

Conformities to Law of Spatio-Temporal Dynamics of Indexes of Health of Population Region of Southern Aral Sea Area

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Abstract: *The article is sanctified to research to the spatio-temporal dynamics of indexes of health of population, resident in the region of Southern Priaralye. It is set that influence of factors of environment in all cases carries complex character. Quantitative dependence is educed between the complex of factors of environment and degree of expressed of his constituents and state of health of population of Priaralye.*

Keywords: Southern Priaralye, health of population, prognosis of morbidity, ecological factors

1. Introduction

Problem of improvement of the state of environment, maintenance of natural resources on the meaningfulness and actuality behaves to the number of priority directions of ecology. In the epoch of scientific and technical revolution activity of man acquires the scale of global processes, that in practice resulted in creation of dangerous regions, separate zones of tense ecological situation, worsening of health of people, considerable causing damage to nature. Therefore the problem of making of effective ecological politics is extraordinarily actual presently. A basic base must be on scientifically reasonable methodology, here the study of cooperation of society and nature must be sent to the decision of all associate complex of problems of this system.

Health as a basic index, reflecting ability of humanity most effectively to carry out the social and biological function in the certain terms of any region, is widely used in scientific researches. Study of influence of factors of environment on a structure, level and dynamics of indexes of health allows to expose the "ecologically conditioned" rejections of these indexes.

2. Result and Discussion

Presently at the study of influence of environment on the health of population the action of one factor is studied, mainly. In opinion of row of scientists, such approach can have some methodological errors [1, 3, 8]. In hygienically and ecological researches a selection is practiced from the environment of one and two factors or elements, overstatement of their influence and even absolutizing of their role at an underestimation other and ignoring of complexity of influence of environment on the whole. As is generally known, about influence of environment on the health of population judge on the coefficients of cross-correlation connection between the degrees of expressed of factor and indexes of quantitative description of health.

The high coefficients of correlation got at an one factor analysis can carry unreliable character in some measure [2, 4, 8]. It is explained that the studied factor can additionally

plug influence of other factors in a mathematical model [6]. Exactly to it a that circumstance is related, that in all analogical cases as far as adding to the model of additional factors, the value of coefficient of private correlation diminishes with the examined factor.

It is possible to suppose that varying of the correlated factors is related to influence on them some more general factors and, thus, the association of them in groups is justified not only from the mathematical point of view but also from ecological. A multivariable analysis allows setting general factors or phenomena and setting forth a hypothesis about nature of fundamental differences between objects, to educe the structure of intercommunications in the set of signs, to check hypotheses about intercommunications and interdependence of signs, to carry out the typology of objects [6].

Conducted before (on 2009-2018) by us the prognosis of primary and general morbidity of population showed in the region of Southern Aral sea area, that actual values of levels of general morbidity of population practically fully or close coincided with the prognosis values of indexes on next classes: to illness of organs of breathing (% rejections = 0,9), illness of the nervous system (% rejection = 1,5), illnesses of the endocrine system (% rejection = 3,5), infectious and parasitogenic diseases (% rejection = 3,1).

High exactness of prognosis was attained on the whole on primary morbidity of population : the percent of rejection of the index actually folded in 2018 from a prognosis value made 0, 9%.

For teenagers, the high degree of accordance of calculation values of prognosis appeared the indexes actually folded for investigated period on the next classes of primary morbidity:

- By illnesses of the urogenital system (rejection= 0, 8 %),
- Illnesses of breathing (rejection = 1,4%) organs,
- Illnesses of the digestive system (rejection = 1, 8 %).

The actual indexes of primary and general morbidity of adults appeared very near to the prognosis calculations: a percent of rejection was 2,7 % and 2,0 %, accordingly. The

most high percent of deviations from a prognosis was on the class of illnesses of organs of digestion (35,1 % and 29,0 %) and on the class of "illnesses of blood and hematogenesis organs" (31,8 % and 25,5%, accordingly). Appeared relatively high and percent of rejection of actual values of primary morbidity of adults by illnesses of the nervous system (43,3 %).

Thus, during researches we are spare more attention to the account of influence of subjective circumstances on the dynamics of row of statistical indexes, characterizing morbidity of population, including the use of methodologies of account and registration of separate forms of diseases, methodology of exposure of illnesses on the early stages, use of stimulant forms of search of diseases.

It is possible to define from the conducted calculations, that weather-climatic terms depending on their quantitative expressed can aggravate or not aggravate negative influence of anthropogenic factors. The characteristic feature of weather-climatic factors, that consists in that they have an optimal level of affecting health of population quantitative expressed, is thus set, while anthropogenic factors render a negative action only.

The got results are explained by general conformities to law of influence of environment on the state of health of population in the ecologically unfavorable terms of Southern Priaralye. The common action of unfavorable factors of environment consists in the decline of резистентности of organism, that can result in the height of доклинических forms of illnesses and level of general morbidity. It is possible to suppose that influence of certain factors on the increase of prevalence of certain nosology forms and groups of illnesses and can be observed at some specific influence of these factors.

Thus, studies undertaken a by us showed that influence of factors of environment in all cases carried complex character. By means of mathematical methods quantitative dependence is educed between the complex of factors of environment and degree of expressed of his constituents and state of health of population of Priaralye. These conformities to law include: features of the action of factors combined, complex and сочетанного on the health of population, priority of different factors of environment in their influence on a health.

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