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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.

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

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

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

WEBSITE

www.geomednews.com

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. Корректур авторам не высылаются, вся работа и сверка проводится по авторскому оригиналу.

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

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ავტორთა საქურაღებოლ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დაიცვათ შემდეგი წესები:

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

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

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

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

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

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

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

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

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

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

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

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

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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A CROSS-SECTIONAL STUDY ON COVID-19 VACCINATION HESITATION AMONG UNIVERSITY STUDENTS

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Abstract.

Background: Students serve as ambassadors, conveying effective messages to encourage the adoption of promotes healthy behaviors. Recognizing their consciousness about corona illness 2019 (COVID-19), desires to utilize the COVID-19 vaccines, and other associated variables will aid in developing viable vaccination promotion tactics for the present COVID-19 pandemic.

Methods: A transverse-segment internet poll of university students in the healthcare and non-healthcare industries was conducted to analyze their motivations to be vaccinated against the coronavirus. To recruit research participants, a random snowball sampling approach was utilized using digital media sites and mails. The contestants were chosen from throughout India, including several main geographic areas, between Nov-2020 and Jan-2021, prior to the release of the COVID-19 vaccination. There were descriptive metrics utilized to illustrate the research participants' socio-demographics and vaccine-related behaviors. Using logistic regression modeling, key characteristics that are expected to influence vaccination uptake among students were modeled. $p < 0.06$ was judged substantial in each study.

Results: 656 students participated in the study, with 48.4% coming from the healthcare sector & 51.5% from other fields. Of these 655 students, 43.6 and 22.4% came from India's northern and eastern areas. Graduate students accounted for 41.1% of the total population, and graduates for around 43.2%. The age range of 56.0% of the students was 18 to 25. Women made up 62% of the population, and 69.5% of them were unmarried. Seventy-eight percent of the students were from the medium socioeconomic level. Concerns about side effects and safety, distrust of government officials, and questions about the vaccine's efficacy were among the reasons given by students in this study for their reluctance to get vaccinated. It is essential to remember that these investigations were carried out at various times and in various nations; thus, the conclusions may not apply to all college students throughout the globe.

Conclusion: According to the findings of this research, Indian university students showed rather a great deal of motivating desire to acquire COVID-19 immunizations. The people were either doubtful or reluctant to get the vaccination, which suggests possible vaccine aversion. There is a need for information

campaigns and other actions to lessen vaccine hesitancy in order to promote the usage of COVID-19 vaccines.

Key words. COVID-19, Vaccination, logistic regression modeling, university students.

Introduction.

In an attempt to produce antibodies to the virus and stop transmissions, the research of vaccines has accelerated while many countries continue to grapple with new ailments brought on by the COVID-19 [1]. COVID-19 Different countries authorized 19 vaccinations for widespread use in 2020 and 2021. Global research has examined and relatively well established are the rates of COVID-19 vaccine hesitancy in the general population [2]. Vaccination hesitancy among students is a phenomenon defined as hesitancy or mistrust against obtaining vaccinations among people in academic environments including colleges, universities, and schools. Concerns regarding vaccination safety, misinformation or misconceptions around vaccines, distrust in the healthcare system or pharmaceutical firms, spiritual or cultural views, fear of needles or medical procedures, and peer pressure can all contribute to this hesitation [3]. For the next COVID-19 vaccination, a lot of terrain has been covered, but there are still a number of major challenges to be solved. One of these challenges is the uncertainty surrounding the public's response to the COVID-19 vaccination [4]. It is necessary for the effectiveness of vaccination campaigns to increase the rate of vaccination, especially for inflammatory illnesses that have recently emerged, and acceptance of vaccines indicates the in its entirety of vaccine attitudes, illness risk, and demand among the general community [5]. Since 2014, there has been a consistent rise in vaccine skepticism in over ninety percent of the world's nations. Vaccination choices may be influenced by a number of different factors, which can lead to a person delaying, declining, or accepting part or all of their vaccinations. The process of an individual deciding whether or not to be vaccinated is a complicated one that incorporates a variety of elements, including those that are cognitive as well as those that are sentimental, socioeconomic, spiritual, and ideological. The level of concern about COVID-19 among members of the general community is directly correlated with their level of openness to vaccination. Research demonstrated individual requirements for accepting COVID-19 immunization. These criteria include awareness of the effectiveness of the vaccine, the length of protection that it gives, and faith in political figures [6].

Students in universities and colleges are an essential component of each and every civilization. It is generally accepted that students are perceptive, influential, curious, well-educated, and receptive to concerns relating to public health. Furthermore, university students are regarded to be young adults who have a high level of knowledge and are believed to be at more risk of spreading the SARS-CoV-2 yet have less risk of acquiring difficulties related to COVID-19 [7].

Related Works.

The goal of the research was to investigate the extent of COVID-19 vaccination hesitancy. A community-based concurrent mixed-methods research was suggested in the paper [8]. To find hesitation predictors, a multivariate logistic regression framework was developed. 5369 questionnaires were gathered and divided into three survey periods. The range of vaccine reluctance was 22% to 29%, whereas the response rate varied from 81.2% to 76.4% [9]. The project seeks to analyze the efficacy of several machine learning models and deep learning approaches in recognizing averse to vaccine tweets the fact that is being released during the COVID-19 epidemic. Specifically, this evaluation will focus on identifying tweets that include the hashtag #vaccinehesitant [10]. Participants in a cross-sectional study completed a series of online questionnaires that included demographic inquiries as well as tests of vaccination motives, attitudes, and rewards [11]. Utilizing spatial regression and other geographic weighted regression (GWR) models, they included ecological and technical factors to better explain the regional variability of vaccination rates [12]. The latent Dirichlet allocating model was used to extract eight subjects, and the most often tweeted topic was vaccine reluctance, which included anxiety, the flu, vaccine safety, timing, and severity of symptoms [13]. The paper [14] makes use of information from the 2021 Home Pulse Survey and intersectionality theory. Statistical studies using both bivariate and multivariate techniques were used. A Multisectoral Approach (MSA) has been suggested as a potential remedy. A policy result is attained via the intentional cooperation of multiple groups of stakeholders and sectors (such as the economy, the environment, and health) [15].

Materials and Methods.

Dataset:

Indian university students were the subjects of a cross-sectional investigation, looking at both the non-healthcare industries and the healthcare industries. The study was conducted in India from the beginning of Nov 2020 to Jan 2021, before the "first wave" of COVID-19 vaccinations was made available there. University Students were enlisted in an online poll using social media platforms including Facebook, WhatsApp, and Twitter, using a self-reported questionnaire. Consequently, a practical sample approach was predominantly used. Additionally, the snowball sampling method was employed to recruit more participants, with the invited individuals being asked to extend the invites to their colleagues. 576 samples, with a 50% acceptability rate, a 5% absolute accuracy, and a 95% confidence level, were thought to be the bare minimum necessary. The design impact remained constant at 1.5. A whole group of 655 students was recruited, of whom 323 were from the healthcare industry and 332 were from

other fields. The research includes individuals who are presently residing in India and are at least 18 years old. All participants provided online informed consent before the survey. To begin the analysis, only those who gave their informed permission were sent to the questionnaire website.

Study Questionnaire:

The analysis evaluated the number of areas, including previous immunization practices, vaccine perception, current understanding of COVID-19 and particular endures with COVID-19, and social and economic factors, including gender, age, academic achievement, family size, and where they reside. In order to assess the general perception of vaccines, some of the important questions that were posed were: "Have they ever declined a vaccine for either themselves or a child, taking into account it to be useless or dangerous?"; "Have they ever delayed a vaccine recommended by the physician?"; "Were they aware of the COVID-19 virus which has recently become prevalent among community members before the interview?"; "Is there right now any vaccine that has been developed for the worldwide epidemic of Coronavirus strain?"; and more.

Statistic assessments:

Socio-demographic features of the analysis results were subjected to descriptive analysis. The age variable was divided into three categories: ages 18 to 25, 26 to 35, and above 35. Male or female was used as the binary code for gender. The three categories of educational status were postgraduate, graduate, and high school/diploma. India's geography was divided into several groups (West, South, East, Central, North, and Northeast), and urban vs. rural areas of residency were designated. The "yes" and "no" options were used to classify responses to questions about prior vaccination habits, vaccine perception, awareness of COVID-19, and personal experiences with COVID-19. They were also asked, "How concerned are you that you or a member of your family will contract the COVID-19 virus?" and their answers were noted using a scale based on Likert with three possible outcomes: extremely concerned, slightly involved, or perhaps not at all concerned.

When asked whether they were confident that the healthcare system could handle the current COVID-19 crisis, respondents gave three different answers: very probable, fairly likely, and not at all probable. All of the variables were analyzed bivariately together with the target-dependent variable. The connection between the social and economic factors and vaccination habits of the students who received the COVID-19 vaccine was investigated using multiple logistic regression analysis. It was deemed significant if $p < 0.05$. Stata 15 was used to analyze the data.

Results.

The term "COVID-19 vaccine hesitancy" describes those who are reluctant or refuse to get the vaccine even when it is available. Efforts are being made to address vaccine hesitancy among university students, including educational campaigns, community outreach, and incentives such as vaccine mandates or free giveaways. A number of 656 students were involved in the research, 48.4% from the healthcare industry and 51.5% from other industries. 43.6 and 22.4% of these 655 students

were from the Eastern and Northern regions of India. Graduate students made up 41.1% of the population, while graduates made up around 43.2%. 56.0% of the learners were between the ages of 18 and 25. Sixty-two percent (62%) were women, and 69.5% were single. The majority of pupils (78.2%) belonged to the middle socioeconomic class. (Table 1). "A COVID-19 vaccine" was under development, as reported by 89.3% of students and the majority of attendees (93.4%), who were aware that the virus was spreading throughout the area. Five percent of students and little under two thirds of learners expressed confidence in the efficacy of immunizations produced domestically in India. A background of journeys or encounters with a patient who has been verified to have COVID-19 was disclosed by around 27.7% of pupils. Only one-third of the kids, or 33.4%, were worried about catching the coronavirus. The majority of students (82.9%) reported no history of vaccination reluctance (Table 2). Figure 1 shows descriptive data on the opinions of the subjects of and knowledge about the home COVID-19 vaccination.

The majority of college students (89.3%) were aware that COVID-19 vaccinations were being created, and (64.5%) and 56.0%, respectively, of them trusted the domestic vaccines and the healthcare system. Table 3 shows that just approximately a third (33.4%) thought they were at risk of developing a coronavirus infection.

Bivariate analysis suggests that the intention of a COVID-19 vaccination to be administered is higher among postgraduate students than among undergraduate students, and it appears to be barely greater among non-healthcare industry students than among the healthcare industry. Students' desire to be vaccinated was shown to be individually associated with information on the COVID-19 vaccine's growth and development, risk perception,

Table 1. Demographic and social information about the contestants.

Variable	Total (%)
Age	
18–25	391
26–35	243
above 35	24
Gender	
Male	250
Female	407
College Students' category	
Non-Healthcare sector	333
Healthcare sector	324
Highest education	
Diploma/higher secondary school	99
Undergraduate	288
Postgraduate	270
Family size	
Five and below	518
Six and above	139
Social status in the community*	
Low	67
Medium	523
High	68
Place of residence	
Urban	310
Rural	347

Table 2. Analysis of Descriptive data on the opinions about the home COVID-19 vaccination.

Variables	No	Yes
Exposed to covid-19 cases	474	183
Awareness about COVID-19	44	613
Development of vaccines	71	586
History of vaccine hesitancy	544	113
Risk perception	437	220
Trust in healthcare	233	424

Table 3. Bivariate analysis of the research participants' motivation to acquire the COVID-19 vaccination in relation to their socioeconomic status.

Variable	Willingness to undergo COVID-19 shots		P value
	Yes (n = 418)	No/not sure (n = 242)	
Age			
18–25	237	155	0.07
26–35	79	165	
above 35	6	19	
Gender			
Female	98	152	0.26
Male	140	267	
Students Category			
Non-Healthcare sector	107	227	0.03
Healthcare sector	132	193	
Highest education			
Diploma/higher secondary school	30	72	0.69
Undergraduate	120	169	
Postgraduate	91	180	
Family size			
Five and below	183	336	0.61
Six and above	55	84	
Social status in the community			
Low	25	43	0.72
Medium	120	331	
High	22	46	
Place of residence			
Urban	116	195	0.07
Rural	123	225	

faith in the system of health care, and trust in domestic vaccines (Table 4).

We discovered that individuals with higher odds of submitting willingness to receive vaccinations for COVID-19 increased patients' confidence in the medical field. And have assurance in domestic vaccines. Figure 2 shows an examination of the COVID-19 vaccine's impacting variables using mixed logistical regression.

Discussion.

Research on COVID-19 in India has addressed its impact on medical education, its link to students' and healthcare workers' propensity for suicidality, and its influence on students' anxiety. However, no one has documented the use of the COVID-19 vaccination among students, particularly those who work in the healthcare industry. College students' vaccine hesitation

is a dynamic phenomenon that can evolve over time. This variability is caused by a variety of variables, including shifting society attitudes, scientific discoveries, and personal experiences. Initially, some students can have reservations regarding immunization owing to misinformation or a lack of knowledge. However, if individuals receive access to proper information, participate in conversations, and see the advantages of vaccination directly, their hesitation can decrease.

Participants in this research reported a decreased risk perception of contracting COVID-19 infection, probably due to an optimism bias where we anticipate things to turn out better than they do. Age, gender, and education did not substantially

Table 4. Bivariate study of vaccination intention, risk perception, and vaccination behavior for COVID-19.

Variables	Willingness to undergo COVID-19 shots		P value
	Yes (n = 418)	No (t = 237)	
History of vaccine hesitancy			
No	76	37	0.03
Yes	343	202	
Risk perception			
No	128	93	0.01
Yes	292	146	
Belief in the healthcare industry			
No	102	132	0.01
Yes	318	107	
Exposed to COVID-19 cases			
Yes	119	65	0.75
No	301	173	
Awareness about COVID-19			
No/not	24	21	0.01
Yes	218	396	
Development of COVID-19 vaccines			
No/not	35	37	0.33
Yes	385	202	

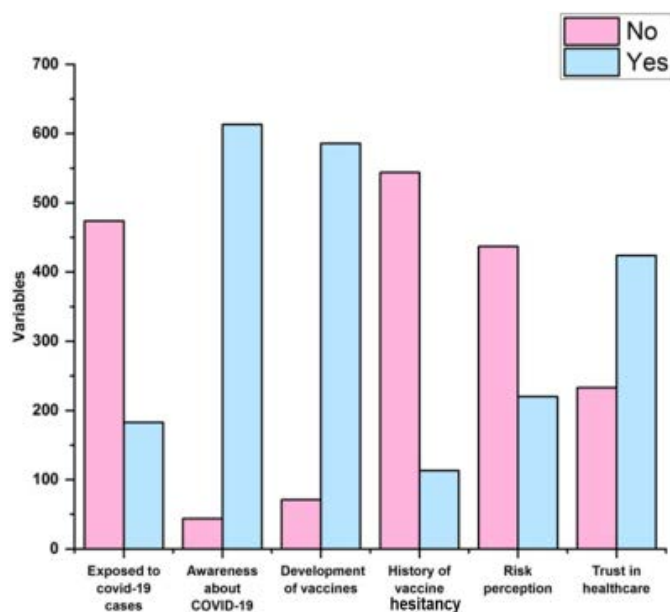


Figure 1. Descriptive data on the opinions of the subjects of and knowledge about the home COVID-19 vaccination.

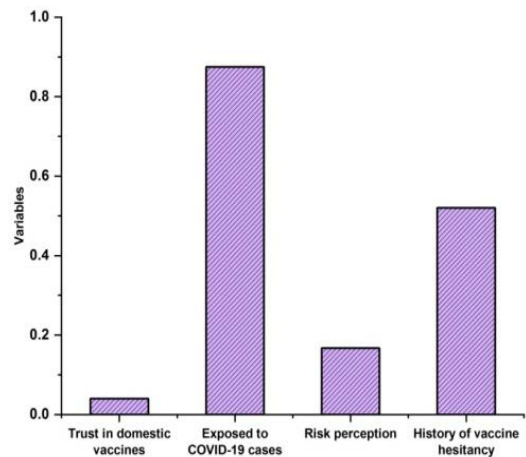


Figure 2. An examination of the COVID-19 vaccine's impacting variables using mixed logistical regression.

predict vaccination acceptance in a multivariable study. This conclusion contrasts with those of earlier studies, where education and marital status were shown to be strongly related to vaccination uptake, respectively. It was also found that less often than males, women intended to get the COVID-19 vaccine. Studies among university students and the general community have shown that perceived Negative consequences of COVID-19 immunization may be a factor in hesitation. According to studies, medical students may be reluctant to be vaccinated because of severe reactions and ineffective vaccines.

Studies among different groups have also indicated several reasons for reluctance to COVID-19 vaccinations, including adverse reactions to the vaccine, its rapid growth, questions regarding its effectiveness and how long that effectiveness will last, and medical criticism. Students are seen as reliable advocates and influencers for the marketing of vaccines. Student vaccination reluctance, particularly among those in the medical industry and other important groups, may have detrimental effects on the individuals who exhibit it, as well as have an impact on public opinion. For instance, one research found that healthcare professionals who had received vaccinations were more inclined to advise patients to do the same.

There are a few restrictions on this research. First off, since the research was cross-sectional, the predictors of vaccination uptake could not be causative but rather only show possible connections resulting from unidentified processes. However, the major predictors found are consistent with the literature-documented probable processes for vaccination acceptance. The purpose is to get the COVID-19 vaccination might, however, transform both with time and under various structural conditions. Next, since participants were chosen using easy and snowball sampling, the findings do not necessarily apply to learners in the healthcare and non-healthcare industries. Third, rather than conducting a direct interview, a self-administered online questionnaire form was utilized, which might have influenced the results. However, research in the area of health has demonstrated that that might not have been any distinction between a self-administration and an interviewer-administered questionnaire. Further research is required to determine the causes of the low or absent desire to get the COVID-19 vaccination, maybe utilizing qualitative

or mixed method techniques. Despite these drawbacks, this research offers important information on the elements that influence college students in India's acceptance of COVID-19 immunization. The information provided in this research, which shows how vaccination intentions changed over time, might also serve as a baseline for comparisons in the future.

Conclusion.

In this study, we found that approximately one-third of the respondents were either certain about getting the COVID-19 immunization or were willing to obtain it, indicating considerable levels of potential vaccine resistance. Students' opinions of vaccine effectiveness and safety, as well as their level of trust in the healthcare system, had a substantial impact on their approval of the COVID-19 inoculation. Create a method based on evidence to motivate children to be immunized, which might include educational programs that deal with vaccine reluctance. When implementing the COVID-19 immunization initiatives, tactics proving the vaccine's efficacy and safety will be crucial, and such efforts will undoubtedly have an impact beyond the COVID-19 pandemic.

REFERENCES

1. Ndwandwe D, Wiysonge C.S. COVID-19 vaccines. *Current opinion in immunology*. 2021;71:111-116.
2. Biswas N, Mustapha T, Khubchandani J, et al. The nature and extent of COVID-19 vaccination hesitancy in healthcare workers. *Journal of community health*. 2021;46:1244-1251.
3. Saied S.M, Saied E.M, Kabbash I.A, et al. Vaccine hesitancy: Beliefs and barriers associated with COVID-19 vaccination among Egyptian medical students. *Journal of medical virology*. 2021;93:4280-91.
4. Khubchandani J, Sharma S, Price J.H, et al. COVID-19 vaccination hesitancy in the United States: a rapid national assessment. *Journal of community health*. 2021;46:270-277.
5. Wang J, Jing R, Lai X, et al. Acceptance of COVID-19 Vaccination during the COVID-19 Pandemic in China. *Vaccines*. 2020;8:3:482.
6. Barello S, Nania T, Dellafiore F, et al. 'Vaccine hesitancy' among university students in Italy during the COVID-19 pandemic. *European journal of epidemiology*. 2020;35:781-783.
7. Hamdan M.B, Singh S, Polavarapu M, et al. COVID-19 vaccine hesitancy among university students in Lebanon. *Epidemiology & Infection*. 2021;149:e242.
8. Dereje N, Tesfaye A, Tamene B, et al. COVID-19 vaccine hesitancy in Addis Ababa, Ethiopia: a mixed-method study. *BMJ open*. 2022;12:5:e052432.
9. Baccolini V, Renzi E, Isonne C, et al. COVID-19 vaccine hesitancy among Italian university students: a cross-sectional survey during the first months of the vaccination campaign. *Vaccines*. 2021;9:11:1292.
10. Nyawa S, Tchuente D, Fosso-Wamba S. COVID-19 vaccine hesitancy: a social media analysis using deep learning. *Annals of Operations Research*. 2022;1-39.
11. Taylor S, Landry C.A, Paluszek M.M, et al. A proactive approach for managing COVID-19: the importance of understanding the motivational roots of vaccination hesitancy for SARS-CoV2. *Frontiers in psychology*. 2020;11:575950.
12. Pallathadka A.K, Chang H, Han D. What explains spatial variations of COVID-19 vaccine hesitancy?: A social-ecological-technological systems approach. *Environmental Research: Health*. 2022.
13. Shim J.G, Ryu K.H, Lee S.H, et al. Text mining approaches to analyze public sentiment changes regarding COVID-19 vaccines on social media in Korea. *International Journal of Environmental Research and Public Health*. 2021;18:12:6549.
14. Morales D.X, Beltran T.F, Morales S.A. Gender, socioeconomic status, and COVID 19 vaccine hesitancy in the US: an intersectionality approach. *Sociology of Health & Illness*. 2022;44:6:953-971.
15. Corpuz J.C.G. Multisectoral approach on COVID-19 vaccination: a proposed solution on vaccine hesitancy. *Journal of Public Health*. 2021;43:2:e370-e371.