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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 ბაზებიდან.

### 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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## QUALITY OF LIFE IN INDIVIDUALS WITH VARYING LEVELS OF TRAIT AND STATE ANXIETY

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### Abstract.

**Introduction:** The association between specific domains of quality of life (QOL), viewed as an integral characteristic of an individual's physical, emotional, and social functioning, and anxiety as a distinct psychological trait, has not been thoroughly investigated. The aim of this study is to explore the association between specific domains of quality of life and levels of trait and state anxiety, focusing on uncovering the nature of the relationships between these indicators.

**Materials and methods:** In the study conducted as part of a scientific project, 180 male and female respondents aged 16-60 were involved. Quality of life was assessed using a modified version of the SF-36 questionnaire, and anxiety was evaluated using the Spielberger scale. Statistical processing and data analysis were carried out using the SPSS 22.0 software package. The correlation between the examined indicators were determined using Spearman's method.

**Results:** The values of the respondents' quality of life scores in specific domains, as measured by the SF-36 questionnaire, ranged from 59.5 to 84.3 points. For MH and RP scales the scores were 43.4 and 49.9 points, respectively, while the scores for trait and state anxiety were 46.1 and 43.6 points, respectively. The observed pattern of relationships between the studied indicators in individuals with varying levels of anxiety shows a decrease in the values of specific QOL domains with an increase in levels of state and trait anxiety. An inverse relationship was found in the anxiety-psychological health component complex ( $r = -0.602$  to  $-0.697$ ,  $p < 0.001$ ). Weak negative correlations were obtained for the anxiety-physical health component ratio ( $r = -0.236$  to  $-0.266$ ,  $p < 0.001$ ). No significant relationship was found between PH and MH ( $r = -0.011$ ,  $p = 0.885$ ). A direct relationship between state and trait anxiety was indicated by the correlation coefficient between these variables ( $r = 0.602$  to  $0.697$ ,  $p < 0.001$ ).

**Conclusion:** The study of the correlations between specific domains of QOL and anxiety indicates that there are relationships between the variables examined. Notably, significant anxiety considerably reduces QOL, particularly affecting its psychological component.

**Key words.** Quality of life, trait anxiety, state anxiety, correlation.

### Introduction.

It is well-known that anxiety, induced by various adverse factors, negatively impacts a person's quality of life (QOL) and impairs their ability to function effectively in society. The experience of emotional discomfort and the anticipation of impending danger are reflected in anxiety, which, from a psychological perspective, can be situational (ST) or trait-based

(LT). A certain level of anxiety within the psyche is associated with the endocrine and nervous systems [1-3]. Psychological stress, to varying degrees, is inherent in anyone who finds themselves in a stressful situation and is a natural adaptive response to significant events. However, it often exceeds the limits of physiological stress and leads to maladaptation [4,5]. Furthermore, any emotional experience in an individual is subjective. Quality of life (QOL) is considered an objective criterion for such experiences, as it reflects the physical, psychological, and social well-being of an individual, group, or population [6,7].

To date, there has not been sufficient exploration of which specific areas of QOL and health components are most affected by anxiety [8]. The aim of this study was to explore the relationships between different areas of QOL and situational and trait anxiety based on the analysis of physical and psychological health components in individuals with varying levels of anxiety.

### Materials and Methods.

As part of a scientific project funded by the RA Committee on Science and Education, a cross-sectional survey was conducted in Nagorno-Karabakh in 2021-2022, one year after the end of the 2020 military events in the region, among 180 respondents, both male and female, ranging from 16 to 60 [9]. The participants were provided with an informed consent to participate in the study and were free from acute or chronic illnesses or exacerbations at the time of data collection [10]. Questionnaires were administered, including the ST and LT scales by Spielberger and the Armenian-adapted version of the English-language SF-36 health survey [11]. The questionnaires were approved by the Ethics Committee of the Yerevan State Medical University (Protocol No. 1-1/22, 22.09.2022). According to the SF-36 methodology, the survey included 36 items grouped into 8 scales. Individual ratings were calculated using an appropriate key [12-14]. Higher scores on the SF-36 correspond to better health. The physical health component (PH) and mental health component (MH) scores were computed. Anxiety levels were assessed using Spielberger's test, which consists of 40 statements, 20 related to situational anxiety and 20 to trait anxiety. Anxiety levels were classified as follows: low (up to 30 points), moderate (31-44 points), and high (45 points and above). The data from the surveys were processed using standard methods and an electronic database was created. Statistical analysis was performed using SPSS 22.0 software. Due to the asymmetric distribution of QOL values in the compared groups, the Kruskal-Wallis test was used to assess the significance of differences, with  $p < 0.05$  considered significant. The correlation between anxiety levels and QOL domains in SF-36 was evaluated using Spearman's method.



## Results.

The following distribution of QOL domains was obtained in terms of their ranking from lowest to highest: MH, RP, BP, GH, RE, SF, and PF (Table 1), with QOL scores ranging from 59.5 to 84.3 points. It should also be noted that the MH score was, on average, 6.5 points lower than the PF score. The analysis of anxiety levels in the respondents revealed that trait anxiety (LT) was at a high level, exceeding situational anxiety (ST) by an average of 2.6 points. All the participants were divided into groups based on their anxiety levels: low, moderate, and high. The data for various QOL domains were then compared across these groups (Table 2). A predominance of respondents with high trait anxiety (51.7%) and moderate situational anxiety (50.0%) was observed, while lower levels of trait anxiety (2.2%) and situational anxiety (6.7%) were less common. As seen from Table 2, a consistent pattern was observed: as anxiety levels (both ST and LT) increased, the scores in different QOL domains decreased, and these differences were generally statistically significant (Kruskal-Wallis criterion ranged from 5.152 ( $p=0.076$ ) to 72.527 ( $p<0.001$ )).

The comparative analysis of QOL domains in relation to ST and LT in respondents with different anxiety levels revealed that in the PF domain a significant difference was found between those with high and low situational anxiety ( $p=0.040$ ). The RP

domain differed significantly between respondents with high and moderate situational anxiety and trait anxiety ( $p=0.030$ ). The GH domain showed significant differences between those with high and moderate, as well as high and low levels of ST ( $p<0.001$ ,  $p<0.001$ ), and LT ( $p<0.001$ ,  $p=0.014$ ). Significant differences in BP were found between respondents with high and moderate, as well as high and low levels of ST ( $p=0.001$ ,  $p<0.001$ ) and LT ( $p<0.001$ ,  $p=0.003$ ), and between moderate and low ST ( $p=0.024$ ). The RE domain showed significant differences between respondents with high and moderate ( $p<0.001$ ), high and low ( $p<0.001$ ) ST levels, and between high and moderate trait anxiety ( $U=2092$ ,  $p<0.001$ ).

The SF domain differed significantly between respondents with high and moderate ST and LT ( $p<0.001$ ), and high and low ST ( $p<0.001$ ), as well as high and low LT ( $p=0.012$ ). In relation to the PF domain, a significant difference was observed between respondents with high and moderate ( $p<0.001$ ) and high and low levels of ST ( $p<0.001$ ) and LT ( $p=0.001$ ). For MH, a significant difference was observed only between respondents with high and low levels of ST ( $p=0.019$ ) and LT ( $p=0.048$ ), while for MH, differences were found between high and moderate ST and LT ( $p<0.001$ ), and high and low ST ( $p<0.001$ ) and LT ( $p=0.002$ ). Pairwise comparison of QOL domains by anxiety level (Table 2) showed that individuals with high anxiety

**Table 1.** Descriptive statistics of SF-36 scales and anxiety for the entire sample.

Indicators (in scores)	PF	RPF	BP	GH	VT	SF	REF	MH	PH	MH	SA	TA
Average	84,25	74,17	67,45	65,31	59,46	73,26	68,49	59,53	49,91	43,43	43,56	46,14
Standard error	1,55	2,24	1,84	2,85	1,39	1,56	2,78	0,89	0,65	0,66	1,57	1,46

**Note:** PF – Physical Functioning, RP – Role Physical Functioning, BP – Bodily Pain, GH – General Health, VT – Vitality, SF – Social Functioning, RE – Role Emotional Functioning, MH – Mental Health, PH – Physical Health (physical component of health), MH – Mental Health (psychological component of health), SA – State Anxiety, TA – Trait Anxiety.

**Table 2.** The relationship between specific domains of quality of life (QoL) and different levels of state anxiety (SA) and trait anxiety (TA)\*.

Level of anxiety		SA			TA		
Domains of QOL		Low	Moderate	High	Low	Moderate	High
PF	M±m	87,91±7,94	86,33±2,17	81,28±2,22	96,25±2,39	84,64±2,62	83,39±1,86
	H, p	H=8,837, p=0,012			H=5,152, p=0,076		
RPF	M±m	81,25±9,79	78,33±3,14	68,27±3,31	75,00±17,68	80,12±3,11	68,82±3,19
	H, p	H=7,908, p=0,018			H=7,141, p=0,028		
BP	M±m	85,58±8,44	74,20±2,28	56,87±2,64	-	74,20±2,49	60,02±2,51
	H/U, p	H=27,486, p<0,001			U=22,575, p<0,001		
GH	M±m	80,08±3,28	65,71±1,81	62,58±6,19	81,88±6,06	68,28±1,89	61,95±5,22
	H, p	H= 26,064, p<0,001			H=25,326, p<0,001		
VT	M±m	83,33±3,39	65,69±1,70	48,59±1,74	71,25±12,97	67,80±2,02	51,51±1,55
	H, p	H=57,594, p<0,001			H=39,368, p<0,001		
SF	M±m	89,58±3,72	80,98±1,89	61,83±2,22	93,75±3,61	82,08±1,85	64,49±2,17
	H, p	H=45,218, p<0,001			H=35,840, p<0,001		
REF	M±m	97,22±2,78	80,68±3,38	50,00±4,20	-	83,87±3,31	53,41±3,89
	H/U, p	H=38,295, p<0,001			U=2092,0, p<0,001		
MH	M±m	69,00±2,42	64,97±0,90	51,79±1,28	77,00±3,42	64,42±1,01	54,41±1,22
	H, p	H=63,020, p<0,001			H=39,413, p<0,001		
PH	M±m	53,04±2,76	50,38±0,73	48,90±1,16	54,78±2,29	50,47±0,86	49,21±0,98
	H, p	H=9,319, p=0,009			H=6,365, p=0,041		
MH	M±m	52,93±1,55	47,49±0,72	37,29±0,83	53,37±2,08	48,22±0,76	38,74±0,83
	H, p	H=72,527, p<0,001			H=58,803, p<0,001		

**Note:** M±m – arithmetic mean ± standard error of the mean, H – Kruskal-Wallis test, U – Mann-Whitney test. \*Symbols are the same as in Table 1.

levels had significantly lower scores across all QOL domains compared to those with low and moderate anxiety levels.

To determine the strength of the relationships between the studied indicators, the correlation between anxiety levels and QOL domains in SF-36 was also calculated using Spearman's method (Table 3.4.5). As seen, for physical health components, inverse correlations were found between ST and GH ( $r=-0.426$ ,  $p<0.001$ ), ST and BP ( $r=-0.420$ ,  $p<0.001$ ), LT and GH ( $r=-0.397$ ,  $p<0.001$ ), and LT and BP ( $r=-0.429$ ,  $p<0.001$ ). Weak negative correlations were also found between PF and anxiety, and between RP and anxiety, ranging from  $r=-0.221$  ( $p=0.003$ ) to  $r=-0.253$  ( $p=0.001$ ). For psychological health components, stronger inverse correlations were found between ST and LT, with correlation coefficients ranging from  $r=-0.450$  ( $p<0.001$ ) to  $r=-0.666$  ( $p<0.001$ ). The correlation coefficient between ST and LT was  $0.610$  ( $p<0.001$ ), indicating a noticeable direct relationship between these indicators. No significant relationship was found between PF and MH ( $r=-0.011$ ,  $p=0.885$ ).

### Discussion.

The data obtained from the various spheres of Quality of Life (QOL) indicate a relatively high subjective assessment of QOL and living conditions of the respondents [6,7]. It is noteworthy that when evaluating the integral indicators, Mental Health (MH) was lower than Physical Health (PH). The relatively low levels of Vitality (VT) and Psychological Well-being (PWB) likely reflect the presence of fatigue, depression, and anxiety tendencies among the respondents [12,13]. In contrast, the high

scores for Physical Functioning (PF) suggest minimal limitation of physical functioning due to health conditions and a high level of physical activity among the respondents [14-18]. The increased level of Trait Anxiety (TA), noted by us, is likely associated with "the formation of an intrapersonal conflict, manifested in a sense of vague anxiety, threat, anxious anticipation, tension, and worry, or as a feeling of constant danger, which forms a basis for the development of serious neurotic disorders". In the case of State Anxiety (SA) we can speak about the good adaptive capacity of the subjects, who are able to recognize the cause of their anxiety and make decisions independently in difficult situations. Spielberger emphasizes the mobilizing character of this type of anxiety, which corresponds to the "norm" [8]. The study of QOL in individuals with low, moderate, and high levels of anxiety showed that as the level of SA and TA increases, the values of various QOL domains decrease. The correlation analysis between different QOL domains and anxiety indicates the presence of interrelationships between the studied indicators, with the nature of the relationships differing for the physical and psychological components of health, as well as for situational and trait anxiety. Our study indicates a predominance of weak inverse correlations between PF and role limitations due to physical functioning (RPF) and anxiety. A similar relationship was observed between PH and anxiety (both trait and situational). The correlation coefficient between emotional well-being (EW) and anxiety indicates a moderate interrelationship between these indicators. The most vulnerable relationships are those

**Table 3.** Correlation relationships between state/trait anxiety and domains of the physical health component.

Quality of life domains	Situational anxiety		Individual anxiety	
	r	p	r	p
PF	0.223	<0.003		
RPF	-0.221	<0.003		
BP	-0.426	<0.001		
GSH	-0.420	<0.001		
PF			-0.252	<0.001
RPF			-0.253	<0.001
BP			-0.397	<0.001
GSH			-0.429	<0.001

**Note:** r – Spearman's correlation coefficient. The abbreviations for the quality-of-life domains are the same as in Table 1.

**Table 4.** Correlation relationships between state/trait anxiety and domains of the mental health component.

Quality of life domains	Situational anxiety		Individual anxiety	
	r	p	r	p
VT	-0.666	<0.003	-0.557	<0.001
SF	-0.557	<0.003	-0.493	<0.001
RE	-0.466	<0.001	-0.450	<0.001
MH	-0.622	<0.001	-0.524	<0.001

r – Spearman's correlation coefficient. The abbreviations for the quality-of-life domains are the same as in Table 1.

**Table 5.** Correlation relationships between state/trait anxiety and domains of the physical/mental health components.

Quality of life domains	Situational anxiety		Individual anxiety	
	r	p	r	p
Psychological component of health (PH)	-0.246	<0.001	-0.266	<0.001
Physical component of health (MH)	-0.697	<0.001	-0.602	<0.001

**Note:** r – Spearman's correlation coefficient.

between Mental Health (MH) and its domains (Vitality, Social Functioning, Role Emotional Functioning, and Psychological Well-being) with SA and TA. This pattern suggests the presence of significant causal links between these indicators. Our results confirm the idea that significant anxiety substantially reduces QOL, especially its psychological component. According to our data there is a direct relationship between TA, a stable individual trait reflecting a subject's tendency to anxiety, and SA, a dynamic characteristic manifested as a response to heightened tension in the face of a "vital" or social threat. Our results did not show a convincing link between PH and MH, which likely suggests that they are different constructs. Future research should focus on using more detailed designs to assess causal relationships between these variables. The obtained data also indicate that people, when assessing their health, are signalling the need for further research aimed at testing specific hypotheses. The limitations of this study may include age, gender, time, and regional factors. Certain limitations in the study of QOL in individuals with different levels of anxiety are due to the fact that our work focused on the correlation parameters between the studied indicators in this specific cohort (one year after military events in the region) [9], which complicates the characterization of similar interrelationships outside this cohort, territorial, and temporal range. To increase the reliability of the obtained correlations between anxiety levels and QOL, it is necessary to expand the sample size, increase the time intervals, and extend the geographical scope of the study. Despite the relevance of medical-biological research aimed at developing criteria for assessing the "anxiety level - QOL" complex, such studies are limited to the examination of only those indicators that allow safe work with the subjects. This study focused only on the indicators that were most interrelated, and it was not aimed at analyzing other spheres of respondents' lives.

### **Conclusion.**

Despite the reduced psychological component of health, particularly Vitality and Psychological Well-being in the subjects, a favorable QOL assessment by respondents is determined by high scores for Physical Functioning and Social Functioning. In the structure of anxiety among the surveyed cohort, a significant interrelationship between its components was found with a noted increase in Trait Anxiety and moderate State Anxiety levels. Along with the testing of QOL and anxiety, an important role in identifying human responses to environmental factors lies in tracking the links between these indicators. A comparative analysis of QOL in relation to levels of State and Trait Anxiety showed that individuals with high levels of anxiety had significantly lower scores across various QOL domains compared to those with low and moderate anxiety. The study also found that increased anxiety has a more negative impact on the psychological, rather than physical, component of health. The elevated level of Trait Anxiety in the structure of anxiety indicates the need for deeper study of its mechanisms in individuals with high levels of TA, as its correction could prevent maladaptation and improve QOL. The identified correlation links between QOL domains and anxiety levels were likely influenced by the post-war context. Given that data collection took place in the aftermath of military

events, the established correlations may be relevant for studying medical-biological aspects of QOL in post-war regions and could serve as a scientific-practical basis for further research. Our results highlight the importance of studying QOL and anxiety using questionnaires, as they complement each other and allow for individualized medical-biological approaches to the subjects. Based on our analysis we believe such research could be used to identify and mitigate the negative living conditions of individuals. In this case recommendations can be made to mitigate high Trait Anxiety and maintain a moderate level of State Anxiety to improve the QOL of the population, particularly the psychological component of health, with an emphasis on specifying actions, responsible parties, and control mechanisms, as well as establishing effective communication with the public.

### **Conflict of Interest.**

The authors declare no actual or potential conflicts of interest related to the publication of this article.

### **Ethical Standards.**

The study was approved by the local Ethics Committee of the Yerevan State Medical University named after Mkhitar Heratsi (No. 1-1/22; 22.09.2022) and conducted in accordance with the ethical standards of the Helsinki Declaration of the World Medical Association, "Ethical Principles for Medical Research Involving Human Subjects."

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