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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 ВИНИТИ 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 ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

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
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. Корректура авторам не высылается, 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 compu-ter-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.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 საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ 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 შეღებვის 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 ფჩხილებში 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.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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ANXIETY SYNDROMES IN ADOLESCENTS WITH OPERATIONAL RESPIRATORY CONDITIONS: A PROSPECTIVE STUDY

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Abstract.

Aim: Determining the prevalence of anxiety disorders and their effect on disease progression and quality of life in adults with organic illnesses and functional disorders of the respiratory system treated in a pulmonology environment.

Materials: A total of 135 young adults between the ages of 13 and 17 were analyzed. There were a total of 46 adolescents diagnosed with somatoform respiratory disorders (SRD), 45 adolescents diagnosed with bronchial asthma (BA), and 44 adolescents diagnosed with pneumonia. The Spielberger-Khanin anxiety questionnaire and the Nijmegen hyperventilation syndrome (HVS) scale were used for the research and diagnosis, respectively. The quality of life was measured using the asthma quality of life questionnaire (AQLQ).

Result: In comparison to adults with asthma (33.2%) and pneumonia (32.3%), adults with SRD (34.5%). There were mild immediate associations between the Spielberger scale and the Nijmegen HVS questionnaire for both trait and state anxiety, and mild inverse correlations between the Spielberger scale and the AQLQ for both state and trait anxiety. Adolescents with anxiety had a higher prevalence of trauma, pain, and social issues than their non-anxious counterparts who were referred to psychiatry.

Conclusion: In adolescents, 5.1% had severe trait anxiety, and 19.3% had severe condition anxiety. Adolescents with SRD were twice as likely to suffer from extreme state and trait anxiety as the general population. It is hypothesized that anxiety problems are at the root of HVS and contribute to adults' dissatisfaction with their quality of life due to lung ailments. Although certain adolescents with anxiety disorders were referred for anxiety, this data nevertheless lends credence to the idea that using standardized and structured instruments regularly might help increase accuracy and detection rates in the clinic, regardless of the reason for referral. Complete evaluations are essential for this patient population due to the intricacy of their symptoms.

Key words. Anxiety, disorder, adolescents, hyperventilation syndrome (HVS) and respiratory systems, adults.

Introduction.

Adolescence is a crucial developmental stage characterized by a host of changes in social, emotional, and physical domains. The co-occurrence of anxiety syndromes and operational respiratory disorders presents a unique issue in the complex fabric of adolescent health that has to be meticulously assessed [1]. Anxiety disorders in adolescents have been linked to increased levels of comorbidities, a major loss in quality of life, and severe functional impairment. Figure 1 shows the symptoms of anxiety disorder. Anxiety syndromes are a group of conditions that present as excessive anxiety, fear and discomfort that considerably limit an individual ability to live a normal life [2].

Adolescents are especially prone to these disorders owing to the unique mix of biological, social, and environmental elements that converge at this period of life. The only mental illnesses that are strongly linked to bronchial asthma (BA) are anxiety disorders that persist throughout life. This relationship may be one-way, with one condition potentially causing or resulting from another [3]. BA is one of the most prevalent illnesses. A multitude of somatic and psych-emotional elements that combine to generate a multifactorial illness, which is a typical example of a path genetically induced sickness [4]. There is a lifetime relationship between a child's emotional condition and the physiological features of breathing. Stress disorders, SRD, and anxiety disorders are often grouped [5]. Frequently, anxiety is the cause of a range of physical symptoms that resemble the breakdown of various systems and organs in the body. These physical expressions of anxiety are often referred to as SRD [6].

Adults and adolescents with SRD have detrimental consequences on their quality of life and development. Hence, more care is needed for this disease. The relevance of this issue stems from its ability to interrupt an adolescent key age that compromises physical health, psychological well-being, and general quality of life. The management of post-operative patients, anxiety and depression are common recurring psychological illnesses. They frequently coincide with a worse quality of life linked to health, which together reduce treatment adherence and impede recovery following resection [7]. Understanding the underlying causes of anxiety syndromes in these teenagers which is critical for appropriate management and support [8]. Unaddressed anxiety disorders have far-reaching implications, affecting not just people but also the healthcare system and society as a whole. Adolescence is a pivotal developmental period, and our research intends to add to our understanding of the complex relationship between physical and mental health at this time. The aim of this research is to enhance healthcare strategies for this vulnerable group by identifying trends, risk factors, and possible therapies related to the coexistence of anxiety disorders and respiratory diseases. The research [9] examined an anxiety disorder rates, predictors, and medication among age-matched male adolescents with Fragile X syndrome (FXS) or autism spectrum disorder (ASD). Anxiety was unpredicted by cognitive

scores or ASD severity. The goal of the research [10] was to identify the prevalence of depressive and anxious disorders in adult and adolescent populations according to the presence of various neurological abnormalities (NDs). They looked at data from the national survey of adults' health in 2016, comparing adolescents aged 6-17 years old who had NDs to those who did not have NDs. The goal of the study [11] was to determine the lifetime prevalence, sociodemographic features, risk factors, and co-morbidities of this illness in adults and adolescents. The cross-sectional approach does not allow for the investigation of prospective connections between variables. Other significant limitations that should be addressed in future research are the lack of a control group and follow-up durations. The study [12] determined the perception of a person's worth and the quality of life about one's health in adolescents diagnosed with polycystic ovarian syndrome (PCOS), and mental problems. Their study's findings imply that mental health conditions, including anxiety and sadness are common among adolescents with PCOS. The research [13] aimed to determine the base rate and predictive factors of ADHD in adolescents without injuries who satisfied the criteria for post-concussional syndrome (PCS) and the international classification of diseases, tenth revision. Furthermore, the research assessed the reporting of concussion-like symptoms by adolescents with ADHD who were not injured and categorized by many co-occurring diseases. The research [14] addressed the relationship between anxious and depressed symptoms with gender, the severity of ASD, and socioeconomic characteristics. Additionally, they examined the age distribution of depressed and anxious symptoms, ranging from later adolescence to old age. The findings of their study highlight the need to promptly diagnose and treat anxiety and sadness in individuals with ASD. The study [15] explored the incidence of teenage depression and anxiety symptoms in a community sample of high school students in Kenya to assist fill these gaps. They further investigated the relationships between these symptoms and psychological and sociodemographic characteristics. They gave a self-report measure of depression and anxiety symptoms, social support, recognition, development mindsets, and life satisfaction to 658 students aged thirteen to nineteen. The purpose of the study [16] was to examine depression and anxiety symptoms in PCOS adults and how they relate to various socioeconomic factors. Cross-sectional research was done on 250 PCOS adults using the sequential sampling approach to measure sadness and anxiety symptoms. The study [17] aimed to investigate the presence of anxiety and somatic symptoms in both adult and adolescent individuals with ADHD and to assess how methylphenidate medication influences these symptoms. The study's outcomes were carefully reviewed by medical professionals, who took into account the role of anxiety and somatic symptoms in ADHD adults and adolescents when designing and supervising methylphenidate treatment plans. The purpose of the study [18] was to assess the post-traumatic stress, anxiety, and depression symptoms in Syrian adults residing in camps for refugees. The findings of the research showed that adults who are refugees have issues with their physical and mental health and high levels of anxiety, sadness, and post-traumatic stress disorder. The study [19] determined the adolescents who are most susceptible to the pandemic's psychological effects and offers information that can assist in developing crisis management techniques for teenagers. Results emphasize the value of social support and good habits like exercise and sleep as protective factors against the pandemic's negative impacts on adolescents' mental health. The goal of the research [20] was to evaluate the COVID-19 information-seeking behavior among parents in moments of uncertainty and its possible connection with anxiety symptoms.

Research aim: The prevalence of anxiety disorders in adults and adolescents with organic illnesses and functional respiratory disorders that are treated in pulmonology, and the influence these disorders have on the development of the disease and the quality of life these patients have are the subjects of this study.

Key contributions.

• The study identify those adolescents with respiratory illnesses had high rates of anxiety disorders, highlighting the relevance of psychological elements in their care.

• The Spielberger scale shows minor immediate connections between anxiety and HVS, suggesting a link between emotional well-being and physiological symptoms that inform integrated therapy.

• The study uses the AQLQ to measure how anxiety affects respiratory adolescents' quality of life.

Materials and Methods.

A total of 135 boys and girls participants, aged 13 to 17, signed an informed consent form to participate in the research. Boys made up 53.8% of the count (n = 75), while girls made up 46.2% (n = 60). There were three groups of adults. The first group included adults with 34.5 % (n = 45) BA, the second group included adults with SRD (32.3 %) (n = 44), and the third group included adults with pneumonia (33.2 %) (n = 42). The Spielberger-Khanin questionnaire for the diagnosis of phobic anxiety disorders is used. The Spielberger-Khanin test consisted of a total of forty questions, split into two distinct parts: the first portion, consisting of twenty questions, was designed to detect reactive anxiety, while the second part, consisting of twenty questions, was designed to identify personal concerns. The framework of the questionnaire is comprised of two distinct forms, and the points system was used in order to analyze the responses. It is possible to deliver the questionnaire either one at a time or in groups. Adolescents started by marking the reactive anxiety (RT), and then they moved on to the personal anxiety (PT). The presence of RT is indicative of adults experiencing subjective discomfort, anxiety, tension, and autonomic arousal in response to problematic circumstances. Each component that contributes to a high PT index reflects the patient's experience of intense anxiety on a subjective level. Nijmegen Questionnaire was used in order to arrive at a diagnosis of HVS as the primary symptom of SRD. If the total number of points on the Nijmegen questionnaire is more than 23, then the diagnosis of HVS is made with a sensitivity of 91.0% and a specificity of 95.01%. The AQLQ was used in order to measure the life quality of adolescents who were suffering from respiratory disorders and comorbidities. The Likert scale was used to design the questionnaire, which was used to examine the level

of satisfaction that adults between the ages of 13 and 17 had in many aspects of their lives. AQLQ, a validated disease-specific questionnaire, was used to evaluate asthma adults' quality of life. This instrument is a questionnaire that is particular to asthma, and it has 15 questions. It offers an overall summary index and evaluates four areas of health-related quality of life (HRQoL), which are activity limitation, symptoms, emotional function, and environmental exposures over the last two weeks. On a range from 1 (completely restricted) to 7 (not at all limited), the answer choices for each of the 15 questions are based on a Likert scale of seven points. The quality of life score was used as a continuous variable, with higher values indicating no impairment or reduced impairment owing to asthma and lower scores indicating significant impairment as an outcome of the condition.The statistical analysis was carried out with the assistance of the software packages. The variety of statistical methods, such as correlation and regression analysis, is to determine the accuracy of difference between the groups. In addition, determined the degree of difference between the means by carrying out a Student's two-sample t-test and building a confidence interval (CI) with a 95% level of certainty.

Results and Discussion.

In this part, we analyzed the anxiety level of both adolescents (boys and girls) who had in bronchial asthma (BA), somatoform respiratory disorder (SRD) and pneumonia. The anxiety signs in adolescents, both in general and in diverse groups, showed personal and reactive anxiety. Depending on the etiology, the level of reactive and personal anxiety differed considerably. 29(65.9%) adults in the subgroup with SRD had the greatest rate of severe personal anxiety, compared to 18 (40.0%) adults in the subgroup with asthma, and 9 (21.5%) adults in the grouping with pneumonia. Conversely, the subgroup with SRD also had the highest rate of severe reactive anxiety, with 12 (27.3%) adults reporting it. The subgroup with asthma reported slightly lower rates, with 11 (24.4%) adults reporting it, and the subgroup with pneumonia reported the lowest rates, with 2 (4.8%) adults reporting it.

Adults with Bronchial asthma (BA).

BA is a chronic respiratory disorder that affects the adults which is characterized by frequent bouts of wheezing, shortness of breath, chest tightness, and coughing. Environmental variables, such as allergens, pollution, or respiratory illnesses, may often bring on bouts of asthmatic episodes. Managing BA often entails the use of bronchodilators and anti-inflammatory medicines to reduce symptoms and avoid exacerbations. Education on the factors that might set off an asthma attack, and the significance of taking medicines as directed, is vital. Monitoring lung function on a regular basis, making necessary modifications to one's lifestyle and avoiding recognized triggers are all essential components of asthma care for adults. Adults who have BA may have happy lives and keep their respiratory health in excellent condition if their condition is appropriately treated. Figure 2 and table 1 depicts the anxiety of adolescents in BA (boys and girls).

Adults with SRD.

SRD in adolescents is a challenging clinical population to treat. Those who suffer from SRD have bodily symptoms

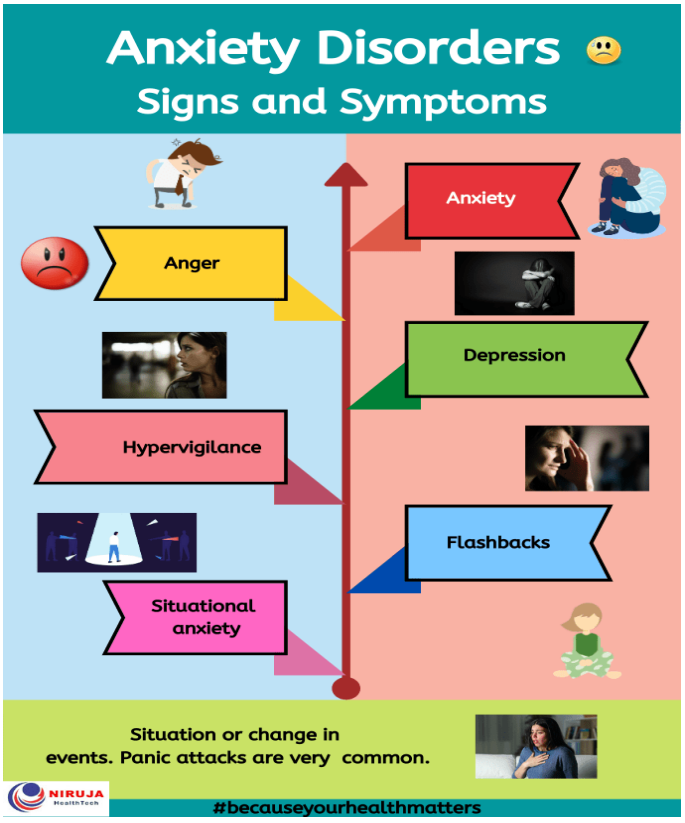

Figure 1. *Symptoms of anxiety. In this image obtained from. [source: https://www.nirujahealthtech.com/wp-content/uploads/2020/04/Anxiety-Disorders-Signs-amp_-Symptoms.png]*

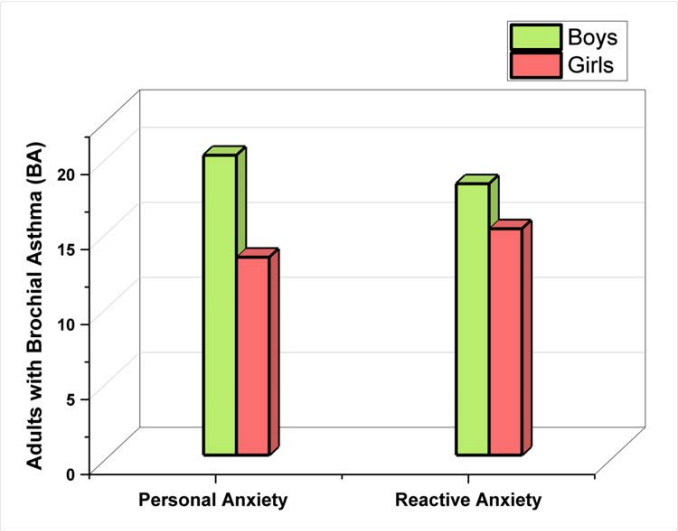

Figure 2. *Adults with BA.*

Table 1. *Anxiety level of adolescents with BA.*

Adults with Bronchial Asthma (BA)		
Anxiety	**Boys**	**Girls**
Personal Anxiety	20	13.2
Reactive Anxiety	18.1	15.1

that doctors have trouble pinpointing to a specific cause. Poor respiratory health is a major effect on the quality of life for these people because of symptoms including shortness of breath,

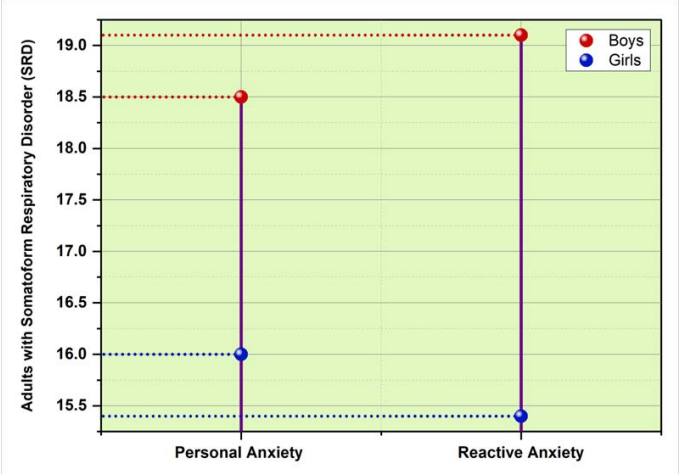

Figure 3. *Adults with SRD.*

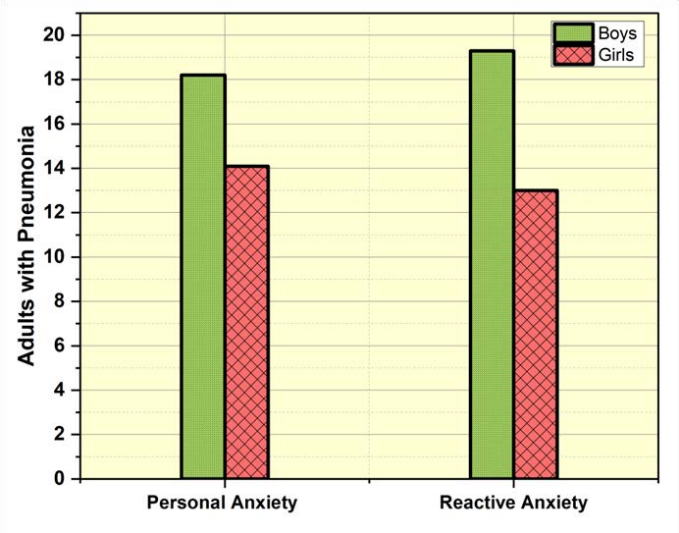

Figure 4. *Adults with pneumonia.*

Table 2. *Anxiety level of adolescents with SRD.*

Adults with Somatoform Respiratory Disorder (SRD)		
Anxiety	**Boys**	**Girls**
Personal Anxiety	18.5	16
Reactive Anxiety	19.1	15.4

Table 3. *Anxiety level of adolescents with pneumonia.*

Adults with Pneumonia		
Anxiety	**Boys**	**Girls**
Personal Anxiety	18.2	14.1
Reactive Anxiety	19.3	13

chest discomfort, and coughing. Treatment for individuals with SRD often includes a team effort, including both psychological therapies and medical assessment to rule out organic sources of symptoms. Commonly utilized treatments for the underlying mental health issues that contribute to SRD include cognitive behavioral therapy and other psychotherapies. They need SRD because their symptoms and anguish are real. Figure 3 and table 2 depicts the anxiety of adolescents in SRD (boys and girls). Effective treatment addresses the disorder's emotional and psychological elements while reassuring and limiting the medical procedures.

Adults with pneumonia.

Adults who have pneumonia may encounter a wide variety of symptoms, including fever, cough, chest discomfort, and trouble breathing. Pneumonia is an illness that affects the lung tissue, and it may be brought on by a number of different pathogens, including bacteria, viruses, and fungi. In cases of bacterial pneumonia, the treatment often consists of the administration of antibiotics, proper rest and fluids are very necessary for recovery. If the condition is severe, hospitalization can be required. Vaccination against certain pathogens, such as the influenza virus and Streptococcus pneumonia, may assist in the prevention of pneumonia in adults, particularly in those who are at a greater risk of developing the condition, such as the elderly and those whose immune systems are not functioning properly. In order to effectively treat pneumonia and minimize the risk of developing complications, prompt diagnosis and medical treatment are of the utmost importance. Figure 4 and table 3 depicts the anxiety of adolescents in pneumonia (boys and girls).

Questionnaire analysis.

As per the questionnaire, the largest percentage of teenagers (15 out of 35) who reported having a serious personal anxiety disorder was in the 13- to 17-year-old age group. The age range of 13 to 15 years included the lowest prevalence of severe personal anxiety (17 out of 45 adults), while the age group of 13 to 15 years old had the lowest frequency (16 out of 46 adults). Simultaneously, the highest proportion of adults experiencing a severe reactive anxiety was between the 12–15 age ranges. The age range of 13 to 15 years old had a somewhat lower frequency of severe reactive anxiety (8 out of 45adults), while the age group of 14 to 16 years old exhibited the least amount of (6 out of 35 adults). Boys were almost three times more likely than girls to have low proportions of both internal and reactive anxiety. Adolescents exhibited extreme levels of reactive and interpersonal anxiety almost twice as often as boys.

Among adults with SRD, teenagers with personal anxiety scored highest on the Spielberger-Khanin scale, a considerably lower score was observed in the adolescents who suffered from asthma. Due to the existence of the condition, which is marked by SRD such as HVS, adolescents who have SRD suffer in increased levels of PT. These two disorders have a complicated link due to the fact that anxiety plays a role in the development of depression. This might be owing to the fact that the pathology has somatic manifestations in the form of HVS. Therefore, ill adolescents diagnosed with SD have a score on the Spielberger-Khanin scale that is 46.2± 9.2, this is much more than the amount of points awarded to the adult asthma and pneumonia diagnosis groups, whose total score was 37.9 ± 8.9. The total number of points accumulated by the adults who suffered from asthma was also noticeably higher than the level attained by the adults who suffered from pneumonia. The adolescents who were diagnosed with asthma had the maximum score on the Spielberger-Khanin scale out of all the adults who suffered from RT. The adults who were diagnosed with SRD had a score that was somewhat

lower, and the adults who were diagnosed with pneumonia had the score that was the lowest. It is anticipated that the group of individuals suffering from asthma will have the maximum score on the RT scale. This is due to the fact that the existence of background anxiety, when coupled with organic lung illness and followed by asthma episodes, produces a considerable rise in the aggravation of the pathology. Similar alterations may be noted in individuals who have SRD, especially during the HVS crisis phase, which is marked by a significant feeling of dyspnea. This stage of the disease is characterized by the most severe symptoms. According to the Spielberger-Khanin scale, compared to the adults with pneumonia group (35.0 ± 6.1) and the adults with SRD group (39.1±9.5), the adults with asthma group had a significantly higher number of points (38.3 ± 9.1). The total number of points obtained from the adults who were diagnosed with SD was likewise noticeably higher than the total obtained from the individuals who were diagnosed with pneumonia.

By applying the AQLQ, it was found that the group of adults suffering from SRD had the lowest score, while the group of ill adults suffering from organic lung disease (including asthma and pneumonia) had much higher scores. Therefore, the total score on the AQLQ scale for the group of adults who had SRD was 48.2 ± 6.8, and this score was substantially lower than the overall score for the group of adults who had asthma, which was 58.1±14.1, and for the group of adults who had pneumonia, whose total score was 58.1 ± 8.9. It is acceptable to suggest that there is a clear correlation between the onset of HVS and the presence and degree of anxiety, given the findings of the study. The hypothesis also suggests that adults with lung diseases, both organic and functional, may experience deterioration in quality of life due to the underlying illness and the development of primary and secondary anxiety symptoms that are linked to the pathological factors. This is because there is a close relationship between the underlying disease and both types of anxiety.

Nijmegen questionnaire was used on a sample of 135 adolescents who were experiencing respiratory problems, twenty-eight people, or 19.8 percent, were found to have HVS. Its fundamental composition was comprised of 19 individuals with SRD (which accounted for 70% of the total), 6 adults with asthma (which accounted for 21%), and 4 adults with pneumonia (which accounted for 14%). The presence of both organic illness and HVS, along with other respiratory dysfunctional syndromes, may hasten the course of organic disease and make it more difficult to accurately assess the effectiveness of therapy. This confluence of organic diseases and respiratory dysfunction is something that has been seen repeatedly in a variety of research investigations including adult participants. Because the existence of HVS or other dysfunctional illnesses may provide the erroneous impression that therapy is unsuccessful, it is vital to detect and take into consideration this co-occurrence when treating adult patients who have such problems. Adolescents diagnosed with asthma had the highest score on the Nijmegen questionnaire for HVS. Adults diagnosed with pneumonia had somewhat lower scores, while adults diagnosed with SRD had the lowest scores. This variation in expression is most likely attributable to the premorbid psychological and emotional state, and the autonomic dysregulation, that is present in individuals who have organic lung disorders. These factors, which arise during the period of organic disease, cause the autonomic regulation of the respiratory system to decompensate. A more severe case of dyspnea may be the result of a mix of factors, including pathophysiological changes brought on by the underlying disease and mental stress, the severity of which may worsen as the illness progresses. As a direct consequence, the severity of the respiratory pain has a substantial influence on the function of the heart and lungs.

Discussion.

Anxiety is a psychological trait that describes a person's heightened propensity to experience feelings of unease in response to a wide range of everyday events and circumstances. Personal anxiety (PT) and reactive anxiety (RT) are the two main forms of anxiety. The individual anxiousness is a state that continues to exist. It is the propensity of a person to see a diverse range of circumstances as potentially dangerous and react to these kinds of events with feelings of anxiety. According to the research, it is clear that a sizeable percentage of individuals who have an organic respiratory illnesses or functional respiratory disorders also suffer from noticeable anxiety disorders. These disorders might take the shape of either personal or reactive anxiety. These anxiety disorders are linked to a greater risk of developing depression and the bodily symptoms of depression, which may eventually have an effect on the evolution of the illness and extend the amount of time needed for therapy. Anxiety is a significant role in identifying the disease in SRD's hierarchical structure. However, anxiety is a concomitant pathology in the structure of organic disorders as a response to the progression of the actual illness, notably in the case of reactive anxiety. On the other hand, adults with organic lung disease and had a personal anxiety prior to the development of the disease, leading to functional somatic disorders like HVS occurring simultaneously. The high prevalence of severe personal and reactive anxiety in adults with SRD, compared to other pulmonary pathologies, highlights its key role in premorbidity, psychosomatic spectrum diseases, and HVS clinical manifestations. Adults with pneumonia have the lowest incidence of severe anxiety due to fewer functional respiratory disorders, which contribute less to clinical symptoms. On the other hand, adults who have asthma have a greater frequency of psychosomatic spectrum illnesses, which contributes to a development of their disease and make the process of rehabilitation more difficult. Notably, severe PT and RT are approximately twice as frequent in females as they are in boys, which suggest that gender is a possible risk factor for the development of anxiety disorders and associated psychosomatic diseases. These comprise a wide range of health concerns, including HVS within the context of SRD as well as organic lung illnesses. In addition, according to the results of the AQLQ, persons who have SRD have the lowest levels of life satisfaction compared to those who have other lung diseases. Adults with SRD have lower life quality satisfaction than adults with organic respiratory diseases due to anxiety and depressive disorders, which are common symptoms of the disease. The fundamental relationship between adults' life quality satisfaction and psycho-emotional condition, rather than biological sickness, warrants additional investigation.

Conclusion.

In this study, we addressed the incidence of anxiety disorders in adolescents with respiratory illnesses treated in a pulmonology environment, as well as their influence on the development of disease and quality of life. According to our research, teenage adults who suffered from SRD, BA, and pneumonia had varied degrees of anxiety. Notably, adolescents with SRD demonstrated a slightly greater frequency of anxiety compared to those with BA and pneumonia. We found that the relationships between anxiety, hyperventilation syndrome, and overall quality of life were not strong. In addition, anxious adolescents demonstrated a greater incidence of traumatic experiences, chronic pain, and social problems, which highlights the complicated interaction that exists between anxiety and the organic diseases or functional disorders that adolescent's experience. Among adolescents 5.1% reported severe trait anxiety and 19.3% severe condition anxiety. To precisely determine the impact of early therapy for anxiety and depression on the onset and outcome of respiratory problems, they would need to consult relevant experts in the field. It is essential, clinical studies that specifically examine the relationship between mental health interventions such as treating anxiety and depression and the management of respiratory diseases in adolescents. This research highlights how important it is to recognize and manage anxiety in adolescents who have respiratory disorders in order to enhance their overall well-being and treatment results. The adult's psycho-emotional condition must be taken into account in order to optimize the management of pulmonary diseases in adults, in addition to the primary processes of illness development. Early detection of emotional disorders, especially anxiety and depression improves treatment results, accelerates the course of the illness and social adaptation, and reduces the risk of relapses, especially in adult with asthma.

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