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ANALYSIS OF MORBIDITY OF ADOLESCENT POPULATION OF PRIARALIA

Abstract. Analysis of statistical data showed that in the period from 2006 to 2016, the number of respiratory diseases in children aged 15 to 17 living in the Kyzylorda region decreased to the minimum values for Kazakhstan. The number of adolescents with blood diseases, hemopoietin organs and immunity disorders has been doubled, many noted the presence of iron deficiency anemia, an increase in the number of digestive system diseases by 30%, the nervous system by 40%, eye diseases and its adnexa by 52 %, compared with the average republican indicators for the same period. At the same time, teenagers living in rural areas of Kyzylorda region registered 46% more cases of blood diseases and immune reactivity, 24.1% more children with iron deficiency anemia, 10% more children suffering from diseases of the nervous system and 52 % more adolescents with diseases of the digestive system, compared with adolescents living in urban conditions in the Aral Sea region. Only in terms of health of the eyes and its appendages, the number of rural adolescents was 30% less than the number of urban children with impaired and disturbed visual function.

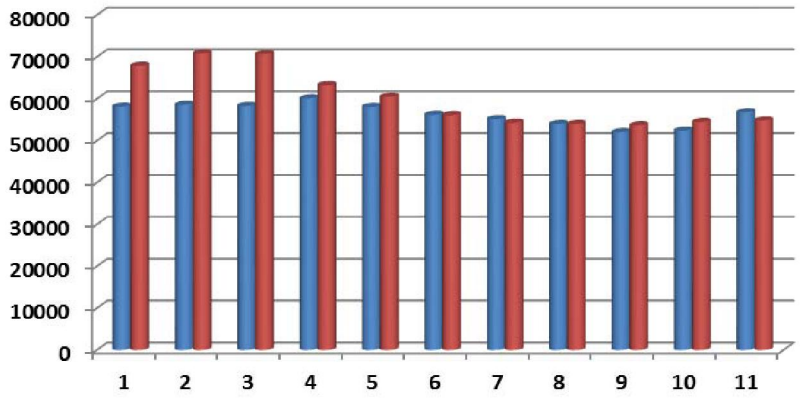
Key words: Priaralye, teenagers, health, disease.

Introduction. Because of the intensive development of irrigation since 1960 in Kazakhstan and Central Asia, the run off to the lower reaches of the Syrdarya and Amudarya rivers has been steadily decreasing. As a result, there was a steady decline in the level of the Aral Sea, which led to the desertification of river deltas, the deterioration of the state of ecosystems. The active processes of soil salinity due to increased groundwater mineralization and salt-dust removals from the exposed bottom of the Aral Sea, the drop in groundwater levels outside irrigation systems and the absence of horizontal water exchange led to the development of aridization and desertification processes in this region [1].

The change in hydrological conditions caused a sharp decline in soil fertility and degradation of vegetation. Lowering the level of groundwater has led to deterioration in the water supply of the surrounding regions. Environmental problems caused global and regional climate changes, due to the intensification of the greenhouse effect, an increase in the concentration of carbon dioxide in the atmosphere, salt-dust removals and disturbed human living conditions in the Aral Sea area [2].

Analysis of the incidence of adolescent population in Kyzylorda region. In connection with the developing ecological disadvantage of the region, there was a significant increase in the overall morbidity of the Aral Sea area population, exceeding the average republican indicators. The 2002 year in Kyzylorda region the total morbidity was 71538 cases per 100 thousand of population with the average republican value of this indicator 57518, which is almost 25% of the increase. In the period 2006-2007 the total morbidity of Kyzylorda region residents was 18-20% higher than the average republican indicators, in 2008-2010, this indicator was higher by 10%, in the period from 2011 to the present, the data on the general incidence of the population of the Aral Sea area show the average republican level (figure 1).

In the period 2006-2007, the incidence rate of the adolescent population (79210.5) in Kyzylorda region corresponded to the average republican level (77,403.5) with insignificant fluctuations in the direction of growth. In the structure of morbidity, the leading position of respiratory diseases (15595.7),

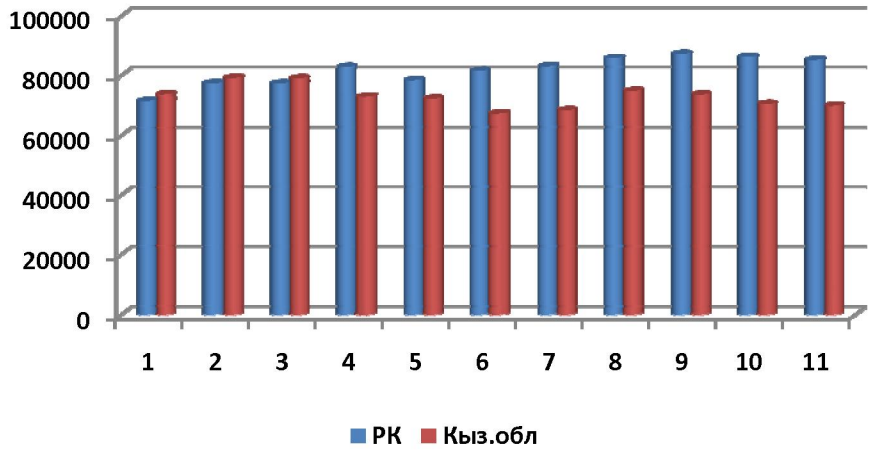


Where 1-11 is the period from 2006 to 2016 (blue - Republic of Kazakhstan, red- Kyzylorda region)

Figure 1 – The dynamics of the overall incidence of the population of the Republic of Kazakhstan and Kyzylorda region for the period 2006-2016 (per 100 thousand populations)

diseases of the digestive organs (22581 cases per 100 000 people of this population) was revealed, which is 3.3 times higher than the average republican indicator (6773.9). The high incidence rate of adolescent population with blood diseases, hematopoietic organs and immunity (8691.4) with iron deficiency anemia (8677.0) is shown. There was a tendency to an increase in diseases of the urinary system (6354.1), diseases of the eye and its appendages (4870.8), the ear and mastoid process (3696.2), diseases of the nervous system (2662.7) [3].

Analysis of statistical data for the period 2015-2016 on the incidence of adolescents from 15 to 17 years of Kyzylorda region showed that the total incidence is 69962.3 cases per 100 thousand of the corresponding population, which is 18% less than the average republican indicator (85228.8 in the Republic of Kazakhstan) and by 11.6% less than in 2006-2007 (figure 2).



Where 1-11 is the period from 2006 to 2016 (blue - Republic of Kazakhstan, red- Kyzylorda region)

Figure 2 – The indicators of the overall incidence of adolescents in the Kyzylorda region in comparison with the average republican data for the period 2006-2016. (per 100 thousand population)

In the structure of diseases in the region, the teenage population retained leading positions in the incidence of respiratory diseases (19426,1), which is 24.5% more than in 2006-2007, digestive apparatus diseases (9240.6), 32% the average republican indicator for 2016 (6997.4) and 59% less than in 2006-2007. It was found out that 45% more sick teenagers in rural areas (10509.4 cases) than in the city (7218.0). It was also found out that the number of adolescents with eye diseases and its appendages (8205.8) increased by 52% in the region, as compared to the data for the same indicator for the Republic of Kazakhstan [4].

Statistics show that over the past 10 years, the teenage part of the population of Kyzylorda region has decreased by 8% the incidence of blood diseases, hematopoietic organs and immunity (7976.8), iron deficiency anemia (6898.6), compared with the corresponding data for 2006-2007. However, in relation to the average republican indices of 2015-2016, the incidence of children with blood diseases in the region was 2 times higher than in the Republic of Kazakhstan. High indicators were also revealed in the incidence of diseases of the nervous system in adolescents (3263.8), which is 9% higher than the national indicator (2989.1) and 22.5% higher than the corresponding indicator in the period 2006-2007, while the incidence rural schoolchildren was 10% more than urban. The incidence of congenital anomalies (malformations), deformities and chromosomal abnormalities in the period 2015-2016 in the teenage population of the region (144.9) was significantly lower than the average republican values (325.2) [3-9].

Thus, a comparative analysis of the incidence of children aged 15 to 17 years living in the Kyzylorda region for the period 2006-2016 a high incidence of children with blood diseases, hematopoietic organs and immunity disorders, iron deficiency anemia, the number of which exceeded the average republican indicators by 2 times. So, if in the RK the number of such diseases was 3792.2 cases, respectively, for 100 thousand adolescents, in children from 15 to 17 years old living in Kyzylorda region, suffering from anemia and blood and immune system diseases is 7976.8 cases, that 2 times more than the average republican indicators. At the same time, an increase in the number of children with blood diseases and immune reactivity living in rural areas by 46% was found, with signs of iron deficiency anemia by 24.1%, compared with the data of the RK [3-9].

An increase in respiratory diseases by 28-30% has been revealed in the region, in comparison with the data of 2006-2007. Nevertheless, when compared with the average republican data, over the past 10 years, the number of respiratory diseases in both the adult population and schoolchildren aged 15 to 17 living in the Kyzylorda region was consistently 40-50% lower than in other regions of Kazakhstan. So, in 2016, the incidence in the region was 19426.1 diseases per 100,000 adolescents against 39679.6 respiratory diseases, on average in the country.

A 30% increase in diseases of the digestive system in children aged 15-17 is shown, compared with the average republican values, which leads Kyzylorda region to the third place in Kazakhstan, after the Almaty and Pavlodar regions. At the same time, according to the data of 2015-2016, the number of diseases of the digestive system and those living in rural areas exceeded by 52% the number of urban teenagers with similar problems.

In addition, the analysis of statistics 2015-2016 shows that the diseases of the nervous system in adolescents of the Aral Sea area have a pronounced tendency to increase and constitute 4635.1 diseases per 100 thousand people, which shows the third place in Kazakhstan, after Pavlodar and Almaty region and 40% more than the average republican indicators. At the same time, the number of children living in rural areas and suffering from diseases of the nervous system is 10% higher than in urban areas (village 3377.4 and city 3082.7).

Particularly significant growth was found in the incidence of eye and adnexa in adolescents in the Kyzylorda region, whose rates exceed the average republican data by 52%, which is 8205.8 per 100,000 of the population against 5395.1 average republican values. It is noted that the incidence of diseases of the eye and its appendages in adolescents aged 15 to 17 living in rural areas of Kyzylorda region is 30% (7028.3) less than the incidence of urban children with a similar visual function disorder (10082.7 diseases per 100 thousand people of the corresponding population). It should be noted that for this disease the region also ranks third in the Republic after the Aktobe and Pavlodar regions [3-9].

Analysis of the morbidity of the growing population of the Aral Sea region living in an ecologically crisis region over the past 10 years has made it possible to identify the leading groups of diseases that.

Conclusion.

1. Comparative analysis of statistical data on the incidence of adolescent population in the Kyzylorda region for the period from 2006 to 2016 showed an increase in the incidence of respiratory diseases, diseases of the nervous system, eye diseases and its adnexa.

2. Over the past 10 years, the incidence rate of blood diseases, hematopoietic organs and immunity disorders, iron deficiency anemia, digestive organs in the adolescent part of the region's population has decreased, compared to 2006-2007.

3. Incidence of children aged 15 to 17 years living in rural areas of Kyzylorda region, respiratory diseases, blood diseases and immune reactivity is higher than in the city.

4. Comparative analysis of statistical data of Kyzylorda region with average republican data on the incidence of children from 15 to 17 years showed that in 2015-2016, in the region the number of adolescents with eye diseases and its appendages has significantly increased, leading positions on the incidence of blood diseases, blood-forming organs and immunity disorders, and diseases of the nervous system have been preserved.

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АРАЛ МАҢЫНДАҒЫ ЖАСӨСПІРІМДЕРДІҢ АУРУЛАРЫ ЖАЙЛЫ САРАПТАМА

Аннотация. Статистикалық мәліметтер бойынша, 2006-2016 жылдар аралығында Қызылордa облысында 15-17 жас аралығындағы балалардың тынысалу жүйесі ауруларының кездесуі Қазақстан бойынша алғанда минимальді көрсеткішке дейін төмендеген. Жасөспірімдердің қан және иммунитеттің бұзылуы аурулары саны 2 есе ұлғайғаны анықталды. Олардың көпшілігінде осы жылдары аралығында Республика бойынша орта көрсеткішпен салыстырғанда теміртапшылығы анемиясы, асқорыту жолдары ауруларының 30%, жүйке жүйесі - 40%, көру жүйесі мен көз аурулары - 52% арытықандығы анықталды. Сонымен бірге, Қызылорда облысының ауылдық аймақтарында тұратын жасөспірімдердің қалада тұратын жасөспірімдермен салыстырғанда 46% қан аурулары мен иммундық ауруларының белең алғандығы, балалардың 24,1% теміртапшылығы анемиясы, 10% жүйке жүйесі аурулары және 52% асқорыту жолдарының жиі кездесетіндігі анықталды. Тек көру жүйесі мен көз аурулары бойынша ауылдық жерде тұратын жасөспірімдер қалалық жеткіншектерге қарағанда 30 30% төмен екендігі анықталды.

Түйін сөздер: Арал, жасөспірімдер, денсаулық, аурулар.

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АНАЛИЗ ЗАБОЛЕВАЕМОСТИ ПОДРОСТКОВОГО НАСЕЛЕНИЯ ПРИАРАЛЬЯ

Аннотация. Анализ статистических данных показал, что в период с 2006 по 2016 годы количество заболеваний органов дыхания у детей от 15 до 17 лет, проживающих в Кызылординской области, снизилось до минимальных значений по Казахстану. Выявлено увеличение в 2 раза числа подростков с болезнями крови, кроветворных органов и нарушений иммунитета, у многих отмечено наличие железодефицитной анемии, рост числа заболеваний пищеварительной системы - на 30%, нервной системы - на 40%, заболеваний глаз и его придаточного аппарата - на 52%, по сравнению со среднереспубликанскими показателями за аналогичный период. При этом, у подростков, проживающих в сельской местности Кызылординской области, зарегистрировано на 46% больше числа заболеваний крови и иммунной реактивности, на 24,1% больше оказалось детей с железодефицитной анемией, на 10% больше детей, страдающих болезнями нервной системы и на 52% больше подростков, заболевших болезнями пищеварительной системы, по сравнению с подростками, проживающими в городских условиях Приаралья. Только по показателям здоровья глаз и его придатков число сельских подростков оказалось на 30% меньше числа городских детей с нарушениями и расстройством зрительной функции.

Ключевые слова: Приаралье, подростки, здоровье, заболевание.

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