

## PAIN, STRESS, ANXIETY AND PSYCHOTHERAPEUTIC MODALITIES FOR THEIR MANAGEMENT IN DENTAL PRACTICE

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### ABSTRACT:

We reviewed 21 sources in the literature and made an exhaustive analysis of the stress-related anxiety states generated by pain during dental treatment. Different psychological and psychotherapeutic modalities for their management were discussed. The results of the study suggest that dental practitioners must know and use such modalities, and, if unable to deal with anxiety states, require consultation with psychotherapist.

**Key words:** dental treatment, anxiety, psychotherapy

Pain is a universal syndrome in human pathology. According to the International Association for the Study of Pain (IASP) pain is an unpleasant sensory or emotional experience primarily associated with tissue damage or described in terms of tissue damage. The subjective sensation of pain can be generated by stimulation of nociceptors; the sensation can be experienced even in the absence of pain. Pain is not only a sensory experience it is also an emotional experience. As a distress factor it can trigger different anxiety states.<sup>1,2,6</sup>

It is impossible for one to practise modern dentistry without realising that for the patient, the control of pain and fear is extremely important. Modern technical advances have made painless dentistry a reality and yet research has shown that most people avoid dental treatment because of fear of pain. Dental surgeons and psychologists agree that patients frequently magnify their unpleasant dental experiences.<sup>3,4</sup>

There are deep-seated psychological reasons for this exaggerated fear; the mouth, being a highly charged sensory region, is a primary zone of interaction with the environment and can have important emotional significance. To many people the anticipation of dental treatment is sufficient to arouse extreme anxiety.<sup>9</sup>

Dental fear is defined as a specific anxiety, that is, it is the predisposition for a negative experience in the dental surgery.<sup>7</sup> Anxiety, according to Folleyan<sup>10</sup> at al. is a universal human phenomenon. Studies have shown a world-wide

variation in the prevalence of dental anxiety with estimates ranging between 3% and 43%. The etiology of dental anxiety is multifactorial, with factors acting in synergy to affect its expression. These authors give the following definition of anxiety: "Dental anxiety is the feeling of tension associated with dental treatment and is not necessarily connected to external stimuli"

Ivanov<sup>1</sup> does not include dental pain into the classical psychosomatic disorders and yet the psychologic factor is constantly present in all their manifestations. There are two basic components in the psychological state of the dental patient – fear and pain. In some patients fear is so strong that it causes rejection of dental treatment. Tashev<sup>5</sup> describes the dentophobia and concludes that unless it is overcome in time it could lead to the loss of all teeth. The types of dental fear and the factors that determined them have been studied by Kaakko<sup>13</sup>, Litt<sup>14</sup>, and Rousseau<sup>18</sup>.

The child's age is particularly important for the child to adapt and get motivation to receive dental treatment.<sup>5</sup>

Ivanov<sup>1</sup> argues that the distress in dental treatment may lead to phobias generated by the pain and the unpleasant associations from the dental machines, the particular procedures and the dentist. The neurotic dental phobias can be:

1. Simple phobia – the fear felt is caused only by the machine or the dentist.
2. Complex phobia – the fear is induced by the entire dental surgery (dental chair, the machine, dentist). It can grow to a panic disorder.
3. Phobic crisis – the trigger can be an object, a thought, image or other stimuli leading to intense focusing of subconsciousness and triggering a strong reaction of fear which can escalate to panic and is accompanied with an abundant vegetative symptoms (sweating, heart palpitation, feeling faint, paling).

Uzunov<sup>6</sup> studied the simultaneous development of phobic and obsessional psychoneurosis. It is caused by the presence of a previously-experienced dental procedure which was accompanied with a pain syndrome. Such neuroses usually develop in accentuated personalities who have anxiously obsessive traits and also in children. When the

patient anticipates a dental intervention his mind and memory start spontaneously to generate thoughts, images, memories obsessing his personality. The patient realises their unsubstantiated character, treats them critically but is unable intentionally to get rid of them. The vegetative symptoms also become more intense (heart palpitation, facial flushing, headache) and all these can result in a definitive refusal to undergo dental treatment.

Management of the anxiety states caused by dental treatment is possible by application of psychotherapeutic methods.<sup>9</sup> Ivanov<sup>1</sup> and Uzunov<sup>6</sup> suggest for this purpose the following: behaviour psychotherapy, systematic desensitization, rational psychotherapy and hypnosis.

George<sup>11</sup> and Sime<sup>20</sup> demonstrate that there are several psychological factors that are related to postsurgical recovery. Dentists might improve patients' recovery by giving the surgery a more positive meaning, improving patients' acceptance of their condition, making patients' expectations more positive and reducing anxiety about recovery. All this results in the reduction of the postsurgical anxiety states as well as the use of analgesics.

Schwartz<sup>19</sup> studied the effect of preoperative preparation on stress reduction in children hospitalized for dental surgery. The participants were allocated into three groups: group I were children prepared using unrelated play therapy, group II included children whose preparation was done by related play therapy focusing on hospital and surgical procedures, and a control group which received no preoperative preparation. Subjects' behavior was assessed using behavior observation scales for cooperation and upset. The related play therapy group was found to be more cooperative and less upset than either of the other two groups in terms of dealing with surgery related stress and anxiety.

To alleviate the anticipatory stress in chronic pain patients Logan<sup>16</sup> suggest cooperation of the dentist with a psychotherapeutic specialist.

Appropriate stress management of patients is essential for smooth running of invasive or surgical dental procedures conducted under local anesthesia. Ng et al.<sup>17</sup> analysed the effectiveness of preoperative information provision for anxiety reduction during dental surgery in patients with high- or low-trait anxiety. They found that the provision of

information about the surgery leads to reduction of fear in low-trait anxiety patients but not in high-trait anxiety patients while providing information about the surgical intervention and recovery period results in a significant reduction of anxiety in all patients.

Johren<sup>12</sup> studied the short-term and medium-term reduction of dental fear in patients with dental phobia by using premedication with midazolam or a one-session psychological treatment. The results of their study suggest that patients that undergo psychological treatment have a more lasting reduction of fear.

Litt<sup>15</sup> studied five anxiety reduction techniques that may result in different levels of relaxation, control and self-effectivity to prepare them for extraction of 3rd-molar teeth. The conclusion they reached was that none of the techniques used in isolation could be conducive to the success of preparation and that including more elements in the preparation can bring about better results.

Enqvist<sup>8</sup> studied the effect of preoperative hypnotic techniques in patients planned for surgical removal of third mandibular molars. The patients of an experimental group were subjected to hypnotic technique: hypnotic relaxation induction, posthypnotic suggestions of healing and recovery, and training to achieve control over stress and pain. The control group patients received no hypnotic preparation. Anxiety before the operation increased significantly in the control group but remained at baseline level in the experimental group.

Benson<sup>9</sup> thinks that most of the people avoid dental treatment because of the pain fear and use of controlled suggestion and hypnosis could have a significant role to play in clinical dentistry.

The present review of the available literature on the issue of anxiety and pain related to dental treatment shows that modern dental treatment should make use of psychotherapeutic methods. The combined psychological and psychotherapeutic approach to the dental patient requires a collaboration between dentists and psychotherapeutic specialists. In case the patient refuses to assist psychotherapeutic specialist the dentist should perform the psychotherapy independently.

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