

Evaluation of the Degree of Dental Anxiety in a Lot of Patients Altered in Young Adults

GHEORGHE RAFTU, ELENA-CLAUDIA SIN*, AURELIANA CARAIANE, STELIANA GABRIELA BUSTIUC, RALUCA BRICEAG
Ovidius University of Constanta, Faculty of Dental Medicine, 7 Ilarie Voronca Str., 900684 Constanta, Romania

The study aims at identifying and highlighting dental anxiety in a group of young adults, analyzing patients' concerns about the main dental treatment procedures, and establishing statistical relationships between anxiety and gender, the background, level of education, socio-economic status and knowledge of habits of care and hygiene of oral cavity characteristic of the studied group. The study group consists of 150 female (50%) and male (50%) patients, aged between 20 and 40 years. The inclusion criteria in the batch were those related to the age range of 20 to 40 years. Two respondents (Corah's Dental Anxiety Scale, Revised (DAS-R)) were given two questionnaires (Corah's Dental Anxiety Scale, DAS-R), and the second questionnaire contained 7 questions about the habits dental care). Most patients' concerns about the main procedures of dental treatment / other concerns are: dental extraction, material expenses, possibility of treatments and shame she felt oppressed health of the oral cavity. Regardless of the level of dental anxiety, the oral cavity hygiene habits are not properly performed by patients, with an increased tendency for them to be disregarded by patients with severe dental anxiety.

Keywords: dental anxiety, anxiety, pain

Regularly received professional dental care can provide an opportunity for early prevention, diagnosis and treatment of oral and craniofacial diseases and disorders. People seeking regular preventive care have better oral health than those who do not want or who seek care only when needed. Dental anxiety is a determining factor if people do regular dental visits.

Dental anxiety is defined as a patient's response to stress-specific dental conditions [1]. A study by Stouthard and Hoogstraten showed that more than 50% of the industrialized nation's population was worried while presenting to the dentist, while 15% avoided dental care because of their anxiety [2]. Furthermore, Gatchell et al. showed that 70 percent of patients presenting to the dentist exhibit fears and 15% have avoided presenting to the dentist due to their anxiety [3].

Most people recognize the importance of dental health, but a significant proportion of the population finds that dental procedures are so stressful that they have drawn attention from both medical and psychological investigations. Agras et al., For example, asked people to identify common situations of fear [4]. Dental anxiety ranked fifth in all the most feared situations in the study. Although there have been many findings on dental anxiety, there are still many gaps in knowledge. Studies have indicated the possibility of a relationship between dental anxiety and social anxiety, as well as physical perception of oneself [5].

In her studies of dental anxiety in the 1960s, her appearance was attributed to several factors: the personality characteristic; traumatic or painful experiences in childhood (conditioning experience); attitudes towards dental services that cause fears from anxious family members or their peers; perception of body image; feelings of blood fever; coping styles (vigilant, avoidant and emotional); and reactivity to pain [6].

Experimental part

Material and method

The study group consists of 150 male and 50% female patients aged between 20 and 40 years who

presented themselves at the Voronca Hilarion Clinic within the Faculty of Dental Medicine Ovidius University in Constanta during 1.10.2017 - 30.05.2018. The inclusion criteria in the batch were those related to the age range of 20 to 40 years.

The first step in the present study was data collection by administering two questionnaires: the first questionnaire was Corah's Dental Anxiety Scale (DAS-R), revised (DAS-R) and the second questionnaire contained 7 questions related to dental care habits. Also, in order to evaluate the level of concern specific to the group studied with regard to the main procedures characteristic of a dental therapist, a list of dental procedures was administered in which the persons questioned ranked the concern after a proposed scale. This list of the level of concern regarding the main dental procedures was attached to the first questionnaire. The collected data were centralized and their processing and comparative analysis was performed using descriptive and analytical statistical methods. Data processing was done using Ms Office Excel 2016.

Results and discussions

Percentage distribution of the batch studied by age classes is the following: patients aged between 20 and 25 were 8%; those aged between 25 and 30 years accounted for 24%; the age range of 30 to 35 years represented 28% of all patients studied, and the age range of 35 to 40 years was 40%. 70% of study participants come from urban areas, and 30% of patients come from rural areas.

In the level of education, distribution percent of the study group is as follows: 34% represents the percentage recorded in patients with secondary, and 66% is the percentage recorded in the patients with higher degree.

Dental anxiety is a major obstacle when it comes to seek advice early on oral and dental problems. Although in most literature articles there are studies showing that women have a higher level of dental anxiety than men, the study in this paper highlights the fact that 38% of women surveyed have an increased degree of anxiety in compared to men, which is 52%. It was also noticed that the men surveyed had a level of severe anxiety / phobia of 8%, while women did not record any results.

* email: sin.claudia.elena@gmail.com; Phone +0722 650502

As far as the environment of origin is concerned, the surveyed patients coming from rural areas recorded 6% of the severity of dental anxiety compared to 3% of the urban population. It was also noticed that rural patients showed a higher percentage of moderate dental anxiety than urban patients - 67% compared to 29%. Elevated levels of dental anxiety were highlighted in urban patients - 68%, compared with 27% in rural areas.

According to the present study, the questioned patients who have graduated from higher education have shown an increased level of dental anxiety lower than those who have secondary education - 9% and 59% respectively, and those who have experienced a high level of dental anxiety / phobia have were patients only from the group of patients with secondary education. Also, a moderate level of dental anxiety was registered in a higher percentage in the group of those with higher education than those in the medium-education group - 91% compared to 12%. In this respect, the literature abounds in studies that support the fact that the level of education influences the level of dental anxiety [7,8].

Regarding the professional status, only 3% of patients who are employed / in the labor market have experienced a severe level of dental anxiety, compared to those who are not employed, who have registered 8% of this. A moderate level of increased percentage of anxiousness was also observed in patients employed with the unemployed - 66% versus 34%. A higher percentage of an increased level of dental anxiety was seen in non-employed patients than in those employed - 58% and 31%, respectively.

In analyzing the level of dental anxiety according to the monthly income, it was observed that those with monthly income lower than the average income on economy recorded an increased percentage of the level of 20% severe dental anxiety, compared to those with a monthly income equal to the average income per economy - 3% and those with a monthly income higher than the average income for the economy - 0%. However, the highest percentage representing a high level of dental anxiety was seen among patients with a monthly income higher than the median economic income - 67%, compared

to 47% in patients with an income monthly compared to the average for the economy and against 40% - the percentage established after data processing for patients with a monthly income lower than the average income for the economy.

All these results obtained regarding the socio-economic status and the level of dental anxiety are in agreement with the data from the literature [9, 10-26].

In the analysis of patient concerns about the main dental treatment / other concerns, high rates of concern were recorded for dental extraction (50%), material costs of possible treatments (40%) and shame on the health of the oral cavity (48%). Much of the moderate levels of concern were observed as the vibration of the dental cut (44%), the anesthetic injection (70%), the sensation of suffocation during fingerprinting (60%), the painful feeling caused by cold air (60%), the number of necessary schedules (50%). Low levels of patient concerns about the main dental treatment / other concerns were recorded in elevated percentages for endodontic treatments (50%) and for dental cabinet smells (60%).

Regarding the dental care habits of the patients in question, it was observed that , in the case of the time elapsed since the last dental examination, 100% was found in patients with severe dental anxiety who chose the last answer, that is, I do not remember when they did the last dental consultation.

Patients in the group of those with severe dental anxiety began early dental care in adolescence - 50% or nearly 30 years - 50%, compared with those who had moderate dental anxiety who started their first dental care at almost 20 years - 67%, and at almost 30 years only 10%.

Small percentages were recorded for responses that targeted brushing 3 times a day, regardless of dental anxiety level (13.33%, 5.56 and 0%). The highest percentages were found for dental brushing once a day: 100% in patients with severe dental anxiety / phobias, 70% in moderately dental anxious patients. Patients in the category of those with high dental anxieties recorded 55.56% of the responses to dental brushing twice a day.

Table 1
PERCENTAGE DISTRIBUTION OF THE PATIENT POPULATION ACCORDING TO THE TIME ELAPSED SINCE THE LAST DENTAL CHECK PERFORMED AND THE DEGREE OF DENTAL ANXIETY

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. Less than 3 months ago	10%	27.78%	0%
b. Less than 3-6 months ago	17%	27.78%	0%
c. 1 year ago	33%	27.78%	0%
d. I do not remember	40%	16.67%	100%

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. Adolescence	20%	27.78%	50%
b. Nearly 20 years	67%	44.44%	0%
c. Nearly 30 years	10%	22.22%	50%
d. After 30 years	3%	5.56%	0%

Table 2
PERCENTAGE DISTRIBUTION OF THE BATCH OF PATIENTS ACCORDING TO THE PERIOD IN WHICH PATIENTS STARTED DENTAL CARE AND DENTAL ANXIETY

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. Once a day	70%	38.89%	100%
b. Twice a day	16.67%	55.56%	0%
c. Three times a day	13.33%	5.56%	0%
d. Never	0%	0%	0%

Table 3
PERCENTAGE DISTRIBUTION OF THE BATCH OF PATIENTS ACCORDING TO THE FREQUENCY OF DENTAL BRUSHING AND THE DEGREE OF DENTAL ANXIETY

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. No.	13.33%	55.56%	50%
b. Yes	86.67%	44.44%	50%

Table 4
PERCENTAGE DISTRIBUTION OF THE PATIENT POPULATION BASED ON THE USE OF MOUTHWASH AND THE DEGREE OF DENTAL ANXIETY

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. No.	73.33%	61.11%	100%
b. Yes	26.67%	38.89%	0%

Table 5
PERCENTAGE DISTRIBUTION OF THE BATCH OF PATIENTS BASED ON THE USE OF DENTAL FLOSS AND THE DEGREE OF DENTAL ANXIETY

Answer options	Moderate degree of dental anxiety	High degree of dental anxiety	Degree of severe dental anxiety / phobia
a. Every 3 months	6.67%	5.56%	0%
b. Every 6 months	23.33%	44.44%	0%
c. Once a year	63.33%	38.89%	50%
d. Another time interval	6.67%	11.11%	50%

Table 6
PERCENTAGE DISTRIBUTION OF THE BATCH OF PATIENTS ACCORDING TO TOOTHBRUSH CHANGING FREQUENCY AND DENTAL ANXIETY

With regard to the use of mouthwash, patients in the moderate dental anxious group recorded the highest percentage of 86.67%. According to the study, patients in the group with severe dental anxiety / phobia do not use dental floss at 100%, it was also observed that most of the patients who had a moderate degree of dental anxiety did not use dental floss as an ancillary oral hygiene agent - 73.33%.

Patients in the group of those with severe dental anxiety give dental brushing about 50% for about 1 minute, and 50% of them do not know how much they devote to dental brushing. Small percentages have been recorded for the dental brush allocation over 2 minutes regardless of the level of dental anxiety. Patients in the moderate dental anxious group give approximately 2 minutes to dental brushing in 73.33%, and those in the group characterized by an increased level of dental anxiety do this in a percentage of 44.44 %.

Conclusions

Urban patients have elevated levels of dental anxiety over rural patients. Low educational levels can lead to increased levels of dental anxiety. Most patients' concerns about the main dental treatment / other concerns are: dental extraction, material costs of possible treatments, and perceived shame over the health of the oral cavity. Regardless of the level of dental anxiety, the oral cavity hygiene habits are not properly performed by patients, with an increased tendency for them to be disregarded by patients with severe dental anxiety.

References

- CORAH NL, GALE EN, ILLIG SJ. Assessment of a dental anxiety scale. *J Am Dent Assoc* 1978; 97: 816-9
- STOUTHARD MEA, HOOGSTRATEN J. Prevalence of dental anxiety in the Netherlands. *Community Dent Oral Epidemiol* 1990; 18: 139-42
- GATCHELL RJ, INGERSOLL BD, BOWMAN L, ROBERTSON MC, WALKER C. The prevalence of dental fear and avoidance: a recent survey study. *J Am Dent Assoc* 1983; 107: 609-10
- AGRAS S, SYLVESTER D, OLIVEAU D. The epidemiology of common fears and phobia. *Compr Psychiatry* 1969; 10: 151-6.
- ROWE M, MOORE T. Self-report measures of dental fear: gender differences. *Am J Health Behav* 1998; 22: 243-7.
- GEORGE C. ECONOMOU, HONORS B.Sc., Dental Anxiety and Personality: Investigating the Relationship between Dental Anxiety and Self-Consciousness, *Journal of Dental Education*, Volume 67, Number 9, 2003
- BASHIRU BO, OMOTOLA OE. Prevalence and determinants of dental anxiety among adult population in Benin City, Nigeria. *Eur J Gen Dent* 2016; 5: 99-103
- HUMPHRIS GM, DYER TA, ROBINSON PG. The modified dental anxiety scale: UK general public population norms in 2008 with further psychometrics and effects of age. *BMC Oral Health* 2009; 9: 20.
- YILDIRIM, TUBA TALO. Evaluation of the Relationship of Dental Fear with Dental Health Status and Awareness. *Journal of Clinical and Diagnostic Research: JCDR* 10.7 (2016): ZC105-ZC109. PMC. Web. Aug 29 2018.
- ANTOHE, M.E., AGOP FORNA, D., DASCALU, C.G., FORNA, N.C., The importance of observing the aesthetic requirements in partial edentulous rehabilitation - implications in medical-dental training, *International Journal of education and information technologies* Volume: 10, p. 199-203, 2016

11. GRADINARU, I., IGNAT, L., DASCALU, C.G., SOROAGA, L.V., ANTOHE, M.E., Studies regarding the architectural design of various composites and nanofibres used in dental medicine, *Revista de Chimie*, **69**(2), 2018, p.328-331
12. ASAFTEI, I.V., SANDU, I.G., MIHAIL, L., ET AL, Conversion of industrial feedstock mainly with butanes and butenes over B-HZSM-5 and Zn-HZSM-5 modified catalysts, *Rev.Chim.(Bucharest)*, **66**, no.3, 2015, p.336-341
13. ANTOHE, M.E., FORNA AGOP, D., DASCALU, C.G., FORNA, N.C., Implications of digital image processing in the paraclinical assessment of the partially edentated patient, *Rev. Chim. (Bucharest)*, **69**, no.2, 2018 p.521-524
14. MATELM.N., EARAR, K., TRINCA, L.C., Degradation characteristics of poly-tetrafluoroethylene coatings on stainless steel orthodontic wires immersed in tuna fish derived products, *Rev. Chim. (Bucharest)*, **67**, no.4, 2016, PG.800-807
15. MATEI, M.N., CHISCOPI, I., EARAR, K., et al., Evaluation of corrosion resistance of NiTi Nb orthodontic wires in tomato juice, *Rev.Chim. (Bucharest)*, **66**, no.12, 2015, p.2009-2012
16. MARECI, D., EARAR, K., ZETU, I., Comparative electrochemical behaviour, of uncoated and coated Ni Ti, for dental orthodontic wires, *Rev.Chim.(Bucharest)*, **52**, no.2, 2015, p. 150-153
17. TARANU, T., CONSTANTIN, M.M., TOADER, M.P., et al., The benefits of using the Iodine solution in the treatment of acne at pregnant women, *Rev. Chim. (Bucharest)*, **69**, no.9, 2018, p.2343-2345
18. GRIGORE, M., FURNICA, C., ESANU, I., et al., Pentology of Cantrell associated with unilateral anophthalmia. Case report and literature review, *Medicine*, **97**(31), 2018
19. ANCUTA, C., POMIRLEANU, C., IORDACHE, C., et al., Serum lipid profile in diffuse versus limited systemic sclerosis data from the SASS cohort, *Rev.Chim.(Bucharest)*, **69**, no.2, 2018, p.403-406
20. BUDACU, C., NEMTOI, A., CONSTANTIN, M., Biomaterials used in Reduction and Fixation of Unstable Fractures of the Zygomaticomaxillary Complex, *Rev. Mat. Plast.*, **54**, no. 4, 2017, p.773-776
21. NEMTOI, A., DANILA, V., DRAGAN, E. et. al., The Effects of Insulin and Strontium Ranelate on Guided Bone Regeneration in Diabetic Rats, *Rev. Chim. (Bucharest)*, **68**, no. 4, 2017, p. 693-697
22. HABA, D., BUDACU, C., MIHAI, C. The Role of Chemical Substances in Classic and Modern Sialography Technique and applications, *Rev. Chim. (Bucharest)*, **68**, no. 12, 2017, p.2829
23. NITESCU, D., MIHAI, C., OANTA, C., Evaluation of Cumulative Effects of Chemotherapy and Bevacizumab (Avastin) in Oncological Patients with Periodontal Disease, *Rev.Chim.(Bucharest)*, **68**, no.3, 2017, p. 549
24. TATARU, C., FORNA AGOP, D., FORNA, C. N., Possibilities of prosthetic implant rehabilitation using various bone grafting materials, *Romanian Journal of Oral Rehabilitation* Vol. 8, No. 3, Jul-Sep 2016
25. CALIN, A., FORNA AGOP, D., FORNA, C. N. The implications of preimplantation analysis and positioning of implants in the success / failure rate of the implantation treatment, *Romanian Journal of Oral Rehabilitation* Vol. 8, No. 3, Jul-Sep 2016
26. BARTOK, F.F., FORNA, N.C., Peri-implantitis - a review of actual treatment methods, *Romanian Journal of Oral Rehabilitation* Vol. 8, No. 3, Jul-Sep 2016

Manuscript received: 12.07.2018