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Original article

Analysis of the Effectiveness of the Advanced Training Program "Rehabilitation of Children with Autism Spectrum Disorder"

[Lyazzat Kosherbayeva](#)¹, [Laura Kozhageldiyeva](#)², [Sandugash Kurmanalina](#)³,
[Kastytis Šmigelskas](#)⁴

¹ Team Lead of the Project, Suleyman Demirel University, Almaty region, Kaskelen, Kazakhstan. E-mail: klk.lyazzat@gmail.com

² Senior Researcher of the Suleyman Demirel University, Almaty region, Kaskelen, Kazakhstan. E-mail: laurahealthprojects@gmail.com

³ PhD-student of the Asfendiyarov Kazakh National Medical University, Almaty, Kazakhstan. E-mail: s.kurmanalina@mail.ru

⁴ Professor of the Lithuanian University of Health Sciences, Kaunas, Lithuania. E-mail: Kastytis.Smigelskas@ismuni.lt

Abstract

The growth of children with Autism Spectrum Disorder (ASD) throughout the world requires a review of the provision of assistance to them in all areas, where multidisciplinary assistance should be provided. A systematic review found that clinicians have limited capacity to care for people with ASD and that specialized autism education programs need to be developed.

The purpose of this study is to analysis of the effectiveness of the training program "Rehabilitation of children with autism spectrum disorder" for primary healthcare specialists.

Methods. At the first stage, a multidisciplinary team was created, and the content course was discussed based on the competences that are of need at the primary care level specialists. As a result of the discussion, a professional development program (here in after referred to as the Program) was developed for two credits (60 hours). To study the effectiveness of the Program on the final day, feedback was received from listeners using QR codes, anonymously. For a more in-depth analysis, interviews were conducted with various primary care specialists who participated in the Program.

Results. 9 participants of the training program completed the survey, of which 3 had less than 5 years of work experience; from 6-10 years -1; and more than 10 years - 5. All participants gave the highest score in assessing the presentation material; productivity, usefulness and relevance of the work done.

Conclusions. The advanced training course for primary care specialists allowed us to identify further directions for improving the program. The feedback received about the program indicates the quality of the product, which was developed directly by a multidisciplinary team. It is necessary to continue work in this area with a larger coverage of program participants.

Keywords: autism spectrum disorders, rehabilitation population, primary care, physicians, Kazakhstan.

Corresponding author: Laura Kozhageldiyeva, Team Lead of the Project, Suleyman Demirel University, Almaty region, Kazakhstan.

Postal code: 040900

Address: Kazakhstan, Almaty region, Kaskelen city, Abylaykhan Street, 1/1

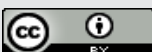
Tel.: +7 7701 746 52 76

E-mail: laurahealthprojects@gmail.com

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Introduction

In recent years, there has been an increase in the prevalence of autism spectrum disorder (ASD). Autism Spectrum Disorders (ASDs) are characterized as chronic and lifelong pervasive neurodevelopmental disorders that influence children's social, language/communication, and behavioral development [1]. Authors of systematic reviews found the global prevalence of ASD to be 98/10,000 [2], in cross-country settings among children aged 4 to 8 years, the prevalence was 1.70 and 1.85% [3], while in Europe it ranged from 0.38 to 1.55% [3] and in Asia 0.36%, where in men 0.45% was higher than in women 0.18% [4]. The incidence of ASD among boys is approximately four times higher than among girls [5]. Currently, there is no gold screening method for ASD diagnosis, which is important for Primary Health Care (PHC) clinicians to know the basic characteristics of children with ASD as this may lead to earlier diagnosis and intervention.

The growth of children with ASD throughout the world requires a review of the provision of assistance to

Materials and Methods

At the first stage, a multidisciplinary team was created, which included: one pediatrician working at the level of primary health care, two rehabilitation doctors (from the National Center for Children's Rehabilitation, where the rehabilitation of children with ASD is directly carried out); one psychologist (supporting parents of children with ASD); one public health specialist (to explain regulations and the process of providing assistance to children with ASD); one specialist in Motivational Interviewing, member of the Motivational Interviewing Network of Trainers.

Research notes that the best knowledge about autism is associated with place of work and age of practice [10-13]. Consequently, the educational program development team was created from specialists with practical experience in working with people with ASD.

The created team held four meetings where they discussed common problems that occur when providing assistance to children with ASD, such as: errors in the preparation of documents by medical staff, changes in the ICD-10 classification and changes in ICD-11; volumes of rehabilitation assistance, as well as insufficient psychological support for parents/guardians of children with ASD.

As a result of the discussion, a professional development program (hereinafter referred to as the program) was developed for two credits (60 hours) with the goal of forming and consolidating in-depth knowledge among students in issues related to the diagnosis, organization and implementation of rehabilitation activities for children with ASD. The program was developed primarily for primary health care (PHC) specialists.

The main results of the program included:

- principles of managing children at the primary health care level;

Results

During the period from October 2-7, training was conducted with the participation of primary care specialists. 13 specialists took part in the training. During the session, cases were presented, and three children with ASD were also invited (with the permission of parents/guardians of children with ASD)

them in all areas, where multidisciplinary assistance should be provided. A systematic review found that clinicians have limited capacity to care for people with ASD and that specialized autism education programs need to be developed [6]. A survey of parents/guardians of children with ASD revealed that 33% of doctors spontaneously discussed non-traditional methods of treating autism [7]. In addition to doctors, a survey among medical students also revealed insufficient knowledge about ASD, in particular prognosis and treatment [8]. Previously, researchers noted the lack of awareness among medical specialists about the etiology and manifestations of autism in Kazakhstan [9].

The aim of our study is to analysis of the effectiveness of the training program "Rehabilitation of children with autism spectrum disorder" for primary healthcare specialists.

- main documents regulating the provision of medical care to children with ASD in Kazakhstan;
- diagnostic methods for ASD;
- identify risks of developing ASD;
- develop a route to obtain timely rehabilitation services for children with ASD;
- monitor the developmental progress of a child with ASD and, if necessary, adjust the management plan;
- maintain documentation within the framework of the regulatory documents of the Republic of Kazakhstan;
- maintain documentation within the framework of the regulatory documents of the Republic of Kazakhstan;
- interact with parents/guardians of children with ASD
- assess the progress of correctional work of a child with ASD.

The program was approved at an extraordinary meeting of the Academic Committee of the Faculty of Medicine and Health Care No. 13 dated September 14, 2023 (extract from protocol No. 1).

To study the effectiveness of the Program on the final day, feedback was received from listeners using QR codes, anonymously. However, for a more in-depth analysis, interviews were conducted with various primary care specialists who participated in the Program.

to demonstrate skills in assessing the risks of ASD, interacting with children with a suspected/confirmed diagnosis of ASD, as well as methods of communicating information to parents/ caregivers of children with ASD.

Regarding feedback: 9 participants of the training program completed the survey, of which 3 had less than 5 years of work experience; from 6-10 years - 1; and more than 10 years - 5. All participants gave the

highest score in assessing the presentation material; productivity, usefulness and relevance of the work done (Table 1).

Table 1 - Program evaluation: through the eyes of the listeners

Respondent	Work experience	Rate the presentation material	Evaluate the productivity of the work done	Assess the relevance of the work done	Evaluate the usefulness of the work done
1	up to 5 years	5	5	5	5
2	6-10 years	5	5	5	5
3	more than 10 years	5	5	5	5
4	up to 5 years	5	5	5	5
5	more than 10 years	5	5	5	5
6	more than 10 years	5	5	5	5
7	up to 5 years	5	5	5	5
8	more than 10 years	5	5	5	5
9	more than 10 years	5	5	5	5

When asked what they liked most, respondents noted: good presentation of materials; availability of valuable information; combination of theory and practice, availability of information. In particular, respondents noted: "The topics of the lectures are carefully thought out, there is no water - that's all the most important thing. EVERYTHING was interesting," and also "As long as there are such specialists, I am sure that patients with ASD will have a good future!" and "Special thanks to all the organizers of the project!"

Discussion

Lack of knowledge among medical professionals about ASD has been identified in a number of studies, for example, Rahbar co-authors identified among general practitioners 44.6% had only heard of autism [14], and even where medical professionals demonstrate a high level of awareness, they still have misconceptions about autism [15,16].

A systematic review found that most doctors are not trained to care for people with ASD, despite the number of people with ASD being on the rise. The results of this systematic review also noted that health professionals who received ASD-related training became more knowledgeable about topics related to the condition, more confident in their ability to provide care to autistic people, and more likely to screen their patients for ASD [17]. Insufficient knowledge about ASD may affect its early detection and reluctance to make a diagnosis due to emotional reactions [18, 19].

Involving a multidisciplinary team in the development of our program strengthened its content, and research shows that in-depth knowledge of autism

Conclusions

The advanced training course for primary care specialists allowed us to identify further directions for improving the program. The feedback received about the program indicates the quality of the product, which was developed directly by a multidisciplinary team. It is necessary to continue work in this area with a larger coverage of program participants.

Competing interests: The authors declare they have no competing interests.

When asked what needs to be improved: the need for topics on adult autism; more information on identifying autism in newborns, in the form of an algorithm or instructions; Conduct such training seminars as often as possible with a larger audience coverage, and also devote more hours. Also, as wishes, the need to organize more courses and develop express methods for identifying autism in newborns was noted.

was also associated with working in a tertiary medical setting [20], as well as the involvement of experienced health professionals working with children with ASD [21].

The results of our first training showed a high need and desire for medical specialists to undergo such types of training; it is also worth separately noting the individual wishes of respondents for the need for more training hours with a large number of practical sessions. Efforts should be made to involve more participants in training to enable parents and caregivers of children with ASD to receive quality assistance.

Future directions: within the framework of this Project, we plan to continue the training seminar, and also consider the introduction of online courses for specialists in rural regions, thereby improving access to the training course. It is also important to strengthen training courses for medical students; a number of studies show low awareness among this category [22-25]. In the future, we will present the results of a comparative analysis of online and offline courses.

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All authors read, agreed to the final version of the manuscript, and signed the copyright transfer form.

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«Аутизм спектрі бұзылуы бар балаларды оңалту» біліктілікті арттыру бағдарламасының тиімділігін талдау

[Кошербаева Л.К.](#)¹, [Кожаягелдиева Л.](#)², [Құрманалина С.](#)³, [Kastytis Šmigelskas](#)⁴

¹ Жоба басшысы, «SDU University» мекемесі, Алматы облысы, Қаскелең, Қазақстан. E-mail: klk.lyazzat@gmail.com

² Сүлеймен Демирел университетінің аға ғылыми қызметкері, Алматы облысы, Қаскелең, Қазақстан.

E-mail: laurahealthprojects@gmail.com

³ С.Ж. Асфендияров атындағы қазақ ұлттық медицина университетінің PhD докторанты, Алматы, Қазақстан.

E-mail: s.kurmanalina@mail.ru

⁴ Лутва денсаулық ғылымдары университетінің профессор, Каунас, Литва. E-mail: Kastytis.Smigelskas@lsmuni.lt

Түйіндеме

Бүкіл әлемде аутизм спектрі бар балалардың өсуі оларға көпсалалы көмек көрсету қажет барлық салаларда көмек көрсетуді қайта қарауды талап етеді. Дәрігерлердің аутизм бар адамдарға күтім жасау мүмкіндіктері шектеулі екенін және аутизмге қарсы мамандандырылған білім беру бағдарламаларын әзірлеу қажет екенін жүйелі шолу көрсетті.

Бұл зерттеудің мақсаты: алғашқы медициналық-санитарлық көмек мамандарына арналған «Аутизм спектрінің бұзылуы бар балаларды оңалту» оқыту бағдарламасының тиімділігін талдау.

Әдістері. Бірінші кезеңде көпбейінді топ құрылып, алғашқы көмек деңгейінің мамандарына қажет құзыреттілік негізінде мазмұндық курс талқыланды. Талқылау нәтижесінде екі кредиттік (60 сағат) біліктілікті арттыру бағдарламасы (бұдан әрі – Бағдарлама) әзірленді. Бағдарламаның тиімділігін зерттеу үшін соңғы күні тыңдаушылардан QR кодтары арқылы анонимді түрде кері байланыс алынды. Толығырақ талдау үшін Бағдарламаға қатысқан түрлі алғашқы медициналық-санитарлық көмек деңгейінің мамандарымен сұхбат жүргізілді.

Нәтижелер. Оқыту бағдарламасының 9 қатысушысы сауалнаманы аяқтады, оның ішінде 3-еуінің жұмыс өтілі 5 жылдан аз; 6 жастан 10 жасқа дейін -1; және 10 жылдан жоғары – 5. Барлық қатысушылар презентация материалын бағалауда ең жоғары ұпайды берді; орындалған жұмыстың өнімділігі, пайдалылығы және өзектілігі.

Қорытынды. Алғашқы медициналық-санитарлық көмек деңгейінің мамандарының біліктілігін арттыру курсы бағдарламаны жетілдірудің одан әрі бағыттарын анықтауға мүмкіндік берді. Бағдарлама туралы алынған кері байланыс көп салалы ұжыммен тікелей жасалған өнімнің сапасын көрсетеді. Бағдарламаға қатысушыларды көбірек қамту арқылы бұл бағыттағы жұмысты жалғастыру қажет.

Түйін сөздер: аутизм спектрінің бұзылыстары, халықты оңалту, алғашқы медициналық-санитарлық көмек, дәрігерлер, Қазақстан.

Анализ эффективности программы повышения квалификации «Реабилитация детей с расстройствами аутистического спектра»

Кошербаева Л.К.¹, Кожаягелдиева Л.², Құрманалина С.³, Kastytis Šmigelskas⁴

¹ Руководитель проекта, Учреждение «SDU University», Алматинская область, Каскелен, Казахстан.

E-mail: kkk.lyazzat@gmail.com

² Старший научный сотрудник Учреждение «SDU University», Алматинская область, Каскелен, Казахстан.

E-mail: laurahealthprojects@gmail.com

³ PhD - докторант Казахского национального медицинского университета имени С.Д. Асфендиярова, Алматы, Казахстан,

E-mail: s.kurmanalina@mail.ru

⁴ Профессор Литовского университета медицинских наук, Каунас, Литва. E-mail: Kastytis.Smigelskas@lsmuni.lt

Резюме

Рост детей с расстройствами аутистического спектра во всем мире требует пересмотра оказания им помощи во всех сферах, где должна быть оказана мультидисциплинарная помощь. Систематический обзор показал, что возможности врачей по уходу за людьми с аутизмом ограничены и необходимо разработать специализированные образовательные программы по аутизму.

Цель исследования: проанализировать эффективность программы обучения «Реабилитация детей с расстройствами аутистического спектра» для специалистов первичного звена здравоохранения.

Методы. На первом этапе была создана мультидисциплинарная команда и обсуждено содержание курса с учетом компетенций, необходимых специалистам первичного звена. В результате обсуждения была разработана программа повышения квалификации (далее – Программа) на два кредита (60 часов). Для изучения эффективности Программы в заключительный день была получена обратная связь от слушателей с помощью QR-кодов анонимно. Для более глубокого анализа были проведены интервью с различными специалистами первичной медико-санитарной помощи, участвовавшими в Программе.

Результаты. Опрос прошли 9 участников программы обучения, из них 3 имели опыт работы менее 5 лет; от 6-10 лет -1; и старше 10 лет – 5. Все участники поставили высший балл при оценке презентационного материала; продуктивность, полезность и актуальность проделанной работы.

Выводы. Курс повышения квалификации специалистов первичного звена позволил нам определить дальнейшие направления совершенствования программы. Полученные отзывы о программе свидетельствуют о качестве продукта, который разрабатывался непосредственно многопрофильной командой. Необходимо продолжить работу в этом направлении с большим охватом участников программы.

Ключевые слова: расстройства аутистического спектра, реабилитационная популяция, первичная медико-санитарная помощь, врачи, Казахстан.