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SOCIOLOGICAL STUDY OF WOMEN'S REPRODUCTIVE HEALTH IN ALMATY: DETERMINANTS AND DISEASES

This article presents the results of a sociological study aimed at studying the state of women's reproductive health in Almaty and identifying the factors influencing it. The main objective of the study is to analyze the socio-economic and socio-cultural determinants that determine the level of access to health services and awareness of women of reproductive age about preventive measures and disease risks. Particular attention is paid to the issues of accessibility and quality of health care, awareness of contraception and prevention methods, as well as the influence of existing cultural stereotypes on women's behavioral attitudes in the field of health.

The methodological study is based on a sociological survey conducted among 320 women living in the districts of Almaty. The questionnaire included a wide range of questions related to reproductive behavior, frequency of seeking medical care and the level of awareness and health. The results showed that women with low income and education face greater barriers to obtaining quality health services, which is associated with both financial constraints and socio-cultural norms that influence their perception of the need for health care.

The contribution of the study is to identify the need for comprehensive support aimed at improving women's reproductive health in Almaty. Based on the results, recommendations are proposed for the creation of programs that will increase access to health care and women's awareness of risks, as well as help overcome cultural barriers. The practical significance of the results lies in the possibility of their use in developing strategies that will increase women's awareness of health risks, ensure access to necessary health services, and create more favorable conditions for independent decision-making in the field of reproductive health.

Key words: reproductive health; sociology of medicine; reproductive behavior determinants; women in households; socio-cultural determinants of behavior.

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Алматы қаласындағы әйелдердің репродуктивті денсаулығын социологиялық зерттеу: детерминанттар мен аурулар

Бұл мақалада Алматы қаласындағы әйелдердің репродуктивті денсаулығының жағдайын зерттеуге және оған әсер ететін факторларды анықтауға бағытталған социологиялық зерттеудің нәтижелері берілген. Зерттеудің негізгі мақсаты – медициналық қызметтерге қолжетімділік деңгейін және репродуктивті жастағы әйелдердің алдын алу шаралары мен ауру қаупі туралы хабардарлығын анықтайтын әлеуметтік-экономикалық және әлеуметтік-мәдени детерминанттарды талдау. Медициналық көмектің қолжетімділігі мен сапасы, контрацепция және алдын алу әдістері туралы хабардар болу, сондай-ақ денсаулық сақтау саласындағы әйелдердің мінез-құлық қатынасына қалыптасқан мәдени стереотиптердің ықпалы мәселелеріне ерекше назар аударылады.

Әдістемелік зерттеу Алматы қаласының аудандарында тұратын 320 әйел арасында жүргізілген социологиялық сауалнамаға негізделген. Сауалнама репродуктивті мінез-құлыққа, медициналық көмекке жүгіну жиілігіне, хабардарлық пен денсаулық деңгейіне қатысты сұрақтардың кең ауқымын қамтыды. Нәтижелер табысы мен білімі төмен әйелдердің денсаулық

қабылдауына әсер ететін қаржылық шектеулер мен әлеуметтік-мәдени нормаларға байланысты сапалы медициналық қызмет көрсетуде үлкен кедергілерге тап болатынын көрсетті.

Зерттеудің үлесі – Алматы қаласындағы әйелдердің репродуктивті денсаулығын жақсартуға бағытталған кешенді қолдаудың қажеттілігін анықтау. Нәтижелер негізінде денсаулық сақтау саласына қолжетімділікті және әйелдердің қауіп-қатер туралы хабардарлығын арттыратын және мәдени кедергілерді жеңуге көмектесетін бағдарламаларды құру бойынша ұсыныстар жасалды. Нәтижелердің практикалық маңыздылығы әйелдердің денсаулыққа қауіп-қатер туралы хабардар болуын арттыруға, қажетті медициналық қызметтерге қолжетімділікті қамтамасыз етуге және ұрпақты болу денсаулығын сақтау саласында өз бетінше шешім қабылдауға неғұрлым қолайлы жағдайлар жасауға мүмкіндік беретін стратегияларды әзірлеуде оларды пайдалану мүмкіндігінде болып табылады.

Түйін сөздер: репродуктивті денсаулық; медицина әлеуметтануы; репродуктивті мінез-құлық детерминанттары; үй шаруашылығындағы әйелдер; мінез-құлықтың әлеуметтік-мәдени детерминанттары.

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Социологическое исследование репродуктивного здоровья женщин в Алматы: детерминанты и болезни

Данная статья представляет результаты социологического исследования, направленного на изучение состояния репродуктивного здоровья женщин в Алматы и выявление влияющих на него факторов. Основной целью исследования является анализ социально-экономических и социокультурных детерминант, определяющих уровень доступа к медицинским услугам и осведомленность женщин репродуктивного возраста о профилактических мерах и рисках заболеваний. Особое внимание уделяется вопросам доступности и качества медицинской помощи, информированности о методах контрацепции и профилактики, а также влиянию существующих культурных стереотипов на поведенческие установки женщин в области здоровья.

Методологические исследования базируются на социологическом опросе, проведенном среди 320 женщин, проживающих в районах города Алматы. Анкетирование включало широкий спектр вопросов, касающихся репродуктивного поведения, частоты обращения за медицинской помощью и уровня информированности и здоровья. Результаты показали, что женщины с низким уровнем дохода и образования сталкиваются с большими барьерами на пути к получению качественных медицинских услуг, что связано как с финансовыми ограничениями, так и социокультурными нормами, оказывающими влияние на их восприятие необходимости заботы о здоровье.

Вклад исследования заключается в выявлении потребности в комплексной поддержке, направленной на улучшение репродуктивного здоровья женщин в Алматы. Основываясь на результатах, предложены рекомендации по созданию программ, которые повысят доступность медицинской помощи и информированность женщин о рисках, а также помогут преодолеть культурные барьеры. Практическое значение результатов заключается в возможности их использования при разработке стратегий, которые позволят повысить осведомленность женщин о рисках для здоровья, обеспечат доступ к необходимым медицинским услугам и сформируют более благоприятные условия для самостоятельного принятия решений в области репродуктивного здоровья.

Ключевые слова: репродуктивное здоровье; социология медицины; детерминанты репродуктивного поведения; женщины в домохозяйстве; социокультурные детерминанты поведения.

Introduction

In recent decades, Kazakhstan has been actively working to improve its healthcare system, including the area of reproductive health and women's rights. However, issues related to fertility and reproductive

health remain relevant, particularly in the context of women's empowerment. A systematic review of literature in this field is an important step toward understanding the current state of affairs and identifying trends in the development of policies and programs aimed at improving women's reproductive health.

This topic focuses on a comprehensive study of the reproductive determinants of women from various scientific perspectives, including sociology, socio-economics, and public health. However, the primary focus is on examining the topic through the lens of health sociology. In modern society, reproductive health and women's rights take center stage in the context of social and gender issues. In Kazakhstan, as in many countries, the empowerment of women directly influences demographic indicators, public health, and economic development. Research on this topic becomes highly relevant in light of society's aspiration for more equitable and inclusive conditions for all its members.

A thorough analysis of literature on reproductive health and women's rights in Kazakhstan will shed light not only on the current state of the healthcare system but also on the factors influencing women's decisions regarding fertility. This includes access to modern contraceptive methods, maternal care services, and overcoming sociocultural barriers that may limit women's choices and self-determination in this critical aspect of their lives.

The importance of studying this topic is also linked to the fact that successful reproductive health strategies can become a key factor in achieving sustainable societal development, contributing to the improvement of future generations' health and the reduction of social inequalities. Such a systematic review of the literature will provide a necessary foundation for the development of effective gender-oriented healthcare strategies and social policies in Kazakhstan.

The issues surrounding reproductive and sexual health, the assessment of service quality and accessibility, and societal attitudes that influence reproductive behavior all require comprehensive and in-depth study. Researchers recognize the relevance and personal nature of these issues and aim to conduct a comprehensive analysis by dividing the topic into several components and territorial divisions, thus planning to fully investigate the reproductive determinants of women in Kazakhstan. A sociological study based on a large city such as Almaty is an important first step before conducting more extensive research across Kazakhstan. This approach ensures the effectiveness and reliability of the data collected and their subsequent extrapolation to the entire country.

In this article, we will conduct both theoretical and practical research on identifying reproductive determinants and attempt to understand the symptoms of reproductive system diseases in women

(based on their self-assessment of health). The practical significance of the study lies in increasing the efficiency of healthcare (the study of reproductive determinants and diseases in the reproductive system of women in Almaty provides important information for improving the healthcare system. Understanding the main factors influencing women's health will allow for the development of targeted programs and measures for the prevention and treatment of reproductive issues); the significance of empirical research for the development of social programs (the results of the study can be used to create and enhance social programs aimed at supporting women of reproductive age. This includes educational initiatives, counseling, and support aimed at improving overall health and reproductive well-being); the significance in shaping informed healthcare policy decisions (the data obtained can serve as a basis for developing healthcare policies that take into account the reproductive health characteristics of women in Almaty. This will help policymakers make informed decisions regarding resource allocation and focus efforts on the most critical areas); the importance of raising public awareness (disseminating the research results can contribute to increasing public awareness of the factors affecting women's reproductive health. This promotes a positive attitude towards reproductive issues and creates a supportive environment for sharing information and experiences).

Thus, the combination of analyzing reproductive determinants and diseases in the reproductive system of women in Almaty provides a practical, empirical foundation for improving women's quality of life and developing effective reproductive health care programs.

Justification for choosing a topic and goals and objectives

Fertility refers to the ability of an individual to conceive offspring. Reproductive health encompasses not only the capacity for reproduction and the freedom to decide when and how often to do so, but also the right to a satisfying and safe sexual life. The 1994 International Conference on Population and Development provided an extensive definition of reproductive health, covering all aspects related to the health and proper functioning of the reproductive system (UN, 1995). Scholars have attempted to integrate existing knowledge on women's empowerment and international development. In a sole review by Blanc, published more than a decade ago, research on the role of gender power dynamics in

sexual relationships and its impact on reproductive health was summarized (Blanc, 2001). Reproductive health includes the ability to control one's own fertility, experience a safe pregnancy, and have healthy children. This is critical for all women but remains a significant challenge, especially in low- and middle-income countries.

Although Kazakhstan has made significant progress in healthcare and family welfare, access to reproductive and sexual health services remains problematic. These issues are further exacerbated by a lack of knowledge and awareness about available services, fear of social stigma, low reproductive health literacy, and gender-based violence. Fertility is one of the key factors influencing population change, as it regulates the size and structure of a country's population. Concerns about reproductive health directly affect fertility rates.

The literature shows that fertility is influenced by various factors, including social, economic, demographic, and cultural aspects (Lal, Singh, Makun, Chand, Khan, 2021). It is clear that the empowerment of women is a reliable indicator of fertility trends in both developed and developing countries (Mumtaz et al., 2009).

Theoretical Importance

The study of reproductive determinants and diseases, as well as dangerous symptoms in women's health, holds high theoretical significance within the framework of the sociology of health. First, it can contribute to the development of theoretical concepts related to the impact of social and cultural factors on women's health. Analyzing reproductive determinants and diseases in the context of a city allows for a better understanding of how the sociocultural characteristics of a locality influence women's health. Second, the research will help expand the theoretical framework in gender studies and health sociology, allowing for a deeper understanding of how gender roles, social expectations, and economic factors affect women's health in a specific urban context.

Literature review

The study of issues related to reproductive health has always been relevant and began long before modern times. However, the sociological approach to examining these issues gained significant traction only from the 1970s. This article provides a literature review covering the chronology and key themes explored to date. It also examines the theo-

retical paradigms from which this problem is analyzed, offering a deeper understanding of its social aspects.

Sociological research on women's reproductive health has always been an important area of study, especially in the context of urbanized regions such as Almaty. This literature review aims to analyze existing studies in this field, focusing on key determinants related to reproductive health and diseases affecting women in urban settings.

Analysis of key topics and research approaches in the sociological aspect of studying the topic of reproductive health. Sociology of medicine and sociology of women's reproductive health began to form as an independent field of research in the second half of the twentieth century, when researchers and scientists from the social sciences began to analyze social factors that affect the outcomes of reproductive behavior, pregnancy and childbirth. Thus, such studies as "To have or to have not – Promotion and prevention of childbirth in gynecological work" Sally Macintyre (1974) and research "The good birth guide" Kitzinger Sheila (1978) showed us that until the 1970s, most studies focused exclusively on medical aspects, that is, all topics and problems of pregnancy and childbirth were studied exclusively following the paradigms of obstetrics and medicine. We think this is another reason for the relevance and need to study the topic of women's reproductive health and behavior, pregnancy and childbirth from the sociological aspect of science.

Only since the late 1960s have sociologists and social scientists begun to pay more attention to issues of research into women's reproductive behavior, namely, to issues of birth control and abortion, which has opened up new perspectives for analyzing reproductive health, taking into account the influence of social factors on it. These changes and the beginning of such studies in general have led to active discussions about the role of education in the process of managing childbirth and the need to include social aspects of research in the field of women's health. We have studied and draw attention to the fact that exclusively medical aspects of reproductive health are insufficient and ignore important social contexts. Even now in Kazakhstan we can say that the study of reproductive behavior in terms of the influence of social and other factors on them has not been studied much and widely, and the aspect of sociology, namely the sociology of medicine, is a special and unstudied part of science in Kazakhstan.

Considering what we have said above, we have defined the factors and directions of research in the

field of women's reproductive health. We would like to dwell on another work by Sheila Kitzinger "Woman as mother" (1978) and on the work of Ann Oakley "Becoming a mother" (1979). These researchers wrote most of all about the medical aspects of studying women's reproductive health and behavior, but we, the authors, want to talk about the multi-vector study of the topic of reproductive health, namely, always taking into account all factors, namely even the influence of social factors on the state of reproductive health and fertility. For example, in the book "Becoming a mother" Oakley considered how social and medical factors based on the first maternal consequences take into account the experience of qualitative studies of women during pregnancy and childbirth. It can be said that this emphasis on qualitative research methods makes it possible to better take into account additional impacts in various social and cultural contexts of women's problems. The second important work is Anna Cartwright "The dignity of labor? A study of childbearing and induction" (1979) which focused on key issues such as quality of care and conditions of birth, especially in urbanized regions. The 1979 study first looks at childbearing from three different perspectives: the eyes of women, directly experiencing the process; the eyes of midwives, providing care and support; and the perspective of consultant obstetricians, who make key medical decisions. We think this approach is interesting and relevant for Kazakhstan, where the interaction between the mother, the power staff and the family often includes not only medical aspects but also cultural ones. In Kazakhstan, midwifery practices can vary regionally, which is related to levels of urbanization and access to economic services. As a result, for example, women sometimes rely on the advice and assistance of traditional birth attendants, which can influence their perceptions and expectations of childbirth. On the other hand, in larger cities such as Almaty and Astana, women are more likely to use skilled obstetricians and gynecologists who can offer more advanced medical treatments, including induction of labor. This study looks more broadly at women's experiences of childbirth and how they perceive the level of information they were provided with during pregnancy. In Kazakhstan, as in many countries, access to information about childbirth and choices about methods of care can be limited. Women, especially in rural areas, are not always fully informed about methods of delivery, and, as the authors of this article argue, their ability to make independent decisions is reduced by their level of knowledge. This

affects their subsequent decisions regarding medical support and preparation for future reproductive decisions and childbirth. In this paper, author Anna Cartwright draws conclusions about how induction of labor is linked to broader policy and practice, responding to women's reactions to their own experiences. In Kazakhstan, the women's movement is still in its infancy, and reproductive rights issues are not yet widely discussed. However, growing interest in the quality of health care and international research in reproductive health may lead to new perspectives on women's role in important birth decisions. External guidelines that monitor birth experiences and development programs that provide comprehensive information about birth may change incentives and improve women's satisfaction with the birth process and decision-making actions on other reproductive behaviors.

Having identified the main works of feminist approaches to the study of behavior and the state of reproductive behavior, we would like to highlight one more work that is written by a critical approach and a feminist perspective in reproductive health research. Since the late 1970s, the sociology of reproductive health has increasingly used external approaches that challenge the cascade of paradigms. Feminist studies such as "Woman as Mother" by Sheila Kitzinger emphasize the degree to which women's experiences and rights in reproductive health are taken into account, including the right to choose the place and conditions for pregnancy and childbirth. Continuing their research, scholars have begun to approach this topic from the perspective of medical anthropology, exploring how cultural practices and beliefs influence women's perceptions of their health. For example, the work of Margaret Lock "Encounters with aging: Mythologies of menopause in Japan and North America", Emily Martin, Nancy Abelman and Charlotte Faircloth draw on cultural analysis data to examine traditions of influence and expectations regarding women's perceptions and experiences in the sphere of reproductive health, including treatment of diseases. Thus, the development of the sociology of reproductive health, as it is important to take into account not only medical but also social, cultural and legal aspects, ensures the comprehensive development of women's reproductive experience. Critical and feminist approaches allow for consideration of provisions in the field of reproductive health that were previously often ignored, opening up new horizons for research in this area.

The second approach is feminist political economy of health. This approach analyzes how economic and political factors influence access to healthcare services, including reproductive services for women. The research can assess which resources are provided to support women's health and how these resources are distributed in the city of Almaty. Key works in feminist political economy of health include those by Nancy Krieger (1999), Leslie R. Durrant, and Emily Oster (2012).

Empirical Analysis

From an empirical standpoint, studying women's health issues in Almaty provides a valuable resource for forming practical recommendations and strategies in public health. Focusing on reproductive determinants and diseases will help identify specific problems faced by women in this region. Empirical data can be used to adapt and develop healthcare programs that account for the cultural and social contexts specific to Almaty.

The value of studying reproductive determinants and diseases in the reproductive system of women in Almaty is significant, as there are studies proving the relevance and dangers of this problem on a global scale. In Kazakhstan, we are currently observing an interesting dynamic that shows both an increase and a decrease in birth rates in various regions of the country. Our hypothesis and research question focus on analyzing and understanding why there is a decline in birth rates. A decline in fertility initially leads to an increase in the working-age adult population compared to children, which could potentially lead to accelerated economic growth and a temporary «Demographic Dividend» (Starrs et al., 2018). The issue that may have impacted the decline in birth rates could arise from infertility among people of reproductive age.

Policies aimed at increasing birth rates through improved access to infertility treatments are being actively implemented to restore the demographic pyramid and enhance the positive economic impact of the working-age population. Specifically, such measures are being undertaken within programs proposed by De Geyter et al. (2020) and confirmed by the Central Intelligence Agency in its report *The World Factbook: Field Listing – Total Fertility Rate for 2022*. However, despite efforts in this area, global assistance in infertility treatment has had only a marginal effect on overall fertility rates. This is explained by the unequal and limited access to necessary treatments in most countries, as supported by research by Inhorn and Patrizio (2015), Chiware et al.

(2021), Duffy et al. (2021), Brodeur et al. (2022), and Karaga et al. (2023).

Environmental and lifestyle factors such as smoking, excessive alcohol consumption, obesity, and poor diet can negatively impact both male and female fertility. Additionally, exposure to pollutants, such as pesticides, can reduce the quality and quantity of gametes, contributing to infertility (Gore et al., 2015; Segal and Giudice et al., 2019; WHO, 2021; Skakkebaek et al., 2022; Giudice et al., 2023). Infertility, particularly secondary infertility, is notably prevalent in regions with high rates of sexually transmitted infections (STIs), as supported by data from Rowley et al. (2019) and WHO (2008). In low- and middle-income countries, infertility can be caused by tubal diseases related to complications following unsafe abortions and postpartum sepsis (Serour et al., 1988; Scholes et al., 1996; Tsevat et al., 2017).

The reasons for the decline in the overall fertility rate among both women and men vary by region and include socioeconomic, cultural, religious, educational, and environmental factors (Nargund, 2009; World Economic Forum, 2022).

However, over the past five years, some regions in Kazakhstan have observed a moderate recovery in fertility rates. This may be attributed to various factors, including increased fertility among women who have delayed motherhood, family support policies, improved access to assisted reproductive technologies (ART), and higher fertility rates among immigrant women (as demonstrated by studies from the Organization for Economic Cooperation and Development (OECD), 2009; De Geyter et al., 2020). Nonetheless, ART is believed to have contributed significantly to births in many countries, although the overall effect of ART is challenging to isolate from other factors.

The study of reproductive health among Kazakhstani women holds a prominent place in contemporary scientific research. Both Kazakhstani and international scholars focus on the impact of environmental issues, climate change, urbanization, social policy, ethnic-social factors, and the availability of medical services on women's health. The following section presents key studies on reproductive health and behavior among women.

The influence of environmental factors on the reproductive health of women in Kazakhstan. Research titled “The Health Status of the Reproductive System in Women Living in the Aral Sea Region” (Turdybekova et al., 2015) focuses on the reproductive health of women living in the Aral Sea region

and highlights the negative impact of environmental factors on female health. This study examined 1,406 women from the Kyzylorda region. The aim was to conduct a comprehensive clinical-functional and laboratory examination of women considering regional and environmental factors. The results showed a high prevalence of endocrine gynecological pathologies among the participants. A significant number of women exhibited a late onset of menarche (after age 16), a characteristic found in 39% of the participants. There was also a trend toward earlier menopause. Inflammatory diseases of the female genital organs were diagnosed in one-third of the women surveyed. Notably, data on reproductive losses revealed that every fourth woman in the ecological disaster zone had a history of miscarriage, spontaneous abortion, or non-viable pregnancies, with some cases occurring repeatedly. These findings suggest that women in regions with ecological issues are exposed to significant risks related to deteriorating reproductive health. Moving to other, more favorable regions is often not feasible due to various reasons, with low income or living standards being the most significant. This economic constraint, alongside ecological problems, exacerbates women's reproductive health issues and access to medical services.

Influence of Socioeconomic Factors on Reproductive Behavior and Health. From this perspective, the study by G.S. Dauletova, L.L. Karp, and K.S. Absattarova (The Indicators of Reproductive Behavior in Young Families as a Criterion of the Social and Economic Level of Society, 2012) explored the problem of reproductive health in women. The primary goal of the study was to determine factors affecting reproductive attitudes and childbearing motives. A quantitative data collection method was used, including a questionnaire administered to 1,017 respondents under the age of 39. The results indicated that the expected number of children in a family directly depended on the standard of living. With improved housing conditions and increased family income, the average expected number of children also increased. Statistically significant differences were found among women of Asian ethnic groups compared to other groups concerning desired and ideal number of children. The study results confirmed the researchers' hypothesis that family plans regarding the number of children significantly depend on specific living conditions.

Maternal and Child Health. In the article "Perinatal Care Indicators in Almaty, Kazakhstan for 2013-2017: A Cross-Sectional Study," the health

status of mothers and children in Almaty over a five-year period is examined. The authors emphasize the importance of maternal and child health for public health and societal well-being. The focus is on reducing maternal and child mortality, associated with optimizing obstetric services and implementing international perinatal technologies. The study conducted in Almaty showed stable general fertility rates and a decrease in adolescent fertility, indicating progress in the perinatal health system. Concerns were raised about a high level of extragenital pathology, necessitating additional measures for pregnancy planning and monitoring women's health of childbearing age. The availability of quality medical care in Almaty contributes to better maternal mortality rates compared to other regions of Kazakhstan. However, the study's results are limited to data from a single region, which does not allow for extrapolation to smaller cities and rural areas with lower levels of medical care access.

Various organizations are engaged in studying reproductive health in general. In Kazakhstan, significant contributions to the development and resolution of reproductive health issues have been made by several key organizations. These include the Kazakhstan Association of Reproductive Medicine (KARM), the Kazakhstan Association for Sexual and Reproductive Health (KMPA), the Republican Alliance of Associations for Reproductive Potential of the Population of Kazakhstan, and the International Clinical Center for Reproductive Health PERSONA. Notably, the work of UNFPA and UNICEF has significantly contributed to improving the reproductive health of Kazakhstan's population.

From the perspective of sociology and social sciences, research contributions have been made by scholars such as G.T. Alimbekova, A.B. Shabdenov, B.S. Baisserkin, R.A. Sisemalieva, G.M. Moldakulova, G.O. Abuova (2018), A.A. Bakytzhanova (2020), S.Zh. Imanbaeva, A.B. Sarsenov (2024), and other researchers.

In conclusion to the literature review section, it can be noted that the study of women's reproductive health is a multifaceted and complex field that encompasses a wide range of issues, from social determinants of health to environmental factors. Problems related to reproductive health are examined not only through biological aspects but also through social, cultural, and economic lenses, which is particularly important for urbanized regions such as Almaty.

The literature review indicates that despite significant efforts to improve access to infertility

treatment, reproductive health issues, and related problems, there are substantial barriers related to unequal resource distribution and disparities in education and access to medical services. An important aspect of the research is also the impact of age-related changes and lifestyle on fertility, which requires further investigation in the context of rapidly changing social conditions.

Moving on to the next section, methodology, we will discuss the methods and approaches to be used for investigating this issue, as well as how the empirical research will be conducted to identify and analyze the factors affecting reproductive health and reproductive determinants of women's behavior in Almaty.

Materials and methods

This study is devoted to the study of reproductive health and factors influencing behavioral determinants among women in the districts of Almaty. Only a comprehensive analysis of this topic, covering both theoretical and empirical aspects, allows us to identify insufficiently studied areas and fill gaps in real research. For this, several theoretical approaches and paradigms are used, the empirical part is based on quantitative sociological methods. In connection with the type of scientific literature and the objectives of this study, we put forward the following hypotheses:

1. Socioeconomic conditions have a positive impact on reproductive health in Almaty, especially in terms of access to preferential services and making reproductive decisions.

2. Families with different income levels use different approaches to family planning, which plays a role in the economic effect in reproductive behavior.

Research Object: The main focus is on the reproductive age of women (from 18 to 49 years old) living in households with different income levels in Almaty.

Subject of the study: The analysis focuses on the influence of socio-economic factors on the health of women of reproductive age, as well as the specifics of family planning practices among households with different income levels.

The purpose of our study is to provide an objective assessment of how family income affects women's reproductive health and behavioral attitudes. The study also aims to identify key socioeconomic

factors that influence reproductive function and analyze indicators of accessibility of reproductive health services.

Research objectives:

To determine the main indicators of reproductive health of women with different incomes.

To analyze socioeconomic conditions that influence reproductive decisions.

The study examines the accessibility and use of reproductive health services among women with different income levels.

To compare approaches to family planning and the study of women's reproductive health indicators.

Research design: The study is based on the principle of a cross-sectional quantitative design, which allows for more objective and publicly available results.

Sampling Method: A stratified random sampling method based on income levels will be used. This study aims to determine and explore the topic across Kazakhstan, adhering to the requirements for a representative sample. However, before conducting a nationwide study, the researchers tested their research and surveys within one city. The survey was conducted by specialized sociologist trainees from the Center for Public Opinion Studies.

Results and discussion

The study "Sociological Research on the Reproductive Health of Women in Almaty: An Analysis of Reproductive Determinants and Diseases" examines the opinions and experiences of women living in Almaty. Respondents were randomly selected, and a stratified random sampling method was used to ensure sample representativeness by income level. Stratification involves dividing the overall group into subgroups (strata) based on important characteristics (in this case, income level), and then randomly selecting respondents within each stratum. This approach allowed for comparisons of reproductive behavior among women in different income groups.

The survey included 320 women from 8 districts (40 women from each district) of Almaty: Alatau, Almaly, Auezov, Bostandyk, Zhetisu, Medeu, Naurzbyay, and Turksib. This section of the paper will discuss the results of our research.

Table 1 – Demographic indicators of respondents

Demographics	Indicators	Percentage (%)
1. Age of respondents	1. Under 18 years old	1,9
	2. 18-25 years old	58,4
	3. 26-35 years old	15,00
	4. 36-45 years old	21,9
	5. 46-55 years old	2,8
2. Nationality of respondents	1. Kazakh	97,2
	6. Uzbek	2,8
3. Religious beliefs of respondents	1. Islam	93,8
	99. Difficult to answer	6,3
4. Marital status	1. Married	29,4
	2. Divorced	1,3
	3. Single	69,4
5. Having children	1 child	9,7
	Two children	6,3
	Three children	12,2
	No children	69,4
	4 or more children	2,5

The survey results indicate that among the 320 respondents, 1.6% have incomplete secondary education, 12.5% have general secondary education, and 9.4% have secondary specialized education. This implies that most respondents hold higher education degrees. Among them, 47.8% have higher education without an academic degree, while 28.7% possess both higher education and an academic degree.

Having higher education or an academic degree undoubtedly has a significant impact on individuals' lives. However, it may also be associated with delayed motherhood, as professional engagement and associated stress factors can affect women's reproductive health, potentially leading to infertility.

This finding could serve as a basis for further research and discussion.

Regarding the socio-demographic profile of the respondents, 15.3% of the 320 participants are either temporarily unemployed or unemployed, 3.4% are on maternity leave or engaged in household duties, 15.9% work in the private sector (as employees), 26% are employed in public sector organizations, 8.1% are government officials, and only 1.9% are private entrepreneurs. The largest group of survey participants were students at various educational levels: 28.7% of the women surveyed were either doctoral or undergraduate students at the time of the study.

The sector of employment and type of occupation can significantly influence women's reproductive health and behavior. Employment in the private sector and public organizations may increase stress levels, negatively impacting reproductive function. At the same time, students and women on maternity leave may have different priorities, which also affects their decisions regarding motherhood.

In addition to education level and professional activity, another critical factor affecting women's reproductive health is the financial status and household income. Socio-economic living conditions of the respondents can significantly impact their access to medical services, nutritional quality, stress levels, and ability to plan pregnancies. Let us examine in more detail how income is distributed among the surveyed women and the potential impact on their reproductive behavior.

Among the respondents, 20% have a monthly income of up to 100,000 tenge, 19.1% earn up to 250,000 tenge, and 13.4% make up to 350,000 tenge per month. These figures pertain to individual income and include all sources of income, such as wages, benefits, and other forms of earnings. Only 3.1% of respondents reported an income of up to 500,000 tenge per month, while 11.6% earn less than 50,000 tenge. It is important to note that these

incomes often cover not only the woman’s personal needs but also those of the entire family. This can impact a woman’s ability to invest in her health and, in particular, seek medical care for reproductive health issues.

In the context of Kazakhstan, women often delay seeking medical care, with one reason being the challenges in accessing quality services at public medical institutions, such as long wait times and

insufficient service levels. Private clinics offer an alternative, but their services can be expensive and less accessible. The economic status of the family is also directly related to women’s reproductive and sexual behavior, as it influences their family planning decisions, frequency of medical consultations, and health care. Next, we will examine how the socio-economic status of respondents’ households affects their reproductive health.

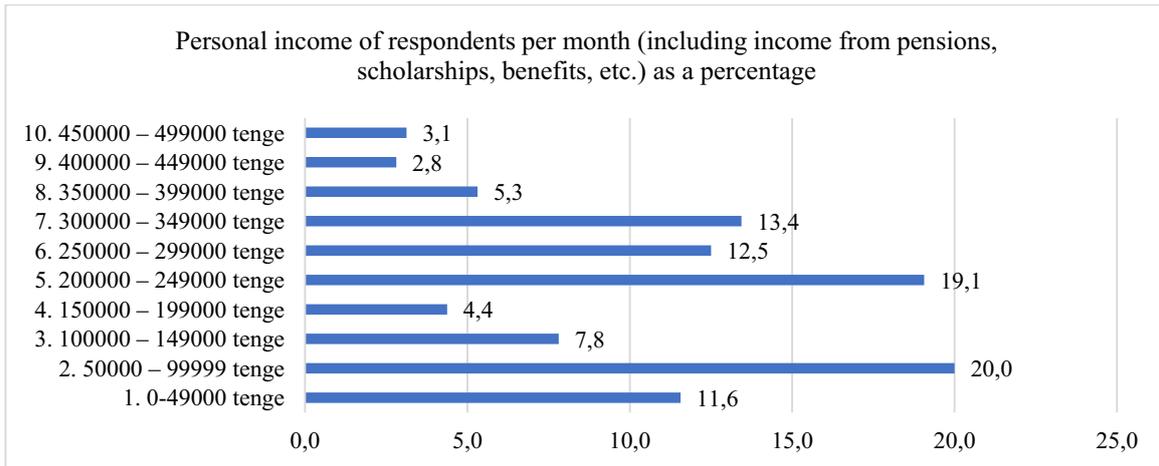


Figure 1 – Socio-economic status of respondents

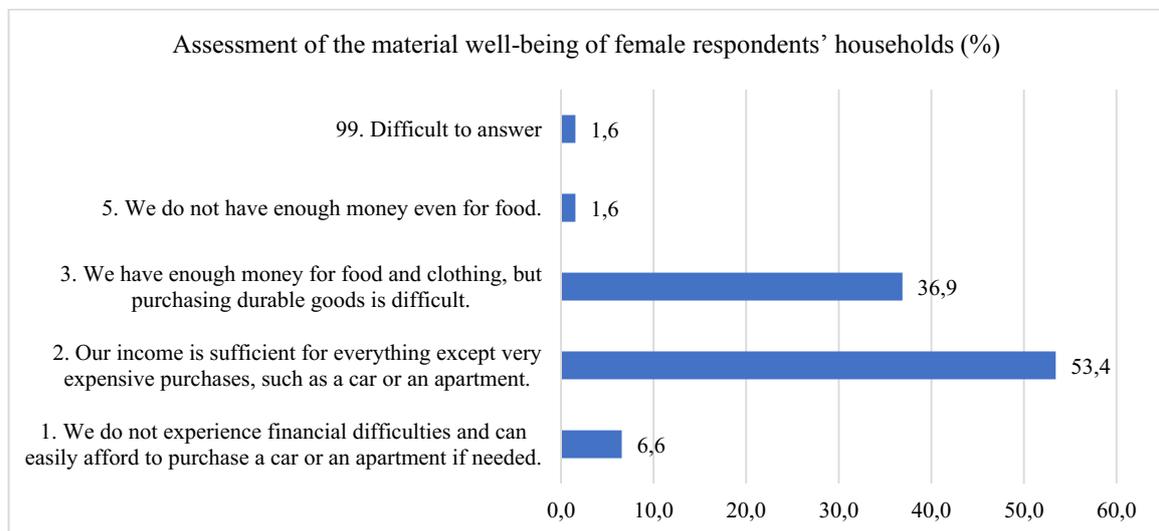


Figure 2 – Assessment of material well-being of female respondents’ households

Assessment of the material well-being of respondents' households shows that 53.4% of women indicated that their household income is sufficient for everything except very expensive purchases, such as a car or an apartment. 36.9% of respondents reported that their income is adequate for food and clothing, but purchasing durable goods is challenging. The most difficult situation is faced by 1.6% of respondents, for whom even buying food is problematic due to insufficient funds. The same percentage of respondents chose not to answer this question.

Women's incomes and those of their households vary. Many households in Kazakhstan likely do not have reserves or funds specifically allocated for medical expenses or emergencies that may require healthcare expenditures. This also represents a problem that may put women in a precarious position.

The results show that the majority of the participants have a high level of education, which often leads to postponing motherhood due to professional qualities and stress factors. Such a delay can have negative consequences for reproductive health. The majority of the respondents are students, which also affects their priorities and behavior in the reproductive sphere. The income of the respondents is noticeably observed: about 20% of women have an in-

come level of up to 100,000 tenge per month, which limits their opportunities in the field of health care. More than 36% of the participants face difficulties in purchasing excluded goods, 1.6% even have difficulties in producing food, which again requires a complex financial requirement to access the terms of service provision. Thus, education and financial status take into account important factors affecting women's reproductive health. These data indicate the need for research and development aimed at improving the quality of health services and reducing financial costs, taking into account the problems faced by women.

In the next section, we will look at the main results of our study in detail. Reproductive health is a key factor in demographic and social processes. This study pays special attention to the analysis of factors influencing women's reproductive decisions, including family attitudes, financial aspects, plans to expand the family and maintaining the period of having children. To understand the level of health care and understand its quality, questions about symptoms experienced over the past 12 months and visits to health facilities are also necessary. The study identifies the main factors and reasons that can influence women's reproductive health, decisions and behavior.

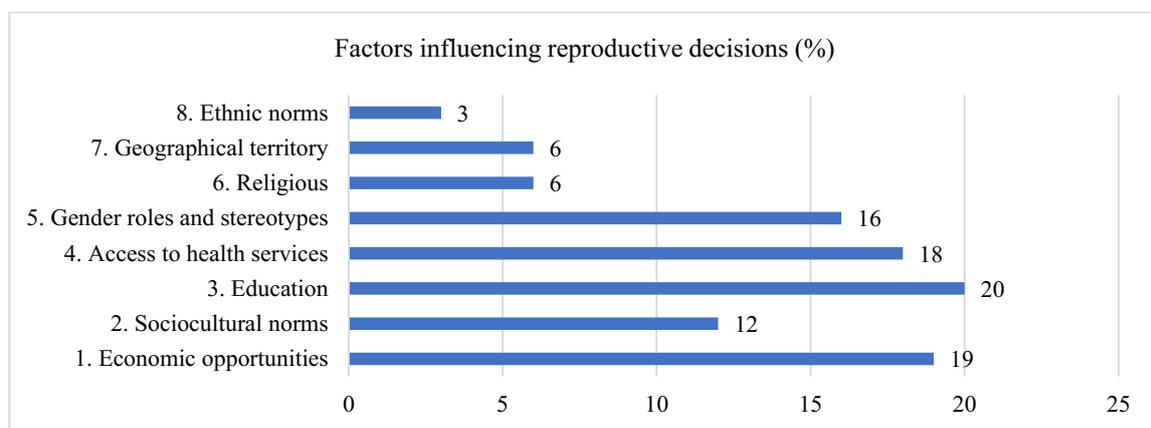


Figure 3 – Factors Affecting Women's Reproductive Decisions in Households

This question is aimed at identifying key determinants such as access to opportunities, the influence of socio-cultural norms and economic resources. According to the results of the study, 20% of women note that their level of education has a significant impact on their reproductive attitudes and choices. Education can be considered one of

the fundamental factors influencing reproductive decisions for several reasons. Firstly, it plays an important role in awareness and decision-making regarding marriage, sexual relations and approaches to motherhood. Secondly, education is directly related to the level of women's awareness of reproductive and sexual health, which contributes to

a more balanced approach to family planning and health care.

Another factor that has a significant impact on reproductive decisions is the availability of opportunities and resources, including health, social and economic services. This aspect is an important basis for confident motherhood planning and reproductive behavior strategy in general. For example, a woman who has access to quality health care and social support is more likely to make informed decisions about the time and conditions of childbirth, which reduces possible risks. The histogram provided in the study illustrates how diverse factors can

influence women’s reproductive behavior. For example, looking at income, education, and access to services together helps us understand what triggers different approaches to reproductive health. Figure 4 shows how financial considerations influence decisions to have children, highlighting the economic consequences of such decisions and their long-term effects on women and families. Of course, it should be noted that reproductive decisions are complex processes that depend on many factors, and understanding their interactions can help us design more effective support and information programs for women of different social groups.

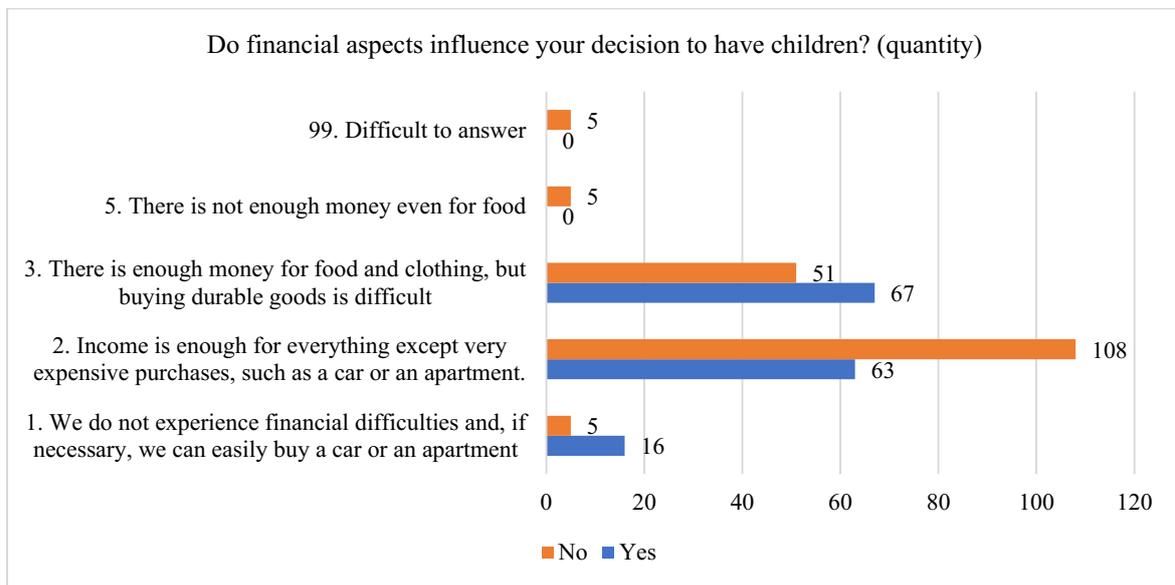


Figure 4 – Analysis of the influence of financial aspects on the decision to have children. The influence of economic consequences on the reproductive decision

When considering the question “Do financial aspects influence your decision to have children?” we see that the respondents’ opinions are divided. Of the 320 women surveyed, 146 (46%) answered affirmatively, which confirms the presence of a financial component in their family planning decisions. However, the remaining 174 women (54%) noted that their reproductive plans do not depend on financial circumstances, which indicates the multifaceted motives underlying such decisions. A more in-depth analysis reveals important patterns related to household income levels. Among those who reported income sufficient to cover all daily needs, with the exception of major purchases (e.g. a car or apartment), the majority (108 respondents) stated that financial factors do not influence their

decision to have children. This highlights that for a certain proportion of families, reproductive decisions are not directly tied to financial status and are considered within the framework of longer-term life priorities.

Nevertheless, 63 women in this category noted that financial status has some influence on their choice. This may be explained by the fact that family planning is often associated with a long-term financial perspective, taking into account not only current income, but also future expenses related to raising children, providing quality education and health care. Perhaps such respondents realize that stable upbringing of a child requires not only love and care, but also the opportunity to provide the child with a reliable basis for development.

Thus, the obtained data suggest that although for many women financial resources are not a decisive factor in family planning, their importance increases among those who look at this issue from the point

of view of long-term financial stability. Financial confidence in the future can contribute to making a positive decision to have children, allowing it to be viewed as an important and meaningful event in life.

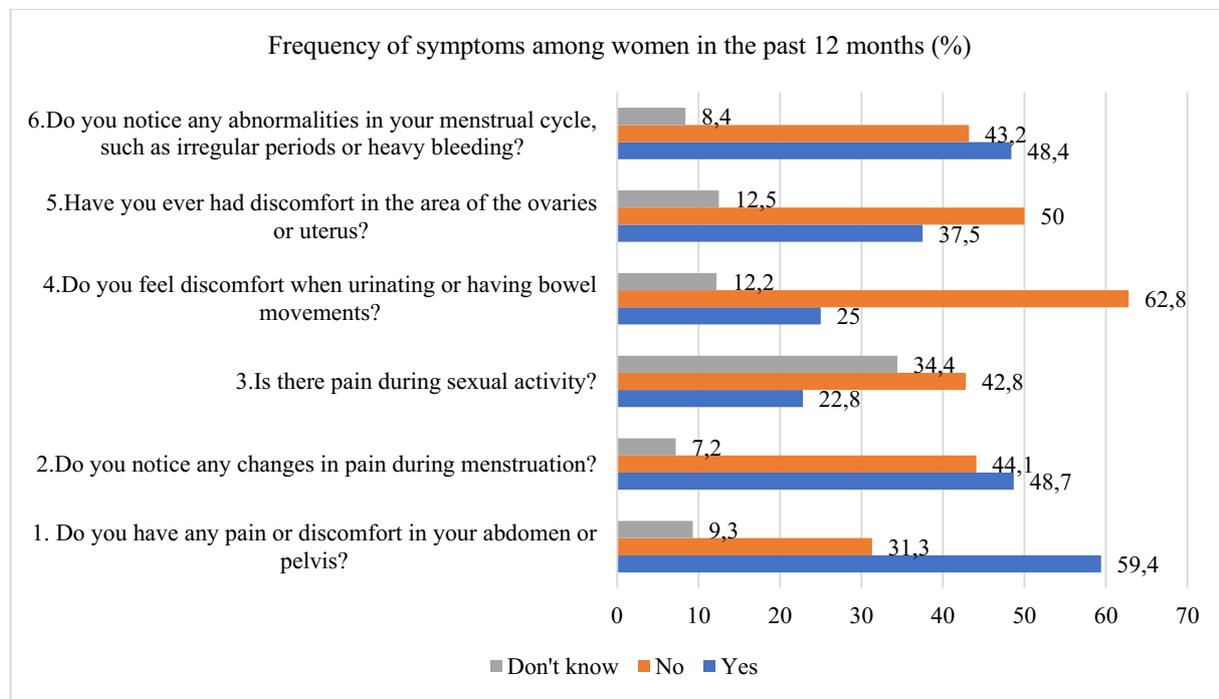


Figure 5 – The question in the questionnaire “Have you had any of the following symptoms in the past 12 months?” helps to better understand women’s self-assessment of their reproductive health

The survey results show that over the past year, respondents have frequently experienced various symptoms that affect their reproductive health. For example, more than half of the women (59.4%) reported pain or discomfort in the abdomen or pelvis, 48.7% mentioned painful menstruation, and 48.8% – menstrual cycle disorders, such as irregular periods or heavy bleeding. Pain in the uterus or ovaries was also a common symptom for 37.7% of respondents. These complaints indicate the prevalence of problems that can significantly affect the quality of life and reproductive plans of women. Long-term or frequent pain, for example, can affect decisions related to childbearing, creating additional difficulties for conception. Cycle disorders may indicate reproductive diseases, such as endometriosis or polycystic ovary syndrome, which require medical intervention. Of particular interest is the question of whether women seek medical help for such symptoms. In practice, many tend to perceive them as insignificant or postpone a visit to the doctor. The rea-

sons are varied – from lack of time and finances to insufficient awareness of possible risks. Such ignoring of symptoms can lead to serious complications, including infertility and chronic diseases of the reproductive system. To prevent such consequences, it is extremely important not only to identify common symptoms, but also to raise women’s awareness of the importance of timely visits to specialists. Educational programs and improved access to medical services can play an important role in this, which will help reduce barriers for those who want to take care of their health.

Another significant aspect of the study was the influence of financial factors on the decision to have an abortion. The survey included the question: “Do you think financial status influences women’s decisions regarding abortion?” This item allowed us to identify the extent to which financial resources influence such important reproductive decisions as the choice between continuing or terminating a pregnancy.

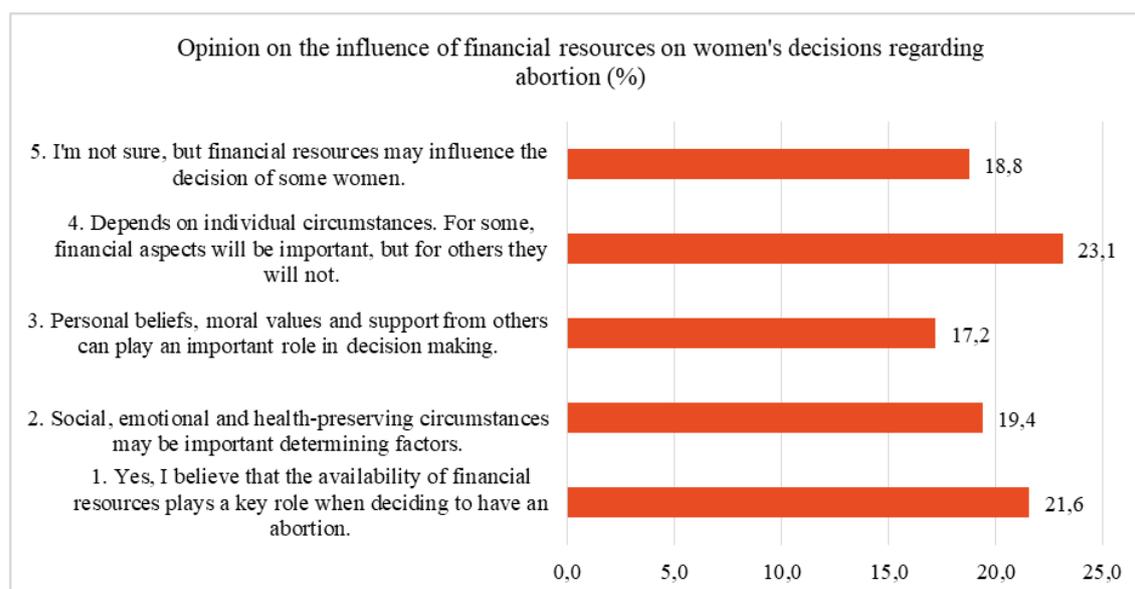


Figure 6 – Perceptions of the influence of financial status on abortion decisions. Question from the survey: “Do you think financial status influences other women’s decisions regarding abortion?”

Women’s reproductive health is an aspect that requires not only a medical, but also a social and economic approach. Making decisions about pregnancy or abortion often depends on available financial resources, especially in conditions of economic instability. The study revealed opinions that women’s financial situation can significantly influence such decisions. Thus, some respondents indicated that lack of funds, lack of stable income or employment push them to choose abortion in order to avoid financial difficulties in raising a child. However, not all women make decisions based on financial difficulties. Many respondents are sure that other factors, such as emotional support, social circumstances or personal beliefs, can be more significant. In their opinion, even with limited financial resources, women sometimes continue pregnancy, believing that they can cope with difficulties. Our study showed that although financial stability can be a significant factor, it does not always determine the decision. Thus, 23.1% of respondents noted that the choice depends on the circumstances, and 21.6% indicated that financial aspects are the main ones. At the same time, 19.4% believe that social and economic aspects can have a greater impact on decision-making. These data confirm that each case is individual and requires a comprehensive approach that takes into account not only economic but also social and cultural factors.

Women’s reproductive health in Almaty is also associated with problems such as access to qual-

ity health care and awareness of preventive methods. The high level of reproductive diseases among women can be explained not only by economic but also by cultural barriers, such as stereotypes that limit access to care.

Thus, to improve the level of women’s reproductive health, a comprehensive approach is important, including improved access to health services, health education and community support. Eliminating stereotypes and raising awareness contribute to women making informed and free decisions about their own health.

While respecting uniqueness, we also see the importance of reflecting these issues in research and practice to provide women with quality support and understanding of their needs.

Conclusion

This sociological study on women’s reproductive health in Almaty has identified important socioeconomic and cultural determinants that significantly affect women’s health status and behavioral patterns. It was found that factors such as education level, financial stability, and cultural norms play a key role in ensuring access to health services and in women’s awareness of potential risks to their health. These findings highlight the importance of a comprehensive approach to improving reproductive health that should include not only medical support, but also social and economic measures aimed

at removing barriers to quality and affordable health care.

Financial instability, high levels of employment, persistent stereotypes, and limited access to high-quality health services continue to limit opportunities for health protection, especially for women with low incomes and lower levels of education. These groups remain the most vulnerable to adverse conditions, making it difficult for women in the region to achieve optimal health and well-being. At the same time, financial constraints and inequality in access to medical information continue not only to limit opportunities for choice, but also to lack the necessary knowledge about prevention and timely seeking of help.

To solve these problems, it is necessary to develop targeted programs that will improve access to health care for all social groups, as well as con-

duct educational and information campaigns aimed at raising women's awareness of the risks and possible methods of their prevention. It is important to actively work to overcome social stereotypes that can restrain women from seeking medical help and self-preservation. In addition, recognition of the important relationship between socio-economic conditions and women's reproductive health becomes a necessary step in creating effective strategies aimed at improving their quality of life.

Thus, the results of this study indicate the need for a comprehensive analysis of existing barriers and improvement of the health care system, taking into account the socio-cultural characteristics of the region. This will create conditions for comprehensive support of women's health in Almaty, increase their awareness and the ability to make more independent decisions regarding their reproductive health.

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