

Overcoming the Negative Demographic Trends by the Children's Injury Prevention

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Abstract. The article provides an overview of the demographic situation and its importance for the further society development. The authors describe injury as a social phenomenon that has a significant impact on the demographic situation in Russia and in the whole world. The data on the predominant causes of injuries among children and adults are presented. The analysis of the socio-economic situation and social policy is given in the context of demographic indicators. This social policy is implemented in modern Russian society.

The injury phenomenon has the importance and it is the third cause of death. The article describes the main trends of modern social policy and systematic measures that can reduce injury rates with a focus on its sources and causes. It will have a positive impact on the demographic crisis in the country.

1. Introduction

The social policy in Russia is aimed at ensuring a decent standard of living for all members of society. It is reflected in the Concept of long-term socio-economic development for the Russian Federation. The purpose of the concept is to determine ways and means of ensuring sustainable improvement of the Russian citizens' welfare. There are also national security strengthening in the dynamic development of the economy for the long term and country strengthening in the world community. The increasing role of human capital and the competitiveness level of modern innovative economy are increasingly determined by the quality of professional staff, the level of their socialization and cooperation. Russia is not able to maintain a competitive position in the world economy at the expense of cheap labor and savings on the development in education and public health.

Human development includes two types of systemic transformations. They are aimed at developing the competitiveness of human capital, labor and social sectors of the economy. There are transformations that improve the quality of the social environment and living conditions for people [2]. They cover medium-and long-term goals, priorities and main directions of demographic policy, policy of modernization in education and health care, development of the pension social assistance, culture development, formation of effective labor and housing markets.

In Russia the dominant trend is the population decline[3]. The purpose of the state demographic policy is to reduce the rate of natural population decline, stabilize the population and create conditions for its growth, improve the quality of life and increase life expectancy [21].

The priority directions of the state demographic policy in the Russian Federation are several follows. The first point is the reduction of mortality, especially high mortality (men) in working age. The second point is the reduction and strengthening of public health, increasing the duration of active

life, the creation and the formation of conditions and motivation for a healthy lifestyle, the reduction of the socially significant and danger diseases. The third point is the increasing in the birth rate, including the birth of the second and subsequent children in families [1].

Here is also the institution of the family strengthening, the revival and preservation of spiritual and moral traditions in family relations, family education, the development of family support in connection with the birth and upbringing of children, providing state financial support to families with children. The fourth point is the management of migration processes in order to reduce the shortage of labor resources in accordance with the economy needs. There is an attracting policy for qualified foreign specialists, including graduates of Russian universities, compatriots, young people from foreign countries for training and internship in the Russian Federation.

The formation of an effective, flexible and adaptive social system of institutions and organizations for the Russian population social services is impossible without strong economic basis. All members of civil society, not only representatives of power structures, should be interested in its creation [17].

In the "Forecast of long-term socio-economic development of the Russian Federation for the period up to 2030", developed by the Ministry of economic development, there are some areas among the main factors determining the socio-economic development of our country. There are the development of institutions that determine entrepreneurial and investment activity, the effectiveness of state institutions, strengthening trust in society and social justice, including issues of legitimacy of property, the intensity of improving the human capital quality, the the middle class formation, improving the life quality.

The indicators of the life quality are its duration, safety of life, reduction of mortality [4]. The leading mechanisms of death from unintentional injury are traffic accidents, drowning, poisoning, thermal injuries and falls. For all mechanisms, there are striking similarities between the main causes of injury and the underlying socio-economic and environmental determinants.

The burden of injury is unevenly distributed, disproportionately among the poorest families and among the countries experiencing the greatest socio-economic change. In some countries the difference in mortality rates from unintentional injuries reaches nine times and depend on belonging to a particular socio-economic category [7]. This uneven distribution of injuries threatens to further gap of health inequalities between and within countries and leads to the social injustice.

The connection of injuries with technical progress in industry, agriculture, motor transport and the development of movement speeds give to the injury's problem a special social importance [9]. "According to Kerry, in the United States since the beginning of this century, the losses from car accidents are more than twice after killing in all the wars that America led in the last two centuries" (I. M. Grigorovsky). "In France, according to the National Institute of labor protection, an accident occurs every 9 seconds at industrial enterprises and construction sites. They lead to temporary disability, every 2 minutes – leading to permanent disability, every hour- to a fatal accident" (S. Pronin). Clavelin (Ch. Clavelin) wrote that during the first world war 21 000 000 people were injured and defeated. The second world war required many times more victims [5].

Today injury prevention is perceived as a public responsibility. It is recognized that evidence - based systemic prevention is more effective than treating injuries as casual and unavoidable accidents that can be mitigated by education.

Various territories are very different in terms of their conditions and culture [12]. For example during several years some Western and Northern states have demonstrated an active and sustained political commitment to fighting childhood injuries. They have allocated funds to address the problem. These countries have some of the lowest rates of injury in the world (Netherlands, Norway, Denmark). On the contrary, the countries of Central and Eastern Europe, including Russia and the Commonwealth of Independent States (CIS), are still adapting to rapidly changing political, economic and social realities. They have very high rates of children injuries.

Thus, not all children in the world enjoy the benefits of public responsibility and concerted public health action. These terms create a safe environment and a safe model of behaviour.

Injuries demand huge resources from health authorities. According to Europe injury's estimates, the hospitals receive 5 million people and the emergency department treats 69 million people every year. Low injury rates in high-income countries indicate that human lives can be saved in other terms.

It is quite natural to say that injuries by increased mortality has a significant impact on demographic indicators. It happens not only in underdeveloped, but also in prosperous countries [14].

It is well known that the main causes of death from injuries are: accidents, drowning, poisoning, falls from a height [15]. This thesis is most relevant for children.

Well-being is the degree of society satisfaction with material and spiritual needs, joys and benefits. It is characterized by the following indicators: living conditions, the possibility of the constitutional guarantees implementation, indicator for the average period of the population life.

The level of life is the use of society material goods, spiritual needs. It is characterized by a system of quantitative and qualitative indicators. There are the level and structure of the labor results use; the level and dynamics of prices for essential goods, tariffs for various services, in particular, public utilities or transport expenses; working hours; working conditions; housing conditions; the amount of funding for social payments; the development of social infrastructure.

The problems of living standards are in the attention focus of the world community and international organizations. Thus, article 25 of the ILO Convention "About basic purposes and norms of social policy" No. 117 reports that a person has the right to a standard of living adequate for the health and well-being of himself and his family. This right includes food, clothing, housing, medical care and social services, as well as the right to security in the event of unemployment, disability, widowhood or other loss of livelihood in independent circumstances [18]. On the UN recommendation, the standard of living is measured by a system of indicators. It is characterized by health, consumption, employment, education, housing, social security levels [16].

Social policy of any state, including the Russian Federation, is aimed at improving the level and quality of the population life. It is reflected in the activities of Russia [6].

Social security in the narrow sense means that the state, which has the aim of social policy to ensure a minimum quality of society life, guarantees the protection of every individual from the basic dangers, the loss of livelihood, such as illness, industrial accident, old age, unemployment, poverty. The social security refers to a system, which through the state and public organizations provides resources for accommodation and service to the needs. People should be able to maintain an adequate standard of living. It will be the social equality and full equilibrium development through redistribution of incomes [8].

Considering the social aspects of economic reform, it should be noted that the development of market relations leads to the allocation for social support in an independent activity [19, 264 p.].

Social security, from scientific, theoretical and practical points of view, is a distribution system of material and financial resources. These resources meet the vital basic needs of citizens who find themselves in a situation that objectively violates their livelihoods. The preservation of health and full reproduction on the basis of the insurance principle and partial state support should be for all members of the society [10].

The process of the constitutional rights' implementation for citizens to provide them with various social services by public authorities at all levels of government is the social guarantees.

Social guarantees include the following rights: autonomy in determining the place of work and occupation; the obligation to receive a minimum wage; the guarantee of a minimum pension; the payment of various types of benefits related to the birth and upbringing of a child; the provision of a minimum unemployment benefit; the guaranteed payment of a minimum grant; the timely provision of health care and protection and so on.

2. Actuality

Injury is a major public health problem that threatens populations around the world. A huge number of people die from injuries or suffer pain and become disabled. Some disaster, such as a train crash, can attract public attention. The daily loss of people lives who die as a result of injuries remain almost

unnoticed. The highest number of deaths occur in low-and middle-income countries. There are five out of six deaths from injuries. The difference between the countries with the highest and lowest unintentional injury deaths is seven times high.

Throughout the 20th century the urgency on the problem of injuries has grown. The concern is not just the growth of injuries in Russia (especially in recent years), but the fact that there is an increase in fatal injuries with the complete or temporary disability. Today in the economically developed countries of the world injuries take the third place among causes of the population death. Injuries take lives of the youngest able-bodied age people. Among men in the age groups from 1 year to 44 years mortality from injuries ranks the first place.

In the structure of the general morbidity, injuries and poisoning account for 10 - 15%, and among the newly diagnosed diseases they occupy the second place. They give place only to respiratory diseases. The average injury rate is between 120 and 130 per 1.000 people. Injuries for men are in 1.5 - 2 times higher than for women. This is due not only to the professional and production characteristics of men, but also the specifics of their life way. Non-productive injuries are also 2 times higher for men than for women. Injuries and poisonings occur at any age. This pathology is the characteristic of young and the most productive age people[13].

That fact dramatically increases their value for the solution of demographic problems. Injuries have the high socio-economic importance in the study of the mortality causes. The frequency and proportion of deaths from injuries tends to increase in the world and ranks the third place in the structure of all death causes. In recent years the mortality from injuries in Russia claims the second place. It aheads the malignant tumors. Naturally, the level of mortality from injuries differs for people of different ages. Injuries are the leading cause of death for people under 30 years' age. Young men injuries and poisoning are up to 60% of the death causes.

Therefore, the prevention of injuries should be the subject of close attention, not only for medical workers, but also for many other departments: from the safety service and traffic police to school and kindergarten staff.

A special place among all types of injuries takes the children's injury. Injuries are harmful to people of all ages, but they are the leading cause of deaths for children between 5 and 17 years old. It is also one of the main pain causes, suffering and disability, which can have far-reaching consequences for the physical, psychological and social development of the child. The increase in the number of children with disabilities creates an unnecessary additional burden on the able-bodied age population. In addition, children injuries divert huge resources from the society and the public health in the short and long term outlooks.

Sometimes the economy of a country, republic or region is reduced by some separate spheres and sectors of management (for example, enterprises, finance, tax policy, pricing, etc.) or separate processes and phenomena. This theoretical approach to economics is not rational. It should be noted that this concept narrowing may lead to problems in practice. In this case, measures to improve and develop the economy are not aimed at the economy, but only at its individual components. By the way, it is the basis for the strategy and tactics of limited activity for economic power structures at the federal and regional levels and the subjectivity in their activity priorities.

If we talk about the economy of a particular country or region, we will discuss a constantly developing and changing system created and regulated by society. The system where its subjects are engaged in the production and distribution of material goods. This approach for determining the essence of the economy allows clearly and reasonably form economic concepts, programs and forecasts. It also allows to plan competently and professionally the organization of economic bodies, determine their functions, tasks and priorities. Programs and plans for the development of the economy in the country, regions and municipalities should contain sections related primarily to the production of goods and services.

This is a key part of economic documents and a super-priority task of economic bodies. Other sections cover distribution, exchange and consumption processes. Thus, dealing the economy is the

analyzing of all processes taking place in it (production, distribution, exchange and consumption) and offering appropriate mechanisms for their improvement and development [11].

According to the economist Lawrence Peter, "Economics is the art of satisfying infinite needs with limited resources." The Russian economy is developing in the market era. Russia is a social state according to the Constitution of the Russian Federation. The essence of the social market economy is the focus on the person, his development and welfare. It is trivial, superficial and inaccurate. Even more doubtful is the thesis that the market economy itself regulates the standard of the population living, the ratio of social justice and economic efficiency (freedom and order). It should be automatically and without external interference.

The core of the social market economy is the one with the main goal and objective for increasing the efficiency of production and profit. Of course, the market economy, with the main goal achieving, automatically solves some social issues: employment, wages, etc. However, the market economy is based on competition and it does not care about social justice. Social justice and social protection are ensured by the state intervention in the economy (benefits' redistribution, tax policy, legal support, etc.).

The state turns it to the people interests and gives the status of a social market economy. It is made by the state's will and force, but not by the market economy itself. The state often sacrifices economic efficiency for the population's social protection. For example, the supply of traffic lights audible alarm for the blind, the device of special lifts on public transport for the disabled are at the expense of economic efficiency.

Thus, one of the most important criteria of the social market economy is the orientation to social security, equality of all population segments and ensuring social security.

The social system is a special kind of a system, because the structural components of this system include people and their relationships. The economic principle is the empirically based information about the economic aspects of the social system. It is proven with the help of categorical-scientific apparatus. It is the choice of principles implemented by the state. It provides an opportunity to talk about the degree of democratization and civil society formation, to which all civilized states aspire today.

There are many principles of social economy and the most important of them is the principle of humanism. This principle consists in the fact that a person is considered as the highest value and his/her dignity and civil rights must be protected. It is necessary to create conditions for the realization of his/her personal development. Today the creation of conditions for social and economic well-being remains one of the most priority goals for the social sphere.

3. Research result

The aim of our study is to analyze the social phenomenon of injury. It is observed from the possibility of preventive activities to reduce or minimize its consequences. This social phenomenon is analyzed by the authors as an interdisciplinary object of research from social, medical and economic points of view. The article describes possible ways to resolve the complex demographic situation by reducing the mortality rate from injuries. It reveals the research potential in the field of social policy and public opinion research to obtain reliable and objective information about the status, trends and prospects of the existing socio-economic policy. The study was carried out using various methods of theoretically-analytical and practical plans.

The theoretical analysis was carried out in order to systematize the basic concepts, basic provisions, social and medical practices that form the basis of social policy. This policy is aimed for improving the level and quality of life. The main causes of injuries among children and adults, risk factors for falling from a height, strategies for the prevention of road accidents among children, measures to prevent children drowning, strategies to prevent children poisoning, measures to prevent thermal injuries are described according to the results of the studied material.

The authors present a descriptive and detailed analysis of the injuries problem as a social and economic phenomenon in order to systematize, generalize and algorithmize it. It is described as a social and medical problem that needs to be solved by the social, economic and legislative activities.

The strategic goal of the study is to identify the specifics of injuries for adults and children as the demographic factor affecting the level and quality of life. The recommendations and measures are developed. They allow propaedeutic method to reduce the level of estimates with minimal economic costs.

There are the main measures to prevent children injuries associated with these causes below.

Table 1. Key strategies to prevent road traffic accidents among children.

Strategy	Effective	Long-term	Insufficient data	Inefficient	Harmful
Laws providing for zero tolerance of alcohol consumption	*				
Laws on the minimum age at which alcohol is allowed	*				
Reducing the permissible level of alcohol in the blood	*				
The involvement of the media	*				
Child seat	*				
Seats allowing children to use seat belts	*				
Seat belt	*				
Motorcycle helmet	*				
Placement of children in the rear seats	*				
Only educational programs on the use of child seats			*		
Increased visibility of vulnerable road users			*		
School introductory programs on the problem of driving under the influence of alcohol			*		
Airbags and children					*
Issuance of driver's licenses to novice teenage drivers from the earlier age					*
Improving road design	*				

For most children, water is a great pleasure and a source of joy and excitement. But in developed countries, about 14 children drown every year. Measures to prevent drowning include:

1. Careful supervision for children during swimming;
2. Construction and operation of swimming pools meeting all safety requirements;
3. Training and certification of rescuers;
4. Installation of barriers between children and water catchment tanks;
5. Compliance with safety rules when riding children on boats and other types of water transport;

6. During young children bathing it is not recommended to use the seats for baths and during teaching children to swim you must use the inflatable facilities.

Drowning is the second leading cause of death due to injuries among children.

Poisoning is the third leading cause of death from unintentional injuries. It accounts 7% of all deaths from accidental injuries.

Measures to prevent children poisoning are presented in table 2.

Table 2. Basic strategies for preventing children poisoning.

Strategy	Effective	Promising	Insufficient data	Inefficient
Elimination of toxic substance	*			
Adoption and enforcement of legislation on packaging for medicines and poisons that cannot be opened by children	*			
Packaging of drugs in quantities, insufficient for fatal outcome	*			
The establishment of poison control centres	*			
Storage of drugs and toxic substances under lock and key		*		
Removal or regulation of the toxic substances availability that can be easily mistaken for food			*	
Instilling children the need to avoid toxic substances			*	
Reducing the attractiveness of drugs and toxic substances			*	
Safety training in the home and furnishing of houses devices security			*	
Clear labelling of toxic products				*

In the daily lives, children are regularly exposed to flames and hot water. Burns are the only type of injury that affects girls more than boys at any age group[13]. Among the measures of thermal injury preventions are:

Use of technical measures: fire alarm; regulation of water temperature, flowing from the tap; manufacture of children's underwear that protects against burns.

The environment changing by the optimization of building standards, modernization of household equipment.

Legislation revision to restrict children's access to open fire (fireworks), stricter requirements for sockets, plugs, lighters, etc.

Training on prevention and first aid measures.

Falling from a height is the next common cause of childhood injuries [20]. The risk factors of falling from a height include:

1. Age, stage of development and sex of the child. Most often fall from a height the small children, boys and girls in puberty period.
2. Threat environment – the open wells, the lack of anchorages for ladder techniques, the lack of handrails, dangerous balconies, outdoor access to the roof.
3. Unsuitable equipment in schools and other educational institutions.
4. The equipment for playgrounds which does not have adaptations providing safety.
5. Contact with animals (horse riding).
6. Poverty is a common risk factor for all types of injuries and poor children's supervision.

4. Summary

In conclusion, we note that overcoming negative demographic trends by the injury prevention is the potential tool that will solve the urgent problem of reducing mortality, improving the quality and standard of living by propaedeutic facilities. The authors offer various methods of prevention, a list of measures aimed for the analyzing problem solving.

The authors believe that a significant reduction in child injury can be achieved by the organization of social support at home, for example, through programs of patronage for young mothers. It is possible to explain parents the need of protective equipment using, such as window latches and stair doors. Ask them not to use products that are sources of danger, for example, walkers.

It can be concluded that interventions in the upbringing of children, can reduce child injuries. It can be made with a variety of measures that are most often implemented at home, particularly in families with an increased risk of adverse effects on the child health. Preventive measures save thousands of lives and each of them is a value for the country.

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