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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии
საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

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

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

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

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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STRATEGIC QUALITY MANAGEMENT OF PROCESSES IN NURSING SERVICES WITHIN INTERNAL AND GENERAL MEDICINE UNITS FOR A SUSTAINABLE FUTURE IN HEALTH SYSTEMS

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Abstract.

Objective of the study: The study focuses on the importance of quality nursing care in internal medicine, especially for patient recovery in complex cases. Variability in nursing practices can lead to inconsistent outcomes, and Evidence-Based Practice (EBP) is suggested as a strategy to standardize care and improve quality of service. The study evaluates the quality of nursing care in the province of Tungurahua, Ecuador from the perspectives of nurses and patients. **Materials and Methods:** Using the SERVQUAL model, the study evaluates the quality of nursing services through surveys focused on dimensions such as tangibility, reliability, responsiveness, safety, and empathy. The HS-EBP questionnaire was adapted to measure EBP among nurses. The study included 137 patients and 12 nurses from the Internal and General Medicine Service. **Results:** A moderate positive correlation was found between nursing education and perceived quality of service ($r = 0.430$), and between the use of research and perceived reliability of care ($r = 0.405$). However, there are barriers to the systematic application of EBP, and the study emphasizes the need to focus on both technical evaluation and empathy to improve service quality. **Conclusions:** The integration of EBP is essential to improve the quality of nursing care in internal and general medicine, but it is also important to address the organizational and interpersonal factors that affect patients' perceptions. A holistic approach that combines professional development, evidence-based practices, and patient-centered care is recommended to improve standards in internal medicine.

Key words. Nursing care, evidence-based Practice, quality, SERVQUAL model, patient care, internal medicine.

Introduction.

The quality of nursing care in internal medicine services is critical to ensuring patient recovery and well-being, especially in settings with complex pathologies and multiple comorbidities [1]. A recurring challenge in these settings is the high variability of care, which is influenced by factors such as individual nurse experience, resource availability, and specific hospital conditions [2]. This lack of standardization leads to variations in care that can significantly affect health outcomes, negatively impacting both patient recovery and healthcare system efficiency [3-10].

Evidence-based practice (EBP) is emerging as a key strategy to address this variability and improve the quality of care. EBP integrates the best available scientific evidence with clinical experience and patient preferences and aims to standardize care interventions through research-based protocols and guidelines, thereby reducing subjectivity in decision-making and promoting

consistent outcomes [11,12]. Studies show that implementation of EBP significantly reduces complication rates, improves recovery times, and optimizes resource use [13]. In internal medicine, the adoption of EBP is particularly important for managing complex patient needs and ensuring high standards of care [14,15].

Interpersonal relationships in healthcare are also critical to ensuring a positive patient experience and clinical success. Empathic and effective interactions with patients can increase trust and adherence by 30% [16-20]. However, poor communication and interpersonal relationships, even in settings with high technical standards, can negatively impact perceived quality of service. An analysis of 25 Latin American hospitals found that in facilities where interpersonal relationships were not prioritized, patient satisfaction decreased by 40%, despite advanced technology and effective procedures [19,20]. This underscores the importance of combining technical competence with empathy, particularly in communities with limited capacity to evaluate service quality, which directly influences user satisfaction [18].

In Ecuador, the quality of health services is a major focus of public policy to ensure equitable, accessible, and efficient health care [21-34]. The National Directorate of Health Services Quality, part of the Ministry of Public Health (MSP), oversees compliance with national and international standards to ensure patient safety and efficiency in clinical and administrative processes [10,22].

The objective of this study was to evaluate the quality of nursing services with which people leave the different institutes that provide continuous training services in Internal and General Medicine in the province of Tungurahua, Ecuador, from the perspective of both nursing staff and patients. Using the SERVQUAL model, which measures discrepancies between service expectations and perceptions in key dimensions such as tangibility, empathy, reliability, safety, and responsiveness, the results will provide valuable insights for continuous improvement and the development of strategies to optimize care in the local context.

Literature Review.

The SERVQUAL model, developed by Parasuraman et al. in 1988, is an essential tool for evaluating service quality in various sectors, including the health sector [23]. This model addresses service quality through five critical dimensions: tangibility, reliability, responsiveness, security and empathy. Recently, the relevance of SERVQUAL in the health field has gained significant importance, particularly in aspects related to

improving patient satisfaction and evaluating the performance of medical services, evidencing a continuous evolution in its practical and theoretical application [24].

In more recent literature, Willie [25] highlights how the specific environment of hospitals requires an adaptation of the SERVQUAL model to achieve scores that accurately reflect patients' expectations and perceptions. Willie argues that the dimensions of tangibility and safety are particularly critical to patient perceptions, especially in hospitals where expectations are inherently high due to the sensitivity of the services provided. This study suggests that the adaptation of the model to the specificities of the hospital environment is fundamental for its effectiveness and relevance in contemporary studies of service quality assessment [25].

On the other hand, the research by Naveed et al. [26] extends the SERVQUAL analysis to more specialized contexts, such as private clinics. The study proposes that specific modifications to the original model are necessary to adapt it to primary care and emergency services settings, where patient expectations and perceptions can vary considerably. Naveed et al.'s findings emphasize the flexibility and adaptability of SERVQUAL, underlining that methodological adaptations are essential to adequately capture perceived quality in different healthcare contexts [26].

These studies, both in Greece and Jordan, demonstrate the versatility and effectiveness of the SERVQUAL model to analyze and improve the quality of services in the health field. The personalization of care, adapted to the specific needs and expectations of patients, emerges as a crucial element to close the gap between the expected and perceived quality of service. The implementation of strategies that encourage effective communication and rapid response to patient needs not only improves satisfaction, but also raises the overall perception of the quality of hospital service [27-29].

In addition, adapting standards of care based on patients' prior experience, as seen in the context of intrapartum care in Jordan, suggests an important area of study for future research [30,35]. Further investigating how different prior experiences affect patients' expectations and perceptions could guide the development of more effective and compassionate protocols in treatment and care.

The studies highlight the importance of adapting the SERVQUAL model to the specific expectations of patients in the healthcare field and highlight the need for strategies that improve communication and responsiveness to patients' needs to improve both service quality and patient satisfaction. In-depth analysis of these dimensions allows medical practices to adapt to the changing dynamics of each context, as evidenced in intrapartum care, where preparing staff to address the specific concerns of first-time patients can positively influence perceptions of quality [36-38].

Case study.

The target population of this study is made up of patients who received care in the Internal and General Medicine Service by students who passed and applied their knowledge within the province during the period from January to April 2020, as well as nursing personnel who worked in said service during the same

period. Given the volume of patients treated, a representative sample of 137 patients was selected by simple random sampling, ensuring a confidence level of 95% and a margin of error of 5%. This method ensured the representativeness of the sample with respect to the total population of patients treated.

On the other hand, due to the small number of nurses, it was decided to work with the entire population of 12 nurses who were active in the service during the period studied. The inclusion of all nurses in the study was a crucial decision to obtain a complete view of the perceptions and experiences of the health team, especially given their fundamental role in the quality of the service provided to patients.

Methodology.

The methodology of this study involves a review of the existing literature on the SERVQUAL method as a tool to improve the quality of medical services. SERVQUAL, developed by Parasuraman in 1988, is recognized as an effective model for measuring the gap between user expectations and perceptions in various service settings, including healthcare [17,18]. The review focused on publications from 2018 to 2024, using academic databases such as PubMed, Scopus, and Google Scholar, as well as peer-reviewed journals such as the Journal of Healthcare Quality, International Journal of Health Care Quality Assurance, and Health Services Research. Boolean operators were used to create specific search strings to ensure complete and up-to-date coverage of the topic.

In addition to the bibliographic review, structured surveys were carried out with both nurses and patients who provided the Internal and General Medicine Services after the end of the training in the province of Tungurahua. The target population consisted of 16 nurses and 1,000 patients. Using simple random sampling, a representative sample of 278 patients was initially selected, but the final sample size was reduced to 250 due to willingness to participate. All 16 nurses participated in the study. The surveys, based on the SERVQUAL model, used a validated questionnaire to assess the quality of service in terms of tangibility, reliability, responsiveness, safety and empathy.

Instrument.

To evaluate the adoption of evidence-based practices (EBPs) in the internal medicine service of the Alfredo Noboa Montenegro Hospital, the Health Sciences-Evidence Based Practice (HS-EBP) questionnaire, developed by Juan Carlos Fernández-Domínguez et al., was used. The questionnaire was modified to suit the specific needs of the study, reducing it to 17 questions distributed in five key sections: Growth and Empowerment (CREAC), Outcomes (RESULT), Practice (PRAC), Evaluation (EVAL), and Barrier Factors (BARFAC).

In addition, a Likert scale from 1 to 5 was used for all items, where participants evaluated their degree of agreement with the statements presented, with 1 being "strongly disagree" and 5 "strongly agree". A higher score reflects a greater degree of alignment with evidence-based practices, facilitating a clear and quantitative interpretation of the results.

On the other hand, the SERVQUAL model of the study "SERVQUAL: A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality", developed by the authors

Parasuraman, A., Zeithaml, Valarie A., and Berry, Leonard L., was used for patients. This model has been adapted and reduced to 15 key questions, maintaining its focus on the most critical aspects of nursing care.

The questionnaire is divided into two main sections: Expectations and Perceptions. In the Expectations section, patients express what they believe should characterize a quality nursing service, while in the Perceptions section, they evaluate how they really perceive the service received. Each statement is scored using a 7-point Likert scale, where 1 means "Strongly disagree" and 7 means "Strongly agree." This structure allows us to measure the intensity of patients' opinions on each aspect evaluated. By comparing the responses of both sections, gaps in service quality can be identified, providing valuable insights for continuous improvement.

Results and Discussion.

An exploratory factor analysis of the data collected from nursing professionals on Evidence-Based Practice (EBP) was performed. The analysis employed the principal component method for factor extraction to identify the underlying dimensions that could explain the observed correlations between the variables. To ensure the suitability of the data for factor analysis, the Bartlett sphericity test and the Kaiser-Meyer-Olkin sampling adequacy index (KMO) were used. Bartlett's test yielded a significant result ($p < 0.05$), confirming that the correlation matrix was not an identity matrix and was appropriate for factor analysis. In addition, the KMO index was greater than 0.6, indicating a sufficient proportion of common variance between the variables to justify the continuation of the analysis.

For factor rotation, a Varimax rotation was applied to simplify the interpretation of the factor structure. The Kaiser criterion (eigenvalues greater than one) and the stony diagram determined the number of factors to be retained. This approach identified seven main components, which explained a substantial percentage of the total variance, demonstrating that the factor model effectively represents the underlying data structure (Figure 1).



Figure 1. Sedimentation plot for determining the number of factors.

In the Internal and General Medicine Service, the majority of nursing staff are young adults (66% under 42 years of age) and predominantly women (91.67%). About 66.67% have a fourth-level degree and half have up to 10 years of experience that

through training they continued to improve their knowledge. While 50% claim to apply Evidence-Based Practice (EBP), 83.33% recognize its importance for the quality of care, although only 41.67% carry out periodic scientific reviews. In addition, 66.67% prioritize experience over EBP, highlighting the need to improve access to and use of scientific resources in daily practice.

The results of the HS-PBE questionnaire applied to nursing professionals show a varied perception of the application of Evidence-Based Practice (EBP) in five key areas: Growth and Training (CREAC), Outcomes (RESULT), Practice (PRAC), Evaluation (EVAL) and Barrier Factors (BARFAC). In the Growth and Training section (P1-P4), the averages between 3.17 and 3.50, with modes of 3 and 5, reflect that some professionals feel prepared to apply EBP, while others face barriers, possibly due to the lack of continuous training. This indicates the need to improve access to educational resources.

Regarding the Results (P5-P8), the means between 2.58 and 3.42, with modes in 1, 2 and 4, reveal an uneven adoption of the PBE. Although some professionals value scientific updating, others have difficulties in incorporating this evidence in a systematic way, suggesting personal and organizational barriers that limit its application.

In practice (P9-P11), the means between 2.42 and 3.50, with modes of 1 and 5, show that some professionals integrate research into their daily practice, while others do not do so due to lack of time, resources or specific training in EBP. P9's low average underscores concerns about the ability of some to apply research in their daily work.

In Evaluation (P12-P14), means ranging from 2.17 to 3.33, with modes in 1 and 3, suggest an inconsistent implementation of evaluation practices. While some professionals use objective measures, others still do not do so regularly, highlighting the need to strengthen training and resources in this area.

Finally, in the Barrier Factors (P15-P17), the means between 2.75 and 3.42, with modes at 2, 3 and 5, indicate that there are significant organizational barriers to the implementation of EBP. Many professionals report difficulties in accessing scientific resources and lack of support in their work environment, which underscores the need to improve institutional support to facilitate EBP (Table 1).

Cronbach's alpha analysis, performed to assess the internal consistency of the questionnaire, yielded a value of 0.75, indicating acceptable reliability. This result suggests that the questionnaire items consistently measure the underlying theoretical construct. The item statistics table suggests that most items contribute positively to overall reliability, and it is not recommended to remove any of them. This level of Cronbach's Alpha reinforces the validity of the questionnaire used, indicating that it is an adequate tool to assess the perception and application of Evidence-Based Practice (EBP) among nursing professionals (Table 2).

Similarly, for the SERVQUAL questionnaire, the analysis showed that the adequacy of the sample, as measured by the KMO index, was 0.483, suggesting that the sample is barely sufficient for this type of analysis. Bartlett's sphericity test was not significant, indicating that the correlations between the

Table 1. Descriptive Statistics on Perceptions of Evidence-Based Practice (EBP) – Nursing Process.

No.	PBE Statements	Average	Way	Standard deviation	
CREAC	P1	Regularly uses the results of scientific research to guide their professional practice	3.1667	3	1.33712
	P2	Do you think that EBP improves the quality of nursing care it provides?	3.1667	5	1.64225
	P3	You feel empowered to apply recent research findings in your daily practice.	3.5000	5	1.38170
	P4	Apply EBP in daily clinical decision-making	3.1667	5	1.69670
RESULT	P5	Solve your practice problems by searching for up-to-date scientific results	2.8333	1	1.69670
	P6	It typically uses standardized procedures and tools to assess the quality of scientific literature.	3.4167	4	1.24011
	P7	Assess the relevance of previous research findings to plan future interventions.	3.0833	3	1.37895
	P8	Recognize and manage variables that could influence the interpretation of scientific study results	2.5833	2	1.44338
PRAC	P9	Incorporates the most up-to-date results of scientific research into problem-solving into their daily practice	2.4167	1	1.56428
	P10	Regularly assess whether your interventions are aligned with evidence-based best practices	3.0000	3	1.34840
	P11	Integrate patient preferences, values, and expectations into EBP implementation	3.5000	5	1.73205
EVAL	Pág. 12	Learn about the most commonly used objective measures to evaluate results in your area of work	3.3333	3	1.43548
	P13	Systematically records the results obtained by applying standardized assessment instruments to their patients	3.0833	3	1.24011
	Pág. 14	Evaluate the results of the implementation of their decisions in terms of efficiency and effectiveness	2.1667	1	1.33712
BARFAC	Pág. 15	You have easy access to resources related to scientific evidence in your workplace	3.4167	5	1.62135
	Pág. 16	Feel that your work environment supports the implementation of EBP	2.7500	2	1.42223
	Pág. 17	Do you think that current policies and procedures make it easier to find and apply EBP in your practice?	3.0833	3	1.44338

Table 2. Reliability Measures for the Evidence-Based Nursing Practice Assessment Scale.

Cronbach's alpha	Cronbach's alpha based on standardized items	Number of elements
0.754	0.769	17

Table 3. KMO and Bartlett test for the SERVQUAL Questionnaire.

Kaiser-Meyer-Olkin measure of sampling adequacy		0.483
Bartlett's test of sphericity	Approx. Chi-square	119,897
	gl	105
	Next.	0.152

items are not strong enough to warrant factor analysis. Despite these challenges, factor extraction was carried out using the Principal Components method, identifying up to eight factors that together explain a considerable percentage of the total variance (Table 3).

The results of the analysis of the responses to the SERVQUAL questionnaire reflect a generally positive perception of nursing services, although key areas in which improvement is needed have been identified, especially in terms of consistency, accessibility and personalization of care.

In the dimension of tangibility, the questions showed that the majority of respondents consider that the facilities are well

maintained (mean 5.45 in P1) and that the appearance of the staff is adequate (mean 5.20 in P2). However, 24.8% of respondents were neutral or slightly in agreement with these statements, suggesting that some patients may be perceiving the need for improvements in these areas.

In the Reliability dimension, although patients showed confidence in the competence of the nursing staff, the results indicate some variability in perceptions. With an average of 5.08 in P5 and 5.12 in P6, and 29.9% neutral responses, it is clear that not all patients have full confidence in the consistency of the service, which could be reflected in their overall experience of care. This relates to the overall perception that care is good

Table 4. Descriptive statistics of the SERVQUAL questionnaire for the evaluation of the quality of nursing service.

No.	SERVQUAL Judgments		Average	Way	Standard deviation
Tangibility	P1	Were nursing equipment and facilities up-to-date and well-maintained?	5.4526	6	1.07081
	P2	Was the appearance of the facility and nursing staff appropriate and professional?	5.2044	6	1.27843
	P3	Do you think that the operating hours of the nursing service were convenient?	5.1387	5	1.24960
Reliability	P4	Did the nursing staff meet the promised times for treatments and care?	5.1387	6	1.27869
	P5	Were you able to rely on the competence of the nursing staff to take proper care of your health?	5.0584	4	1.33816
	P6	Was the level of service provided by the nursing staff consistent?	5.1241	5	1.25701
Answer	P7	Did the nursing staff respond quickly to your needs and requests?	5.6131	6	1.08633
	P8	Did you have easy access to the nurse when you needed it?	5.5182	5	1.18206
	P9	Did the nursing staff address their concerns in a careful and reassuring manner?	5.4599	5	1.18206
Safetyad	P10	Did the nursing staff handle your health information and status confidentially and securely?	5.1022	5	1.32446
	P11	Did you feel confident with the care you received from the nursing staff?	5.0949	5	1.21197
Empathya	Pág. 12	Did you receive personalized and understanding treatment from the nursing staff?	5.5401	5	1.04329
	P13	Did nurses demonstrate awareness and consideration of their specific needs?	5.4891	5	1.18270
	Pág. 14	Did you feel treated with courtesy and respect by the nursing staff?	5.5766	6	1.17400
	Pág. 15	Do you think the nurse had your best interests in mind during your care?	5.5401	6	1.13769

(80%) but not excellent (20%), indicating a significant area for improvement.

Responsiveness, assessed with questions about the speed and accessibility of staff, yielded positive results (average of 5.61 in P7), but 22.6% of respondents remain neutral or disagree with the speed of response. This coincides with what has been observed in the research, which highlights that despite the fact that 85% of patients consider that the nursing team's decision-making is good, there is concern about excessive dependence on medical staff, which could be affecting the efficiency of care.

Regarding Security, the results show that patients perceive an adequate management of the confidentiality and security of their information (mean 5.10 in P10), although a significant percentage of respondents (26.3% neutral) suggest that this is an area that could benefit from greater attention. This perception of safety is crucial, as it is directly related to patients' confidence in the care received, which was highlighted by 80% of patients who positively valued the ability of the staff to handle materials and instruments, but also mentioned problems of accessibility and clarity of information.

Finally, in the Empathy dimension, although high levels of agreement are observed that patients receive personalized and understanding treatment (mean 5.54 in P12), the general perception that the treatment is only "good" (80%) and not "excellent" (15%) indicates that there is room for improvement in the way nursing staff show empathy and consideration

towards patients. This is consistent with the need, mentioned in several studies, to foster an organizational culture that values respect and empathy, factors that are closely related to patient satisfaction and their overall experience in the hospital (Table 4).

A correlation analysis was performed to explore the relationship between the implementation of Evidence-Based Practice (EBP) by nursing staff and the perception of the quality of the service provided. In this analysis, the dimensions of the EBP questionnaire were considered as an independent variable, reflecting how nurses applied EBP in their daily practice. On the other hand, the dimensions of the SERVQUAL questionnaire were taken as a dependent variable, representing the patients' perception of the quality of the nursing service.

The analysis examined the relationship between various dimensions of Evidence-Based Practice (EBP) and aspects of service quality using SERVQUAL. Specifically, the CREAC (PBE) was correlated with Tangibility (SERVQUAL) to assess how staff training influenced perceptions of physical service quality; OUTCOME (PBE) with Reliability (SERVQUAL) to assess the impact of research results on perceived reliability; Responsive PRAC (PBE) (SERVQUAL) to measure the effect of EBP on staff responsiveness; EVAL (PBE) with Safety (SERVQUAL) to determine whether better assessment influenced perceptions of safety; and BARFAC (PBE) with Empathy (SERVQUAL) to explore how organizational barriers impacted perceptions of empathy.

The correlation between the CREAC (Growth and Training of the PBE) and the Tangibility (SERVQUAL) showed a moderate and positive Pearson correlation coefficient of 0.430, suggesting that greater perceptions about staff training are associated with a better physical quality of nursing services. However, the significance value of the correlation was 0.163, above the threshold of 0.05, indicating that this correlation is not statistically significant with the 95% confidence level. Therefore, while there is a positive trend, it cannot be confirmed that it is consistent or not due to chance. The covariance of 0.311 further supports the positive relationship, but offers less interpretive clarity compared to the correlation coefficient (Table 5).

Table 5. Correlation between the Growth and Training Dimension (CREAC) of the PBE and Tangibility of SERVQUAL.

Variables	Pearson coefficient	Significance (p-value)	N (Sample)
CREAC - Tangibility	0.430	0.163	12

The correlation between the dimensions "RESULT" of the PBE questionnaire and "Reliability" of the SERVQUAL questionnaire was calculated using Pearson's correlation coefficient. The results show a correlation coefficient of 0.405, indicating a moderately positive relationship between the two dimensions. However, the significance (p-value) is 0.192, suggesting that this correlation is not statistically significant at the conventional level of 0.05. This implies that, although there seems to be a tendency that a better use of research results (RESULT) may be related to a greater perception of reliability of the nursing service (Reliability), this relationship is not strong enough to be conclusive in this sample. The sample size for "RESULT" was 12 and for "Reliability" was 137 (Table 6).

Table 6. Correlation between RESULT (PBE) and Reliability (SERVQUAL).

Variables	Pearson coefficient	Significance (p-value)	N (Sample)
RESULT -Reliability	0.405	0.192	12

The correlation between the "PRAC" dimensions of the EBP questionnaire and the "Responsiveness" dimensions of the SERVQUAL questionnaire shows a Pearson coefficient of 0.309, indicating a weak positive correlation between the two variables. The significance value (p-value) is 0.328, suggesting that this correlation is not statistically significant with a 95% confidence level. This implies that there is not enough evidence to affirm that there is a significant relationship between evidence-based practice and the perception of responsiveness in the quality of nursing services. The sample size used for this correlation is 12 responses for EBP and 137 responses for SERVQUAL (Table 7).

The correlation between the "VAS" dimensions of the PBE questionnaire and "Empathy" of the SERVQUAL questionnaire shows a Pearson coefficient of -0.158, indicating a very weak negative correlation between these two variables. The

significance value (p-value) is 0.625, suggesting that this correlation is not statistically significant with a 95% confidence level. Therefore, there is not enough evidence to conclude that there is a significant relationship between the evaluative capacity of evidence-based practice and the perception of empathy in nursing care. The sample size used for this correlation is 12 responses for EBP and 137 responses for SERVQUAL (Table 8).

Table 7. Correlation between the Practice Dimension (PRAC) of the EBP and the Response Capacity of SERVQUAL.

Variables	Pearson coefficient	Significance (p-value)	N (Sample)
PRAC - Responsiveness	0.309	0.328	12

Table 8. Correlation between the Assessment Dimension (EVAL) of the EBP and the Empathy of SERVQUAL.

Variables	Pearson coefficient	Significance (p-value)	N (Sample)
EVAL - Empathy	-0.158	0.625	12

Conclusion.

The conclusions of this study highlight the importance of evaluating the quality of nursing processes, considering both the perspective of nursing professionals and the perception of patients. Evidence-Based Practice (EBP) stands out as an essential approach to standardize care and reduce variability in an environment that serves patients with high complexity and multiple comorbidities. Through the EBP and SERVQUAL questionnaires, we explore how the implementation of evidence-based practices by nursing staff can influence the perception of the quality of the service provided.

Correlation analyses between the dimensions of both questionnaires revealed positive, albeit moderate, relationships that provide relevant information on the quality of nursing care. A positive correlation was found between the Growth and Training dimension of the PBE and the Tangibility of SERVQUAL, suggesting that the strengthening of staff competencies improves the perception of the physical quality of the service. Likewise, a positive correlation was observed between the results of the EBP research and the perceived reliability of the service, indicating that a greater focus on evidence-based practice may be related to a perception of greater reliability in the care received.

Taken together, these findings highlight the relevance of integrating EBP into nursing practice to improve quality of care and patient perception. Although strengthening EBP is crucial, the results suggest that other interpersonal and organizational factors should also be considered to achieve a holistic improvement in the quality of nursing care. A holistic approach that combines professional development, the implementation of evidence-based practices and patient-centered care is key to raising quality standards in the internal medicine service.

Author Contribution:

All authors contributed significantly to the work. Mariela Isabel Gaibor-González, Shirley Viviana Zapata Romero,

Rafael Alejandro Sánchez Macías and César Maldonado participated in the conceptualization, curation of data, formal analysis and methodology. Gaibor-Gonzalez and Zapata Romero led funding and project management, while Sanchez Macias and Maldonado were in charge of resource acquisition and software development. All contributed equally to the supervision, validation, visualization, and writing of the original manuscript, and also participated in critical review, editing, and final approval. All authors approve the final version and assume responsibility for the accuracy and completeness of the work.

Conflict of Interest:

The authors declare that there is no conflict of interest.

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Цель исследования: Исследование посвящено важности качественного сестринского ухода во внутренней медицине, особенно для восстановления пациентов в сложных случаях. Вариабельность сестринской практики может привести к несовместимым результатам, поэтому в качестве стратегии стандартизации ухода и повышения качества услуг предлагается использовать доказательную практику (Evidence-Based Practice - EBP). В данном исследовании оценивается качество сестринского ухода в провинции Тунгурахауа (Эквадор) с точки зрения медсестер и пациентов.

Материалы и методы: Используя модель SERVQUAL, исследование оценивает качество сестринских услуг с помощью опросов, сосредоточенных на

таких параметрах, как осязаемость, надежность, отзывчивость, безопасность и эмпатия. Анкета HS-EBP была адаптирована для оценки EBP среди медсестер. В исследовании приняли участие 137 пациентов и 12 медсестер из службы внутренней и общей медицины.

Результаты: Была обнаружена умеренная положительная корреляция между образованием медсестер и воспринимаемым качеством обслуживания ($r = 0,430$), а также между использованием научных исследований и воспринимаемой надежностью ухода ($r = 0,405$). Однако существуют препятствия для систематического применения EBP, и исследование подчеркивает необходимость сосредоточиться как на технической оценке, так и на сопереживании для повышения качества обслуживания.

Выводы: Интеграция EBP необходима для повышения качества сестринского ухода в области внутренней и общей медицины, но также важно учитывать организационные и межличностные факторы, которые влияют на восприятие пациентов. Для улучшения стандартов в области внутренней медицины рекомендуется использовать целостный подход, сочетающий профессиональное развитие, научно обоснованную практику и уход, ориентированный на пациента.

Ключевые слова: Сестринский уход, доказательная практика, качество, модель SERVQUAL, уход за пациентами, внутренняя медицина.

რეზიუმე:

კვლევის მიზანი: კვლევა ყურადღებას ამახვილებს ხარისხიანი საექტონო მოვლის მნიშვნელობაზე შინაგან მედიცინაში, განსაკუთრებით რთულ შემთხვევებში პაციენტის გამოჯანმრთელების მიზნით. საექტონო პრაქტიკაში ცვალებადობამ შეიძლება გამოიწვიოს არათანმიმდევრული შედეგები და მტკიცებულებებზე დაფუძნებული პრაქტიკა (EBP) არის შემოთავაზებული, როგორც სტრატეგია ზრუნვის სტანდარტიზებისა და მომსახურების ხარისხის გასაუმჯობესებლად. კვლევა აფასებს საექტონო მოვლის ხარისხს ტუნგურახუას პროვინციაში, ეკვადორი ექტონებისა და პაციენტების პერსპექტივიდან. მასალები და მეთოდები: SERVQUAL მოდელის გამოყენებით, კვლევა აფასებს საექტონო მომსახურების ხარისხს გამოკითხვების საშუალებით, რომლებიც ფოკუსირებულია განზომილებებზე, როგორცაა ხელშესახებობა, სანდობა, რეაგირება, უსაფრთხოება და თანაგრძობა. HS-EBP კითხვარი ადაპტირებული იყო ექტთა შორის EBP-ის გასაზომად. კვლევაში მონაწილეობდა 137 პაციენტი და 12 ექტანი შინაგანი და ზოგადი მედიცინის სამსახურიდან. შედეგები: ზომიერი დადებითი კორელაცია დაფიქსირდა საექტონო განათლებასა და მომსახურების ხარისხს ($r = 0,430$) და კვლევის გამოყენებასა და ზრუნვის აღქმულ სანდობას შორის ($r = 0,405$). თუმცა, არსებობს ბარიერები EBP-ის სისტემურ გამოყენებასთან დაკავშირებით და კვლევა ხაზს უსვამს როგორც ტექნიკურ შეფასებაზე, ასევე თანაგრძობაზე ფოკუსირების აუცილებლობას მომსახურების ხარისხის გასაუმჯობესებლად.

დასკვნები: EBP-ის ინტეგრაცია აუცილებელია შიდა და ზოგად მედიცინაში საექთნო მოვლის ხარისხის გასაუმჯობესებლად, მაგრამ ასევე მნიშვნელოვანია ორგანიზაციული და ინტერპერსონალური ფაქტორების გათვალისწინება, რომლებიც გავლენას ახდენენ პაციენტების აღქმაზე. შიდა მედიცინის სტანდარტების გასაუმჯობესებლად რეკომენდებულია ჰოლისტიკური

მიდგომა, რომელიც აერთიანებს პროფესიულ განვითარებას, მტკიცებულებებზე დაფუძნებულ პრაქტიკას და პაციენტზე ორიენტირებულ ზრუნვას.

საკვანძო სიტყვები: საექთნო დახმარება, მტკიცებულებებზე დაფუძნებული პრაქტიკა, ხარისხი, SERVQUAL მოდელი, პაციენტის მოვლა, შინაგანი მედიცინა