

12. Kostno-sustavnoi tuberkulez //Monografiia pod. redaksii Iu.N. Levasheva i A.E. Garbuza.- M.: Meditsina i zhizn', 2003.- 294 s.
13. Klinicheskii protokol po meditsinskoii reabilitatsii. Meditsinskaia reabilitatsiia bol'nykh tuberkulezom kostei i sustavov na etape protivotuberkuleznogo lecheniia: №148 ot 23 sentiabria 2021 goda.
14. Stoporov AG, Kaladze NN, Savelko NV. Effektivnost' reabilitatsii bol'nykh s posledstviiami pozvonochno-spinnomozgovoi travmy s primeneniem funktsional'noi elektrostimulatsii. Fizioterapiia, bal'neologii i reabilitatsiia. 2017;16(1):12-17. doi: 10.18821/1681-3456-2017-16-1-12-17

УДК: 615.1(574.54)

ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ АРАЛ ТЕҢІЗІ ӨңІРІНДЕ "ЕМДІК МАҚСАТТА ЖАТТЫҒУ ТАҒАЙЫНДАУ" БАСТАМАСЫН ІСКЕ АСЫРУ МҮМКІНДІГІНЕ SWOT-ТАЛДАУ

Алданова А.¹, Найман Д.², Махашбай А.³, Ермуханова Л.⁴, Калыбаев А.⁵, Рахманов Е.⁶
Назарбаев Университеті, Медицина мектебі, Медицина департаменті, Астана, Қазақстан

¹ Магистр, ғылыми қызметкер, Назарбаев Университеті, Медицина мектебі, Медицина департаменті, Астана, aigul.yedil@nu.edu.kz, 0009-0000-6220-44372

² Магистрант, Назарбаев Университеті, Медицина мектебі, Медицина департаменті, Астана, Қазақстан, daiana.naiman@nu.edu.kz, 0009-0000-1429-50553

³ Магистрант, Назарбаев Университеті, Медицина мектебі, Медицина департаменті, Астана, Қазақстан, amina.makhashbay@nu.edu.kz, 0009-0007-5314-27304

⁴ М.ғ.д., PhD, профессор, кафедра меңгерушісі Марат Оспанов атындағы Батыс Қазақстан медицина университеті, Ақтөбе қ. 0000-0001-7703-96495

⁵ Магистр, мұғалім, 220 орта мектеп, Арал қ., 0000-0002-9350-05516

⁶ PhD, MD, Спорттық медицина және оңалту бағдарламасы бойынша магистратура бағдарламасының тең директоры, Назарбаев Университеті, Медицина мектебі, Медицина департаменті, Yeltay.rakhmanov@nu.edu.kz, Астана, Астана. 0000-0002-6790-2995.

Түйіндеме

Мақсаты: «Емдік мақсатта жаттығу тағайындау» (ExMed) бастамасын Қазақстанның Арал өңірінде жүзеге асыру мүмкіндігін бағалау. Бұған табиғи апаттар салдарынан бұл аймақтың денсаулығына үлкен қауіп төніп тұрғаны себеп. Зерттеудің негізгі мақсаттары – қазіргі уақытта денсаулықты нығайту жағдайын бағалау, физикалық белсенділікті тексеру, қоршаған ортаны сканерлеу, мүдделі тараптарды талдау және пилоттық жобаға ұсыныстар беру.

Әдістері: Арал өңірінің денсаулық сақтау мекемелерінің ExMed тәжірибеге енгізуге дайындығын бағалау үшін SWOT (күшті, әлсіз жақтары, мүмкіндіктер және қауіптер) талдауы қолданылды. Сапалы деректерді жинау үшін мүдделі тараптармен жеке сұхбат жүргізілді. Зерттеу жоспарына жергілікті этикалық комиссия рұқсат берді, ол этикалық нұсқауларды сақтауға кепілдік береді. ExMed жұмыс тобын құру, SWOT және қоршаған ортаны сканерлеуді орындау және ExMed басатамын тәжірибеде жүзеге асырушылармен сөйлесу арқылы толыққанды мәлімет алу - зерттеудің бір бөлігі болды.

Нәтижелер: Нәтижелер Арал өңірінде дене шынықтыру белсенділігін арттыруға кедергі келтіретін бірнеше әдістемелік және ұйымдастырушылық кедергілер бар екенін көрсетті. Егер

бұл мәселелер шешілмесе, физикалық белсенділіктің төмен деңгейі жұқпалы емес аурулары кенінен таралады.

Қорытынды: Денсаулық сақтаудың осы мәселелерін шешу үшін Арал өңірі ЕхМед жоспарын жүзеге асыруға басымдық беруі керек. Зерттеудің ұсынымдары ЕхМед-тің қазіргі артықшылықтары мен мүмкіндіктерін пайдалану және кемшіліктері мен қауіп-қатерлерін жою арқылы сәтті интеграциялауды жеңілдетуге арналған.

SWOT-АНАЛИЗ ДЛЯ РЕАЛИЗАЦИИ ИНИЦИАТИВЫ "УПРАЖНЕНИЯ КАК ЛЕКАРСТВО" В РЕГИОНЕ АРАЛЬСКОГО МОРЯ РЕСПУБЛИКИ КАЗАХСТАН

Алданова А.¹, Найман Д.², Махашбай А.³, Ермуханова Л.⁴, Калыбаев А.⁵, Рахманов Е.⁶

¹ Магистр, научный сотрудник, Медицинская школа Назарбаев Университета, Департамент медицины, Астана, aigul.yedil@nu.edu.kz, 0009-0000-6220-4437

² Магистр, Медицинская школа Назарбаев Университета, Департамент медицины, Астана, daiana.naiman@nu.edu.kz, 0009-0000-1429-5055

³ Магистр, Медицинская школа Назарбаев Университета, Департамент медицины, Астана, amina.makhashbay@nu.edu.kz, 0009-0007-5314-2730

⁴ PhD, доктор медицинских наук, профессор, заведующий кафедрой Западно-Казахстанского медицинского университета имени Марата Оспанова, г. Актобе, 0000-0001-7703-9649

⁵ Магистр, учитель, 220-я средняя школа, Арал, 0000-0002-9350-0551

⁶ PhD, MD врач, **содиректор магистерской программы по спортивной медицине и реабилитации**, Медицинская школа Назарбаев Университета, Департамент Медицины, Yeltay.rakhmanov@nu.edu.kz, Astana. 0000-0002-6790-2995

Абстракт

Цель этого исследования заключается в том, чтобы оценить вероятность успешного внедрения концепции «Упражнения как лекарство» (ЕхМед) в регионе Аральского моря Казахстана. Это связано с тем, что природные катастрофы поставили под угрозу здоровье населения этого региона. Основные цели исследования включают оценку текущего состояния здоровья, изучение физической активности, проведение экологического сканирования, анализ заинтересованных сторон и разработку предложений для пилотного проекта.

Методы: для оценки готовности системы здравоохранения региона Аральского моря к внедрению ЕхМед был использован SWOT-анализ (анализ сильных и слабых сторон, возможностей и угроз). Для сбора качественных данных были проведены индивидуальные интервью со стейкхолдерами. Дизайн исследования был одобрен местной этической комиссией, что гарантирует соблюдение этических норм. Исследование включало создание рабочей группы ЕхМед, проведение SWOT-анализа и экологического сканирования, а также интервью с исполнителями ЕхМед для получения углубленных знаний.

Результаты: Результаты показали, что в регионе Аральского моря существуют организационные и методологические проблемы, которые мешают людям заниматься спортом. Если эти проблемы не будут решены, низкая физическая активность может привести к увеличению числа неинфекционных заболеваний.

Заключение: Внедрение плана ЕхМед должно быть первоочередной задачей для решения этих проблем со здоровьем в регионе Аральского моря. Рекомендации исследования направлены на то, чтобы облегчить интеграцию ЕхМед, используя его текущие преимущества и возможности, а также устраняя его недостатки и риски.

SWOT ANALYSIS FOR IMPLEMENTING EXERCISE AS MEDICINE INITIATIVE IN THE ARAL SEA REGION OF THE REPUBLIC OF KAZAKHSTAN

Aldanova A.¹, Naiman D.², Makhashbay A.³, Yermukhanova L.⁴, Kalybayev A.⁵, Rakhmanov Y.⁶
Nazarbayev University, School of Medicine, Department of Medicine

¹ MSc, Research Assistant, Nazarbayev University, School of Medicine, Department of Medicine, Astana, aigul.yedil@nu.edu.kz, 0009-0000-6220-4437

² MSc candidate, Nazarbayev University, School of Medicine, Department of Medicine, Astana, Kazakhstan, dajana.naiman@nu.edu.kz, 0009-0000-1429-5055

³ MSc candidate, Nazarbayev University, School of Medicine, Department of Medicine, Astana, Kazakhstan, amina.makhashbay@nu.edu.kz, 0009-0007-5314-2730

⁴ MD, PhD, Professor, Head of the Department, Western Kazakhstan Marat Ospanov Medical University, Aqtobe. 0000-0001-7703-9649

⁵ MSc, Teacher, 220th Secondary School, Aral, [0000-0002-9350-0551](tel:0000-0002-9350-0551)

⁶ PhD, MD, Co-Director of MSc Program in Sports Medicine and Rehabilitation Program, Nazarbayev University, School of Medicine, Department of Medicine, Yeltay.rakhmanov@nu.edu.kz, Astana. 0000-0002-6790-2995

Abstract

Objective: The purpose of this study is to assess if the "Exercise as Medicine" (ExMed) concept can be successfully implemented in Kazakhstan's Aral Sea region. This is driven by the serious health risks that this region faces as a result of natural disasters. The study's main objectives are to assess the state of health promotion at the moment, examine physical activity, conduct an environmental scan, analyze stakeholders, and offer suggestions for a pilot project.

Methods: To evaluate the preparedness of the Aral Sea region's healthcare settings for the implementation of ExMed, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis was utilized. To collect qualitative data, stakeholders were interviewed one-on-one. The study design was authorized by the local ethical commission, which guarantees adherence to ethical guidelines. Creating an ExMed working group, performing a SWOT and environmental scan, and speaking with ExMed implementers were all part of the research to obtain in-depth knowledge.

Results: The results showed that the Aral Sea region has a few methodological and organizational obstacles that prevent physical activity promotion. If these issues are not resolved, low levels of physical activity may make non-communicable diseases more common.

Conclusions: To address these health issues, the Aral Sea region should prioritize implementing the ExMed plan. The study's recommendations are intended to make it easier for ExMed to integrate successfully by utilizing its current advantages and capabilities and addressing its shortcomings and risks.

Introduction

Kazakhstan is aiming to improve the healthcare system with multiple levels of immediate (Salamatty Kazakhstan 2011–2015, Densaulыq 2016-2019), medium-term (Vision 2020 and 2030), and long-term (Kazakhstan 2050 Strategy) policy plans.[1] In this regard, we are witnessing significant advancements nationwide to achieve shared responsibility in health. In terms of shared responsibility for promoting a healthy lifestyle, joint decision-making and collaboration of various stakeholders are very crucial. Health promotion programs should be tailored depending on the necessities of the public, and their economic, cultural, environmental, etc. background. Ryan and Lauver proved in their research that the increase in user satisfaction through adaptation of the intervention content leads to alterations in the intervention's behavioural outcomes. [2]

In Public Health, the promotion of health-improving activities is the critical component of strategic actions. There is scientific evidence that involvement in regular physical activities could prevent chronic pathologies such as cardiovascular diseases, non-insulin-dependent diabetes, and some types of oncologic diseases .[3]

From the early 1990s, physical activity intervention initiatives - physician-based assessment and counselling for exercise, Exercise for Prescription, and Exercise as Medicine initiatives were developed in European countries and the United States of America. These incentives are based on the transtheoretical model of behaviour change and social-cognitive theory, which had the purpose of promoting moderate-intensity physical activities in primary care settings [4,5].

However, primary care practitioners note several significant obstacles to promote physical activity, including lack of time, lack of interest on the part of patients, lack of knowledge and skills on physical activity, and lack of preparation in behavioral advising.[5,6] The abovementioned projects have the purpose of overcoming these obstacles through simple practitioner-delivered standards that could be realised in a short period of time. The American version of the program“Exercise as Medicine” alleviates this problem, by promoting physical activity with a simple and time-efficient approach. For instance, it involves a single visit to a primary care physician as well as a follow-up call two weeks after the initial visit to offer encouragement and address any issues of a patient. According to the nonrandomized control trial, this initiative was effective in making sedentary people more active as the experimental group increased their physical activity by 37 minutes per week, compared to just 7 minutes per week in the control group.[4] Furthermore, Exercise as Medicine is efficiently implemented within primary care settings in the United States.[6].

Pedersen and Saltin carried out an up-to-date, evidence-based basis review on the experience of prescribing physical activities as the treatment for 26 pathologies including metabolic diseases (metabolic syndrome, obesity, type 2 diabetes, type 1 diabetes, polycystic ovarian syndrome hyperlipidemia), psychiatric pathologies (anxiety, depression, schizophrenia, stress); cardiovascular disorders (coronary heart disease, hypertension, cerebral apoplexy, heart failure); neurological diseases (Parkinson's disease, multiple sclerosis, dementia), respiratory diseases (cystic fibrosis, asthma, chronic obstructive pulmonary disease); locomotor pathologies disorders (osteoporosis, osteoarthritis, rheumatoid arthritis, back pain); and cancer. [7].

Since the health issues of the population living in the environmental disasters' region of Kazakhstan is of great concern, we decided to assess the possibilities of implementing the "Exercise as Medicine" pilot project in the Aral Sea Area of the Republic of Kazakhstan.

The potential of the Aral Sea disaster directly impacting human health lies within such concerns as pesticides in the environment and food chain, the salinization of the water table, and dust storms and air quality. [8] Environmental changes could elevate respiratory conditions, hypertension, heart disease, anemia, kidney disease, and various cancers. Other suspected adverse health consequences are related to endocrine disruption, infertility, teratogenesis, and neurodevelopmental and behavioral disturbances due to exposure to persistent organic pollutants [9,10].

Considering these particular circumstances, Public health specialist should plan their activities according to the needs of the target population. For example, in promoting active physical lifestyles, health educators, and trainers should take into consideration accompanying diseases, so-called precision physical activity prescription. Unfortunately, Kazakh specialists with the post-soviet teaching method of physical activities are still considering sports as activities to gain success in competitions, neither to gain health within physical activities, nor fitness programs. In Western practice, the term "Physical activity" is widely used in promoting public health and as a part of the treatment strategy. It means that physical movement can be used as a “super-drug” or “super-preventative measure” to maintain health in all stages of disease. [11] Exercise as Medicine Initiative is promising projects that unite sports doctors, primary care physicians, health promoters, physical activity, and sports specialists to improve public health. However, many medical doctors do not talk to their patients about exercises to raise awareness

about the health benefits of them. Physical activity interventions should be discussed as a severe form of therapy, like pharmacological treatment, and need to be precisely prescribed to every patient. Physicians should have the competency to identify patients' risk factors and provide counseling on the intensity, frequency, time, and type of movements necessary to safely achieve maximal health benefits.[12] The implementation of Exercise as Medicine in Kazakhstan is essential due to low participation in sports activities. Vancampfort et al. have discovered that 33.8% of Kazakh youth who had low physical activity participated in moderate to vigorous physical activity <150 min within one week. That is why there is a necessity to analyze the readiness to Implement Exercise as a Medicine Initiative at the community level in the Aral Sea Area of the Republic of Kazakhstan. [13]

Objectives

1. Analyse the current Health Promotion situation, participation in physical activities, environmental scan, stakeholders' analysis;
2. To give some recommendations to implement a pilot project, "Exercise as Medicine."
3. To evaluate and compare the result of the pre-implementation of SWOT Analysis towards the ExMed implementation readiness in Healthcare settings of the Aral Sea.

Materials and Methods

Ethics. The Local Ethical Commission of the West Kazakhstan Marat Ospanov Medical University approved the design of the study in accordance with the Declaration of Helsinki and the European Convention on Human Rights and Biomedicine (protocol number: 35, from 4th of December 2023).

The entire work will consist of the following steps to achieve our objectives:

Step I: Set up Exercise as Medicine (ExMed) working committee to coordinate and carry out the research;

Step II: Conduct environmental scan, stakeholders SWOT (strength, weakness, opportunity, and threat) analysis, and interview with ExMed implementors;

Step III: Give recommendations to implement ExMed.

A strengths, weaknesses, opportunities, and threats (SWOT) analysis is one of the most useful tools to be applied to reach the goal. A SWOT analysis helps to evaluate the needs of communities and organizations, identify existing strengths, and leverage the best opportunities for success. of the communities and organizations. [9]

In this study, we will apply a quantitative approach to generate local community data, as shown in Figure 1 [adapted from. [14] The themes will be divided into SWOT categories and then integrated to develop strategies designed to implement ExMed in the Aral Sea region.

ExMed interview respondents. This work involved several stakeholder organizations: the Nazarbayev University-NU (Professors, researchers), the Western Kazakhstan Marat Ospanov Medical University-WKMU (teaching, research staff of the following departments: Primary Care/Family Medicine, Internal diseases, Cardiology, Orthopaedics, Physical Education), Aral Sea region's health care settings (Healthcare managers, physicians, nurses), local secondary schools (principals, teachers, responsible for the school physical activity program) and Public Organizations.

WKMU is an Educational, Research, and Healthcare Institution, which is firmly located in the Aral Sea region of Kazakhstan. A collaborative relationship between NU and WKMU was established in 2022 to develop cooperation in accordance with a mutual interest in a program of academic exchange, and to establish a long-term mutually beneficial association.

Members of the ExMed Committee assisted in creating tools for data collection such as designing a focus group process and interview questions. The discussions and questions were conducted in Kazakh and Russian languages. Detailed notes were taken during the focus group and interview since, referring to the ExMed Committee, this method was more culturally appropriate compared to tape recording. After that, the committee and the research team analysed the results from

the SWOT analysis by giving feedback on a draft of strategies together and provided the final strategies, which would be best for the community to act on. [14]

Interviews. The interview discussion lasted about 15-20 minutes. Respondents were of mixed gender. Individual interviews were semi-structured and informal, allowing participants to share their views and ideas on the possibilities of implementing the ExMed initiative.

Environmental scan. The scan of the environment was conducted by direct observation of community, healthcare, and educational settings environment.[15] Environmental scanning is very critical since environmental and social factors could be determinants of physical activity [16].

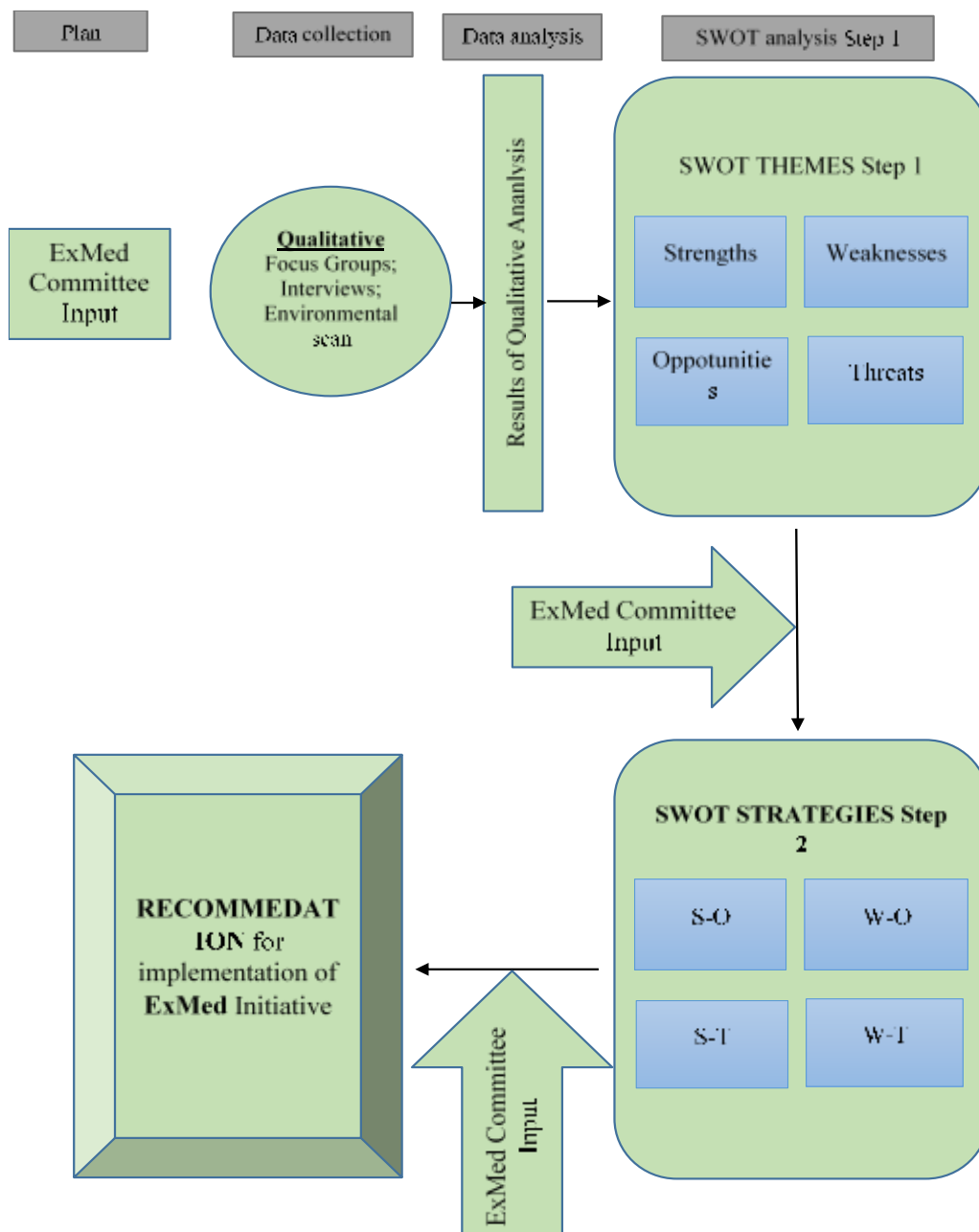


Figure 1. Process for planning strategies using a SWOT analysis [adapted from [14]]

Results

Based on the information obtained from interviews, we summarised the strengths, opportunities, weaknesses, and threats for the implementation of ExMed in the Aral Sea Area of the Republic of Kazakhstan. Interview data analysis revealed a variety of interconnected topics and subtopics of external causal factors for implementing ExMed in the targeted area. Strengths included existing programs and facilities and the enthusiasm of local healthcare and educational setting staff to suggest strategies for change. Topics are classified as weaknesses connected with limited access to physical activity facilities, a Soviet-style method of teaching, lack of funding from the Government, and low development of the non-government sector. Opportunities included the possibility of applying for grants to fund more programs, innovative solutions for health and educational service delivery, and special attention from International Donor Organizations. The threats were: geographic isolation, low socioeconomic status, lack of resources, and the disempowerment felt by local teachers and health personnel. Empowerment was defined as a lack of skills and knowledge to promote physical activities.

For the interview, 50 specialists working in sports medicine, health promotion, and physical education were invited. Forty-six specialists gave their consent to take in this project and, accordingly, underwent interviewing. The professional background of respondents can be found in Figure 2. Strengths and weaknesses were the positive and negative characteristics, respectively, of current physical activity practice, its role in public health and higher education, secondary school education process. Table 1 shows SWOT themes that were developed from qualitative and environmental scan data.

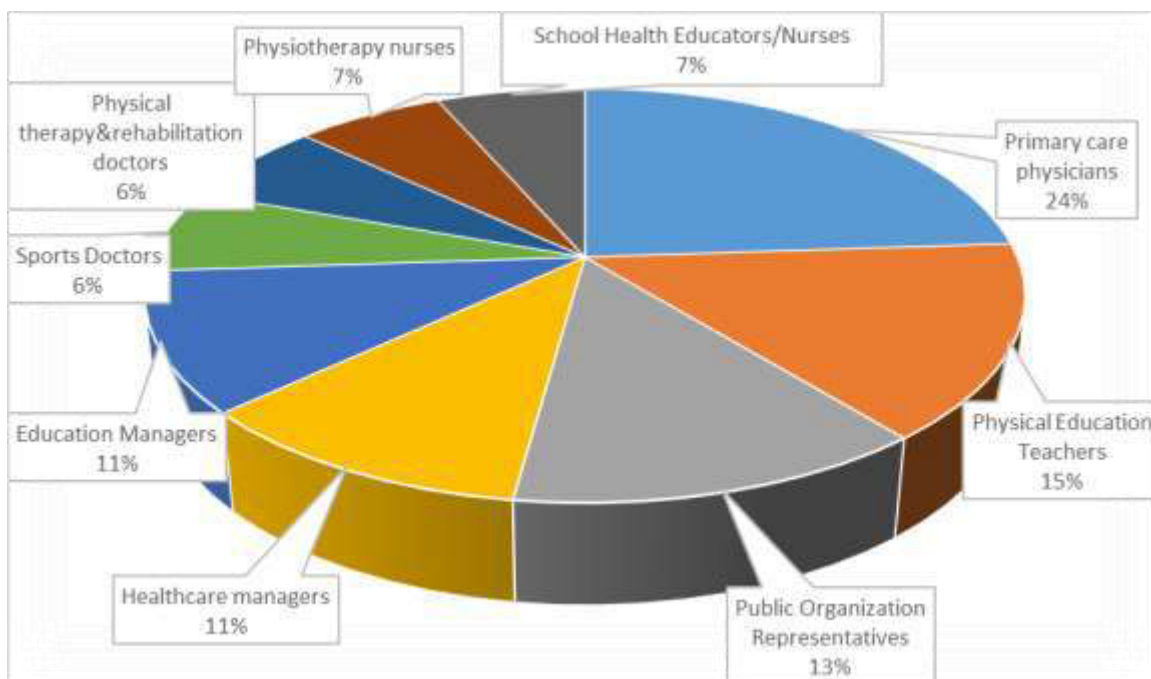


Figure 2. Professional background of respondents

One of the subtopics from the qualitative analysis was the availability and accessibility and facilities. A closer examination of the raw qualitative data revealed that this result could fall under two SWOT categories: strengths and opportunities. Like the results from the environmental scan, community members felt that there was adequate access to existing facilities (SWOT strength), but that there were possibilities for improving this access (SWOT opportunity).

Table 1. Strengths, Weaknesses, Opportunities, and Threats to implement ExMed in the Aral Sea Area of the Republic of Kazakhstan

Strengths	Weaknesses
<ul style="list-style-type: none"> • Primary and Secondary Schools have specially dedicated lectures of physical education program (two hours/week); • There are available sports sections for school children. • There is increased collaboration between representatives of Medical University and Aral Sea Healthcare settings; • Program and Policy Support for physical activities including Salamatty Kazakhstan 2011–2015, Densaulyq 2016-2019;[1] • Accessibility of existing facilities, such as the school gymnasium; • Existing literacy summer camp for youth; • The enthusiasm of some local healthcare and educational settings' representatives to suggest strategies to address these issues that could be implemented locally; • Successful bilateral collaboration with national, and international healthcare, educational, and research institutions to modernise the existing system. 	<ul style="list-style-type: none"> • Limited access to safe, affordable, physical activity sites; • Unavailability of financial resources to support Employee Wellness programs that encourage physical activities;"; • Weak or non-existent connections with local municipalities regarding the built environment which could provide opportunities for physical activity such as walking trails and bike paths; • Lack of qualification, the experience of primary care physicians to prescribe physical activity for the prevention of chronic diseases/improve quality of life; • Old-established soviet system of physical education teaching; • Lack of adaptive physical activity for prevention and improvement of quality of life; • Lack of independent social organizations; • The non-existence of the University of the Third Age or other organizations to promote physical activity among older people.
Opportunities	Threats
<ul style="list-style-type: none"> • Examine the use of social media to boost physical activity; • Strengthen collaboration between healthcare and the education system; • Look for ways to use schools to elevate the community access to physical activity including access to school gyms for the “ExMed” initiative. • Develop a comprehensive approach to physical activity that combines public awareness, education, and motivation strategies with target audience strategies and evaluation to engage the entire community because it was evident that this method is effective in increasing physical activity levels across the community, leading to better health outcomes; • Look for ways to improve opportunities for promoting healthy living, especially physical 	<ul style="list-style-type: none"> • Socioeconomic status; • Demographic status - demographic hole due to "environmental refugees," aging of the population; • Geographic remoteness; • Shortage of resources, including funding, staff, equipment, and facilities; • Other activities including TV, video games, and computer/Internet use; • Overloaded work of primary care physicians and physical activity teachers.

activity after school, after work, and during retirement, in partnership with Health and Educational Authorities.

- Possibilities for physical educators' private practice;
- A particular interest of Donor organizations to the problem of the Aral Sea disaster;
- Possible joint projects with Qyzylorda Branch of the Republican Children's Rehabilitation Center, Corporate fund "University Medical Center";
- Nazarbayev University's MSc degree in "Sports Medicine and Rehabilitation" will train a new generation of Sports Physicians who will be able to implement ExMed at the community level;
- A higher tendency to implement innovative solutions in the Kazakh Health Care and Educational System;
- Tele-fitness, telerehabilitation project is a promising initiative to improve community-based health promotion and rehabilitation;
- Development of international networking with the Health Promotion Unit of the World Health Organization (WHO) and Professional Associations;
- Further implementation of the project "Development of Preventive and Adapted Sport in Kazakhstan from medical, pedagogical, social and legal perspectives."

Discussion

The obtained research results describe how a SWOT analysis might benefit the Aral Sea Healthcare system in implementing the ExMed initiative into practice. The qualitative findings included numerous strengths, opportunities, and threats for implementing ExMed. The main threats to the population of Aral city are socioeconomic status, demographic status - demographic hole due to "environmental refugees," aging of the population; and geographic remoteness.

Due to the reduction of the amount of water in the Aral Sea and its two feeding rivers, fishing and agriculture production has decreased; that is why, the region's economy is at a low level. [17] An approximate number of people migrated due to the Aral Sea environmental catastrophe was more than 100 000, victims of this disaster called environmental refugees. [18] The able-bodied population left the region in search of new opportunities and was capable of adapting to the new environment quickly. The remaining population had fewer abilities, and opportunities to adjust to a new mode of life. This is significantly important when it regards the availability of trained healthcare staff and educational personnel. [19]

Recognizing that there are positive aspects and potential benefits for physical activity within the Aral city population may have motivated local healthcare and educational organizations' personnel to take action. One initiative action is "Development of Preventive and Adapted Physical Activities in Kazakhstan from medical, pedagogical, social and legal perspectives," which is supported by the JSC

«Center for International programs» administrator of the Bolashaq International Scholarship of the Republic of Kazakhstan. Within this project, Kazakh specialists working in the field of sports medicine spent a research internship in Italian Higher education and healthcare institutions. [20]

Another promising opportunity to promote physical activity in isolated regions is the tele-fitness project that will improve community-based health promotion. An important issue in combatting inactivity is to elaborate efficient, engaging, and cost-effective physical activity programs. Scientists advise computer-tailored interventions that could be individualized health behavior advice and feedback which could impact to increase the adherence to prescribed exercise programs. Innovative technologies opened new horizons to promote physical activities.[21]

Another important opportunity is in the special interest of Donor organizations to the Healthcare System of Kazakhstan and the Aral Sea Area. After the Soviet Union's dissolution, there was a significant influx of development assistance from various sources, including international organizations, individual countries, private foundations, and non-governmental organizations (NGOs). The World Bank and USAID were two of the main contributors, contributing around US\$200 million and US\$150 million respectively. During the Soviet era, the USSR, being part of the United Nations (UN), worked closely with specialized international agencies such as the World Health Organization (WHO), and consequently, it provided the WHO with a unique standing in the region. However, when it collapsed, the newly independent Central Asian Republics, including Kazakhstan, were inexperienced in engaging with international development programs. Therefore, they initially were overwhelmed and faced some challenges in managing the influx of advice and financial support from Western countries. [22].

WHO, UNICEF and Médecins Sans Frontières made significant contributions to the life of the population living in the Aral Sea zone since 1998. They support projects on improving healthcare service delivery to the population and carry out research into the environmental factors affecting health. [23].

From a business perspective, the SWOT analysis has been critically examined by Pickton and Wright and they emphasised the value and limitations of its use. [24] They highlight that the process of carrying out a SWOT analysis is as advantageous to an organization's strategic planning as the outputs produced by the SWOT analysis. In this regard, as the strengths of this work, we could indicate our substantial focus placed on the process of the SWOT analysis. Besides planning programs, a framework for evaluation is another possible use of SWOT analysis. Therefore, it could be used to both plan and evaluate strategies in the same community, which can act to streamline the intervention process starting from the initial community analysis to the enhancement of evaluated strategies. This study stands out for its investigation into the feasibility of implementing ExMed in the Aral Sea Area, especially by integrating qualitative evidence with the SWOT analysis framework from strategic planning literature [25, 26].

A small sample size was the limitation of this study. Further studies should consider increasing sample size and using a technique of Delphi studies. But despite these limitations, our initial tentative estimate of the possibilities to implement the ExMed initiative in Kazakh practice, especially in isolated regions of the country – provides us a clear overall picture of the situation in the region.

Conclusion

This study gave information about the possibilities of implementing ExMed in the Aral Sea Area with a wide range of opportunities and issues. We found that the population of the Aral Sea area has organisational and methodological problems. If no action is taken in these environments, the low levels of physical activity are likely to lead to an increase in non-communicable diseases in the region. Therefore, the implementation of the ExMed Initiative should be a priority agenda. Health policymakers in Kazakhstan should prioritise creating and implementing programs that promote physical activity. More importantly, they should focus on policy and environmental interventions that effectively facilitate physical activity for all population groups in all settings.

Reference:

1. The President of the Republic of Kazakhstan. State Program "Densaullyq" for 2016-2019. Astana: 2015. Available at: <http://adilet.zan.kz/kaz/docs/P1500001082>.
2. Ryan, P., Lauver, D. R. The efficacy of tailored interventions. *J. Nurs. Scholarsh*, 2002; 34(4): 331–337.
3. Oguma, Y., Sesso, H. D., Paffenberger, R. S., Lee, I. M. Physical activity and all cause mortality in women: a review of evidence. *Br J Sports Med*, 2002; 36: 162-172.
4. Calfas, K. J., et al. A controlled trial of physician counseling to promote the adoption of physical activity. *Prev Med*, 1996; 25: 225–233.
5. Lawlor, D. A., Keen, S., Neal, R. D. Increasing population levels of physical activity through primary care: GPs' knowledge, attitudes and self-reported practice. *Fam Pract*, 1999; 16: 250-254.
6. Long, B. J., Calfas, K. J., Wooten, W. A multisite field test of the acceptability of physical activity counseling in primary care: project PACE. *Am J Prev Med*, 1996; 12: 73–81.
7. Pedersen, B. K., Saltin, B. Exercise as medicine - evidence for prescribing exercise as therapy in 26 different chronic diseases. *Scand J Med Sci Sports*, 2015 Dec; 25(Suppl 3): 1-72.
8. WHD. The health dimension of the Aral Sea crisis (background papers). In: International Conference on Sustainable Development of the Aral Sea Basin. Nukus, Karakalpakstan, Uzbekistan: United Nations, 1995.
9. MSF. Research for Better Environmental Health in the Aral Sea Area. Tashkent, Uzbekistan: Medecins Sans Frontieres, 1999.
10. Palmerini, M. G., et al. The cooperation agreement between the University of L'Aquila, Italy and the Marat Ospanov West-Kazakhstan State Medical University, the Republic of Kazakhstan: a successful story from academy to bench. *Medical Journal of Western Kazakhstan*, 2015; 4(48): 1-6.
11. Romano-Spica, V., Macini, P., Fara, G. M., Giammanco, G. Adapted Physical Activity for the Promotion of Health and the Prevention of Multifactorial Chronic Diseases: the Erice Charter. *Ann Ig*, 2015; 27(2): 406-14.
12. Phillips, E. M., Kennedy, M. A. The exercise prescription: a tool to improve physical activity. *PM R*, 2012; 4(11): 818-25.
13. Vancampfort, D., Koyanagi, A., Ward, P. B. Chronic physical conditions, multimorbidity and physical activity across 46 low- and middle-income countries. *Int J Behav Nutr Phys Act*, 2017; 14(1): 6.
14. Skinner, K., Hanning, R. M., Sutherland, C., Edwards-Whees. Using a SWOT analysis to inform healthy eating and physical activity strategies for a remote First Nations community in Canada. *Am J Health Promot*, 2012; 26(6).
15. Patton, M. Q. *Qualitative Research and Evaluation Methods*. 3 ed. Thousand Oaks, Calif: Sage, 2002.
16. Giles-Corti, B., Donovan, R. J. The relative influence of individual, social and physical environment determinants of physical activity. *Soc Sci Med*, 2002; 54: 1793–1812.
17. Zetterström, R. Child health and environmental pollution in the Aral Sea region in Kazakhstan. *Acta Paediatr Suppl*, 1999; 88(429): 49-54.
18. Schecter, A., Pa'pke, O., Ball, M. Evidence for transplacental transfer of dioxins from mother to fetus: chlorinated dioxins and dibenzofuran levels in livers of stillborn infants. *Chemosphere*, 1990; 1017-22: 21.
19. Small, I., van der Meer, J., Upshur, R. E. Acting on an environmental health disaster: the case of the Aral Sea. *Environ Health Perspect*, 2001; 109(6): 547-9.
20. Rakhmanov, Y., et al. *Adapted and Preventive Physical Activities for population living in Aral Sea environmental disasters' area*. Wroclaw: The University of Wroclaw, 2017.

21. Norman, G. J., Zabinski, M. F., Adams, M. A., Rosenberg, D. E. A review of eHealth interventions for physical activity and dietary behavior change. *American Journal of Preventive Medicine*, 2007; 33: 336-45.
22. Borowitz, M., Atun, R. The unfinished journey from Semashko to Bismarck: health reform in Central Asia from 1991 to 2006. *Central Asian Survey*, 2006; 24(4): 419-40. DOI:10.1080/02634930701210633
23. Ferriman, A. Charity calls for help for people of Aral sea area. *BMJ*, 2000; 320(7237): 734.
24. Pickton, D. W., Wright, S. What's swot in strategic analysis? *Strateg Change*, 1998; 7: 101-9.
25. Kahn, E. B., Ramsey, L. T., Brownson, R. C. The effectiveness of interventions to increase physical activity: a systematic review. *Am J Prev Med*, 2002; 22: 73-107.
26. Müller-Riemenschneider, F., Reinhold, T., Berghöfer, A. Health-economic burden of obesity in Europe. *Eur J Epidemiol*, 2008; 23(8): 499-509.

УДК: 614.2:616-082(574)

**АККРЕДИТТЕУ «ҰЛТТЫҚ БАЛАЛАРДЫ ОҢАЛТУ ОРТАЛЫҒЫ» КЕАҚ-ДА
МЕДИЦИНАЛЫҚ КӨМЕКТІҢ САПАСЫН ЖӘНЕ ПАЦИЕНТТЕРДІҢ ҚАУІПСІЗДІГІН
АРТТЫРУ ҚҰРАЛЫ РЕТІНДЕ.**

Амангелдіқызы С. ¹, Кусайнова К.К. ², Мусағалиева К.К. ³

«Ұлттық балаларды оңалту орталығы» КеАҚ, Астана қ., Қазақстан Республикасы

¹ «Ұлттық балаларды оңалту орталығы» КеАҚ басқарушы директоры, Қазақстан Республикасы, Астана қ. sa.amangeldikyzy@nccr.kz ORCID 0009-0001-4628-5879

² «Балаларды оңалту ұлттық орталығы» КеАҚ пациенттерді қолдау және ішкі бақылау қызметінің басшысы, Астана, Қазақстан Республикасы, ke.kusainova@nccr.kz ORCID 0009-0004-6009-1765

³ Аға дәрігер, «Балаларды оңалту ұлттық орталығы» КеАҚ пациенттерді қолдау және ішкі бақылау қызметінің сарапшысы, Астана қаласы, Қазақстан Республикасы, ka.musagalieva@nccr.kz ORCID 0009-0004-6903-4054

Түйіндеме

Медициналық ұйымда сапа мен қауіпсіздіктің жақсаруы емделу және пациенттерге күтім жасау арқылы ғана емес, сонымен қатар жайлы және қауіпсіз орта құру арқылы қамтамасыз етіледі. Пациенттердің сапасы мен қауіпсіздігін арттыруға Компания басшылығы мен барлық қызметкерлері, сондай-ақ пациенттер, олардың отбасы мүшелері және келушілер қатысады.

Joint Commission International халықаралық аккредиттеу стандарттарын енгізу сапа менеджментінің тиімділігін және пациенттердің қауіпсіздігін арттырады.

Joint Commission International аккредитациясын алу халықаралық деңгейге жетуге, пациенттердің қанағаттануын жақсартуға және медициналық туризмді дамытуға мүмкіндік береді.

Түйінді сөздер: *аккредиттеу, пациенттің қауіпсіздігі, қауіпсіздік мәдениеті.*

**ACCREDITATION AS A MEANS OF IMPROVING THE QUALITY OF MEDICAL CARE
AND PATIENT SAFETY IN THE NJSC «NATIONAL CHILDREN'S REHABILITATION
CENTER».**

Amangeldikyzy S. ¹, Kusainova K.K. ², Musagalieva K.K. ³