et musique relaxante pour soulager l’anxiété a été menée pendant une période de 6 mois auprès de 82 sujets, dans le cas d’une chirurgie pour implant dentaire. Des échelles visuelles analogiques combinées avec le questionnaire de l’Inventaire de craintes des traitements dentaires d’Aachen (Dental Treatment Fear Inventory/AZI) ont été utilisées pour quantifier les sentiments subjectifs d’appréhension chez ces patients. La tension artérielle, le rythme cardiaque et la pression partielle d’oxygène capillaire ont été mesurés avant, pendant et après l’intervention. Les scores AZI étaient plus faibles dans le groupe ayant reçu l’hypnothérapie (n = 44) et étaient légèrement plus élevés au sein du groupe témoin; les scores étaient significativement différents entre les deux groupes (p = 0,000). Durant l’intervention, la pression sanguine diastolique moyenne et le rythme cardiaque des sujets du groupe ayant reçu l’hypnothérapie ont baissé, et ils ont augmenté au sein du groupe témoin. Cela indique que l’oreiller audio avec musique relaxante donne des effets anxiolytiques durant les procédures entourant l’insertion d’un implant dentaire.

Johanne Reynault
C. Tr. (STIBC)
Uso clínico de una audio almohada novedosa con instrucciones hipnoterapéuticas y música ansiolítica grabadas durante cirugía de implante dental: Un estudio prospectivo

Stephan Eitner, Biljana Sokol, Manfred Wichmann, Julia Bauer, y David Engels

Resumen: Se realizó un estudio prospectivo comparativo de una audio almohada novedosa con texto hipnótico y música de relajación en 82 pacientes de cirugías de implante dental para aliviar la ansiedad en un periodo de seis meses. Se utilizaron escalas analógicas visuales en combinación con el Inventario Aachen de Miedo al Tratamiento Dental (AZI) para cuantificar los sentimientos subjetivos de miedo de los pacientes. Se midieron la presión sanguínea, ritmo cardiaco, y presión parcial de oxígeno capilar antes, durante, y después la cirugía. Las puntuaciones AZI decrecieron en el grupo de hipnoterapia ($n = 44$), e incrementaron ligeramente en el grupo control. Las puntuaciones dieron significativamente entre los grupos ($p = .000$). Durante la cirugía, la presión sanguínea y el ritmo cardiaco promedio decrecieron para el grupo de hipnoterapia e incrementaron en los controles. De este modo, esta audio almohada con música de relajación mostró efectos ansiolíticos en pacientes durante procedimientos de implante dental.

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