# GEORGIAN MEDICAL NEWS

ISSN 1512-0112

NO 12 (345) Декабрь 2023

ТБИЛИСИ - NEW YORK



# ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии საქართველოს სამედიცინო სიახლენი

# **GEORGIAN MEDICAL NEWS**

Monthly Georgia-US joint scientific journal published both in electronic and paper formats of the Agency of Medical Information of the Georgian Association of Business Press. Published since 1994. Distributed in NIS, EU and USA.

**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 ᲡᲐᲧᲣᲠᲐᲦᲦᲔᲑᲝᲦ!

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 პოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენოპა არ უნდა აღემატეპოდეს 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.

#### GEORGIAN MEDICAL NEWS No 12 (345) 2023

Содержание: Yaomin Luo, Xin Chen, Enhao Hu, Lingling Wang, Yuxuan Yang, Xin Jiang, Kaiyuan Zheng, Li Wang, Jun Li, Yanlin Xu, Yinxu Wang, Yulei Xie. TRANSCRIPTOME ANALYSIS REVEALED THE MOLECULAR SIGNATURES OF CISPLATIN-FLUOROURACIL COMBINED Abramidze Tamar, Bochorishvili Ekaterine, Melikidze Natela, Dolidze Nana, Chikhelidze Natia, Chitadze Nazibrola, Getia Vladimer, Gotua Maia, Gamkrelidze Amiran. Ibtisam T. Al-Jureisy, Rayan S. Hamed, Ghada A. Taqa. THE BIO-STIMULATORY EFFECT OF ADVANCE PLATELET RICH FIBRIN COMBINED WITH LASER ON DENTAL IMPLANT Amandeep Singh, Navnath Sathe, Kanchan Rani, Saumya Das, Devanshu J. Patel, Renuka Jyothi R. IMPACT OF MOTHER'S HYPOTHYROIDISM ON FETAL DEVELOPMENT AND OUTCOMES: A SYSTEMATIC REVIEW.......32-36 Sevil Karagül, Sibel Kibar, Saime Ay, Deniz Evcik, Süreyya Ergin. THE EFFECT OF A 6-WEEK BALANCE EXERCISE PROGRAM ON BALANCE PARAMETERS IN FRAILTY SYNDROME: A Zainab Suleiman Erzaiq, Fahmi S. Ameen. COMPARISON BETWEEN PCR STUDY AND ELISA STUDY AMONG PATIENTS WITH DIARRHEA......43-47 Igor Morar, Oleksandr Ivashchuk, Ivan Hushul, Volodymyr Bodiaka, Alona Antoniv, Inna Nykolaichuk. THE INFLUENCE OF THE ONCOLOGICAL PROCESS ON THE MECHANICAL STRENGTH OF THE POSTOPERATIVE SCAR OF Lyazzat T. Yeraliyeva, Assiya M. Issayeva, Malik M. Adenov. COMPARATIVE ANALYSIS OF MORTALITY FROM TUBERCULOSIS AMONG COUNTRIES OF FORMER SOVIET UNION ......52-57 Rana R. Khalil, Hayder A.L. Mossa, Mufeda A. Jwad. MITOFUSIN 1 AS A MARKER FOR EMBRYO QUALITY AND DEVELOPMENT IN RELEVANCE TO ICSI OUTCOME IN INFERTILE Geetika M. Patel, Nayana Borah, Bhupendra Kumar, Ritika Rai, V. K. Singh, Chandana Maji. MEDITERRANEAN DIET AND ITS IMPACT ON THE ILLNESS CHARACTERISTIC OF YOUTH WITH IRRITABLE BOWEL Ketevan Arabidze, Irakli Gogokhia, Khatuna Sokhadze, Nana Kintsurashvili, Mzia Tsiklauri, Tamar Gogichaishvili, Iamze Tabordze. THE EVALUATION OF THE RISK OF COMPLICATIONS DURING MULTIMODAL AND OPIOID ANESTHESIA IN BARIATRIC Hadeer Sh Ibrahim, Raghad A Al-Askarv, MARGINAL FITNESS OF BIOACTIVE BULKFILL RESTORATIONS TO GINGIVAL ENAMEL OF CLASS II CAVITIES: AN IN VITRO Lobashova O.I, Nasibullin B.A, Baiazitov D.M, Kashchenko O.A, Koshelnyk O.L, Tregub T.V, Kovalchuk L.Y, Chekhovska G.S, Kachailo I.A, Gargin V.V. PECULIARITIES OF THE ORGANS OF THE REPRODUCTIVE SYSTEM OF WOMEN OF REPRODUCTIVE AGE WITH LIVER Victoriia Ivano. Omar B. Badran, Waleed G. Ahmad. Valbona Ferizi, Lulëjeta Ferizi Shabani, Merita Krasniqi Selimi, Venera Bimbashi, Merita Kotori, Shefqet Mrasori. Devanshu J. Patel, Asha.K, Amandeep Singh, Sakshi Vats, Prerana Gupta, Monika. A LONGITUDINAL STUDY OF CHILDHOOD SEPARATION ANXIETY DISORDER AND ITS IMPLICATIONS FOR ADOLESCENT PSYCHOPATHOLOGY......105-111 Kachanov Dmitrii A, Artsygov Murad M, Omarov Magomed M, Kretova Veronika E, Zhur Daniil V, Chermoew Magomed M, Yakhyaev Adam I, Mazhidov Arbi S, Asuev Zaurbek M, Bataev Ahmed R, Khasuev Turpal-Ali B, Rasulov Murad N. COMPARATIVE ANALYSIS OF THE EFFECTS OF SOME HEPATOPROTECTORS IN EXPERIMENTALLY INDUCED MAFLD IN Nada J Alwan, Raghad A Al-Askary.

EVALUATION OF INTERFACIAL ADAPTATION BETWEEN VARIOUS TYPES OF FIBER POSTS AND RESIN CEMENTS USING

MICRO CT: AN IN VITRO COMPARATIVE STUDY
Anish Prabhakar, Vinod Mansiram Kapse, Geetika M. Patel, Upendra Sharma. U.S, Amandeep Singh, Anil Kumar. EMERGING NATIONS' LEARNING SYSTEMS AND THE COVID-19 PANDEMIC: AN ANALYSIS
Tereza Azatyan. THE STUDY OF SPATIAL REPRESENTATIONS OF CHILDREN WITH DIFFERENT DEGREES OF INTERHEMISPHERIC INTERACTION
Sefineh Fenta Feleke, Anteneh Mengsit, Anteneh Kassa, Melsew Dagne, Tiruayehu Getinet, Natnael Kebede, Misganaw Guade, Mulat Awoke, Genanew Mulugeta, Zeru Seyoum, Natnael Amare. DETERMINANTS OF PRETERM BIRTH AMONG MOTHERS WHO GAVE BIRTH AT A REFERRAL HOSPITAL, NORTHWEST ETHIOPIA: UNMATCHED CASE- CONTROL STUDY
Himanshi Khatri, Rajeev Pathak, Ranjeet Yadav, Komal Patel, Renuka Jyothi. R, Amandeep Singh. DENTAL CAVITIES IN PEOPLE WITH TYPE 2 DIABETES MELLITUS: AN ANALYSIS OF RISK INDICATORS140-145
Mukaddes Pala. ExerciseandMicroRNAs
Zurab Alkhanishvili, Ketevan Gogilashvili, Sopio Samkharadze, Landa Lursmanashvili, Nino Gvasalia, Lika Gogilashvili. NURSES' AWARENESS AND ATTITUDES TOWARDS INFLUENZA VACCINATION: A STUDY IN GEORGIA154-159
Aveen L. Juma, Ammar L. Hussein, Israa H. Saadoon. THE ROLE OF COENZYME COQ10 AND VITAMIN E IN PATIENTS WITH BETA-THALASSEMIA MAJOR IN BAGHDAD CITY POPULATION
Merve Karli, Basri Cakiroglu. ADRENAL METASTASIS OF BILATERAL RENAL CELL CARCINOMA: A CASE PRESENTATION 12 YEARS AFTER DIAGNOSIS
Manish Kumar Gupta, Shruti Jain, Priyanka Chandani, Devanshu J. Patel, Asha K, Bhupendra Kumar. ANXIETY SYNDROMES IN ADOLESCENTS WITH OPERATIONAL RESPIRATORY CONDITIONS: A PROSPECTIVE STUDY166-171
Mordanov O.S, Khabadze Z.S, Meremkulov R.A, Saeidyan S, Golovina V, Kozlova Z.V, Fokina S.A, Kostinskaya M.V, Eliseeva T.A. EFFECT OF SURFACE TREATMENT PROTOCOLS OF ZIRCONIUM DIOXIDE MULTILAYER RESTORATIONS ON FUNCTIONAL PROPERTIES OF THE HUMAN ORAL MUCOSA STROMAL CELLS
Nandini Mannadath, Jayan. C. EFFECT OF BIOPSYCHOSOCIAL INTERVENTION ON BEAUTY SATISFACTION AFTER STAGED SURGERY AMONG ADOLESCENTS WITH ORAL FACIAL CLEFTS
Bhupendra Kumar, Sonia Tanwar, Shilpa Reddy Ganta, Kumud Saxena, Komal Patel, Asha K. INVESTIGATING THE EFFECT OF NICOTINE FROM CIGARETTES ON THE GROWTH OF ABDOMINAL AORTIC ANEURYSMS: REVIEW
Musheghyan G.Kh, Gabrielyan I.G, Poghosyan M.V, Arajyan G.M. Sarkissian J.S. SYNAPTIC PROCESSES IN PERIAQUEDUCTAL GRAY UNDER ACTIVATION OF LOCUS COERULEUS IN A ROTENONE MODEL OF PARKINSON'S DISEASE
Bhupendra Kumar, Barkha Saxena, Prerana Gupta, Raman Batra, Devanshu J. Patel, Kavina Ganapathy. EFFECTS OF SOCIAL ESTRANGEMENT ON YOUNG PEOPLE'S MATURATION: A REVIEW OF THE RESEARCH196-202
Mordanov O.S, Khabadze Z.S, Meremkulov R.A, Mordanova A.V, Saeidyan S, Golovina V, Kozlova Z.V, Fokina S.A, Kostinskaya M.V, Eliseeva T.A. COMPARATIVE SPECTROPHOTOMETRY ANALYSIS OF ZIRCONIUM DIOXIDE WITH THE CUBIC AND TETRAGONAL PHASE AFTER ARTIFICIAL AGING
Mohammed Abidullah, Sarepally Godvine, Swetcha Seethamsetty, Geetika Gorrepati, Pradeep Koppolu, Valishetty Anuhya, Sana vakeel. EFFECT OF GOAL-ORIENTEDPATIENT CENTRIC HEALTH CARE PROFESSIONAL INTERVENTION ON BLOOD GLUCOSE CONTROL INTYPE 2 DIABETES MELLITUSANDLEVEL OF PATIENT SATISFACTION

# A LONGITUDINAL STUDY OF CHILDHOOD SEPARATION ANXIETY DISORDER AND ITS IMPLICATIONS FOR ADOLESCENT PSYCHOPATHOLOGY

#### Devanshu J. Patel<sup>1</sup>, Asha.K<sup>2</sup>, Amandeep Singh<sup>3</sup>, Sakshi Vats<sup>4</sup>, Prerana Gupta<sup>5</sup>, Monika<sup>6</sup>.

<sup>1</sup>Associate Professor, Department of Pharmacology, Parul University, PO Limda, Tal. Waghodia, District Vadodara, Gujarat, India.

<sup>2</sup>Assistant Professor, Department of Life Sciences, School of Sciences, JAIN (Deemed-to-be University), Karnataka, India.

<sup>3</sup>Professor, School of Pharmacy & Research, Dev Bhoomi Uttarakhand University, Dehradun, India.

<sup>4</sup>Assistant Professor, Department of Allied Healthcare and Sciences, Vivekananda Global University, Jaipur, India.

<sup>5</sup>Professor, Department of psychiatry, TMMC&RC, Teerthanker Mahaveer University, Moradabad, Uttar Pradesh, India.

<sup>6</sup>Associate Professor, Department of Pharmacy, Noida Institute of Engineering and Technology (Pharmacy Institute), 19 Knowledge Park 2 Greater Noida, Uttar Pradesh, India.

#### Abstract.

**Objective:** A prevalent psychiatric disorder called Child Separation Anxiety Disorder (SAD) is characterized by extreme discomfort when a child gets separated from their primary carers. While SAD's quick consequences on kids are well-researched, its long-term implications for teenage psychopathology have received less attention. This longitudinal study aims to ascertain the connection between child SAD and future psychopathological consequences in adolescents.

**Method:** 500 adolescents were chosen as part of the adolescent depression project, and at the age of 17, we retrospectively evaluated past and present mental disorders. At ages 25 and 32, they conducted diagnostic evaluations of these people during adolescence while they continued to monitor them. Based on childhood/adolescent assessments, the participants were split into different groups: SAD (n = 34), other forms of Anxiety (n = 76), a control group with combined psychiatric conditions (n = 205), and mentally sound control group (n = 185).

**Result:** Statistics were evaluated by hierarchical multiple logistic regression after various illnesses and pertinent demographic variables were considered. It implies that SAD has a high risk (80.2%) of being a significant risk indicator for the emergence of mental illnesses in young adults.

**Conclusion:** This study highlights the importance of early SAD management and therapy and the possible advantages of treating SAD in lowering the likelihood of developing other mental health problems in adolescence. It also emphasizes the value of continuous studies to comprehend these connections and enhance the effects on SAD sufferers' psychological wellbeing.

Key words. Separation Anxiety Disorder (SAD), child, psychological well-being, adolescent, management, and therapy.

#### Introduction.

A persevering performance of circumstances defines a prevalent and crippling mental health condition called Separation Anxiety Disorder (SAD). SAD is one of the most frequent mental illnesses in adult populations. However, unlike many other anxiety disorders, its typical beginning age is early adolescence, except for particular phobias. The most common anxiety disorder at this developmental stage is SAD [1]. The film assumes that early adolescence is when SAD treatments are most likely efficient because proactive and reactive initiatives are most likely to be beneficial around the commencement of the condition. On the other hand, only 40-65% of young people with SAD have been proven to benefit from cognitive-behavioral therapy (CBT). Among the mental illnesses with the lowest reactivity is SAD in younger populations, according to current front-line therapies [2]. Alternative explanations of origin and therapy have arisen in new decades because of the typically moderate rates of SAD treatment and recovery in the setting of psychological therapy. These more recent theories are mostly predicated on SAD-specific deficiencies in Positive emotions and education through rewards, as opposed to those seen in other anxiety disorders [3]. The study aims to propose and critically assess an evolutionary theory that focuses on mechanisms to account for the appearance and effects of social an hedonia in a significant group of SAD patients [4]. The context, applicability, and possibility of discovered processes informing action SAD are among the most common mental diseases, although, unlike many other anxiety disorders, they often manifest in childhood [5]. A history of adverse childhood events is a significant risk factor for depression, including early suffering linked to around one-third of all mental illnesses in individuals. The reasons behind this elevated risk may be revealed by studying the neurodevelopmental alterations brought on by trauma [6]. They work together to form an effective brain network that aids in emotion control and danger perception. When performing a feelings cognition activity, personal variations of youths subjected to various types of adversity show. This network's operational connection is linked to Anxiety, and this system has been demonstrated to change physically in people exposed to struggles in childhood [7]. Because of the circuitry's function in threat discrimination, traumatic experiences, and events that occur in Early developmental experiences linked to elevated risk, this observing violent acts may have a more significant influence on the connection between risky circumstances and this network's functional connections during emotions processing has not been explored in previous investigations if the relationship during a passive behavioral test is related to exposure to child maltreatment [8]. They also investigate whether differences in task-related functional connectivity are linked to psychological disorders. These adolescents are known to struggle with particularly managing stressful situations and unfavorable or possibly dangerous details, such as negative social evaluations, which results in worse psychological health and distressingly high levels of interpersonal response.

Children with Anxiety may exhibit increased emotional

reactivity due to brain hypersensitivity to harmful stimuli, including insensitive gestures and social criticism. After receiving anxiety medication, children with Anxiety may still have more fantastic emotions due to brain sensitivity to adverse events, including detrimental looks and social criticism [9]. In particular, the presence of clinical Anxiety in childhood is strongly indicative of anxiety recurrence and the beginning of depression throughout adolescence. The present research aimed to determine which Adolescents' perceptions of their behavior, especially their care, were predicted by brain areas in the affective-salience and emotion-regulation neural networks. Figure 1 represents neglected signs of Anxiety. Twenty years later, they examined whether the neural activity in these brain areas regulated Anxiety in young people who had previously had anxiety disorders. The relationships are seen two years later between teenage Anxiety depressive symptoms and parental warmth. Crucially, every assessment included in this study was carried out following the teens' completion of therapy for anxiety [10].

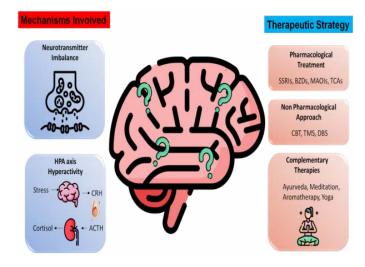


Figure 1. Neglected signs of Anxiety. [Source:https://www.google. com/url?sa=i&url=https%3A%2F%2Fwww.sciencedirect.com% 2Fscience%2Farticle%2Fpii%2FS0753332220309690&psig=A OvVaw2D26Uqi28RGH91\_aMJfy1t&ust=1701236197063000&s ource=images&cd=vfe&opi=89978449&ved=2ahUKEwjjtPTq\_ OWCAxW9bmwGHQLPAMsQjhx6BAgAEBc].

The study [11] described Anxiety as risky when behavioral inhibition (BI) was present. Estimates of the degree of this relationship still differ significantly. Furthermore, while BI is a reliable indicator of SAD, it is unclear how BI relates to additional types of stress. Determining the association between BI with anxiety and evaluating it across various anxiety disorders was the objective of that present study. The author [12] suggested that children and adolescents who suffer from anxiety disorders incur high personal and social expenses. The past 20 years have seen a major growth in the development of psychological and medication treatments for anxieties in children and adolescents. Innovative and fascinating research was still being conducted in the sector, which works for tremendous success and efficiency, as well as the availability of solutions. The research [13] studied differential relationships between feeling anxious and discomfort endurance with Anxiety and depression indicators while accounting for the link between them. Distress endurance and anxiety sensitivity may serve as markers for internalizing illnesses. The current research explored the relationships between absorbing psychopathology and contemporaneous distress tolerance and anxiety sensitivity. The paper [14] provided that cognitive behavioral treatment (CBT) was beneficial for people with anxiety disorders. The effects of CBT may be diminished by nonadherence to treatment. The research investigated the relationships between adolescent adherence to treatment and treatment outcomes by looking at four baseline variables as predictors of youth adherence to treatment. Being more comorbid, transferring diseases, and living with both parents in adolescence were the most reliable indicators of higher commitment. The study [15] explained an increasing body of studies has indicated that home adaptability is involved in the development, maintenance, and management of childhood anxiety. More data are required to direct theoretical advancement and use in medicine in the area. There have never been any test-retest results provided, nor have the causes behind residential levels been verified. The study's goals were to provide factorial structure confirmation data and initial test-retest stability information for the majority often used indicator of parental help for anxious children. The study [16] assesses the impact of different associations of anxiety symptoms and cognitive disability on the prevalence estimation and clinical significance of Anxiety in autism spectrum disorder ASD is linked to more regular and Variable clinical anxiety steps can differ from the anxiety disorders listed in the DSM and resemble them. Conventional parent report anxiety assessments, especially in children with intellectual disabilities, exhibit a reduced ability to detect anxiety disorders in ASD. The paper [17] provided emotional processing theory criteria to anticipate post-CBT anxiety severity, coping mechanisms, and overall function. The current research looked at 72 young people who had been given solo or family CBT and had been diagnosed with an anxiety problem. Subjective Units of Distress, Withinsession routine, between-session routine, and initial fear activation (peak anxiety) were the three exposure adaptation parameters assessed and examined as outcome predictors. The research [18] focused on the investigations that have looked at whether symptoms of anxiety disorders are prospectively linked to disordered eating (EDs), even though longitudinal connections between EDs and anxiety disorders are widely known. A molecular knowledge of psychological development may be reached by identifying these longitudinal correlations, which can also help determine links between eating and anxiety disorders. The study [19] examined the long-term functional and clinical implications of preschool-aged children's irritability is remaining unclear. In an extensive local sample, this research looked at long-term relationships between infancy excitability, mental illnesses, and functional impairment measured in adolescence. The study [20] investigated when coronavirusinduced alterations in the mother's mental state impacted the changes in adolescent psychopathology. The findings show that under community-level stresses like COVID-19, teenage mental health is closely correlated with the mother's mental

health. The current likelihood of growth in signs of psychopathy is increased by young adult disorders and their family's finances [21].

#### Significance of the research:

Health initiatives to focus on and prevent mental health issues in adolescents can be developed using the outcomes of research. Improved diagnosis accuracy for child separation anxiety disorders can result from this investigation. The work could improve SAD diagnostic criteria and evaluation methods by providing a greater correlation between child SAD and adult psychopathology that can assist psychiatrists detect SAD symptoms promptly. It can identify a correlation between childhood SAD and adolescent psychopathology that can determine preventative techniques. Determining relevant hazards in childhood facilitates focused treatments that can reduce or prevent the occurrence of greater psychopathological issues in adolescence.

#### Materials and Methods.

#### Individuals and the process:

As previously mentioned, they were randomly chosen from nine high schools representing both urban and rural areas four intervals were used to evaluate the group. Moment 1 (M1) occurred during youngsters (M period = 15.2), followed by Moment 2 (M2) about a day soon on (M period = 16.3), Moment 3 at the typical ages 25 (M period = 23.5), and 32 (M age = 35.1) for Moment 4 (T4) [22]. Subjects were asked to report both current instances of mental illnesses and any conditions that had taken place between the starting period for present collecting data and the time point for prior data gathering. There were 1,502 and 1,502 individuals in the samples at M1 and M2, respectively. M3 data collection involved inviting youngsters (n = 341) who had a history of MDD disorders (n = 341)330) and a random sample of individuals (n = 346) who had a lack of mental illness to provide data. They were requested to take part in the M4 data-gathering process 185 (80.2%) of the 205 individuals in the M3 group finished the M4 test [23]. It is significant to highlight that the sample employed in this study is overrepresented in terms of individuals having had mental disorders as children due to design.

#### Assessment Discussion:

A combination of the epidemiology (K-SADS-E) and current event (K-SADS-P) versions of Respondents were given the Schedule for Schizophrenia and Emotional Disorders for School-Age Children (K-SADS) at M1 and M2 after their assessments [24]. Additional items are added to the K-SADS diagnoses that could be made. It has been established that the psychometric qualities of the KSADS in both forms are sufficient. The K-SADS items' coefficient alpha ( $\alpha$ =80) was acceptable. At M3, the interview was expanded to evaluate DSM-III-R and DSM-IV37 diseases [25]. The Individuals had interviews at M2, M3, and M4 using across research. The duration Follow-Up Evaluation, which had been modified to look for new or continuing mental instances, M3 and M4 interviews, were done over the device, often yielding findings comparable to physical interviews.(For example, at M1 = .87, at M2 = 2.00, at M3 = .89, and at M4 = .85 for bipolar problems; at M1 = .55, at M2 = .87, at M3, and at M4, for panic problems) [26].

#### Diagnosed as SAD:

Diagnosis information was graded using DSM-III-R standards at M1 and M2. The DSM-IV SAD diagnosis was developed using the available data, and initial analysis revealed no distinctions in the outcomes of concern between the DSM-IV diagnosis and the DSM-III-R categories [27]. Instead of two weeks, the DSM-IV SAD diagnosis needs four weeks of intense symptoms to maintain the data's temporal accuracy and boost the study's reliability.

#### **Classes for Diagnostics:**

60 subjects (3.5% of the sample) had fully complied with SAD criteria at M1. The mean indication count for M1 subjects who met all SAD criteria was 3.3 (DS = 2.3; Range = 3-8). In terms of months, the age at which the start occurred generally was 84.5 (DS = 46.4; range: 27-151), and in terms of weeks, the average episode lasted 145.6 (DS = 134.5; range: 4-310). The final group of interest (M4) consisted of every participant who gave a diagnostic interview during the M4 assessment (m = 500) since we were interested in SAD's ability to predict pathology up to age 30. 42 (5.1%) of the 816 M4 individuals satisfied all the DSM-3- SAD standards at the M1 assessment [28]. Prospective psychotic was defined as the overall occurrence (initial occurrence or recurrence of a condition) from age 25 to 32 because we were interested in the emergence of fresh disease cases in adolescence. As a result, we were able to identify which mental illness. Using the original M1 and M2 diagnostic data, the age at which each disorder first manifested itself was determined for each individual who had been treated around the age of 17 all diagnoses made before the age of 17 were determined using the M1, M2, and M3 information that was published backward throughout that period. Using the M3 and M4 diagnostic data as a foundation, the disorder(s) that all respondents had encountered between the ages of 25 and 32 were identified [29]. While there may be a projected relationship between SAD and eventual mental diseases, it is vital to remember the determination of all mental problems that manifested throughout the research.

To confirm that we were evaluating newly diagnosed cases from the 19th celebration ahead, Subjects who were 17 years old and a recent instance of the relevant illness occurred not included in related studies. The modified sample under study was contingent upon the pertinent dependent variable [30]. 500 individuals (18%) were excluded due to any illness concerning substance misuse, Anxiety, despair, and fear.

The M4 SAD analysis team (n = 34; people completed all five evaluations) and the M1 respondents (n = 25; those that skipped all three assessments) having a depression classification were unable to keep up with M1 and M4 were compared demographically, and M1 diagnostically using decrease evaluations. Regarding M1 statistics, key descriptive groupings at M1 features like The quantity, gender, and period signs of SAD, Between the two groups, no distinct differences were identified (all p's >.04. Individuals with SAD had a completion rate of 80.2% from M1 to M4, which did not vary significantly from the total success rate of the trial.

The DG of attention (the group followed from M1 to M4) consists of 45 patients in the following studies. Based on the diagnosis record at M1, three more transverse groups were determined for comparison's sake:1) A psychopathy PC comprised of every individual who fulfilled the complete diagnostic requirements [31] for any condition other than distress (m = 76); an anxiety disorder group (ANX) comprising Every individual that satisfied the standards for a mental illness beyond depression (n = 34); consisting of everyone who never fulfilled any disorder's diagnostic requirements by the period of 25 (n = 185). For a summary of the particular PC DSM and ANX diagnoses, consider Table 1.

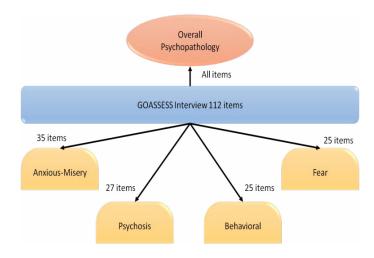
**Table 1.** Dissection of psychological control group and diagnosis group for anxiety disorders.

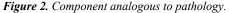
Group	N (%)	Disorder	
-	81	Adjustment disorder	
Brief psychotic disorder	1	Psychotic disorder	
Schizophrenia	1		
Somatization disorder	1		
Personality disorder	11		
Disruptive disorder	68		
Substance abuse/dependence	153	Disorders	
MD	211		
disorders	230	Affective disorder	
	32	Post-traumatic disorder of stress	
	4	Disorder of Obsessive- Compulsive	
	12	Disorder of Overanxious	
Lack of agoraphobia in Panic disorder	9	Anxiety	
Combined Agoraphobia with Anxiety	7		
-	15	fear	
Simple/Specific phobia	22		
Social phobia	19		
Agoraphobia	3		
	41	Phobia	
Disabilities	88	Anxiety disabilities	

The various diagnostic groups' M1 demographics- age, the proportion of White people, the proportion of women, the ratio of people who live with two biological parents, and the balance of people with college degrees-were examined. With a few exceptions, the groups were comparable across all categories: There were far more females in each of the Three categories for diagnosis than in the NMI group [32] Additionally, more females were in the SAD and ANX categories than in the PC group. Compared to the three diagnostic groups, a notably higher percentage of people lived at the M1 with their mother and father in the NMI unit. Evaluation. Although grouping equivalency on participant sex and M1 home structure did not exist, these factors were introduced in later models, and the main effect of M1 home structure was not statistically significant. A forward-step strategy was used to evaluate the group by future psychopathology, and the group by demography associations for every phase were inconsequential.

#### **Analysis Method:**

The population being substantially correlated in a social setting was considered in the subsequent analyses. Group variations in the overall incidence rates of mental illnesses in the 25-32 age range specifically, those individuals who at age 25 did not have a current episode of a particular condition. They were evaluated with the use of multiple logistic linear regressions. The first block included demographic data, diagnostic status, three anticipated differences between the three comparison groups and the SAD category, and the four binary clinical factors that, if prevalent around the age of 25, indicate the presence of drug, panic, Anxiety, or depressive disorders [33]. The second block tested relationships among group status and demographics. Figure 2 shows the component analogous to pathology to determine. An upstream incremental entry strategy was used for the following block's compulsive input given that the significant value of the score data for each relationship phrases contributed to the model.





[Source:https://www.researchgate.net/figure/Bifactor-model-of-psychopathology-reveals-common-and-divergent-dimensions-of\_fig1\_319904671].

#### Results.

#### Prospective Psychology Depending on Clinical Category:

The incidence of mental illnesses from 25 to 32 years of age as a function of diagnostic status up to age 24 is presented in Table 2. To contrast the three control groups with the SAD category, the following three anticipated contrasts were specified: SAD in comparisons with ANX, PC, and NMI. Figure 3 shows the outcomes for Adolescent adults' diagnostic probability.

Table 2. Adolescent adults' diagnostic probability.

Period	Younger Diagnosis Team				
frequency 25-32	NMI (%)	SAD (%)	ANX (%)	PC (%)	
Adolescent	56.3	72.1	82.3	72.1	
Anxiety	5.6	19	25.2	22.2	
Panic	3.2	26.0	12.1	4.6	
Depression	31.0	72.1	60.3	48.2	
Substance	23.0	25.3	35.2	35.3	

Category	Adjusted OR (95% CI)				
Duration of quantity: 17–32	PC vs SAD	NMI vs SAD	SAD vs ANX		
disease	1.16	2.23	0.47		
Fear	1.88	2.62	2.00		
afraid	5.87	4.76	8.79		
sadness	2.91	3.12	3.09		
material	0.53	0.79	1.19		

Table 3. Chance ratio adjustments for the teenage diagnosing category.

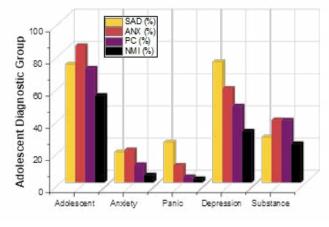


Figure 3. Adolescent adults' diagnostic probability.

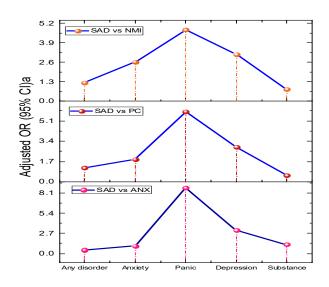


Figure 4. Outcomes for Chance ratio adjustments for the Teenage diagnosing category.

Once individual sex, M1 family structure (block 1), and pathology at age 24 have been adjusted, CIs, ORs, and impact magnitudes for the linear analyses' particular gender differences are shown in Table 3 and figure 4. The estimated effects used for the adjusted models show that group membership carries additional risk beyond that contributed by M1 social variables and coexisting psychosis until age 24 [34]. Individuals having an assessment of SAD have a higher risk of later constructing a panic illness in contrast to the other three organizations after adjusting for characteristics and co-occurring pathology before the age of 17. People with SAD diagnosis had a higher risk of developing depression than those in the PC and NMI categories.

#### Economic T1 Factors' Implications on Later Psychology:

The primary impact of respondent sex remained a significant predictor of psychosis between 25 and 32, even after controlling for the hierarchical logistic regression methods' diagnosis grouping level. The probability of experiencing a panic attack depressive episode (OR = 2.25, 90% CI = 1.81-3.34) in the future was higher in females. On the other hand, having a female gender decreased the risk of early drug use problems between 25 and 32 (OR = 2.16, 95% CI = 1.54-3.03). Gender and M1 SAD diagnostic interaction terms were not essential.

The duration of a SAD episode or the age at which the condition first manifested itself did not significantly correlate with any of the reliant factors. Only a significant correlation (r =.32, p <.06) was seen between the severity of SAD (measured by the total number of separation anxiety symptoms) and future drug use disorders. However, when Type I error was adequately considered, this association stopped being significant.

#### Findings from Epidemiology and Interaction Rates:

They present some epidemiological results that could be useful to the field because the research is among the limited ones investigating SAD using DSM standards in a population example. Seventy-six percent of the sample (N = 500) had experienced another mental disease, and 3.9% satisfied the SAD requirements before 17. More than 80% of the latter group experienced a three-year average duration, with a young startup age of about six. Almost all SAD symptoms in children disappeared by maturity, with just 5% of adults diagnosed with the disorder continuing to have it at the M2 assessment point.

A concomitant diagnostic was present in 34 (76%) 42 persons with a SAD finding by age 17. 24 (53.2%) possessed an emotional disorder, 17 (32.3%) had a problem with drugs, 8 people (14.3%) had a problem with adjustments, 4 (8.5%), one (3.2%) had a dietary issue, while the other 1 had a disruptive disorder. Two (4.3%) had an obsessive problem, two (4.3%) had an eating disorder, and six (12.4%) had a phobic disorder. Three (6.5%) had a simultaneous diagnostic of the so-called post-condition.

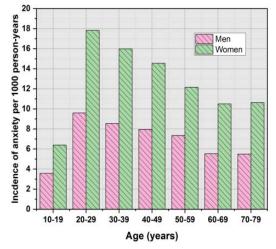


Figure 5. Men's and women's accuracy incidence.

Figure 5 illustrates the accuracy outcomes of anxiety prevalence by gender and age.

#### Discussion.

Moreover, DSM criteria and formal evaluations were used to make the diagnosis. Although our findings point to a possible link between SAD and subsequent disease, they do not permit conclusions on causation. While it is plausible that SAD serves as a trigger for ensuing psychopathology, it is apparent that an underlying susceptibility shared by adult depressive and panic disorders and childhood SAD is the etiology of both conditions. Should the latter be accurate, SAD may also serve as a barometer for the intensity of the underlying susceptibility [35]. It is essential to assess this study in the context of its advantages and disadvantages. The fact that the SAD symptoms were discovered is one of our study's strengths. It is possible to express concerns over the integrity of retroactive overtime reported. Most prior research exploring the association between childhood SAD and future pathology has depended on backward stories regarding SAD gathered when an adult. Our study's ability to conclude a sizable community sample is another asset. As a result, our findings could apply more broadly to the general public but not to clinical samples.

#### Conclusion.

In a population sample, childhood SAD imparts the lower externalizing diseases hazard and the higher chance of absorbing diseases developing in early maturity. We also evaluated the degree to which SAD, compared to other childhood/adolescent diseases, raises the risk for mental problems in early adolescence. Our findings supported the prediction that, even after adjusting for other psychological issues until age 25, SAD specifically enhanced the chance of developing some subsequent disorders of the mind around 25 and 32 years of age. By the age of thirtytwo, Phenomenal instances and depression were prevalent in children with SAD than in children with other anxiety disorders. or drug use problems. By first obtaining historical accounts of childhood psychosis (at M1) and then following people continuously until the age of 32, this study surpasses many prior SAD investigations.

#### Limitation.

The inability to investigate whether SAD influenced the emergence of subsequent Axis III illnesses, a research constraint, makes sense that those with SAD in their early years may be more susceptible to developing certain personality diseases such as dependence disorder. Considering the certainty indications are similar, this option seems reasonable. They could not ascertain if SAD indicates a higher likelihood of future eating disorders and mental diseases because Adolescents with SAD diagnoses were susceptible to symptoms.

#### REFERENCES

1. Creswell C, Nauta MH, Hudson JL, et al. Research Review: Recommendations for reporting on treatment trials for child and adolescent anxiety disorders–an international consensus statement. Journal of Child Psychology and Psychiatry. 2021;62:255-69. 2. Dowsett E, Delfabbro P, Chur-Hansen A. Adult separation anxiety disorder: The human-animal bond. Journal of Affective Disorders. 2020;270:90-6.

3. Giani L, Caputi M, Forresi B, et al. Evaluation of cognitivebehavioral therapy efficacy in treating separation anxiety disorder in childhood and adolescence: a systematic review of randomized controlled trials. International Journal of Cognitive Therapy. 2021:1-24.

4. Kerns CM, Winder-Patel B, Iosif AM, et al. Clinically significant Anxiety in children with autism spectrum disorder and varied intellectual functioning. Journal of Clinical Child & Adolescent Psychology. 2021;50:780-95.

5. Lear MK, Smith SM, Pilecki B, et al. Social Anxiety and MDMA-assisted therapy investigation: a novel clinical trial protocol. Frontiers in Psychiatry. 2023;14:1083354.

6. Lebowitz ER, Marin CE, Silverman WK. Measuring family accommodation of childhood anxiety: Confirmatory factor analysis, validity, and reliability of the parent and child family accommodation scale–anxiety. Journal of Clinical Child & Adolescent Psychology. 2019.

7. Lecei A, van Winkel R. Hippocampal pattern separation of emotional information determining risk or resilience in individuals exposed to childhood trauma: Linking exposure to neurodevelopmental alterations and threat anticipation. Neuroscience & Biobehavioral Reviews. 2020;108:160-70.

8. Lee P, Zehgeer A, Ginsburg GS, et al. Child and adolescent adherence with cognitive behavioral therapy for Anxiety: predictors and associations with outcomes. Journal of Clinical Child & Adolescent Psychology. 2019;48:S215-26.

9. Lengua LJ, Thompson SF, Kim SG, et al. Maternal mental health mediates the effects of pandemic-related stressors on adolescent psychopathology during COVID-19. Journal of Child Psychology and Psychiatry. 2022;63:1544-52.

10. Manicavasagar V, Silove D. Separation anxiety disorder in adults: Clinical features, diagnostic dilemmas and treatment guidelines. Academic Press; 2020.

11. Mohammadi MR, Badrfam R, Khaleghi A, et al. Prevalence, comorbidity, and predictor of separation anxiety disorder in children and adolescents. Psychiatric Quarterly. 2020;91:1415-29.

12. Peterman JS, Carper MM, Kendall PC. Testing the habituation-based model of exposures for child and adolescent Anxiety. Journal of Clinical Child & Adolescent Psychology. 2019;48:S34-44.

13. Peverill M, Sheridan MA, Busso DS, et al. Atypical prefrontal–amygdala circuitry following childhood exposure to abuse: links with adolescent psychopathology. Child Maltreatment. 2019;24:411-23.

14. Pop-Jordanova N. Different Clinical Expression of Anxiety Disorders in Children and Adolescents: Assessment and Treatment. prilozi. 2019;40.

15. Qi J, Rappaport LM, Cecilione J, et al. Differential associations of distress tolerance and anxiety sensitivity with adolescent internalizing psychopathology. Journal of Clinical Child & Adolescent Psychology. 2019.

16. Richey JA, Brewer JA, Sullivan-Toole H, et al. Sensitivity shift theory: A developmental model of positive affect and

motivational deficits in social anxiety disorder. Clinical psychology review. 2019;72:101756.

17. Sandstrom A, Uher R, Pavlova B. Prospective association between childhood behavioral inhibition and Anxiety: a metaanalysis. Research on Child and Adolescent Psychopathology. 2020;48:57-66.

18. Schaumberg K, Zerwas S, Goodman E, et al. Anxiety disorder symptoms at age 10 predict eating disorder symptoms and adolescent diagnoses. Journal of Child Psychology and Psychiatry. 2019;60:686-96.

19. Sorcher LK, Goldstein BL, Finsaas MC, et al. Preschool irritability predicts adolescent psychopathology and functional impairment: A 12-year prospective study. Journal of the American Academy of Child & Adolescent Psychiatry. 2022;61:554-64.

20. Walter HJ, Bukstein OG, Abright AR, et al. Clinical practice guideline for assessing and treating children and adolescents with anxiety disorders. Journal of the American Academy of Child & Adolescent Psychiatry. 2020;59:1107-24.

21. Magson NR, Freeman JY, Rapee RM, et al. Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic. Journal of youth and adolescence. 2021;50:44-57.

22. Cobham VE, Hickling A, Kimball H, et al. Systematic review: anxiety in children and adolescents with chronic medical conditions. Journal of the American Academy of Child & Adolescent Psychiatry. 2020;59:595-618.

23. Beauchaine TP, Hinshaw SP. RDoC and psychopathology among youth: Misplaced assumptions and an agenda for future research. Journal of Clinical Child & Adolescent Psychology. 2020;49:322-40.

24. Masataka N. Anxiolytic effects of repeated cannabidiol treatment in teenagers with social anxiety disorders. Frontiers in psychology. 2019;10:2466.

25. Eisner NL, Murray AL, Eisner M, et al. A practical guide to the analysis of non-response and attrition in longitudinal research using a real data example. International Journal of Behavioral Development. 2019;43:24-34.

26. Hawes MT, Szenczy AK, Olino TM, et al. Trajectories of depression, anxiety and pandemic experiences; A longitudinal study of youth in New York during the Spring-Summer of 2020. Psychiatry research. 2021;298:113778.

27. Coyne SM, Stockdale L, Summers K. Problematic cell phone use, depression, anxiety, and self-regulation: Evidence from a three year longitudinal study from adolescence to emerging adulthood. Computers in Human Behavior. 2019;96:78-84.

28. Li G, Hou G, Yang D, et al. Relationship between anxiety, depression, sex, obesity, and internet addiction in Chinese adolescents: A short-term longitudinal study. Addictive Behaviors. 2019;90:421-7.

29. Becht AI, Luyckx K, Nelemans SA, et al. Linking identity and depressive symptoms across adolescence: A multisample longitudinal study testing within-person effects. Developmental Psychology. 2019;55:1733.

30. Wang JL, Sheng JR, Wang HZ. The association between mobile game addiction and depression, social anxiety, and loneliness. Frontiers in public health. 2019;7:247.

31. Srinivasan R, Pearson RM, Johnson S, et al. Maternal perinatal depressive symptoms, and offspring psychotic experiences at 18 years of age: a longitudinal study. The Lancet Psychiatry. 2020;7:431-40.

32. Amendola S, von Wyl A, Volken T, et al. A longitudinal study on generalized anxiety among university students during the first wave of the COVID-19 pandemic in Switzerland. Frontiers in psychology. 2021;12:643171.

33. Strawn JR, Lu L, Peris TS, et al. Research Review: Pediatric anxiety disorders-what have we learnt in the last 10 years?. Journal of Child Psychology and Psychiatry. 2021;62:114-39.

34. Pan KY, Kok AA, Eikelenboom M, et al. The mental health impact of the COVID-19 pandemic on people with and without depressive, anxiety, or obsessive-compulsive disorders: a longitudinal study of three Dutch case-control cohorts. The Lancet Psychiatry. 2021;8:121-9.

35. Sellers R, Warne N, Pickles A, et al. Cross-cohort change in adolescent outcomes for children with mental health problems. Journal of Child Psychology and Psychiatry. 2019;60:813-21.