

## ANNOTATION

to dissertation work of Duysekova Samal Baibolatovna on the topic " Improving technologies to prevent health loss and improve the quality of life of unemployed youth at the PHC level ", for the academic degree of Doctor of Philosophy ( PhD ) in the specialty 8D10103 - "Public Health"

**Relevance of the topic.** Today, the consequences of unemployment are a significant problem worldwide. In particular, these are both problems with poverty and social instability, as well as acute national and global socio-economic consequences. Great attention is paid only to the economic issues of unemployment in the form of the number of laid-off workers and the amount of benefits paid. However, medical and social consequences, which are difficult to distinguish and are cumulative, are practically not assessed. It is impossible not to touch on public health issues that play an important role for the unemployed population (Brydsten A., 2016).

Youth unemployment, in turn, has its own characteristics, because of the fact that young people, by their psychological and physical nature, are more vulnerable to the adverse effects of unemployment, which affects both mental and physical health. This is evidenced by a number of international studies, the consequences of specific cases, conducting simultaneous serial studies give a similar picture of the consequences of unemployment and the phenomena that accompany it (Raeven Faye Chandler, 2018). The social consequences of unemployment are also of significant importance: but, this is an increase in criminogenic cases, social tension, an increase in the number of physical and mental illnesses, and, accordingly, social differentiation, social aggressiveness is not ruled out. Among the emotional consequences of unemployment are: low self-esteem, depression, suicide and the need for psychiatric treatment in a hospital. Further, there is an increase in psychological and mental disorders, a decrease in the adaptive properties of a person, deterioration in health, a change in relationships with others and loved ones (Stauder J., 2019).

The problem of unemployment among young people worries the world for many generations, since young people are the stratum of the population on which the future in each country depends. The socio-economic situation of young people, especially the unemployed, causes concern, which is not always emphasized in the priorities of social policy. Today's youth has a brighter transformation, often with high labor instability, the NEET generation (neither work, nor study, nor improve their qualifications) has become a frequent occurrence among young people. This transformation has far-reaching consequences that affect the health and quality of life of young people (Ashimkhanova D.E., 2017). In Kazakhstan, the urgency of the problem was highlighted as part of the Year of Youth "Tauelsizdiktin urpaktary" in 2019 and the Year of the Volunteer in 2020.

The study of the incidence among unemployed youth is carried out in many countries, where it is noted that the unemployed have worse mental and physical health compared to employed people. In our country, the relevance of the problem is determined by the lack of scientific papers on a systematic approach to providing

technologies to prevent health loss and improve the quality of life of unemployed youth at the PHC level. Thus, the above contributed to a deeper study of the issue in the field of ways to provide medical and social assistance to unemployed youth at the PHC level.

### **The aim of the research**

scientifically substantiate and develop a model for improving technologies to prevent health losses and improve the quality of life of unemployed youth at the PHC level.

### **Research objectives**

1. to study international and domestic trends in the impact of youth unemployment on health.
2. to study the state of health and quality of life of Kazakhstani unemployed young people.
3. evaluate modern measures to provide medical and social assistance to unemployed youth at the PHC level.
4. develop a model for improving technologies to prevent health losses and improve the quality of life of unemployed youth at the PHC level.

### **Materials and methods of research**

1. Literature review. The data of published studies in the international databases MEDLINE (PubMed), EMBASE, Springer, Elsevier, Web of Science, Cochrane were analyzed. Evidence was systematically searched for keywords using the PICO (TICO) methodology.

2. Studying the characteristics of the basic indicators of the youth labor market in Kazakhstan. The main method was a retrospective study. The materials for the study were the data of the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan for the period from 2015-2021. The official data of the section "Statistics of labor and employment" was analyzed. The gender and age structure, regional and country trends of youth unemployment for the period under study were assessed.

3. Studying the state of health of Kazakhstani youth. The main sources of information were official data on the number of cases of diseases (form No. 12 and registry data of the Damumed system) and cases of deaths (RPN database) in the Republic of Kazakhstan. Study period 2018-2020

Based on the materials of Form No. 12, primary morbidity and prevalence (by sex, by nosology) were analyzed. Based on the Damumed system, we analyzed the frequency of visits to the MO by gender, by age, by work status, by study status, taking into account the main and concomitant diagnoses, taking into account complications, and taking into account the number of visits to the MO for the specified year. Mortality and survival were analyzed based on registry data (RPN) (Kaplan-Meier method).

Indicators of morbidity and mortality were calculated according to the method generally accepted in sanitary statistics. Predictive scores for medical-statistical indicators were calculated by linear regression and/or exponential smoothing.

4. Studying the quality of life of unemployed Kazakh youth. The main research method was a survey. The standardized questionnaire Q-LES-Q (quality of life,

pleasure and satisfaction) was used. An integral indicator of the quality of life was calculated, which varied from 14 to 70, where 14 is the worst value.

At the planning stage, the sample size was calculated (according to the Lehr formula). Taking into account the size of the sample, 669 young people aged 18 to 29 were involved in the study. Of these: 485 (72.3%) employed (work/study) respondents and 184 (27.7%) unorganized.

Multiple regressions were used to evaluate relationships/dependencies. The quantitative variable "Integral indicator of the quality of life (according to Q-LES-Q)" was a dependent variable, the predictors were the personal data of the respondents and some other characteristics.

5. Studying the opinion of social and medical workers in Kazakhstan in the context of providing medical and social assistance to unemployed youth. As part of a cross-sectional study, a questionnaire was developed to interview medical and social workers, as well as specialists from Youth Health Centers (hereinafter referred to as YHC), working in primary health care organizations. The questionnaire included questions to clarify the passport data of respondents and questions to study the specifics of providing medical and social assistance to unemployed youth. A total of 63 medical and/or social workers took part in the study.

#### **Scientific novelty**

For the first time in the Republic of Kazakhstan:

1. As a result of the analysis of international and domestic features associated with youth unemployment, a negative impact on the health status and quality of life of unemployed youth has been proven.

2. The state of health and quality of life of unemployed young people was studied, and the prognosis of survival among this category of the population was determined.

3. The main barriers to the accessibility of medical, social and psychological assistance for unemployed youth in Kazakhstan in terms of insurance medicine are analyzed.

4. Based on evidence-based data, a model has been developed for providing medical and social assistance to unemployed youth in Kazakhstan aged 18-29 years at the PHC level.

5. Proposed to prevent health losses and improve the quality of life of unemployed youth at the PHC level in the Republic of Kazakhstan.

#### **Practical significance of the study**

The practical significance of the work lies in the possibility for health managers to use the results/conclusions/recommendations proposed in the framework of this study to develop standard operating procedures, algorithms for providing medical and social assistance to unemployed youth, ways to prevent health losses and improve the quality of life of unemployed youth.

Analysis and results of the study are set out in the guidelines: "Healthy Universities" and "Healthy Jobs", also in the course of work in working groups under the Ministry of Health of the Republic of Kazakhstan, forms of accounting and reporting on the MCH were proposed with the inclusion of status (protocol of the Working Group on the development of MCH dated 05/25/2022), activities to

disseminate and promote the image with the strengthening of work on medical and social assistance to young people (minutes of the meeting of the Working Group on the formation of the National Project "Healthy Nation" for 2021-2025 No. 5 dated 04/08/2021), recommendations on accreditation standards for youth health centers regarding the development of standard operating procedures for the MHC (protocol of the working group on the development of standards for national accreditation in the field of health care No. 3 dated November 30, 2021).

### **Theoretical significance of the study**

The theoretical significance of the work is determined by its focus on expanding and deepening ideas about the characteristics of the health and quality of life of unemployed youth, as well as existing modern approaches to organizing medical and social assistance to unemployed youth.

The factual material can be used in the development of criteria for accreditation standards for the MCH (the Center for Accreditation in Healthcare is scheduled for 2023; the applicant is a member of the working group), as well as conclusions and recommendations can be used in the educational process when compiling lecture content and practical (case study) assignments.

### **Basic provisions for defense**

1. The negative impact of unemployment on the health status and quality of life of young people has a reliable justification, confirmed by the analysis.

2. For Kazakhstani youth in the period from 2018-2020, trends are characteristic: a decrease in morbidity, an increase in mortality and a relatively stable age-related survival.

3. The quality of life of unemployed youth in Kazakhstan is significantly lower compared to employed youth and depends on "financial well-being", "the fact of drinking alcohol", "region of residence", "feeling of support from the state", "marital status" and "occupation".

4. The current system of providing medical and social assistance to unemployed youth is not carried out at the proper level and requires an integrated intersectoral approach. Additional skills are needed to provide medical, psychological and social assistance to unemployed youth (including establishing psychological contact with this contingent, etc.).

### **Approbation of the dissertation**

The main provisions of the dissertation work are reported on

1. International scientific and practical conference of students and young scientists "Medical science and education: youth and aspiration - 2019", (October 1-2, 2019), Kazakhstan, Nur-Sultan, NJSC "MUA".

2. XXIV International Scientific Conference "Oncology - XXI Century", X Italian-Russian Scientific Conference on Oncology and Endocrine Surgery, XXIV International Scientific Conference "Health of the Nation - XXI Century" (Istanbul, May 2020).

3. Republican scientific-practical conference with international participation "Compulsory social health insurance - improving the efficiency of the healthcare system", Kazakhstan, Semey, NJSC "MUS".

4. International online conference “Modern Science. Management and Research Standards II” (Prague, November 17-18, 2020).

5. International scientific-practical conference of students and young scientists “Insurance medicine. The science. Education” ( Nur-Sultan 21-22.12.2020);

6. International online conference «Modern science. Management and Standards scientific research. Modern science. Research Management and Standards”, Prague, April 22-23, 2021.

7. 5TH Global Public Health conference– GLOEHEAL 2022 “ Future of Global Health in a changing world” 24th – 25th february 2022 – Shri-Lanka.

8. International scientific-practical conference of students and young scientists. NJSC "Astana Medical University" December 09-10, 2021.

#### **Personal contribution of the dissertation student**

Independently collected material, conducted a sociological survey of young people and medical workers, took part in the development of standards for operating procedures for youth health centers. She was directly involved in conducting trainings for unemployed youth on health and quality of life issues.

Independently carried out the analysis and generalization of the data obtained, their statistical processing, and also collected literary data on the topic of the dissertation work. The contribution of the authors to the work is confirmed by publication in scientific journals and participation in scientific conferences on the issues of their dissertation work.

#### **Implementation into practice**

The results of the dissertation work are put into practice in the following organizations:

1. CSE on REM "City Polyclinic No. 7" of the Public Health Department of Almaty (act of implementation on the " Model for the provision of medical and social assistance to unemployed young people aged 18 to 29 years" dated February 17, 2022).

2. GK P on the REM "City Polyclinic No. 3" of the Akimat of Uralsk, WKO (act of implementation on the «Model for the provision of medical and social assistance to unemployed young people aged 18 to 29 years" dated 04/19/2022).

3. " QAMQOR " Shymkent (act of implementation on the " Model for the provision of medical and social assistance to unemployed young people aged 18 to 29 years" dated 10.02.2022).

4. GK P on REM "City Polyclinic No. 6 " of the Akimat of Nur-Sultan , (act of implementation on the " Model for the provision of medical and social assistance to unemployed young people aged 18 to 29 years" dated 04/08/2022).

#### **Publications**

17 scientific papers have been published on the topic of the dissertation:

–there are 2 articles in journals indexed in Web databases of Science and Scopus.

–3 in publications recommended by the Committee for Quality Assurance in Education and Science of the Ministry of Education and Science.

–10 abstracts at international scientific and practical conferences.

–2 guidelines "Healthy Universities" and "Healthy Jobs".

–4 copyright certificates.

### **Conclusions**

1. An analysis of international and domestic trends revealed convincing arguments regarding the association between unemployment and youth health. In the cohort of unemployed youth, about half of those who applied to medical organizations (16.0% in 2018, 13.9% - 2019, 15.5% - 2020) were respondents from Turkestan region, the same level from Karagandy region, Almaty (11.0% in 2018, 13.0% - 2019, 10.3% - 2020).

2. Based on the results of the epidemiological analysis, trends in indicators characterizing the state of health of Kazakhstani youth were established: a decrease in morbidity, an increase in mortality and a relatively stable survival rate. At the same time, about 1/3 of cases (in the analyzed indicators) are accounted by unemployed youth, the proportion of unemployed youth who applied to medical organizations was 36.5% (CI 33.3 ÷ 39.7%), the most common nosology with the code " I » "Diseases of the circulatory system" (23.6% in 2018, 16.3% - 2019, 15.6% - 2020). According to the results of the survey, unemployed youth more often noted health problems over the past year (42.3%) than in other social groups (35.6-37.8%).

3. In general, the quality of life of Kazakhstan youth is slightly above the threshold level (above 50%). At the same time, in the cohort of unemployed youth, the quality of life is significantly lower by 12% compared to the employed youth (differences in average indicators of quality of life are significant at the level of  $p = 0.001$ ). The quality of life of unemployed youth is associated with such predictors as: "Financial well-being", "The fact of drinking alcohol", "Region of residence", "Feeling of support from the state", "Marital status" and "Occupation". Variables tested for "strong" relationship: no multicollinearity. The Durbin -Watson value was 1.858: no autocorrelation.

4. It has been established that the system of providing medical and social assistance to unemployed youth is not carried out at the proper level and requires an integrated intersectoral approach. 66.1% of the respondents qualifies the youth's conversion rate (to their organization) as low (less than once a month). Employees (65% of respondents) need additional study and acquisition of skills in establishing psychological contact, in providing medical, psychological and social assistance and other skills.

5. The proposed model and practical recommendations for preventing health losses and improving the quality of life of unemployed youth are aimed at reducing the impact of the negative effects of unemployment on the health of young people. Improved technologies imply close intersectoral interaction between such bodies as the National Research Center "Youth", the National Center for Public Health of the Ministry of Health of the Republic of Kazakhstan, PHC organizations, Youth Health Centers, which will consistently lead to improved awareness of unemployed youth, access to medical and social assistance and improved health status and quality of life of young people.

### **Practical recommendations**

1. The results of the analysis and conclusions obtained by us are recommended for use by health managers when planning programs / activities aimed at providing

medical and social assistance to young unemployed people, taking into account the identified characteristics and necessary skills.

2. In order to reduce barriers in obtaining medical and social assistance for unemployed youth, employees of youth health centers, together with youth resource centers, healthy lifestyle centers and other interested parties, including public associations, are recommended to conduct awareness-raising activities to prevent the impact of unemployment on health, improve quality of life and affordable medical services within the framework of insurance medicine.

3. In order to prevent health losses, as well as early detection of physical and mental health problems among young unemployed people, it is recommended to conduct screening examinations at the level of youth health centers. To assess the complex state of health, it is recommended to use the questionnaire “Determination of the health status of unemployed youth in Kazakhstan” developed during the study, to apply scales for assessing physical, mental, social health and quality of life.

4. In order to fully record and cover medical services for unemployed young people, it is recommended that public health departments ensure the standardization of the process of providing medical and social assistance to unemployed youth with the maintenance of data on the social status of the patient in the electronic health passport, it is important to further maintain the image and status of the MCH, increase funding for their activities, the use of remote forms of providing medical and social assistance to young unemployed people, for example, mobile applications, a chat bot in a telegram.

#### **Scope and structure of the dissertation**

The dissertation work is presented on 98 pages, consists of the following chapters: introduction, literature review, research materials and methods, theoretical and practical parts of own research (3 sections), conclusion, applications. The work is illustrated with 17 tables and 30 figures. The list of sources used includes 132 sources, of which 96 are in English.