

# GEORGIAN MEDICAL NEWS

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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии  
საქართველოს სამედიცინო სიახლენი

## GEORGIAN MEDICAL NEWS

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**GMN: Georgian Medical News** is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

**GMN: Медицинские новости Грузии** - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

**GMN: Georgian Medical News** – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებშიდან.

### WEBSITE

[www.geomednews.com](http://www.geomednews.com)

## К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman (Кириллица)**, для текста на грузинском языке следует использовать **AcadNusx**. Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - <http://www.spinesurgery.ru/files/publish.pdf> и [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html) В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

**При нарушении указанных правил статьи не рассматриваются.**

## REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface - **Times New Roman (Cyrillic)**, print size - 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html)  
[http://www.icmje.org/urm\\_full.pdf](http://www.icmje.org/urm_full.pdf)

In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

**Articles that Fail to Meet the Aforementioned  
Requirements are not Assigned to be Reviewed.**

## ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx**. შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შედეგის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფხიხლებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

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## EFFECT OF CHRONIC PERIODONTITIS ON HEALTH-RELATED QUALITY OF LIFE AND ANXIETY AMONG PATIENTS IN YEREVAN, ARMENIA

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### Abstract.

**Aim of the study:** The research aimed to investigate the impact of different forms of periodontitis on patients quality of life (QoL) and anxiety.

**Material and methods:** 80 patients with chronic periodontitis were involved in the study. Oral Health Impact Profile scale was used to evaluate the QoL, and Spielberger State-Trait Anxiety Inventory for the assessment of the individual and situational anxiety.

**Results:** The total QoL scores for chronic local and generalized periodontitis were 71.54 and 90.67, respectively. The mean scores of situational and individual anxiety scales were higher among patients with generalized chronic periodontitis. The highest QoL scores, which indicate worst quality of life, were registered among unemployed patients, those who didn't know about oral cavity hygienic means and rules, had accompanying diseases and were widowed.

**Conclusions:** The results of the study indicated that periodontal diseases negatively impact an individual's QoL and anxiety level, especially in patients suffering from chronic generalized periodontitis compared to patients with local periodontitis.

**Key words.** Chronic periodontitis, OHIP-49, quality of life, STAI.

### Abbreviations.

CP: Chronic Periodontitis; OHIP: Oral Health Impact Profile; QoL: Quality of life; STAI: State-Trait Anxiety Inventory.

### Introduction.

Chronic periodontitis (CP) is an inflammatory disease that adversely affects aesthetic, masticatory and speech functions of individuals [1,2].

Periodontal diseases cause a wide range of clinical signs and symptoms, some of which can have a considerable impact on quality of life (QoL) [3].

Patient based outcomes are becoming increasingly popular as their opinions differ from true clinical end points of gain in clinical attachment level and decrease in probing pocket depth [4,5]. Symptoms such as bleeding gums, tooth mobility, drifting teeth, and unaesthetic loss of anterior papilla can be a symbolic oral health-related problem as it can compromise the ability of the periodontal disease person to eat, speak, socialize, and do various daily activities [4].

The dental treatment process stretches for a long time and the dentist must first predict the potential barriers that may arise in the entire process. To achieve good results, a physician needs not only a highly professional qualification but also an individual approach to the patient taking into account his individual features [6,7].

Studies have shown that aesthetic defects have a great impact on quality of life. Quality of life depends on age, family situation and health self-assessment. People at 40 years of age have worse quality of life scores than younger. Patients who had estimated their health status as satisfactory had 1.2 times higher QoL than those with somatic pathology [6].

Currently, two main distinct presentations of periodontitis are recognized: chronic periodontitis and aggressive periodontitis [8]. CP rarely develops in the first three decades of life [9] and has a slow rate of cyclical progression [10]. Localized Aggressive Periodontitis and Generalized Aggressive Periodontitis have been described as rapidly progressive tissue destruction diseases that generally lack correlation to dental plaque deposits, develop early in life and have a higher progression rate relative to CP [8,11].

The impact of periodontitis on QoL and anxiety level was given relatively little attention [4,12,13]. Understanding the impact of different forms of periodontal disease is essential to evaluate patient perception.

The study aimed to investigate the impact of different forms of periodontitis on patients QoL and anxiety.

### Research methods.

**Participants:** The cross-sectional survey was performed to achieve the research goal. The sample was selected from patients aged 18 and older, who referred to the First Dental University clinic of the Yerevan State Medical University, "Payl-Dent" and "Tatdent" clinics, from February 1<sup>st</sup>, 2018, until January 31<sup>st</sup>, 2019. From the screened 400 patients 87 had CP and were targeted in the study. Eighty patients with eligible inclusion criteria further were invited to participate in the current study. The participants were screened for periodontal disease using a Basic Periodontal Examination. The inclusion criteria included aged  $\geq 18$  years old, presence at least 20 teeth, CP diagnosis. Exclusion criteria were a significant physical and psychological condition (e.g., major disability, or serious cognitive or psychological dysfunction). A total of 80 participants were



grouped into chronic localized and generalized periodontitis groups based on Armitage's classification [8]. The rest 7 patients from the selected 87 with CP did not have met inclusion criteria.

The study was conducted in accordance with the ethical principles stated in the Declaration of Helsinki. The study project was discussed and approved by the Ethics Committee of Yerevan State Medical University. Informed consent was obtained from all participants.

**Data collection:** The non-clinical data involved the administration of a questionnaire containing social-demographic and economic variables, OHIP-49 (Oral Health Impact Profile) scale to evaluate the QoL, Spielberger State-Trait Anxiety Inventory (STAI) to evaluate the patients' individual and situational anxiety levels. Social-demographic variables were categorized as follows: age, sex (male/female), occupation (employed/unemployed/retired/other), marital status (married/single/widowed/divorced).

**OHIP-49:** OHIP-49 is a widely used self-administered quality of life questionnaire. It is a patient-related outcome tool based on the disease–impairment–disability–handicap model developed by the WHO [4]. The QoL enhancement represents a conceptual shift from a little clinical view to a patient related outcome with self-assessment [14]. The questionnaire consists of 49 items which are divided into seven domains: functional limitation, physical discomfort, psychological discomfort, physical disability, psychological incapacity, social incapacity, and handicap. Patients indicate how frequently they had experienced negative impacts in these dimensions during the last 12 months. Responses range from 0 to 4 on the Likert scale: 0-“never”, 1-“rarely”, 2-“occasionally”, 3-“quite frequently”, and 4-“very often”. The total score of the OHIP-49 questionnaire is obtained by summing all responses. It can vary from 0 to 196, and the higher is the absolute value, the greater the patient's negative experience [15]. The percentage of subjects reporting “fairly often” or “very often” on one or more items of OHIP-49 is also calculated. The English version of the OHIP-49 was translated to Armenian and linguistically and culturally adapted to our setting by using the back-translation technique [16].

**Spielberger state-trait anxiety inventory:** The Spielberger State-Trait Anxiety Inventory (STAI-40) includes a 20-item subscale of “state”, or situational, anxiety and 20-item subscale of “trait”, or individual, subscale. Participants rate their “state” anxiety on a scale of 1 “almost never” to 4 “almost always”, and trait anxiety on a scale of 1 “not at all” to 4 “very much so.” Higher scores indicate greater anxiety. The STAI has demonstrated good internal consistency among Armenian population ( $\alpha = 0.89$ ). STAI clinical cut-off scores were used by previous investigation in Armenian population [17].

Situational anxiety characterized a wide range of situations as hazardous, alarming. The distress at the moment is a reactive that characterizes anxiety, tension and nervous tension.

**Statistical analysis:** The statistical analysis has been performed using SPSS (Statistical package for the Social Sciences Inc., USA 23, 0) the statistical package. Parametric and non-parametric statistical methods have been applied. Comparison of OHIP-49 scores for social-demographic variables was performed using independent samples t-test for

comparison of two means, and one-way ANOVA with post hoc Tukey test in cases when the number of compared groups was greater than 2. Differences in proportions were compared by the Chi-square test or the Fisher Exact Test. A  $p$ -value  $< 0.05$  was considered as statistically significant.

**Ethics approval and consent to participate:** The study was approved by the Ethics Committee of the Yerevan State Medical University named after Mkhitar Heratsi (Approval # 2/14) The study was performed following the Declaration of Helsinki Principles and the written informed consent was given by all participants before enrolment.

### Consent for publication.

Not applicable in this section since no personally identifiable information is present in our manuscript.

### Results.

A total of 80 patients with CP were involved in the study, out of which half were female and the rest half- male. A little more than half (56.8%) of the studied population had higher education and 59.7% were married. The mean age of the studied population was  $43.3 \pm 16.7$ .

Table 1 shows the comparison of scores of OHIP-49 domains depending on patients social-demographic characteristics.

As shown in Table 2, “Functional limitation” domain scores showed statistically significant difference for information about hygienic means, oral cavity hygiene and accompanying diseases. “Physical disability” domain scores were found to be significantly different for financial status, information about hygienic means, oral cavity hygiene and living place.

The highest QoL scores, which indicate worst quality of life, were registered among unemployed patients, those who didn't know about oral cavity hygienic means and rules, had accompanying diseases and were widowed.

The total scores for chronic local and generalized periodontitis were 71.54 and 90.67, respectively. Comparison of total OHIP-49 scores and 7 domain scores among patients with chronic local and generalized periodontitis showed statistically significant differences for total score, functional limitation, psychological disability, and social disability domains (Table 2).

The mean scores of both, situational and individual anxiety scales were significantly higher among patients with generalized chronic periodontitis compared to patients with the local form of the disease (Table 3).

There was a strong positive correlation between the STAI and the OHIP-49 scores. Pearson Correlation coefficients were 0.765 and 0.749 between OHIP-49 and situational anxiety scores, and OHIP-49 and individual anxiety scores, respectively ( $p < 0.001$ ).

### Discussion.

A total of 80 patients were included. After the clinical examination all those patients who met eligibility criteria were asked to complete OHIP-49 and STAI questionnaires. All patients were distributed into two groups: groups of patients with chronic localized (41 patients) and group with chronic generalized periodontitis (39 patients), respectively. For each group, the clinical and demographic characteristics were recorded.

**Table 1.** Social-demographic characteristics and OHIP-49 domains.

	Functional limitation		Physical pain		Psychological discomfort		Physical disability		Psychological disability		Social disability		Handicap	
	F	p-value	F	p-value	F	p-value	F	p-value	F	p-value	F	p-value	F	p-value
<b>Harmful habits</b> Presence Absence	1.089	.386	1.036	.442	1.063	.408	.698	.849	1.012	.463	.616	.866	1.036	.437
<b>Financial status</b> Low income Middle income High income	1.425	.144	1.261	.241	1.233	.273	1.861	.031*	.980	.500	1.812	.046*	1.277	.235
<b>Education</b> Elementary Secondary Higher	.855	.662	.831	.687	1.367	.188	.723	.824	1.032	.442	1.286	.232	.597	.899
<b>Marital status</b> Married Single Widowed Divorced	.998	.487	.540	.952	1.977	.030*	1.607	.071	.893	.597	1.159	.325	1.575	.092
<b>Gender</b> Male Female	1.163	.313	1.094	.380	.902	.570	.956	.542	.854	.641	1.653	.078	.469	.969
<b>Information about hygienic means</b> Were aware Were unaware	2.334	.004*	2.976	.000*	5.932	.000*	3.823	.000*	5.082	.000*	4.688	.000*	4.356	.000*
<b>Oral cavity hygiene</b> Were aware Were unaware	1.915	.026*	1.936	.025*	2.742	.003*	1.718	.050*	1.156	.326	2.285	.010*	1.158	.324
<b>Accompanying diseases</b> Presence Absence	2.863	.001*	.369	.994	1.372	.190	.763	.776	1.237	.265	.990	.483	.412	.984
<b>Occupation</b> Employed Unemployed Retired Other	1.013	.470	1.923	.026*	2.504	.006*	1.062	.419	.957	.524	1.737	.065	1.120	.358

\* P<0.05

Regarding the OHIP findings in this study, the scores for patients with chronic generalized periodontitis have significantly higher values than those for chronic localized periodontitis, indicating that patients with chronic generalized periodontitis have a poorer perception of QoL.

We found that the severity of periodontal disease has significantly impact on functional limitation domain. This finding agrees with that reported by some authors [4,18,19]. In contrast, Rola Al Habashneh et al. [20] reported that severity of periodontal disease has not significantly associated with functional limitation subscale.

Our study showed that CP has a great impact on anxiety, which is similar with results of other studies. We also found that situational and individual anxiety scores were significantly higher among patients with chronic generalized periodontitis compared to patients with localized form of the disease. In contrast, Vettore MV et al. didn't found differences [21].

Other studies also suggested improvements in self-esteem body image and the ability to socialize following orthodontic

interventions [22-24]. These correlations support the importance of the oral sphere in psycho-physical well-being.

We found that mean scores of OHIP-49 domains were significantly higher in Armenian population compared to the results of other authors [25-27] which can be due to the low level of access to medical care and awareness of Armenian population.

The strength of this study is that it is one of the first studies to explore the impact of chronic periodontitis on quality of life and anxiety level in a country with low income. Findings from the research will help to further improve dental care programs and provide valuable evidence for decision makers to implement effective comprehensive preventive programs for patients with poor QoL and anxiety.

Our study also has some limitations. We didn't include healthy matched control group for comparing results, but we compare our results with findings from other studies. The other limitation is small sample size. Further long-term studies with larger populations are required to address the above limitations.

**Table 2.** OHIP -49 scores of patients with chronic periodontitis.

OHIP-49 domains		Chronic periodontitis		P-value
		Localized n=41	Generalized n=39	
Functional limitation	Mean	13.44	16.31	.049*
	Standard Deviation	6.76	6.03	
	Standard Error of Mean	1.06	.97	
Physical pain	Mean	13.39	16.67	.052
	Standard Deviation	7.89	6.93	
	Standard Error of Mean	1.23	1.11	
Psychological discomfort	Mean	7.46	8.79	.206
	Standard Deviation	5.28	3.93	
	Standard Error of Mean	.82	.63	
Physical disability	Mean	13.44	17.10	.065
	Standard Deviation	9.88	7.37	
	Standard Error of Mean	1.54	1.18	
Psychological disability	Mean	8.10	11.28	.012*
	Standard Deviation	5.76	5.34	
	Standard Error of Mean	.90	.86	
Social disability	Mean	6.56	9.00	.024*
	Standard Deviation	5.08	4.34	
	Standard Error of Mean	.79	.70	
Handicap	Mean	9.15	11.51	.057
	Standard Deviation	5.81	5.09	
	Standard Error of Mean	.91	.81	
Total score	Mean	71.54	90.67	.031*
	Standard Deviation	42.65	34.41	
	Standard Error of Mean	6.66	5.51	

\* p<0.05

**Table 3.** Anxiety scores of patients with chronic periodontitis.

Anxiety scores	Local chronic periodontitis		Generalized chronic periodontitis		P-value
	Mean	SD	Mean	SD	
Situational anxiety	44.0	7.9	50.66	0.58	.0001
Individual anxiety	47.18	5.9	49.69	3.9	.028

SD- Standard Deviation

### Conclusion/Recommendation.

The study demonstrated that periodontal diseases negatively impact an individual's quality of life and anxiety in many aspects, especially of those patients who suffer from chronic generalized periodontitis compared to patients with local periodontitis. There was a strong positive correlation between the STAI and the OHIP-49 scores.

Evaluation of patients' self-perception of QoL and anxiety should be suggested as important component of diagnostics of periodontal diseases. It is essential from a public health perspective to establish communication between health professionals from the dental and behavioral fields, in order to implement a multidisciplinary team approach to treat dental anxiety, involving behavioral and psychological interventions.

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**ВЛИЯНИЕ ХРОНИЧЕСКОГО ПЕРИОДОНТИТА НА АССОЦИИРОВАННОЕ СО ЗДОРОВЬЕМ КАЧЕСТВО ЖИЗНИ И УРОВЕНЬ ТРЕВОЖНОСТИ ПАЦИЕНТОВ В Г. ЕРЕВАН, АРМЕНИЯ.**

**Абстракт**

**Целью настоящего исследования** явилось изучение влияния различных форм периодонтита на качество жизни пациентов и уровень тревожности.

**Материал и методы.** В исследовании приняли участие 80 пациентов с диагностированным хроническим периодонтитом. Для оценки качества жизни пациентов и уровня их личностной и ситуационной тревожности были использованы, соответственно, опросник «Профиль влияния стоматологического здоровья» (Oral Health Impact Profile scale, ОНIP-49) и опросник Спилбергерга (Spielberger State-Trait Anxiety Inventory, STAI).

**Результаты исследования.** Итоговые баллы качества жизни в группах пациентов с локальным и генерализованным периодонтитом составили, соответственно, 71.54 и 90.67. Средние баллы личностной и ситуационной тревожности оказались выше среди пациентов с генерализованной формой заболевания. Наиболее высокие баллы, свидетельствующие о худшем качестве жизни были зарегистрированы в группах безработных пациентов, разведенных, тех, кто не был осведомлен о средствах и правилах гигиены ротовой полости, а также тех, кто имел сопутствующие заболевания.

**Заключение.** Результаты исследования свидетельствуют о негативном влиянии периодонтита на качество жизни и уровень тревожности пациентов. Особенно сильное влияние на качество жизни больных оказывала генерализованная форма периодонтита.

**Ключевые слова:** хронический периодонтит, качество жизни, ОНIP-49, STAI