USE OF MUSIC AS ANALGESIA /ANESTHESIA IN DENTISTRY


Introduction: Patients undergoing endodontic therapy often have severe perioperative and intraoperative anxiety, which may lead to increased perceptions of pain and vital sign instability throughout treatment. The purpose of this study was to test the influences of music, as a non-pharmacologic adjuvant, in terms of significant changes for systolic blood pressure (SBP), diastolic blood pressure (DBP) and heart rate (HR) before, during, and after endodontic treatment in a population with different levels of anxiety assessed with the Corah Dental Anxiety Scale. Methods: A total of 100 patients were recruited in the present study; before starting the endodontic treatment, the interviewer administered the Corah Dental Anxiety Scale to the participants to assess the baseline level of anxiety. Patients were randomly divided into 2 groups: the first one listened to the music and the second one did not. Before, during, and after the endodontic procedures, the vital signs (diastolic and systolic blood pressure and heart rate) were recorded. Results were collected and statistically analyzed. Results: Direct contrasts between patients listening or not listening to music showed that all the measured vital signs decreased considering the overall period (during and after the canal therapy) in the group of patients listening to music (P < .05). Conclusions: This study shows the effects of music therapy on vital values and on subjective perception of anxiety during endodontic therapy. Music and medicine always work together; the soothing effects of sounds and musical frequencies make this union an extraordinary tool of synergistic care. Music therapy is a valid non-pharmacologic adjuvant to anxiety perception in endodontic therapies.


Objectives. The purpose of this randomized investigator-blind controlled trial is to examine the effects of music on the state anxiety and physiological indices among patients undergoing root canal treatment. DESIGN: Randomised controlled trial. METHODS: Purposive sampling was used to recruit 44 adult subjects. The subjects were randomly assigned to the treatment and the control group. There were 22 subjects in each group. Subjects in the music group listened to selected sedative music using headphones throughout the root canal treatment procedure. The control group subjects worn headphones but without the music. Using a repeated measures design with a single pretest and five posttests, the subjects' heart rate, blood pressure and finger temperature were measured before the study and every 10 minutes until the end of the root canal treatment procedure. Anxiety was measured before the study and at the end of the treatment procedure. RESULTS: The results revealed that there were no significant differences between the two groups for baseline data and procedure-related characteristics, except for gender. However, the subjects in the music group showed a significant increase in finger temperature and a decrease in anxiety score over time compared with the control group. The effect size for state anxiety and finger temperature was 0.34 and 0.14 respectively. RELEVANCE TO CLINICAL PRACTICE: The findings provide evidence for nurses and dentists that the use of soothing music for anxiety reduction in patients undergoing root canal treatment procedures is supported by research findings. Music may reduce anxiety during invasive procedures in adolescents and adults. [Evid Based Dent. 2009]

European Journal of pediatric dentistry• Vol. 12/4-201. 239-244. Objective and subjective measures for assessing anxiety in pediatric dental patients. Guinot Jimeno, F., Yuste Bielsa, S., Cuadros Fernández, C., Lorente Rodríguez, A I, Mercadé Bellido, M.

Aim: Anxiety has been defined as a nonspecific feeling of apprehension towards a concrete situation that does not necessarily involve a previous experience. Dental anxiety can prevent patients from cooperating fully during dental treatment. Given that there is a connection between dental anxiety and uncooperative behaviour, it is important for dentists to be able to assess anxiety in their patients. There are many methods for such assessment, and in children they depend on age and intellectual development. These measures can be objective or subjective, depending on the method used to quantify the degree of anxiety. The aim of this literature review was to analyse the objective and subjective scales that are used most commonly to assess the degree of anxiety
of children in a dental setting. **Conclusion:** Knowing the degree of anxiety of dental children is important in order to guide them through their dental experience. Their level of cooperation will also improve and anxiety will be reduced as well.


The purpose of this study was to evaluate the effectiveness of music and white noise in the management of sensitive children treated using electronic dental anesthesia for restorative care. Sound (music and random noise) was used in combination with electronic dental anesthesia in 16 pediatric patients, who have been found to have low pain tolerances during operative procedures under electronic anesthesia alone. Pain was assessed by means of two scales, the color scale and the sound, eye and motor scale. Behavior was assessed through use of the North Carolina Behavior Rating Scale. The comfort was evaluated mainly during penetration of the dentin-enamel junction of the tooth. A procedure involving music and "noisy" music has been effective in 14 children. The music promoted relaxation, whereas the "noise" in combination with electronic signals suppressed pain. It has been demonstrated that audio analgesia and electronic dental anesthesia are quite compatible and may be used with considerable success in combination in difficult circumstances.


Music is generally recognized as the best and, in parallel, the simplest medium of communication. The music therapy, applied in various spheres linked to a therapeutic process, is particularly valued in rehabilitation, medicine, humanities and social sciences. Present study aimed at determination of usefulness of selected techniques of music therapy in different dental specialties. METHODS: The studies were conducted on 81 generally healthy patients aging 18 to 62 years. Various planned dental procedures were performed first time or were appraised by the patients as unpleasant ones. On the basis of pilot studies, a stable scheme of the visits was established. At the beginning of the studies, music therapy according to Kierylk was conducted. Subsequently, basing on description of Schwabe, a form of regulatory individual music therapy was conducted. Depending on psycho-emotional condition of the patient, music programming was based on ISO and LEVEL principles, taking into account musical preferences of the patient and his/her age. After every visit the patients filled questionnaires and appropriate results, together with results of studies performed by the dentist, were subjected to statistical analysis. Conclusion: Results of the studies encourage application of musico-therapeutic techniques in different dental specialties. 2. Dental visit can be made attractive and patient's visits in dental office can be facilitated with no significant financial input or organizational.

Anesthesia Progress. Jan/Feb, 1984. 27-30 **The use of verbal relaxation therapy for sedation during a dental therapy.** Atterbury, RA.

Verbal relaxation therapy is a valuable auxiliary aid in dentistry and oral surgery in the preparation of the patient prior to local anesthesia, operative dental procedures, or conscious sedation, with or without pharmacological adjuncts and in reducing the number of dental phobic patients. Individual listening to preselected music heard through earphones appears to have an effect similar to that produced by listening to carefully selected words. Certain types of music are known to have the suggestive power to allay anxiety, tension, fear, and apprehension and thereby produce a more cooperative and relaxed patient.


OBJECTIVE: To discuss the effect of music in relieving pain during orthodontic treatment. METHODS: One hundred and sixty-five cases who wore arches the first time were selected and treated. These patients were randomly divided into two groups: Music group and blank group. The music intervention was used in reducing orthodontic treatment pain, while blank group experienced no intervention measures. Visual analogue scales (VAS) were adopted to record patients' perception of pain, and Eysenck personality questionnaire (EPQ) to evaluate personality traits of all samples. RESULTS: In 165 patients, 85.45% were effective. The music group
showed significantly less pain than the blank group (P < 0.05). In music and blank group, the pain was stronger in the patients with a tendency of introversion than those with a tendency of extroversion, as well as the irritability ones than steady-minded (P < 0.05). In music group, the pain was stronger in the females than the males (P < 0.05). CONCLUSION: Music helps to relieve pain during orthodontics treatment. The effect of music to relieve the pain during orthodontics treatment for the males are better than that for the females, extroverted personality ones are superior to introverive personality ones, and the steady-minded patients are better than irritability ones.


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.


Managing the anxiety of pediatric dental patient has long been the purview of dentists over many years. Various techniques have been used with moderate and variant success rates over the last few years. The main aim of this study was to ascertain if music distraction is an effective means of managing anxiety in pediatric dental patients. Forty children aged between 4 and 8 years were selected for the study. The assessment of anxiety was done using Venham's picture test, Venham's anxiety rating scale, pulse rate, and oxygen saturation during different treatment visits. The values were statistically analyzed and it was concluded that audio distraction did decrease the anxiety level in pediatric dental patients, but not to a very significant level.


The aim of this article was to analyze the theories underpinning dental fear, anxiety and phobias. To be included, articles must have been published between the years of 1949 and 2013 concerning fears and phobias within dentistry and/or psychiatry. Of 200 articles originally under review, 140 were included and reviewed by the authors. Five specific pathways relating to dental fear and anxiety were identified: Cognitive Conditioning, Informative, Visual Vicarious, Verbal Threat, and Parental. Eight currently accepted management techniques across all dental disciplines for dental fear and anxiety were identified. Further research is required to identify clinical diagnosis and treatment for fears originating from different pathways.


PURPOSE: The purpose of this study was to determine if audio distraction could decrease patient anxiety, pain and disruptive behavior during pediatric dental procedures. METHODS: Forty-five children between the ages of 4 to 6 years had two visits each involving restorative dentistry with local anesthesia in a mandibular quadrant. Visit #1 was a baseline session for all patients. During visit #2, the children were assigned to either an upbeat music group, a relaxing music group or a no music group. Variables measured were: (1) parent-reported anxiety via the Modified Corah Anxiety Scale, (2) self-reported anxiety via the Venham picture scale, (3) heart rate, (4) behavior via the North Carolina Behavior Rating Scale and (5) pain via a visual analogue scale. RESULTS: No significant differences were found among the three groups during experimental visit #2 across any variables. A majority of patients (90%) stated that they enjoyed the music and would like to listen to it during their next visit.
CONCLUSIONS: Audio distraction was not an effective means of reducing anxiety, pain or uncooperative behavior during pediatric restorative dental procedures. However, patients did enjoy listening to the music during their visits.


Dental anxiety is a widespread phenomenon and a concern for paediatric dentistry. The inability of children to deal with threatening dental stimuli often manifests as behaviour management problems. Nowadays, the use of non-aversive behaviour management techniques is more advocated, which are more acceptable to parents, patients and practitioners. Therefore, this present study was conducted to find out which audio aid was the most effective in the managing anxious children.


The aim of this study was to determine the effect of music therapy on patients suffering dental anxiety. In addition, a second objective was to determine the correlation between salivary cortisol and other physiologic parameters. METHODS: 34 patients were randomly assigned to the control group and the experimental group. For each patient was measured for salivary cortisol, stimulate salivary flow, blood pressure, heart rate, oxygen saturation and body temperature. Student t-test and Chi2 were applied to analyze significant differences between the studied variables before and after the unpleasant stimulation causes anxiety for dental treatment. RESULTS: Initially, both groups registered the same level of anxiety. In the second measurement, significant differences were registered in the salivary cortisol concentration, systolic and diastolic pressure, heart rate, body temperature and stimulated salivary flow for treated group with music therapy. CONCLUSION: Music therapy has a positive effect in control of dental anxiety.

Stress Reduction through Audio Distraction in Anxious Pediatric Dental Patients: An Adjunctive Clinical Study. Singh, D, Samadi, F, Jaiswal, J, Tripathi, AM.

AIM: The purpose of the present study was to evaluate the efficacy of ‘audio distraction’ in anxious pediatric dental patients. MATERIALS AND METHODS: Sixty children were randomly selected and equally divided into two groups of thirty each. The first group was control group (group A) and the second group was music group (group B). The dental procedure employed was extraction for both the groups. The children included in music group were allowed to hear audio presentation throughout the treatment procedure. Anxiety was measured by using Venham's picture test, pulse rate, blood pressure and oxygen saturation. RESULTS: “Audio distraction” was found efficacious in alleviating anxiety of pediatric dental patients. CONCLUSION: “Audio distraction” did decrease the anxiety in pediatric patients to a significant extent. How to cite this article: Singh D, Samadi F, Jaiswal JN, Tripathi AM. Stress Reduction through Audio Distraction in Anxious Pediatric Dental Patients: An Adjunctive Clinical Study. Int J Clin Pediatr Dent 2014;7(3):149-152.


BACKGROUND: Waiting for a medical procedure can exert significant feelings of state anxiety in patients. Music listening has been shown to be effective in decreasing anxiety levels. No study so far examined the potential anxiety and stress-reducing effect of a music intervention on pre-treatment anxiety and stress in patients waiting for dental hygiene treatment. Knowing whether the anxiety-reducing effect of music would also be detectible in the context of preventive routine medical procedures in healthy individuals would widen the area of application of music from the hospital or clinical environment to medical offices in general. PURPOSE: Waiting for a medical treatment can induce anxiety and may lead to the experience of stress. We set out to examine the effect of music
on pre-treatment anxiety in a healthy patient sample waiting for a dental treatment. METHODS: In a randomized controlled clinical trial, 92 consecutive volunteer patients (mean age, 57 years) waiting for their scheduled dental hygiene treatment were randomly allocated to either an experimental (n = 46, listening to music for 10 min) or a control group (n = 46, waiting in silence). State and habitual anxiety, subjective stress, and mood measures were assessed before and after music listening or silence, respectively. RESULTS: State anxiety levels in the music group decreased significantly after intervention as compared to the control group (F(1/90) = 8.06; p = 0.006). Participants' trait anxiety and dental anxiety were not found to moderate this effect. CONCLUSIONS: Listening to music prior to dental hygiene treatment decreases anxiety levels to a greater extent than waiting in silence.


OBJECTIVE: The tendency of patients with high levels of anxiety to easily recall threatening stimuli has not been examined in relation to dental anxiety. The current study was aimed to examine the effect of pre-treatment anxiety levels and of information given prior to dentistry surgical procedures on free recall of threatening words.

METHODS: Forty-two subjects attending a private dental clinic were recruited. While awaiting root-canal treatment or tooth extraction, patients were asked to proofread a list of 32 words, which contained mental and physical threat-related words, as well as positive and neutral words. only half of the subjects received information on the forthcoming surgical procedure. Pre-treatment anxiety levels using the dental anxiety Scale (daS) and word recall were evaluated. RESULTS: Only subjects with high dental anxiety (above median score) recalled more mental and physical threat related words, than positive words. Moreover, the dental anxiety score as a continuous variable predicted the mean number of mental threat-related words recalled. no significant differences were noted between those who did or did not receive information prior to the surgical procedures, on the recall of the four types of words. CONCLUSIONS: Similar to other anxiety disorders, patients with dental anxiety display a tendency for free recall of threatening stimuli presented to them before a threatening event. Preliminary information given prior to dentistry surgical procedures does not decrease anxiety. Suggestions for intervention in the dentist's clinic are given.


OBJECTIVE: To discuss the effect of music in relieving pain during orthodontic treatment. METHODS: One hundred and sixty-five cases who wore arches the first time were selected and treated. These patients were randomly divided into two groups: Music group and blank group. The music intervention was used in reducing orthodontic treatment pain, while blank group experienced no intervention measures. Visual analogue scales (VAS) were adopted to record patients' perception of pain, and Eysenck personality questionnaire (EPQ) to evaluate personality traits of all samples.

RESULTS: In 165 patients, 85.45% were effective. The music group showed significantly less pain than the blank group (P < 0.05). In music and blank group, the pain was stronger in the patients with a tendency of introversion than those with a tendency of extroversion, as well as the irritability ones than steady-minded (P < 0.05). In music group, the pain was stronger in the females than the males (P < 0.05). CONCLUSION: Music helps to relieve pain during orthodontics treatment. The effect of music to relieve the pain during orthodontics treatment for the males are better than that for the females, extroverted personality ones are superior to introverted personality ones, and the steady-minded patients are better than irritability ones.


Music is generally recognized as the best and, in parallel, the simplest medium of communication. The music therapy, applied in various spheres linked to a therapeutic process, is particularly valued in rehabilitation, medicine, humanities and social sciences. Present study aimed at determination of usefulness of selected techniques of music therapy in different dental specialties. MATERIAL AND METHODS: The studies were conducted on 81 generally healthy patients aging 18 to 62 years. Various planned dental procedures were performed first time or were appraised by the patients as unpleasant ones. On the basis of pilot studies, a stable scheme of the visits was established. At the beginning of the studies, music therapy according to Kieryl was
conducted. Subsequently, basing on description of Schwabe, a form of regulatory individual music therapy was conducted. Depending on psycho-emotional condition of the patient, music programming was based on ISO and LEVEL principles, taking into account musical preferences of the patient and his/her age. After every visit the patients filled questionnaires and appropriate results, together with results of studies performed by the dentist, were subjected to statistical analysis. CONCLUSIONS: 1. Results of the studies encourage application of musicotherapeutic techniques in different dental specialties. 2. Dental visit can be made attractive and patient's visits in dental office can be facilitated with no significant financial input or organizational.


PURPOSE: Patients undergoing impacted mandibular third molar (IMTM) extraction often have severe perioperative anxiety, which may lead to increased perceptions of pain and vital sign instability throughout surgery. Intraoperative musical interventions have been used during operations to decrease patient anxiety levels. We investigated the anxiolytic effects of musical intervention during surgical extraction of an IMTM. We tested the hypothesis that musical intervention would have positive effects on patients' vital signs, anxiety levels, and perceptions of pain. PATIENTS AND METHODS: We recruited 219 patients with IMTM surgery to participate in this study. Participants were randomly assigned to a music-treated group (106 subjects) or a control group (113 subjects). In a preoperative meeting, patient demographic data were collected, and the patients' favorite songs were selected. For the music-treated group, their selected music was played from the time of arrival to the operating room until the end of the operation. Perioperative anxiety and perceptions of pain were assessed using the Dental Anxiety Scale and the Visual Analog Scale, respectively. Patients' vital signs (blood pressure, heart rate, and respiratory rate) were monitored throughout the surgery. One-way analysis of covariance using perioperative anxiety as a covariant was performed to compare intraoperative anxiety levels and perioperative perceptions of pain between the 2 groups. Repeated measures analysis of variance was used to compare changes in vital signs across surgical stages between the 2 groups. RESULTS: Vital signs changed significantly throughout surgery according to the stage of the procedure. For both groups, vital signs increased from baseline and reached peak values at the time of the initial incision and then decreased quickly and plateaued within normal limits. There were no significant differences between groups in blood pressure; however, the music-treated group showed a significantly smaller change in heart rate than the control group. The music-treated group reported significantly less intraoperative anxiety than the non-music-treated control group when controlling for preoperative anxiety levels (F = 4.226, P < .05). CONCLUSION: These results support the hypothesis that the use of patient-chosen music during surgical extraction of an IMTM significantly lowers patient intraoperative anxiety levels.


OBJECTIVES: The purpose of this randomised investigator-blind controlled trial is to examine the effects of music on the state anxiety and physiological indices among patients undergoing root canal treatment. DESIGN: Randomised controlled trial. METHODS: Purposive sampling was used to recruit 44 adult subjects. The subjects were randomly assigned to the treatment and the control group. There were 22 subjects in each group. Subjects in the music group listened to selected sedative music using headphones throughout the root canal treatment procedure. The control group subjects worn headphones but without the music. Using a repeated measures design with a single pretest and five posttests, the subjects' heart rate, blood pressure and finger temperature were measured before the study and every 10 minutes until the end of the root canal treatment procedure. Anxiety was measured before the study and at the end of the treatment procedure. RESULTS: The results revealed that there were no significant differences between the two groups for baseline data and procedure-related characteristics, except for gender. However, the subjects in the music group showed a significant increase in finger temperature and a decrease in anxiety score over time compared with the control group. The effect size for state anxiety and finger temperature was 0.34 and 0.14 respectively. RELEVANCE TO CLINICAL PRACTICE: The findings provide evidence for nurses and dentists that the use of soothing music for anxiety reduction in patients undergoing root canal treatment procedures is supported by research findings. Music may reduce anxiety during invasive procedures in adolescents and adults. [Evid Based Dent. 2009]
Complementary and alternative medicine (CAM) represent a group of diverse medical and health care systems, practices, and products that are not considered to be part of conventional medicine. Biofeedback, acupuncture, herbal medication, massage, bioelectromagnetic therapy, meditation, and music therapy are examples of CAM treatments. Some dentists in the United States have used some of these treatments and products in their practices. Complementary medicines include herbal remedies, homeopathic medicines, and essential oils. There has been an increase in the use of herbal medicines in the US over the last 15-20 years. There is a public belief that these medicines are safe because they are made from natural sources. However, some of these products have associated adverse effects including toxicity and drug interactions. The health history taken by the dentist should include questions regarding the taking of herbal and over-the-counter medications. The dentist needs to be informed regarding the herbal and over-the-counter products that may impact the delivery of safe and effective dental treatment. In addition, the use of CAM treatments in dentistry should be based on evidence of effectiveness and safety as demonstrated in randomized clinical trials.

**Effect of Music on Patient Experience during Root Canal Treatment.** Wisniewski, J., Murphy, F., Wisniewski, K, Bartolucci, A. #1077 2012

Typically, patients, referred for root canal treatment, present with high levels of anxiety and apprehension. Creation of a sensory-adapted-dental environment (SADE) may enhance patient comfort. Objectives: of this study was to assess the effect of playing customized music in the dental operatory on patient experience during root canal treatment. Methods: A total of 100 patients participated in this clinical study. Subjects were “blinded” to the research project. Patients were simply asked if they wanted to choose the music or have the dental assistant select the music. The specific music was played through the computer via the internet. Following the completion of the root canal therapy, each patient voluntarily completed a post-treatment questionnaire via an interview. Results: of the descriptive factors of the sample population (N=100) include: (1) Music Selection: patient-87%, dental assistant-13% (2) Sex: 40% male, 60% female (3) Age Distribution: Teens and Young Adults (teens, 20's, 30's)-26%, Middle-Aged Adults (40's, 50's)-49%, Older Adults (60's, 70's, 80's)- 25% (4) 79% of the patients presented “in pain”. Specific periapical diagnosis: acute apical periodontitis-40%, acute exacerbation of chronic apical periodontitis-39% (5) Patient Pain Perception Scale (0-4): 0-WNL-22%. 1 to 2-Mild-27%, 3-Moderate-21%, 4-Severe-30%. Additional survey results (N=100): 100% stated it was a better experience, 96% felt more relaxed, 87% stated music made them less nervous, 100% thought it was a good idea. 5% of the patients fell asleep during treatment. No statistically significant associations were found between the Patient's Level of Pain Perception and the patient responses of: (1) Stating It Was A Better Experience (2) Feeling More Relaxed (3) Making Them Less Nervous (4) Thinking It Was A Good Idea. Conclusion: of this study indicated that playing customized music during root canal treatment provided a better experience for the patient and made them more relaxed.

**Does Music during a Dental Treatment Make a Difference?** Olszewska, I, Zarow, M. #2726 Goteborg 2003

Dental treatment may elicit many different emotions, which often result in anxiety. Is it possible to release the stress connected with a visit at a dental office by music? Objectives: The purpose of the study was to assess whether the music influences dental patients' tension and treatability. Methods: 200 adult patients were divided into 2 equal groups (one was listening to classical music during the treatment while the second one wasn’t). Everyone of them has completed an anonymous questionnaire before the treatment which contained questions based on Corah's Dental Anxiety Scale(CDAS) and another one containing questions based on the dentist rating of patients adjustment to treatment(DR) and the patient rating of tension(PR) just after the treatment was finished. Results: The mean result in the group of patients treated without music in PR was 2,7±1,2 and in DR 2,5±0,9 in comparison to 1,9±0,6 in PR and in DR in the second group.. Low level of tension according to PR was shown by 47% patients and medium by 44% in the first group while in the second 79% of patients showed low level and 21% medium. In the first group the level of tension among patients with high level of anxiety was 3,4±1,1 in PR while in the second one 2,5±0,6. The lower level of tension in the second group was observed also in all kinds of treatment (from 1,7 to 2,1 in PR), in all age groups (2±0,7), among women (2±0,7) as well as among men (1,9±0,7). Conclusions: Patients who were listening to music during the dental treatment showed lower level of
tension and better adjustment in all kinds of treatments. In the same group patients with medium and high level of anxiety showed low level of tension. Age and sex didn’t matter in releasing the tension by music.


Stress has a direct effect on pain perception in dental treatment. Patients who come for treatment with a high level of stress usually experience more pain than those with lower stress level. Relaxation is one of many ways used for control stress and pain. Music be useful for reducing stress during dental treatment. Objective: The purpose of this study is to evaluate the effect of music for relaxation (Clair de lune by Debussy) on pain perception during scaling with ultrasonic scaler using Focal Spray insertion (Cavitron®). Methods: Sixty-four gingivitis volunteers, having mild sub-gingival calculus deposits, were included in this experiment. Each subjects was both wearing headphones during scaling of the lower arch and not wearing headphone during scaling of the upper arch. When scaling each half of lower arch, the music was randomly played from a CD player to the headphones of subject while the researcher was listening to the music throughout the experiment. Data were pooled into three groups and then compared among these groups by one way ANOVA. Results: The mean±SD values of VAS of wearing headphone and listening to music, wearing headphone with no music and not wearing headphones groups were 4.06±2.03, 4.94±1.95 and 5.63±2.13, respectively. There were significant differences (P<0.05) between wearing headphone and listening to music and not wearing headphones groups However, there was no significant different between , wearing headphone with no music and not wearing headphones groups. Conclusion: This study suggested that music for relaxation could reduce pain perception during scaling with ultrasonic scaler.

Music Sedation for Patients With Dental Anxiety Relieves Psychological Stress. Kazuki Miyata, Hitomi Odanaka, Yukie Nitta, Shinji Shimoji, Takashi Kanehira, Masamitsu Kawanami, Toshiaki Fujisawa #2979 Boston 2015

Objectives: In dental treatment, intravenous sedation is an effective procedure for relieving stress. However, reducing stress in this way is not possible before administrating agents. The purpose of this study was to investigate the effectiveness of music sedation from entering the hospital to just before entering the operating room from the perspective of autonomic nervous activity. Methods: Eighty-four patients scheduled to undergo intravenous sedation for dental surgery were enrolled in this study. Patients were divided into two blocks of patients with or without dental anxiety, as determined by a questionnaire. Patients in both blocks were randomly allocated to music and non-music groups. To evaluate stress, we used heart rate variability (HRV) and visual analog scale (VAS). HRV was analyzed as the indicator of autonomic nervous activity. The high-frequency component (HF) represented parasympathetic nervous activity, and the low-frequency component divided by HF (LF/HF) represented sympathetic nervous activity in general. Each indicator was evaluated by the difference between the baseline value and the value of after music intervention. Results: Among patients in the dental anxiety block, LF/HF and VAS were significantly decreased in the music group after listening to music compared to the non-music group (Mann-Whitney U test P<0.05, respectively). Among patients without dental anxiety, no significant differences were seen between music and non-music groups. Conclusions: These results revealed that music sedation for patients with dental anxiety acts to relieve stress from entering the hospital to just before entering the operating room, thereby suggesting that the transition from music sedation to intravenous sedation may facilitate continuous sedation management from entering hospital to the end of surgery.


Objectives: A one year Postgraduate Certificate in Dental Sedation and Pain Management has been running since 2004 for dentists and doctors. The aim of this study was: (i) to assess course feedback on completion of the certificate and (ii) to examine how graduates are applying their acquired skills in conscious sedation in general dental practice. Methods: Sessional feedback forms and exit questionnaires are routinely completed by the graduates to rate the course and their experience. An additional online questionnaire was electronically sent to all previous graduates to assess how acquired skills and knowledge were used in clinical practice. Results: (i) Sessional feedback forms presented an overall average score of 4.57 (on a visual analogue scale where 1 = very poor and 5 = excellent) for course performance. (ii) Exit questionnaires revealed: (a) 100% of the graduates either
agreed or strongly agreed that taking on conscious sedation patients had favourably affected their practice (b) 65% considered the cost of the course to be justified and (c) 86% felt that the course adequately prepared them to carry out conscious sedation. (iii) Online questionnaires were completed by 56% of graduates and revealed: (a) an average of 10 patients are seen for sedation each week (b) 50% use sedation primarily for treating phobic patients (c) intravenous sedation with Midazolam was the most popular method (74%) and (c) 92% accept referrals for sedation. Conclusion: The Postgraduate Certificate in Dental Sedation and Pain Management is delivered according to guidelines that require those involved in sedation practice to be fully trained. Evaluation of the course has shown it to be of high quality, offering effective training in the skills and knowledge of conscious sedation. The study shows that graduates apply sedation techniques in their own clinical practice regularly, comprehensively and with a high degree of satisfaction.