

Health literacy in the urban health infrastructure: who maintains healthcare and how

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Abstract. Today we may witness a dire need to research how the urban environment influences urban health, well-being, and sustainability of local communities. The issue of urban health is closely connected with disease prevention projects and the integration of new preventive medical approaches with educational technologies. Due to a large number of responsible parties for the development of health literacy under the authority of different establishments, there is a problem to coordinate aligned activities. Thus the research of the healthcare institutions actions in health literacy development is extremely relevant. The objective of this research is to carry out an integral assessment of the degree to which the functions of preventing non-communicable diseases and developing health literacy are fulfilled by the sectors responsible for urban healthcare. The methods used in this research include a two-phase expert survey: the first group of experts (n: 24) selected the key aspects of healthcare activities, and the second group of experts (n: 35) assessed the quality of implementation of tasks by institutions in charge of disease prevention. The major problem is the lack of effective communication mechanisms in the sphere of intersectoral cooperation, informing the key disease prevention bodies of distributed responsibility, as well as state and social control of execution of laws and regulations. According to the obtained results, the state healthcare system is an important component of the health infrastructure. The functions connected with meeting the vital needs of the city population received medium-high ratings. However, the implementation of disease prevention functions by the healthcare system in Moscow was rated by experts at a low level. Besides, the experts consistently assigned an extremely low rating to the development of health literacy as one of the areas of activity covered by all sectors. To reinforce their outreach and awareness-raising work in the sphere of healthcare, executors of federal projects have to incorporate educational activities into their daily work.

Keywords: health literacy, healthcare, health infrastructure, urban health.

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1 Introduction

Despite a large number of institutions in charge of the formation of health literacy, society addresses the greatest expectations in this relation to education. Indeed, while performing an important academic function, the education system pursues and balances various educational purposes, including the opportunities to develop healthy habits incorporated in the educational program, such as healthy eating, physical exercise, and self-regulation training. Practice shows that the effectiveness of educational activity in the sphere of health largely depends on cooperation between educational structures and external partners responsible for the formation of health literacy. Society is trying to create conditions that would allow everyone to keep healthy. Therefore, it places focus on cooperation between different sectors and integration of resources to reach the goals in the sphere of health [1]. As an integrator of city resources, school is an open system incorporated in urban social infrastructure, including the disease prevention and health literacy formation infrastructure [2].

Joint partnerships (people or organizations from different sectors working together to accomplish a common goal) represent an important strategy aimed at the health improvement of the population. Collaborations have an impact on the changes taking place in society and systems (changes of the environment), behavior changes involving the whole community, and long-term results in terms of population health [3, 4].

It should be noted that such collaboration is characterized by an industry-based approach to problem-solving, conflicts of interests, competition for resources, and poor communications. Attempts at the organization of interdepartmental cooperation are of nominative character, joint “networking” tasks raise criticism on the part of parents, and distributed responsibility turns into sole responsibility of school for children’s health. In this connection, it is relevant to look for new forms of joint organization for implementation of the legislator's intention to create a sustainable disease prevention infrastructure [5]. In light of the modern trend towards a healthy lifestyle in the Moscow megacity, this is true for the whole urban space.

The objective of this research is to specify and describe the functioning of disease prevention infrastructure from the perspective of accomplishment of goals by each structure responsible for health and development of health literacy, assess the quality of prevention activities within the education system in cooperation with other structures, the potential for the development of certain lines of activity, and problem areas of the cooperation, and evaluate the effectiveness of the existing system of health literacy formation.

2 Methods

A two-phase expert survey. During the first phase, as a result of ranking carried out by experts (n: 24), the key aspects of healthcare activities conducted in the framework of institutionalized educational initiatives were selected (Table 1). The second group of experts (n: 35) assessed the quality of implementation of tasks by each institution in charge of disease prevention. Processing of expert evaluations included an assessment of the consistency of opinions (variation coefficient).

3 Results

Based on the expert evaluation results, the quality of implementation of functions is reflected in four groups: the first group – medium-high values (3.8-4.3), the second group – medium values (3.3-3.8), the third group – medium-low values (2.8-3.3), and the fourth group – low values (2.3-2.8). High values were not assigned to any of the functions (Table 1).

Table 1. Weighted average values of expert ratings.

Function	Institution	Value
Rendering emergency medical assistance	Accident and emergency department	4.11
Case investigation	Rospotrebnadzor	4.03
Creating safe conditions	School	3.97
Control and compliance with health legislation	Rospotrebnadzor	3.89
Preventive vaccination	Children's municipal polyclinic	3.89
Rendering specialized medical care	Clinics	3.83
Control of sanitary and hygienic learning conditions	Rospotrebnadzor	3.8
Rendering primary healthcare	Children's municipal polyclinic	3.8
Urban landscaping around schools	Local self-government authorities	3.74
Delivering healthcare services	Nongovernmental healthcare organizations	3.71
Educational and research projects	Moscow City Pedagogical University	3.69
Social demand for a safe learning environment	Family	3.66
Ready for labor and defense	Sphere of physical training and sports	3.54
Social-hygienic monitoring	Rospotrebnadzor	3.46
Preventive medical examination and check-up	Children's municipal polyclinic	3.46
Maintenance of the activities held by medical classes	Medical education and research organizations	3.43
Development of health literacy	The sphere of physical training and sports	3.32
In-patient treatment	Municipal hospital	3.31
Scientific research in the sphere of prevention of non-communicable diseases	Medical education and research organizations	3.29
Coordination of educational resources and cooperation in the sphere of disease prevention	Moscow City Pedagogical University	3.29
Preventive health check-ups	Children's municipal polyclinic	3.29
Integration of disease prevention resources	Interdistrict Board of School Principals	3.26
Bringing forward expectations related to the quality of education in the sphere of developing health literacy	Family	3.2
Initiating health-related projects	Interdistrict Board of School Principals	3.17

Extracurricular and educational activities	School	3.17
Clear goals and objectives in the sphere of preserving health and developing health literacy	Department of Education and Science of the City of Moscow	3.14
Development of health literacy	School	3.14
Consulting (in the sphere of health in education and development of health culture)	Moscow City Pedagogical University	3.14
Responsibility for the development of health literacy	Family	3.11
Control and protection of rights	Prosecutor's office and courts	3.09
Development of health literacy	Medical education and research organizations	3.09
Initiating projects on preservation and promotion of health	Non-governmental organizations within the system of the Department of Education and Science of the City of Moscow	3.09
Consolidation and transmission of experience	Interdistrict Board of School Principals	3.06
Technological support of medical classes	Scientific and technical manufacturing companies in the healthcare segment	3.06
Health preservation as a strategic benchmark in Moscow education	Department of Education and Science of the City of Moscow	3.03
Development of health literacy	Non-governmental organizations within the system of the Department of Education and Science of the City of Moscow	3.03
Public control and inspection	Non-governmental organizations within the system of the Department of Education and Science of the City of Moscow	3.03
Differentiation between the sport of records and the culture of safe physical development	Sphere of physical training and sports	3.03
Innovative products and technologies	Scientific and technical manufacturing companies in the healthcare segment	2.94
Development of health literacy	Rospotrebnadzor (Federal State-Funded Healthcare Institution "Center for Hygienic Education of the Population")	2.91
Medical advice	Municipal hospital	2.83
Coordination of activities carried out by local disease prevention institutions	Local self-government authorities	2.82
Development of health literacy	Clinics	2.79
Disease prevention work in health centers	Children's municipal polyclinic	2.76
Laboratory and technical support of disease prevention activities	Scientific and technical manufacturing companies in the healthcare segment	2.68

Development of health literacy				Children's municipal polyclinic	2.43
Exercise therapy				Children's municipal polyclinic	2.35
Development of health literacy				Municipal hospital	2.31
3.8–4.3	3.3–3.8	2.8–3.3	2.3–2.8		

The highest number of “unsatisfactory” ratings were assigned to the following categories: Interdistrict Board of School Principals – consolidation and transmission of experience (37.1%); Rospotrebnadzor – information and awareness-raising events (40%); prosecutor’s office and courts – control and protection of rights (34.3%); Moscow City Pedagogical University – consulting in the sphere of health literacy formation (34.3%); children's municipal polyclinic – information and awareness-raising events (60%), exercise therapy (55.9%), health centers (44.1%); municipal hospital – information and awareness-raising events (60%) and medical advice (40%); clinics – information and awareness-raising events (38.2%); non-governmental organizations within the system of the Department of Education and Science of the City of Moscow – initiating projects on preservation and promotion of health (40%), information and awareness-raising events and public control (37.1% each); scientific and technical manufacturing companies in the healthcare segment – laboratory and technical support of disease prevention activities (47.1%); family – responsibility for development of health literacy (34.3%); physical ducation and sport – differentiation between the sport of records and the culture of safe physical development (31.4%); prefectures and municipal councils – coordination of activities at the local level (41.2%).

It was found that the experts assigned an extremely low consistent rating to the information and awareness-raising efforts, which lowers the overall evaluation of the work conducted by institutions and sectors to a great extent. High values were not assigned to any of the functions; therefore, the respective group is missing.

4 Discussion

Medium-high values were assigned to functions connected with covering vital needs, such as emergency care, prevention of communicable diseases, and sanitary requirements. In the context of social determinants of health, the readiness of the healthcare system for protecting the health of the whole society is important [6]. Expert reviews have proved that state healthcare is a crucial component of health infrastructure [1]. However, the Moscow healthcare system gained low ranks due to poor disease prevention functions [7].

Medium values were assigned to medical organizations, the sphere of physical education and sport, local self-government authorities in terms of implementation of the economic and communal functions, family as the party interested in the creation of safe learning and development conditions, and Moscow City Pedagogical University, which carries out educational and research projects. Today we may witness a strong impact on the research partnership communities in the social or medical services spheres, promotion of health literacy, and well-being of urban communities [8, 9].

An extensive number of functions performed by heterogeneous networking interactions in the field of disease prevention received medium-low expert ratings. Based on the results of comparative analysis of expert evaluation data, we made the following observations accurately correlating with the data obtained earlier [5, 10]:

- formalization of activities – formal functions standardized by regulations (control of compliance with health legislation, school safety, emergency health services, etc.), which are controlled by clear assessment criteria (case investigation, the rate of accidents and injuries, etc.), received higher ratings;

- mono-/poly-subjectivity – mono-subject activities, where the person/institution in charge is clearly defined (creating the conditions for physical exercise, compliance with learning schedule, etc.) were ranked higher, while activities with distributed responsibility (creating the conditions for health promotion and observation, meal arrangements, development of health literacy, etc.) received extremely low values;
- organizational and managerial/substantive activities – the highest values were assigned to the substantive directions, and medium-low ones were received by infrastructure organization and management, where inter-institutional contexts arise.

The key result is an illustration of extremely low ratings assigned to the information and awareness-raising work, which is one of the essential aspects of all sectors without exception. The key result is to focus researchers on the underrated informing and awareness-raising work, which are the essential aspects of all sectors without exception. According to a few research works, lifelong teaching health literacy with educational means is a very important and relevant task [11-14]. In this context, school, which in line with its principal purpose carries out educational and forming work, looks favorable [15].

5 Conclusion

The organization of inter-institutional interaction of all sectors comprising the city health infrastructure is of primary importance. It is also necessary to provide continuous development of lifelong health literacy, which requires incorporating city online platforms, universities, and companies into the holistic urban health literacy system. Educational centers can systematically help to form health literacy, as they are local socio-cultural center points, that involve in educational activities both students and other residents of districts. However, without the active participation of healthcare and compliance with the requirements outlined in regulations, all efforts will have limited effect and will not lead to citizens' health promotion and health literacy improvement.

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