Title page

Study of effective methods for measuring population satisfaction with health services for implementation in Kazakhstan

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Қазақстанда енгізу үшін халықтың денсаулық сақтау қызметтеріне қанағаттануын өлшеудің тиімді әдістемелерін зерделеу

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Изучение эффективных методик измерения удовлетворенности населения услугами здравоохранения для внедрения в Казахстане

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Study of effective methods for measuring population satisfaction with health services for implementation in Kazakhstan

Abstract / Key messages

The need for standardized and validated methods for evaluating patient satisfaction within Kazakhstan's healthcare system represents a significant obstacle to enhancing service quality. The existing methodologies are inconsistent, limiting their effectiveness for national and international comparisons. This brief draws upon systematic reviews and global best practices to present actionable recommendations for establishing reliable and culturally appropriate approaches to measuring patient satisfaction.

Policy options

1. **Adopt Validated Questionnaires.** Use globally recognized tools and adapt them to Kazakhstan's specific cultural and linguistic contexts to enhance reliability and comparability.
2. **Incorporate Mixed-Methods Approaches.** Integrate quantitative surveys with qualitative methods like focus groups and interviews to capture comprehensive patient experiences.
3. **Develop a Centralized Data Platform.** Establish a national system to standardize data collection, enabling real-time monitoring and regional comparisons.

Vision on the implementation of policy options

The proposed framework will enable Kazakhstan to align its healthcare evaluation practices with international standards, fostering patient-centered care and driving continuous quality improvements.

Keywords: Healthcare Quality Indicators, Patient Satisfaction, Questionnaires, Mixed-Methods Research, Kazakhstan, Healthcare Evaluation Mechanisms, Centralized Data Systems, Cross-Cultural Adaptation, Policy Implementation in Healthcare.

Изучение эффективных методик измерения удовлетворенности населения услугами здравоохранения для внедрения в Казахстане

Аннотация / Основные тезисы

Отсутствие стандартизированных и валидированных методов оценки удовлетворенности пациентов в системе здравоохранения Казахстана является значительным препятствием для повышения качества услуг. Существующие методологии не согласованы, что ограничивает их эффективность как на национальном, так и на международном уровне. В этом обзоре, опираясь на систематические исследования и мировые лучшие практики, представлены практические рекомендации по созданию надежных и культурно адаптированных подходов к измерению удовлетворенности пациентов.

Варианты политики

1. **Использование валидированных анкет.** Применение глобально признанных инструментов с их адаптацией к культурным и языковым особенностям Казахстана для повышения надежности и сопоставимости данных.
2. **Интеграция смешанных методов.** Комбинирование количественных опросов с качественными методами, такими как фокус-группы и интервью, для получения более полного представления об опыте пациентов.
3. **Создание централизованной платформы данных.** Формирование национальной системы стандартизации сбора данных, что позволит осуществлять мониторинг в реальном времени и проводить региональные сравнения.

Видение реализации вариантов политики

Предложенная структура позволит Казахстану привести свои практики оценки системы здравоохранения в соответствие с международными стандартами, способствуя ориентированности на пациента и обеспечивая непрерывное повышение качества услуг.

Ключевые слова: Показатели качества здравоохранения, Удовлетворенность пациентов, Анкеты, Смешанные методы исследования, Казахстан, Механизмы оценки здравоохранения, Централизованные системы данных, Кросс-культурная адаптация, Реализация политики в здравоохранении.

Қазақстанда қоғамдық денсаулық сақтау қызметтеріне халықтың қанағаттанушылығын бағалаудың тиімді әдістерін зерттеу қажеттілігі

Аннотация / Негізгі тезистер

Қазақстанның денсаулық сақтау жүйесінде пациенттердің қанағаттанушылығын бағалауға арналған стандартталған және валидацияланған әдістердің болмауы қызмет көрсету сапасын жақсартуға елеулі кедергілер жасауда. Қолданыстағы әдістемелердің келісілмегендігі олардың ұлттық және халықаралық деңгейдегі тиімділігін шектейді. Бұл шолуда жүйелі зерттеулер мен әлемдегі үздік тәжірибелерді ескере отырып, пациенттердің қанағаттанушылығын өлшеуге арналған сенімді және мәдени тұрғыдан бейімделген тәсілдерді әзірлеу бойынша практикалық ұсыныстар ұсынылады.

Саясат опциялары

1. Валидацияланған сауалнамаларды пайдалану. Деректердің сенімділігі мен салыстырмалылығын арттыру мақсатында Қазақстанның мәдени және тілдік ерекшеліктеріне сай бейімделген әлемдік дәрежеде танылған құралдарды, мысалы, patient Satisfaction Questionnaire Short Form (PSC-18) пайдалану.

2. Аралас әдістерді біріктіру. Пациенттердің тәжірибесі туралы толық түсінік алу үшін сандық сауалнамаларды фокус-топтар мен сұхбаттар сияқты сапалы әдістермен біріктіру.

3. Орталықтандырылған деректер платформасын құру. Нақты уақыт режимінде мониторинг жүргізуге және өңірлік салыстырулар жүргізуге мүмкіндік беретін деректерді жинауды стандарттаудың ұлттық жүйесін қалыптастыру.

Саясат нұсқаларын іске асыруды пайымдау

Ұсынылған құрылым Қазақстанда денсаулық сақтау жүйесін бағалау тәжірибесін халықаралық стандарттарға сәйкестендіруге, пациентке бағытталуды дамытуға және қызмет көрсету сапасын тұрақты түрде арттыруды қамтамасыз етуге бағытталған.

Түйінді сөздер: Денсаулық сақтау сапасының көрсеткіштері, пациенттер қанағаттанушылығы, сауалнамалар, зерттеудің аралас әдістері, Қазақстан, денсаулық сақтауды бағалау механизмдері, орталықтандырылған деректер жүйелері, мәдениетаралық бейімделу, денсаулық сақтау саласындағы саясатты жүзеге асыру мәселелері.

Introduction

Evaluating patient satisfaction is central to managing healthcare quality and serves as a key performance indicator worldwide. It signals how well the care provided aligns with patient expectations and indicates how effectively the system meets the community's health needs. Across the globe, this assessment has matured into a routine component of quality control, with numerous countries embedding patient satisfaction measures into their national oversight frameworks. By doing so, they aim to boost transparency, streamline the delivery of services, and ensure that patient-centered care remains at the heart of healthcare improvement efforts.

Studies conducted worldwide, including those by Ferreira D. (2023), emphasize the effectiveness of standardized tools and methodologies in improving healthcare outcomes. Internationally recognized instruments, such as the Patient Satisfaction Questionnaire Short Form (PSQ-18) and SERVQUAL (Service Quality), have enabled healthcare systems in the United States, Canada, and Europe to measure and enhance patient satisfaction systematically. These tools provide data for monitoring trends, identifying gaps, and developing targeted initiatives.

As patient-centered care gains traction worldwide, the role of satisfaction measures grows increasingly important in achieving fair and effective healthcare outcomes. Although recent health reforms in Kazakhstan have aimed at enhancing both the quality and reach of medical services, the integration of patient satisfaction as a vital performance benchmark remains an area that needs further development.

This gap presents an opportunity for Kazakhstan to leverage international best practices, adapt proven tools to its unique cultural and linguistic context, and establish a robust system for continuous improvement. This review outlines a strategy for integrating advanced international practices into Kazakhstan's healthcare system, adapting them to local requirements to facilitate comprehensive data collection and the development of actionable recommendations.

Problem description

Kazakhstan currently lacks a uniform way to measure how patients feel about their healthcare experiences, and this gap makes it tough to gain an accurate overall picture of the system's performance. The methods that are in place are scattered, inconsistent, and often do not lead to meaningful improvements.

Furthermore, existing surveys in Kazakhstan are predominantly focused on quantitative data, which, while helpful in identifying trends, often overlook the nuances of the patient experience. Internationally, mixed-method approaches that combine surveys with qualitative research have proven effective. For instance, in the United Kingdom, integrating interviews and focus groups into patient satisfaction assessments has provided more profound insights into specific patient issues, enabling targeted improvements in service delivery.

Another critical challenge is the need for a centralized data collection and analysis system. Countries such as Finland and Singapore have demonstrated the importance of national healthcare databases integrating patient satisfaction metrics with other performance indicators. These platforms enable real-time monitoring, interregional comparisons, and informed policy-making. In Kazakhstan, the absence of such infrastructure hampers systematic patient satisfaction tracking and makes it difficult to identify regional disparities.

Internationally, established survey tools like HCAHPS, PSQ-18, and SERVQUAL are widely regarded as trustworthy options for evaluating how patients perceive their care. Although these instruments are adaptable, they must be thoughtfully tailored to align with the unique context of Kazakhstan's healthcare environment.

Current challenges include:

1. **Inconsistent methodologies** – Surveys used across medical institutions in Kazakhstan vary significantly, resulting in fragmented data.
2. **Cultural and linguistic barriers** – International tools are not always effectively localized, undermining their reliability.
3. **Data gaps** – The absence of a centralized system limits the ability to analyze trends and implement evidence-based improvements.

Implementing validated tools, establishing methodological consistency, and creating a centralized data system will form the foundation for a more patient-centered and efficient healthcare system.

Contributing Factors

1. **Limited capacity for adaptation** – A lack of expertise in tailoring validated tools to the local context.
2. **Fragmented implementation** – Disparate methodologies result in inconsistent outcomes.
3. **Low integration of qualitative data** – Quantitative surveys fail to capture the nuances of patient experiences.

Policy Options

1. **Adopt Validated Questionnaires**

As Susan B. et al. (2023) highlighted, using proven tools is essential. Adapting validated instruments for use in Kazakhstan involves:

- Translation and cultural adaptation to ensure relevance and clarity.
- Pilot testing to confirm reliability and validity.
- Training healthcare professionals to ensure consistent implementation of the tools.

Description of tools for assessing patient satisfaction with health services

HCAHPS, SERVQUAL, and PSQ-18 are widely recognized and standardized tools. These tools' features are why they are widely used in practice.

The HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) is the first nationally standardized instrument for measuring inpatients' experiences in hospitals. This questionnaire was developed in the United States through a joint effort between the Centers for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ). First introduced in 2005, the HCAHPS includes 29 questions covering key aspects of patient interactions with healthcare providers, hospital environment, level of understanding of post-discharge recommendations, and overall impression of the care provided. The main goal of the tool is to ensure transparency of the health care system and provide data that allow comparative analysis of the quality of services between institutions at the regional and national

levels. The standardization of the method makes it particularly valuable for monitoring quality and developing targeted improvements.

SERVQUAL (Service Quality) was developed in 1988 by researchers Parasuraman, Zeithaml and Berry as a universal tool for measuring service quality. The methodology is based on the concept of the gap between consumers' expectations and their perception of the actual services provided. SERVQUAL assesses five key dimensions: reliability, responsiveness, assurance, empathy and material aspects (physical environment, equipment, comfort). The application of SERVQUAL in healthcare helps identify service weaknesses and take action to address them. Its versatility and flexibility have ensured its popularity in many sectors, including healthcare, where it is important to consider not only medical outcomes but also the subjective feelings of patients.

The PSQ-18 (Patient Satisfaction Questionnaire Short Form) is a shortened version of the original PSQ instrument developed by the RAND Corporation. This questionnaire was created in 1994 as a compact instrument to quickly assess patient satisfaction with the quality of care. The PSQ-18 includes 18 questions that assess seven key aspects of satisfaction: availability of services, competence of medical staff, quality of communication, waiting time, interpersonal aspects, technical quality, and financial aspects. The instrument combines ease of use and validity, making it an ideal choice for studies that require quality data in a short time. Its popularity is due to its adaptability to different contexts and its effectiveness in identifying factors affecting patient satisfaction.

These tools are widely used in healthcare due to their reliability, validity and ability to provide standardized data needed to monitor and improve the quality of services. Each methodology has its own unique characteristics and applications, allowing them to be used either in stand-alone studies or in combination to provide a more comprehensive picture. The choice of the appropriate tool depends on the research objectives, context and needs of a particular health system.

Table 1. Comparative Table of HCAHPS, SERVQUAL, and PSQ-18 Instruments

Tool	HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems)	SERVQUAL (Service Quality)	PSQ-18 (Patient Satisfaction Questionnaire Short Form)
Purpose	Assessment of the experience of inpatient hospital patients	Measurement of service quality through the analysis of expectations and perceptions	Assessment of patient satisfaction with the quality of healthcare services
Developers	CMS и AHRQ	Parasuraman, Zeithaml, Berry	RAND Corporation

Year of development	2005	1988	1994
Number of Questions	29	Varies (5 key dimensions)	18
Key Dimensions	Communication with medical staff, hospital stay conditions, overall experience	Reliability, responsiveness, assurance, empathy, material aspects	General satisfaction, technical quality, accessibility, communication, financial aspects
Scope of Application	Inpatient care	Various services, including healthcare	General healthcare services
Reasons for Popularity	National standardization, transparency, comparison between hospitals	Focus on expectations and perceptions, universal applicability	Compactness, validation, ease of use
Cultural Adaptation	Requires translation and adaptation to the local context	Requires adaptation to cultural specificities	Easily adaptable for different countries
Features	Open access to results for patients and specialists	Focus on the gap between expectations and actual perceptions	Compactness and convenience for research
Main Limitations	May not account for the specifics of outpatient or specialized services	Requires adaptation to the specifics of the service	The shortened version may overlook nuances

This table clearly reflects the key characteristics, strengths and weaknesses of each tool, which allows you to choose the most appropriate one for certain purposes in the health care system of Kazakhstan.

Application of HCAHPS, SERVQUAL and PSQ-18 tools in scientific research

1. HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems)

Research Example: In "Patient Experience and HCAHPS at Essential Hospitals" (Clark, D., 2019), the author reviews HCAHPS data gathered from multiple healthcare facilities. The findings indicate that this survey tool effectively pinpoints differences in how patients perceive their care, thereby offering essential insights that can guide efforts to enhance service quality.

2. SERVQUAL

Case Study Example: In the study "Experience with SERVQUAL in Measuring Patient Satisfaction with Quality of Health Care Services" (Danilov, A., et al., 2021), researchers employed SERVQUAL within a hospital setting. Their results revealed that the instrument clearly highlighted discrepancies between what patients anticipated and what they actually experienced. This information became a valuable resource for directing initiatives aimed at improving service delivery.

3. PSQ-18 (Patient Satisfaction Questionnaire Short Form)

Case Study Example: In the article "The Patient Satisfaction Questionnaire Short Form (PSQ-18) as an Adaptable, reliable, and Validated Tool for Use in Various Settings" (Thayaparan A. et al., 2013), the PSQ-18 was implemented to evaluate patient satisfaction in multiple healthcare contexts. The researchers confirmed that the tool is both trustworthy and valid, reinforcing its suitability for a wide range of environments.

Overall, the studies mentioned highlight that HCAHPS, SERVQUAL, and PSQ-18 have each proven effective at gauging patient satisfaction. By generating dependable data, these instruments support efforts to enhance the overall quality of healthcare services.

2. Incorporate Mixed-Methods Approaches

Ferreira et al. (2023) emphasize the value of combining quantitative and qualitative methodologies. Key steps include:

- Conducting large-scale surveys to identify general trends.
- Using interviews and focus groups to gather deeper insights into patient experiences.
- Data triangulation to provide a comprehensive understanding of patient satisfaction.

Qualitative methods for assessing population satisfaction with health care services

Qualitative research methods offer unique opportunities to delve deeply into patients' experiences and understand their perceptions of health care services. Unlike quantitative surveys that focus on numerical indicators, qualitative approaches can reveal emotional, behavioral, and social aspects of patients' interactions with the health care system. In the context of Kazakhstan, where cultural and regional differences can significantly influence patients' experiences, the use of qualitative methods becomes particularly relevant.

One of the most effective methods is in-depth interviews, which provide detailed information about individual patient experiences. Such interviews help to explore specific instances of dissatisfaction or, conversely, high praise for services, enabling the identification of hidden problems and key patient expectations To conduct successful interviews, it's essential to

recognize and respect the cultural and language backgrounds of the participants. Interviewers need more than just strong questioning skills—they must also cultivate an atmosphere of trust and openness that encourages participants to speak candidly.

Focus groups represent another method that allows collecting opinions from several participants simultaneously. This approach is particularly effective for identifying common problems and discussing suggestions for improving service quality. Participants in focus groups can exchange their impressions, which stimulates deeper discussion.

However, ensuring that focus group sessions run smoothly involves more than just bringing participants together. An experienced moderator is essential, someone who can keep the conversation on track, encourage everyone to contribute equally, and prevent any single individual from dominating the discussion. Moreover, selecting participants who share certain characteristics—such as being the same age, having a similar gender identity, or having used the same types of services—can make the information collected more directly applicable and valuable. Observation is a unique method that allows studying real interactions between patients and medical staff in natural conditions.

This approach provides an opportunity to capture not only verbal but also non-verbal aspects of interaction, which is important for evaluating service quality. However, for successful application of observation, ethical aspects such as ensuring confidentiality and obtaining informed consent from participants must be taken into account. Observers must be trained to objectively record data, avoiding bias.

Analyzing patient complaints and suggestions provides another useful avenue for pinpointing the most pressing shortcomings in the healthcare system. These grievances often come with detailed accounts of dissatisfaction, making them a rich source of insights into underlying, systemic issues. By regularly reviewing such feedback, healthcare providers can address problems as they arise while also identifying broader patterns that call for more strategic, long-term solutions.

The application of qualitative methods in Kazakhstan requires adaptation to local conditions. This includes training researchers and moderators, developing guidelines for conducting interviews and focus groups, and creating a unified system for data analysis. Additionally, pilot projects in various regions of the country can help identify the specifics of how medical services are perceived and optimize the methods for their evaluation.

Thus, qualitative research methods provide a deeper understanding of population satisfaction with healthcare services. Their application, combined with quantitative approaches, can offer a comprehensive view of the state of the healthcare system, which, in turn, contributes to the development of effective strategies for its improvement.

3. Development of a Centralized Data Platform

A centralized system, as recommended in both studies, would:

- Standardize data collection processes across institutions and regions.
- Enable cross-regional and demographic analyses to identify disparities.
- Serve as a foundation for longitudinal studies to monitor trends and track improvements over time.

Establishing a unified data platform is a key strategic move in creating a patient-centered, modern healthcare infrastructure. Having a centralized system for gathering and evaluating

information helps standardize procedures and ensures that results can be effectively compared across different regions and medical facilities. Furthermore, such a system provides a foundation for long-term research necessary for monitoring changes and implementing effective solutions.

The implementation of centralized data platforms has already proven effective in several countries with advanced healthcare systems. For example, in Finland, the national healthcare data platform integrates information on patient experiences, treatment outcomes, and service satisfaction. This system enables interregional analysis, identifies disparities in service quality, and supports evidence-based decision-making to improve services. The Finnish model is also actively used for long-term research aimed at assessing the impact of reforms on patient satisfaction levels.

Singapore offers another example of the successful implementation of a centralized platform. The national healthcare monitoring system consolidates data drawn from various medical providers, such as hospitals, clinics, and specialized facilities. One of its core strengths lies in its ability to assess patient experiences. This not only helps determine current satisfaction levels but also allows for tracking how patients' views change over time. Insights gleaned from this system guide decision-making at both the individual institution and broader government levels, informing policies designed to enhance the overall quality and reach of healthcare services.

In the United Kingdom, the National Health Service (NHS) relies on the Friends and Family Test to gather ongoing input from patients. After collecting this feedback, health authorities carefully analyze it to see how well care is being delivered, identify where changes might be needed, and make improvements as quickly as possible. The positive impact of this approach has shown that consolidating patient insights in one place not only drives up service quality but also reinforces the public's trust in the healthcare system.

In Kazakhstan, where regional and demographic differences can heavily influence both the availability and quality of healthcare, establishing a centralized data platform is especially important. A unified data collection system will enable standardized assessment methods, ensuring comparability of results across the country. This, in turn, will create conditions for identifying regional disparities and developing targeted strategies to address them.

In addition, such a centralized platform would support long-term research efforts. Rather than offering just a snapshot of current conditions, it allows for monitoring how things change as new policies and improvements roll out. In a setting where healthcare reforms are underway, tracking these shifts is essential. By examining emerging trends and seeing how well certain initiatives work in practice, decision-makers can refine their strategies, ensuring that modernization efforts produce the desired results.

Thus, the implementation of a centralized data platform is not only necessary but also a feasible solution for Kazakhstan. The examples of Finland, Singapore, and the United Kingdom demonstrate that such systems form the basis for enhancing transparency, accessibility, and quality in healthcare services. The realization of this initiative will allow Kazakhstan to improve monitoring of population satisfaction.

Vision on the Implementation of Policy Options
Potential Barriers

1. **Resistance to change** – Healthcare providers accustomed to existing tools may be reluctant to adopt new methodologies.
2. **Limited expertise in qualitative research** – Healthcare personnel may lack the necessary skills for conducting interviews or focus groups.

3. **High initial costs** – Developing IT infrastructure and maintaining a centralized data system require significant upfront investment and ongoing operational expenses.

Potential Opportunities

1. **Enhanced international collaboration and benchmarking** – Leveraging global expertise and comparing performance with international standards can accelerate progress.
2. **Improved patient engagement** – Incorporating patient feedback through mixed-method approaches can provide actionable recommendations for healthcare improvements.
3. **Data-driven policymaking** – A centralized data platform enables informed decision-making and more efficient resource allocation, ultimately improving the healthcare system's effectiveness and equity.

Conclusion

For Kazakhstan to develop a strong framework to evaluate patient satisfaction, it is crucial to implement proven tools like PSQ-18 and SERVQUAL. However, it is important to ensure that those tools are well suited to the cultural and linguistic norms in the local community. Combining qualitative and quantitative methods will help identify overall patient patterns and individual patient experiences. Moreover, creating a centralized information system will allow consistent monitoring of patient outcomes, promoting evidence-based decision-making on a regional level. Considering the findings of Mallinson et al. (2023) and Turner et al. (2023), these initiatives will help the healthcare system address patient expectations and further improve the quality of medical services.

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Author Contributions

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All authors read the final manuscripts and confirmed *the copyright transfer form.*

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