GEORGIAN MEDICAL NEWS

ISSN 1512-0112

NO 7-8 (364-365) Июль-Август 2025

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 საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

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

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

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

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

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

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

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

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

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

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

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

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

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

GEORGIAN MEDICAL NEWS
NO 7-8 (364-365) 2025

Содержание:

GEORGIAN MEDICAL NEWS
No 7-8 (364-365) 2025

IS CORE SELF-EVALUATION A PROTECTIVE FACTOR FOR COLLEGE STUDENTS'MARITAL ATTITUDES? THE MODERATING ROLE OF PSYCHOLOGICAL STATUS

Qunru Hu#, Liying Wen#, Jingqi Zhang, Weiwei Chang, Yuelong Jin, Anshi Wang*, Lijun Zhu*.

School of Public Health, Wannan Medical College, Wuhu 241002, Anhui Province, China.

†Qunru Hu and Liying Wen contributed equally to this work.

**Correspondence: Anshi Wang and Lijun Zhu*

Abstract.

Objective: Marital attitudes significantly influence psychosocial well-being in young adults. The relationship between psychological distress and marital attitudes remains incompletely characterized, while core self-evaluation represents a critical resilience factor. We hypothesized that psychological status moderates the association between core self-evaluation and marital attitudes.

Methods: A cohort of 1,050 medical students in Wuhu, China, underwent assessment using the Marriage Attitude Scale (MAS), Depression-Anxiety-Stress Scale (DASS-21), and Core Self-Evaluation Scale (CSES). Moderation models quantified psychological status (DASS-21) as a moderator of CSES-MAS relationships.

Results: Gender, parental relationship, willingness to marry and spouse selection are all factors that affect the marriage attitude of college students ($P<0.01$). The total score of DASS-21 of college students is negatively correlated with the total score of MAS (β=-0.024), the CSES score is positively correlated with the total score of MAS (β=0.242), and the total score of DASS-21 plays a role in regulating the CSES score and the total score of MAS.

Conclusion: Core self-evaluation buffers against negative marital attitudes, but this protective relationship is compromised by psychological distress. Targeting self-evaluation mechanisms may offer novel interventional pathways for marital attitude interventions in emerging adults.

Key words. College students, marital attitudes, psychological status, core self-evaluation, moderating effect.

Introduction.

Against the backdrop of rapid socioeconomic development and shifting societal values in China, profound transformations in marital attitudes and fertility behaviors have emerged. Aligned with the predictions of the Second Demographic Transition (SDT) theory, young adults increasingly exhibit declining marriage intentions and rates, alongside rising trends in cohabitation, divorce, and non-marital fertility [1]. National statistics from China's Ministry of Civil Affairs illustrate this trajectory vividly: the marriage rate dropped from 9.0‰ in 2019 to 5.4‰ in 2021, with a continuous decline thereafter [2].

As the future backbone of society, college students are navigating the critical transition from dating to marital decisions. Their perspectives on marriage serve as a fundamental predictor of future nuptiality and fertility patterns, rendering research on the factors shaping their marital attitudes both academically and socially significant. Marital attitudes, defined as individuals' subjective evaluations of marriage—encompassing general perspectives on spousal relationships and personal assessments of marital prospects [3]—are conducive to forming higher-quality marriages when positive [4]. Grounded in the Theory of Planned Behavior, marriage intention is inherently linked to behavioral attitudes, subjective norms, and perceived behavioral control [5]. Thus, college students' marital attitudes not only reflect evolving social relational structures but also influence the development of marital culture. Amidst the trend of individualization, students' attitudes toward marriage have become increasingly diverse [6], underscoring the need to guide them toward healthy marital perspectives to enhance marital quality and well-being.

Core self-evaluation (CSE), an individual's fundamental assessment of personal competence and worth [7], has been shown to negatively correlate with psychological stress in romantic contexts among college students [8]. Self-efficacy, a core dimension of CSE, actively shapes personal values [9]: individuals with high CSE typically demonstrate greater confidence in realizing their potential, exhibit effective self-regulation, and thus develop stronger self-efficacy. Enhanced self-efficacy, in turn, fosters more positive marital attitudes [10]. While existing studies have explored isolated aspects of this relationship, a systematic investigation into how CSE influences college students' marital attitudes remains lacking. This study aims to empirically clarify CSE's impact —addressing a critical gap regarding how CSE systematically shapes marital attitudes—and highlights that interventions targeting CSE development and positive affect cultivation may offer novel pathways to promote constructive marital attitudes.

Research indicates that positive marital attitudes are associated with higher psychological well-being [11], whereas perceived stress can disrupt cognitive functioning, adversely affecting emotional and physiological states [12]. This disruption not only induces psychological distress but also undermines mental health, making students with poor psychological adjustment more susceptible to anxiety, depression, and diminished self-confidence. We propose two main hypotheses (Figure 1).

H1: Core self-evaluation positively predicts constructive marital attitudes.

H2: Psychological distress (DASS-21) moderates this relationship, attenuating CSE's protective effect at high distress levels.

This study examines core self-evaluations' relationship with marital attitudes among college students and analyzes psychological adjustment's moderating effect, providing actionable insights for fostering positive marital perspectives.

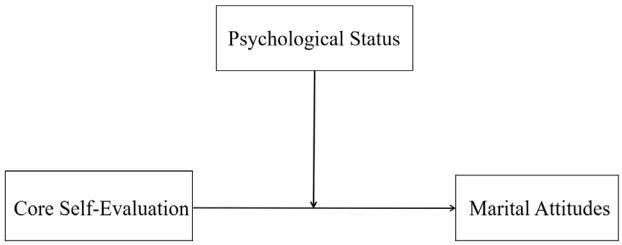

Figure 1. *Hypothetical Model of the research.*

Methods.

Participants:

The study employed a stratified convenience sampling approach among first- to fourth-year undergraduates at a medical university in Wuhu, China. Students were first stratified by academic year, major, and demographic characteristics (e.g., gender, urban/rural residence), followed by random sampling within each stratum. All participants provided written informed consent after receiving a detailed explanation of the research objectives. Questionnaires were administered and collected on-site to ensure data integrity. A total of 1,050 questionnaires were distributed, yielding 1,003 valid responses after excluding incomplete or inconsistent entries, resulting in a 95.5% response rate.

Measure.

Socio-demographic questionnaire:

Demographic and background data included gender, age, height, only-child status, family residence (urban/rural), academic year and major, academic performance, romantic relationship history, family structure, parental education level, parental occupation, and marriage intention.

Marital Attitude Scale (MAS):

The MAS [13] comprises two dimensions: general marital beliefs and self-evaluation/expectations regarding marriage, with a total of 20 items. Responses were scored on a 4-point Likert scale ranging from 1 ("strongly agree") to 4 ("strongly disagree"). Eight items (1, 3, 5, 8, 11, 15, 17, 20) were reverse-scored. The total score ranged from 20 to 80, with higher scores indicating a more positive attitude toward marriage. In this study, the Cronbach's α coefficient for the total scale was 0.786, demonstrating good internal consistency.

Depression, Anxiety, and Stress Scale-21 (DASS-21):

Psychological status was assessed using the simplified Chinese version of DASS-21 [14], revised by Xi Xu et al. The full scale consists of 21 items, with 7 items each for the depression, anxiety, and stress subscales. Responses were recorded on a 4-point scale ranging from 0 ("did not apply to me") to 3 ("applied to me very much or most of the time"). The final scores were calculated as recommended by multiplying by two, with higher scores indicating greater severity of the respective emotional state. In this study, the total scale exhibited a Cronbach's α coefficient of 0.95, while the stress, anxiety, and depression subscales showed coefficients of 0.87, 0.86, and 0.87, respectively, indicating excellent reliability.

Core Self-Evaluations Scale (CSES):

This study employed the Chinese version of the CSES [15] revised by Du Jianzheng and colleagues in 2012 to assess participants' core self-evaluations. The scale is a unidimensional self-report measure consisting of 10 items rated on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Items 2, 3, 5, 7, 8, and 10 were reverse-scored. The total score ranges from 10 to 50, with higher scores indicating a more positive core self-evaluation. The revised CSES demonstrates high reliability and validity, with a Cronbach's α coefficient of 0.83 and a split-half reliability of 0.84 in this study.

Quality Control:

To ensure the representativeness and diversity of the study population, participants were selected using a stratified sampling method. All scales employed in this study have been widely cited in domestic and international academic literature, with well-established reliability and validity to accurately reflect the measured constructs. Standardized instructions were provided to participants, and questionnaires were administered on-site to ensure authenticity. After completion, all questionnaires were checked for completeness and accuracy, followed by double-entry verification into the system.

Statistical Analysis:

Data were analyzed using SPSS 26.0. Continuous variables are presented as mean ± standard deviation ($\bar{x}\pm s$), and group comparisons were conducted using independent samples t-tests or ANOVA. Pearson correlation analysis was performed to examine relationships between variables. Model 1 of the PROCESS 4.1 macro was employed for general linear model analysis, regression analysis, and simple slope analysis to test the moderating effects of psychological status on the relationship between core self-evaluations and marital attitudes. The significance level was set at $\alpha = 0.05$.

Common Method Bias Test:

Harman's single-factor test was conducted to assess common method bias. Following Podsakoff et al. [16] recommendations, if more than one principal component has an eigenvalue greater than 1 and the first component explains less than 40% of the variance, severe common method bias is unlikely. The results revealed eight factors with eigenvalues exceeding 1, with the highest variance explained by a single factor being 24.33% (<40%), indicating no substantial common method bias in this study.

Results.

General Demographic Characteristics:

A total of 1,003 valid samples were included in this study, with a mean age of (19.6±0.9) years. Regarding the scores of the scales involved: the total score of the Marriage Attitude Scale (MAS) was (51.4±6.5); the total score of the Core Self-Evaluation Scale (CSES) was (32.9±5.7); and the total score of the Depression-Anxiety-Stress Scale-21 (DASS-21) was (25.9±22.3). Among the participants, 466 were male (46.5%) and 537 were female (53.5%); 353 were only children (35.2%). In terms of residential distribution: 258 (25.7%) lived in cities, 388 (38.7%) in counties/towns, and 357 (35.6%) in rural

areas. A total of 571 participants (56.9%) had participated in community activities, while 432 (43.1%) had not. Regarding attitudes toward the three-child policy: 227 (22.6%) expressed support, 193 (19.2%) opposed it, and 583 (58.1%) held a neutral attitude. For late marriage and late childbearing: 332 (33.1%) agreed, and 671 (66.9%) held reserved opinions or a neutral stance.

Comparison of Variable Scores Among College Students Across Demographic Groups:

Univariate analysis showed that gender, parental relationship, willingness to marry, and mate selection methods were influencing factors of college students' marital attitudes. Parental relationship, willingness to marry, and mate selection methods also affected college students' psychological status and core self-evaluation. All the above differences were statistically significant (P<0.05). Detailed results are presented in Table 1.

Correlation Analysis of Variable Scores Among College Students:

As shown in Table 2, college students' marital attitudes were negatively correlated with their psychological status scores. Additionally, marital attitudes were positively correlated with general marital beliefs, self-evaluation of marriage, and core self-evaluation scores, with pairwise positive correlations observed among these variables. Meanwhile, psychological status scores were negatively correlated with core self-evaluation, while all dimensions of psychological status were positively correlated with each other (P<0.01).

Moderating Effect of Psychological Status on the Relationship Between Core Self-Evaluations and Marital Attitudes:

Using the total score of the CSES as the independent variable, the total DASS-21 score as the moderator variable, and the total MAS score as the dependent variable, regression analysis was conducted while controlling for gender, parental relationship status, marriage intention, and mate selection approach. The independent and moderator variables were mean-centered prior to analysis. The results presented in Table 3 demonstrate the following: The overall model was statistically significant ($F = 46.36$, $P<0.001$, $\Delta R^2 = 0.005$), and the interaction term between CSES and DASS-21 scores showed a significant negative relationship with MAS total scores ($\beta = -0.004$, $t=-2.624$, $P=0.009$, 95%CI [-0.007, -0.001]), indicating a significant moderating effect. This finding suggests that the magnitude of the effect of core self-evaluations on marital attitudes varies significantly across different levels of psychological distress.

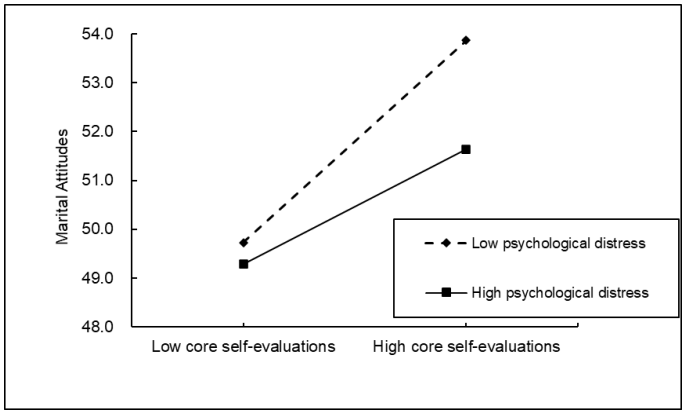

Figure 2. *Moderating Effect of Psychological Status.*

Further analysis was conducted to calculate the predictive relationship between core self-evaluations and marital attitudes at low ($\bar{x}-1s$) and high ($\bar{x}+1s$) levels of psychological distress. A simple slope plot (Figure 2) was generated to illustrate these conditional effects. At low levels of psychological distress, core self-evaluations demonstrated a stronger predictive effect on marital attitudes (β=0.36, P<0.001). At high levels of psychological distress, core self-evaluations demonstrated a weaker predictive effect on marital attitudes (β = 0.21, P<0.001).

Discussion.

This study examined marital attitudes among 1,003 college students, with the mean total score on the Marital Attitudes Scale (MAS) being 51.4 ± 6.5. Subscale scores were 36.2 ± 4.6 for General Marital Beliefs and 15.2 ± 2.7 for Self-Evaluation and Expectations of Marriage, indicating an overall moderate level of marital attitudes—consistent with findings reported by Yang Linxia [17]. Notable gender differences were observed: female students exhibited lower marriage intentions compared to males, which aligns with both domestic and international research [18,19]. This disparity may stem from the differential impacts of marriage on subjective well-being: marriage tends to confer predominantly positive effects on men, whereas its effects on women are more often negative [20].

Furthermore, the quality of parental relationships significantly influenced students' marital attitudes, psychological status, and core self-evaluations. Students raised in families with harmonious parental relationships demonstrated more positive marital attitudes, better psychological adjustment, and higher core self-evaluations. Research indicates that such individuals tend to hold more optimistic views on romantic relationships, experience greater emotional well-being, and report stronger feelings of self-worth [21]. This positive family environment appears to mitigate negative emotions while enhancing self-confidence and self-evaluation. Conversely, students exposed to frequent parental conflict exhibited lower levels of self-differentiation, experienced more conflict in romantic relationships, and were more prone to adopting negative attitudes and coping strategies when resolving problems [22]. These findings suggest that higher quality parental relationships were positively associated with marital attitudes. Regarding marriage intention and mate selection, 82.2% of students expressed ambivalence or unwillingness toward marriage, while only 17.8% reported firm commitment—a rate lower than that reported by Li Ting et al. [1]. This discrepancy may be attributed to differences in the timing of assessment: the present study specifically captured the current marriage intentions of enrolled students, revealing a generally low inclination toward marriage in this population. Meanwhile, 90.5% of students preferred free-choice mate selection, and this preference was associated with more positive marital attitudes—corroborating the findings of Xu Jiaming [23]. This shift reflects a diminishing influence of traditional parental involvement in relationships and marriage, alongside a strengthening of young adults' autonomy in such matters [24].

Table 1. *Comparison of Variable Scores Among College Students Across Demographic Groups ($\bar{x}\pm s$).*

Variable	Number (n=1003)	General Marital Beliefs	Marital Self-Evaluation and Expectations	Total score of MAS	Stress score	Anxiety score	Depression score	Total score of DASS-21	Total score of CSES
Gender									
Male	466	37.3±4.7	16.0±2.6	53.2±6.3	9.9±8.1	8.8±8.0	8.6±8.0	27.3±23.2	32.7±5.9
Female	537	35.3±4.4	14.5±2.6	49.7±6.2	9.1±7.8	8.1±7.3	7.4±7.6	24.7±21.5	33.1±5.6
t		6.98	9.36	8.91	1.52	1.44	2.37	1.86	-1.04
P		<0.001	<0.001	<0.001	0.128	0.151	0.018	0.063	0.300
Only child									
Yes	353	36.2±4.9	15.2±2.8	51.4±7.0	9.7±8.0	8.8±7.8	8.4±8.0	26.8±22.6	32.7±5.9
No	650	36.2±4.5	15.1±2.6	51.3±6.1	9.3±7.9	8.3±7.6	7.8±7.7	25.4±22.2	30.5±5.0
t		0.06	0.60	0.29	0.58	0.99	1.29	0.10	-0.70
P		0.948	0.552	0.771	0.563	0.320	0.198	0.319	0.487
Location									
Urban	258	36.1±4.7	15.1±2.8	51.2±6.8	9.0±8.1	7.7±7.6	7.0±7.5	23.7±22.0	33.3±6.0
Town	388	36.4±4.9	15.3±2.8	51.8±6.8	9.9±7.8	8.8±7.6	8.6±8.1	27.3±22.5	32.9±5.9
Rural	357	36.0±4.3	15.0±2.4	51.0±5.6	9.3±8.0	8.6±7.6	8.0±7.8	25.9±22.3	32.6±5.4
F		0.92	1.28	1.32	1.13	1.72	3.50	2.09	1.25
P		0.400	0.277	0.267	0.325	0.179	0.030	0.124	0.288
Parents' relationship									
Very poor	40	35.1±3.6	15.3±2.1	50.4±4.8	11.6±8.1	10.7±7.7	9.3±7.9	31.5±22.3	31.2±5.4
Quite poor	68	35.4±3.5	15.0±2.1	50.5±4.5	13.2±8.5	11.8±8.3	11.9±8.1	36.9±24.0	31.3±4.4
Ordinary	176	35.1±4.3	14.8±2.6	49.9±6.1	11.1±8.1	10.4±8.0	10.3±8.0	31.8±23.0	31.1±5.6
Quite good	383	36.1±4.6	15.1±2.7	51.1±6.5	9.2±7.5	7.8±6.9	7.6±7.4	24.7±20.6	32.8±5.4
Very good	336	37.2±5.0	15.5±2.8	52.7±6.9	7.9±7.9	7.2±7.8	6.3±7.5	21.3±22.1	34.4±6.0
F		7.54	2.19	6.41	10.14	10.12	13.20	12.10	12.88
P		<0.001	0.069	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Marriage intention									
Yes	179	38.0±4.9	16.7±2.8	54.7±6.9	8.1±7.7	7.4±7.6	6.6±7.8	22.0±22.1	34.0±5.3
Uncertain	396	36.6±4.0	15.5±2.2	52.1±5.2	9.8±7.7	8.7±7.6	8.1±7.5	26.6±21.7	33.1±5.8
No	428	35.1±4.8	14.2±2.7	49.3±6.6	9.7±8.2	8.7±7.7	8.4±8.1	26.8±22.9	32.2±5.7
F		29.41	71.98	54.98	3.16	10.00	3.84	3.24	6.43
P		<0.001	<0.001	<0.001	0.043	0.129	0.022	0.040	0.002
Method of choosing spouse									
Free love	908	36.3±4.7	15.2±2.7	51.5±6.5	9.1±7.7	8.0±7.4	7.5±7.6	24.6±21.6	33.1±5.8
Introduction	71	34.5±4.7	14.3±2.2	48.7±6.1	13.9±8.5	13.5±8.4	12.8±8.3	40.1±24.1	30.9±5.0
Marriage seeking	24	36.7±3.5	15.0±2.5	51.7±5.2	10.8±10.0	10.4±10.1	10.7±9.6	31.9±29.1	32.7±5.4
F		5.36	4.44	6.32	12.93	18.22	16.63	17.40	4.96
P		0.005	0.012	0.002	<0.001	<0.001	<0.001	<0.001	0.007

MAS, Marriage Attitude Scale DASS-21, Depression - Anxiety - Stress Scale CSES, Core Self-Evaluation Scale.

Table 2: *Correlation analysis of variables scores of college students*

	General Marital Beliefs	Marital Self-Evaluation and Expectations	MAS	Stress	Anxiety	Depression	DASS-21
Marital Self-Evaluation and Expectations	0.54**						
MAS	0.94**	0.80**					
Stress	-0.17**	-0.11**	-0.17**				
Anxiety	-0.17**	-0.10**	-0.16**	0.88**			
Depression	-0.21**	-0.16**	-0.21**	0.85**	0.86**		
DASS-21	-0.19**	-0.13**	-0.19**	0.95**	0.95**	0.95**	
CSES	0.28**	0.24**	0.30**	-0.46**	-0.44**	-0.49**	-0.49**

** At the 0.01 level (double tail), the correlation is significant.

Table 3: *Test results of the moderating effect of college students' psychological status*

Variable	Total score of MAS				
	B(SE)	*t*	*P*	*95%CI*	
Gender	-3.149(0.362)	-8.699	<0.001	-3.860	-2.439
Parents' relationship	0.416(0.173)	2.407	0.016	0.077	0.755
Marriage intention	-2.263(0.246)	-9.214	<0.001	-2.745	-1.781
Method of choosing spouse	-0.487(0.463)	-1.052	0.293	-1.396	0.421
CSES	0.242(0.038)	6.425	<0.001	0.168	0.316
DASS-21	-0.024(0.010)	-2.457	0.014	-0.044	-0.005
CSES×DASS-21	-0.004(0.001)	-2.624	0.009	-0.007	-0.001
R^2	0.246		<0.001		

Correlational analyses revealed a negative association between psychological distress scores and core self-evaluations. Marital attitudes were positively correlated with core self-evaluations but negatively correlated with psychological distress. Core self-evaluation represents a positive personality construct [25], and research confirms that individuals with higher core self-evaluations tend to exhibit fewer symptoms of anxiety and depression [26,27]. Students with high core self-evaluations typically possess a positive overall self-assessment, strong self-efficacy, and confidence, experiencing less feelings of low self-worth or persistent low mood [28]. Consistent with theoretical models, we posit that CSE might enhance marital attitudes indirectly by promoting proactive relationship engagement. And CSE was significantly associated with positive marital attitudes, potentially reflecting a protective role, though causality cannot be inferred from cross-sectional data.

Notably, symptoms of anxiety and depression are often negatively correlated with life satisfaction [29], and experiences of depression, anxiety, and stress can adversely impact college students' quality of life—with stress symptoms, in particular, showing strong negative associations with psychological well-being [30]. Consequently, individuals who frequently experience anxiety, depression, or stress may be more prone to emotional volatility, negative affect, and interpersonal difficulties within romantic relationships, ultimately shaping their attitudes toward marriage.

Moderation analysis further clarified that the positive relationship between core self-evaluations and marital attitudes was significantly stronger among students with better psychological adjustment (as indicated by lower psychological distress scores). However, as psychological distress increased (reflected by higher DASS-21 total scores), the positive predictive effect of core self-evaluations on marital attitudes weakened progressively. Good psychological adjustment reflects a stable and resilient state of health, enabling individuals to adapt more effectively to social and interpersonal environments [31]. Within romantic contexts, this emotional stability likely amplifies the positive influence of core self-evaluations on marital attitudes. Conversely, individuals experiencing psychological distress are more vulnerable to anxiety, low self-esteem, and emotional instability [32], which can color their perceptions of romance and marriage negatively. When facing heightened stress and anxiety, those who fail to utilize their psychological resources effectively may resort to avoidant or negative coping strategies. Such maladaptive coping not only fails to resolve problems but can exacerbate negative emotions [33], potentially undermining core self-evaluations and diminishing their positive predictive power on marital attitudes.

Research Limitations.

This study has several limitations that should be acknowledged: (1) The sample was restricted to students from a single medical university in Wuhu, introducing geographic constraints. Future studies should incorporate multi-regional samples to enhance generalizability. (2) The cross-sectional design limits causal inference. Employing longitudinal investigations or experimental approaches in future research would allow for deeper exploration of causal relationships between variables. (3) Although relevant covariates were controlled for, factors influencing college students' marital attitudes are complex and multifaceted, and not all potential confounders may have been accounted for.

Conclusion.

In summary, college students' marital attitudes are associated with gender, parental relationship quality, marriage intention, mate selection preferences, psychological status, and core self-evaluations. Critically, psychological status plays a significant moderating role in the relationship between core self-evaluations and marital attitudes.

These findings highlight the need for educational institutions and families to strengthen values-based guidance: helping students recognize the importance of healthy perspectives on marriage and family, fostering accurate understandings of relationships and marriage, and cultivating positive marital attitudes. Families, in particular, should strive to build strong, harmonious, and supportive home environments, which can subtly promote the development of constructive relationship values. Concurrently, attention must be paid to students' psychological well-being, with timely support and counselling provided to alleviate distress, enabling them to approach relationship and marital challenges with greater resilience and positivity. As a cross-sectional study, our research lays the groundwork for future longitudinal designs to track trajectories of marital attitudes, or family-based intervention experiments to examine causal mechanisms between CSE and marital attitudes.

Author contributions:

Anshi Wang and Lijun Zhu designed the study. Liying Wen and Jingqi Zhang contributed to literature searching, data collection and analysis. Weiwei Chang and Yuelong Jin assessed study quality. Qunru Hu wrote and revised the manuscript. All authors read and approved the final manuscript.

Funding: This study received support from Scientific Research Project of Anhui Provincial Institutions of Higher Education (Philosophy and Social Sciences) (No. 2022AH051208). Innovation and Entrepreneurship Training Program for College Students in Anhui Province (No. S202310368102, 202410368062). Key R&D and Achievement Transformation Projects of Science and Technology Projects in Wuhu City (No. 2023yf103).

REFERENCES

1. LI Ting ZY, YAN Yuteng. Are marriage and childbirth less institutionalized in China?—— Discovery and discussion based on the survey of marriage and childbearing concept of Chinese college students Women's Studies Series. 2022;03:85-102.
2. Ministry of Civil Affairs of the People's Republic of China.
3. Willoughby BJ. Marital attitude trajectories across adolescence. J Youth Adolesc. 2010;39:1305-17.
4. Willoughby BJ. Using Marital Attitudes in Late Adolescence to Predict Later Union Transitions. Youth Soc. 2014;46:425-440.
5. Xie J, Hong X. Research on Factors Affecting Chinese College Students' Marriage Intention: Applying the Theory of Planned Behaviour. Front Psychol. 2022;13:868275.
6. ZHANG Jia ZX. Research on Multiple Marriage Attitudes among College Students from an Individualized View. Youth Exploration. 2022;03:91-100.
7. Judge TA, Kammeyer-Mueller JD. Implications of core self-evaluations for a changing organizational context. Human Resource Management Review. 2010;21:331-341.
8. Song M, Hu X, Liu S. Adult attachment and love psychological stress among college students: the mediating role of core self-evaluation and the moderating role of meaning in life. BMC Psychol. 2024;12:478.
9. Sijia L. Exploration of the influence mechanism of human-organization matching on employees' objective career success. 2023.
10. Xueqing H. The relationship between romantic relationship efficacy and marital attitude in the post-90s generation. 2021.
11. Xiaobo S. Intimate relationship growth, attachment style, and personality traits and marriage quality. 2015.
12. LI Xinyu WX, CHEN Haide, GAO Lingfeng, et al. Relation between stress perception and sleep quality in college students: a two-stage regulated mediation model. Chinese Journal of Clinical Psychology. 2019;27:351-355.
13. YU Yong XS, WANG Xi, SUN Zheng. Reliability and validity of the marital attitude scale Chinese version among unmarried college students and community residents (Chinese). Chinese Journal of Mental Health. 2011;25:60-65.
14. GONG Xu XX, XU Rui, LUO Yuejia. Test report of the Depression-Anxiety-Pressure Scale in Simplified Chinese version (DASS-21) among Chinese college students (Chinese). Chinese Journal of Linchuan Psychology. 2010;18:443-446.
15. DU Jianzheng ZX, ZHAO Yan. Structural validation of the core self-evaluation and its scale revision (Chinese). Psychological Research. 2012;5:54-60.
16. PODSAKOFF P M ODW. Self-report in organisational research:problems and prospects. J Manage. 1986;12:69-82.
17. YANG Linxia ZY. Investigation on the status quo of marriage and childbearing concept of unmarried students in colleges and universities (Chinese). Campus Psychology. 2023;21:207-212.
18. MENG Zhaoyan YM, QI Huan, DANG Yujing, et al. The relationship between marriage attitude and security and self-esteem among college students from single-parent families (Chinese). Chinese Journal of Mental Health. 2023;37:717-722.
19. Chao Z. Exploring the Pathway of Family Education: Insights from the Marital and Reproductive Values of University Students in China. Region - Educational Research and Reviews. 2024;6.
20. XING Zhanjun JY. Preliminary study on the relationship between marital status and subjective well-being among urban residents (Chinese). Psychological Science. 2003;06:1056-1059.
21. Ying W. Study on the influence of family factors on the social mentality of college students (Chinese). 2018.
22. DENG Luanyin XR, FANG Xiaoyi. The relationship between parental conflict and college students and their resolution: the mediating role of self-differentiation (Chinese). Special Education in China. 2015;11:89-96.
23. Jiaming X. Empirical research on contemporary college students (Chinese). Chinese Sex Science. 2019;28:148-154.
24. Faulkner J, Schaller M. Nepotistic nosiness: inclusive fitness and vigilance of kin members' romantic relationships. Evolution and Human Behavior. 2007;28:430-438.
25. LI Hao ZY, LI Yanan, SHAN Hongbo, et al. The mediation effect of college students' anxiety between mobile phone dependence and core self-evaluation (Chinese). Chinese Journal of Mental Health. 2018;32:700-704.
26. Yizhuo S. Study on the relationship between social status, self-esteem, negative evaluation fear and social anxiety among high school students (Chinese). 2015.
27. ZHOU Yang CJ, ZHANG Hui, WANG Pai, et al. The impact of core self-evaluation on cognitive failure: the mediating role of boredom tendency (Chinese). Chinese Journal of Clinical Psychology. 2017;25:132-137.
28. ZENG Hong LG, WEN Haiying, HUANG Wengeng. The relationship between implicit truancy and personality characteristics and core self-evaluation among college students (Chinese). School Health in China. 2011;32:793-794+799.
29. Tang Q, He X, Zhang L, et al. Effects of Neuroticism on Differences in Symptom Structure of Life Satisfaction and Depression-Anxiety among College Students: A Network Analysis. Behavioral Sciences. 2023;13.
30. de FPHB, Lúcia MA, Silva RIKd, et al. Symptoms of depression, anxiety and stress in health students and impact on quality of life. Revista latino-americana de enfermagem. 2023;31:e3884-e3884.
31. SONG Yijia ZJ, ZHANG Jinfeng. Civil servants' mental health and its relationship with social stress, job burnout and life satisfaction (Chinese). Chinese Journal of Mental Health. 2014;28:288-292.
32. Haixia G. Current status and improvement strategies of mental health education among college students (Chinese). Chinese Journal of Multimedia and Network Teaching (China). 2024;03:170-173.
33. Su T, Guo X, Liu M, et al. Better forbearance, lower depression: Evidence based on heart rate variability. Front Psychol. 2022;13:1019402.