



Assessment of knowledge and skills of hand hygiene among representatives of three generations of the family living in different regions of Uzbekistan

Ataniyazova R.A.

¹ Head of the Laboratory of Hygiene of the Layout of settlements, Residential and Public Buildings of the Research Institute of Sanitation, Hygiene and Occupational Diseases.d.m.s ;

Isakova L.I.

² Senior Researcher at the Research Institute of Sanitation, Hygiene and Occupational Diseases,c.m.s;

Usmanova M.I.

³ Junior Researcher at the Research Institute of Family and Women;

Ubbiniyazova A.M.

⁴ Assistant of the Department of General Hygiene of the Medical Institute of Karakalpakstan.

ABSTRACT

With the help of an interview survey, the knowledge and skills in hand hygiene issues of urban and rural populations of various regions of the republic were assessed, taking into account the subjective opinion of three generations living in the same family. The results of the study showed that the provision of favorable conditions for hand hygiene is noted in 40.1% of the studied households of the urban population and in 30.7% of the studied households of the rural population.

The study of the level of knowledge and skills on hand hygiene in the context of family generations showed that the vast majority of respondents showed a good level of knowledge (90% or more). However, in matters of actual hand hygiene in all three generations, there was a difference of 24.2%.

The largest number of respondents believe that lectures and conversations of medical workers (73.4–86.3%), television (66.7–90.7%), as well as conversations with family members (70.8–88.5%) were the most significant sources of information for improving knowledge and skills in hand hygiene. The responses of parents and children were supplemented by two more parameters – the Internet (47.1–73.2%) and books, magazines, brochures (33.1–68.6%).

Keywords:

personal hygiene, hand hygiene, prevention of infectious diseases.

Introduction.

For more than 150 years, hand hygiene has been considered one of the most important measures to prevent infections. Appropriate hand hygiene reduces the likelihood of airborne infections by 43%, since contamination of microorganisms on the skin creates an additional danger of their getting into the air [1, 6, 9]. The health of both an individual and the population as a whole is laid in childhood, which allows us to consider the health of children as a prognostic indicator of the health of society [11,

12, 13]. In this regard, measures aimed at preserving the health of children from an early age are of great social importance. Special attention should be paid to measures to prevent the most common diseases, in particular, among preschool children. These diseases include respiratory infections, which cause up to 90% of the infectious and more than 70% of the total morbidity of children. Of great importance is the widespread spread of infectious and parasitic diseases among children in the prevention of these diseases, the main role is given to the

formation of healthy lifestyle skills from early childhood, in particular, personal hygiene [2, 3, 7, 10].

As part of the ongoing structural transformations, along with the implementation of major strategic investment projects, much attention is paid to creating optimal living conditions in our country that contribute to sustainable development and the growth of the well-being of the population (Decree of the President of the Republic of Uzbekistan "On measures to radically improve the processes of urbanization" No. UP-5623 dated 10.01.2019). Ensuring the sanitary and epidemiological welfare of the population is one of the main conditions for the realization of the constitutional rights of citizens to health protection and a favorable living environment (Law of the Republic of Uzbekistan "On sanitary and epidemiological welfare of the population" No. ZRU-393 of 26.08.2015).

The most important tool for making scientifically sound decisions in the field of public health protection, ensuring sanitary and epidemiological well-being, in which there is no harmful effect of environmental factors on a person and favorable conditions for his life are provided, is the conduct of social and hygienic monitoring. Socio-hygienic monitoring is a system of observation, analysis, assessment and prediction of the health status of the population and the human habitat, as well as the determination of cause-and-effect relationships between the health status of the population and the impact of human environmental factors on it to take measures to eliminate or reduce the harmful effects of environmental factors on the population. There is enough information in the literature indicating the correlation of health indicators of children and adults, depending on the type of settlement (urban or rural) on the level of social and sanitary factors of the environment [4, 5, 8, 11]. In creating favorable sanitary and hygienic conditions in households, the availability of the "green infrastructure" of the regions for the "gray wastewater" generated in the households of the republic is of key importance.

The main purpose of the sociological

study was to assess the level of knowledge, skills and abilities in hand hygiene based on the subjective opinion of representatives of three generations of the family living in different regions of Uzbekistan.

Materials and methods of research.

The object of the study was the urban population living in Margilan, Fergana region and Syrdarya, Syrdarya region, as well as the rural population living in the desert (Republic of Karakalpakstan, Shumanai district and Navoi region, Konimeh district) and mountainous (Namangan region, Kasansai district and Tashkent region, Parkent district) areas of the republic.

To study the subjective opinion of the population, a survey was conducted-interviewing the population using specially designed questionnaires, followed by the use of computational, statistical and analytical research methods. The questionnaire consisted of several blocks: "Passport part", "Water supply", "Sanitation", "Hand hygiene", "Body hygiene", "Sleep and bed hygiene", "Kitchen hygiene"; "Knowledge, skills and skills in household hygiene", "Socio-economic factors of household hygiene". In total, more than 660 households were surveyed, interviews were conducted among families in which representatives of three generations lived together, including grandparents (first generation), parents (second generation) and children (third generation). The primary material was collected in 2021.

The results of the study and their discussion.

In this paper we present the results of a study on hand hygiene. One of the interviewing questions was the question of whether there are conditions for observing the rules of hand hygiene in households (Table. 1), including questions about the availability of a hand-washing sink, access to hand-washing points at the exit of the toilet and in the rooms for cooking and eating, hot and cold water in the sink, connecting the sink to the sewer, as well as the availability of hygiene products

Table 1

The results of the survey on the availability of conditions for hand hygiene in households, %

Indicator	Location of households		
	City (n=217)	mountain regions (n=219)	desert regions (n=231)
The presence of hand washing sinks at the exit of the toilet, %			
Cold and hot water is available and available	38,2	33,8	17,3
There is, but only cold water is available (faucet/washbasin/jug)	51,6	54,3	39,4
There is, but it does not function	0,5	3,7	1,3
Missing, unavailable	9,7	8,2	42,0
The presence of sinks for washing hands before eating, at the entrance to the dining room / kitchen, %			
Cold and hot water is available and available	40,1	32,4	30,7
There is, but only cold water is available (faucet/washbasin/jug)	42,4	57,5	54,1
There is, but it does not function	1,4	1,4	1,3
Missing, unavailable	16,1	8,7	13,9
The presence of water and soap at each sink, %			
Water and soap are available	82,9	83,1	93,5
Only water is available	14,7	13,7	3,5
There is no water, no soap	2,3	3,2	3,0
Connecting the sink to the sewer system, %			
Connected to a centralized sewerage system	37,3	11,9	4,3
Absorbing pit with filtration of waste into the soil	16,1	43,4	31,2
Cesspool (all pit walls and bottom are concreted)	27,2	23,3	13,4
There is no sewerage (collection in a container/bucket)	19,4	21,5	51,1

According to the table, respondents living in urban conditions in 38.2% of cases noted the presence of sinks at the exit of the toilet with hot and cold water, in 51.6% of cases – the presence of only cold water and in 9.7% of cases – the absence of water for washing hands. In mountainous areas, half of the surveyed population noted the presence of a sink at the exit of the toilet with only cold water, 33.8% - the presence of hot and cold water, and the lack of water for washing hands was noted by more than 10% of respondents (3.7% - sinks did not function and 8.2% - there was no water). The population living in the desert region, only in 17.3% of cases noted the presence of a sink at the exit of the toilet with hot and cold water, while 39.4% - the presence of only cold water,

and more than 40% of respondents did not have favorable conditions for washing their hands (1.3% - did not function sinks, 42% - there was no water). While in the kitchen, more than a third of respondents noted the presence of hot and cold water in the sink for washing hands, 42.4% of urban residents, 57.5% of mountain regions and 54.1% of residents of desert regions noted the presence of at least cold water. The absence or non-functioning sinks for washing hands before eating, at the entrance to the dining room/ kitchen were noted by 10.1 to 17.5% of respondents.

Thus, in the context of regions, urban residents had the highest percentage of adequate conditions for washing their hands after going to the toilet (38.2%) and the least

favorable conditions were observed in households in desert regions (43.3% of the households studied). The population attaches more importance to hand washing before eating, and in 40.2% of cases, the surveyed urban population had conditions with hot and cold water supply in sinks. In mountainous and desert regions of the population, 57.5 and 54.1% of the surveyed households are provided with only cold water in sinks. On average, 15% of respondents do not have proper conditions for hand hygiene. The next aspect of the issue is the provision of safe sanitation, taking into account the connection of sinks to the sewer system. Thus, in 37.3% of the studied houses in cities there was a connection to a centralized sewerage system, an absorbing pit with filtration of waste into the soil was noted in 43.4% of houses in mountainous regions and

31.2% of desert regions. A cesspool with hermetically concreted walls and bottom was noted in 27.2% of urban residents, 23.3% of residents of mountainous regions and 13.4% of respondents living in a desert region.

In 51.1% of the studied households in the desert regions, sinks are not connected to sewage systems, liquid household waste was collected in a bucket or container, followed by unorganized emptying.

The next question was asked about the timeliness of hand washing, to which the correct answers covered 7 mandatory aspects after which it is necessary to wash hands (after the toilet; before eating; when I came home from the street; after contact with animals; after housework; after sneezing, coughing and blowing my nose; after communicating with sick people) (Table 2).

Table 2.

The level of knowledge of the population of the pilot regions about the timeliness of hand washing, % of the number of respondents.

indicator		Urban population (n=217)	Rural population	
			mountain regions (n=219)	desert regions (n=231)
I generation	completely correct	90,7	69,4	89,5
	partially correct	9,3	24,7	8,3
	wrong	-	5,9	2,4
II generation	completely correct	90,3	86,3	93,1
	partially correct	6,9	6,9	4,3
	wrong	2,8	6,8	2,6
III generation	completely correct	78,8	82,6	84,8
	partially correct	17,5	8,3	10
	wrong	3,7	9,1	5,2

The opinions of the respondents about how much they observe the rules of hand hygiene are important for comparing the level of knowledge, attitudes and skills, the results of which allow us to conclude that there are quite significant differences between the level of knowledge and the opinion of members of three generations about how much they observe hand hygiene. Thus, a comparative assessment of the

level of knowledge and actual hand hygiene among representatives of all three generations allowed us to determine that the level of knowledge is 24.2% higher than the level of actual hand hygiene. To identify the main causes of non-compliance with hand hygiene, the question "What is the reason for non-compliance with hand hygiene?" was asked, the results of the answers are presented in Table 3.

Table 3.

Opinion of the surveyed population about the reason for non-compliance with hand hygiene, % of the number of respondents

indicator		Urban population (n=217)	Rural population			
			Mountains regions. (n=219)	P	desert regions (n=231)	P
I поколение	There are no conditions	44,6±3,22	7,7±1,50	<0,001	9,1±1,61	<0,001
	No time	23,2±2,69	18,8±2,44	<0,001	16,9±2,25	<0,05
	Forget	26,8±2,84	69,2±2,96	<0,001	71,4±2,80	<0,001
	Think, there is no need	5,4±1,16	4,3±0,94	<0,05	2,6±2,51	<0,05
II поколение	There are no conditions	46,5±3,23	8,2±1,56	<0,05	8,3±1,51	<0,001
	No time	21,2±2,59	19,1±2,46	<0,001	9,5±1,65	<0,001
	Forget	28,2±2,89	59,1±3,17	<0,001	79,8±2,45	<0,001
	Think, there is no need	4,1±0,90	13,6±2,09	<0,05	2,4±0,12	<0,05
III поколение	There are no conditions	42,3±3,20	8±1,54	<0,001	8,3±1,51	<0,001
	No time	22,6±2,66	13,4±2,07	<0,001	10,4±1,74	<0,001
	Forget	30,4±2,96	75±2,75	<0,001	79,2±2,48	<0,001
	Think, there is no need	4,8±1,05	3,6±0,76	<0,001	2,1±0,12	<0,05

Thus, among the urban population, 44.6±3.22 respondents referred to the lack of conditions for hand washing, while 79.8±2.45% of the rural population of desert regions and 59.1± 3.17% of residents of mountainous regions do not wash their hands because they forget (P <0.001).

The formation of knowledge and hygienic literacy directly depends on the information and educational environment of a person. To clarify which sources are the most significant for three generations of families, a corresponding question was added to the questionnaire. The survey results allow us to conclude that for the older generation in all the studied regions, the most significant sources of information were lectures, conversations of medical workers (73.4–86.3%), television (66.7–90.7%) and conversations with family members (70.8–88.5%). The answers of parents were supplemented with two more parameters – the Internet (47.1–73.2%) and books,

magazines, brochures (33.1– 68.6%). The answers of the children coincided with the answers of the parents with the addition of lectures by teachers/trainers (58.2–89.5%).

Conclusions. With the help of a survey-interviewing in this work, the provision of adequate conditions and the level of hand hygiene in the context of the regions of the republic were assessed. The results of the study showed that the highest percentage of provision of hot and cold water was observed in urban households (38.2% - for washing hands after the toilet; 40.1% - before eating), the least favorable conditions were observed in rural households (17.3% - for washing hands after the toilet; 30.7% - before eating).

The study of the level of knowledge and skills on hand hygiene in the context of family generations showed that the vast majority of respondents showed a good level of knowledge (90% or more). However, in matters of actual

hand hygiene in all three generations, there was a difference of 24.2%.

The largest number of respondents believe that lectures and conversations of medical workers (73.4–86.3%), television (66.7–90.7%), as well as conversations with family members (70.8–88.5%) were the most significant sources of information for improving knowledge and skills in hand hygiene. The responses of parents and children were supplemented by two more parameters – the Internet (47.1–73.2%) and books, magazines, brochures (33.1–68.6%).

References.

1. Onishchenko G.G. Actual tasks of hygienic science and practice in the preservation of public health //Hygiene and sanitation. - 2015. - No. 3. – pp. 5-9.
2. Platonova O.I., Tokarev A.A. Education of the basics of a healthy lifestyle in preschool children in pre-school conditions //Topical issues of modern pedagogy: Mater. II International Scientific Conference- Ufa, 2012. URL: <https://moluch.ru/conf/ped/archive/60/2510>.
3. Smirnova T.V. Creating a health-preserving environment in a group as a means of preserving and strengthening the health of preschool children //A young scientist. — 2017. — № 11.1 (145.1). — Pp. 50-55.
4. Ushakov A.A., Turbinsky V.V., Pashchenko I.G., Katunina A.S. Hygienic assessment of unfavorable social, sanitary and hygienic environmental factors in the Altai Territory //Health risk analysis. - 2015. - №4 (12). – Pp. 50-61.
5. Материалы проекта Германского общества по международному сотрудничеству GIZ по профилактике пандемии гриппа «Salomatliging toza qóllaringda». Ташкент, 2009-2011. – 68 с.
6. Aunger R., Greenland K., Ploubidis G., Schmidt W., Oxford J., Curtis V. The determinants of reported personal and household hygiene behavior: A multi-country study //PloS one. 2016;11(8):e0159551.
7. Larson E.L., Kretzer E.K. Compliance with handwashing and barrier precautions. J Hosp Infect 1995;30(Suppl):88-106.
8. Maldives Population and Housing Census. Statistical Release VI: Housing and Household Characteristics //National Bureau of Statistics. 2016:25 p.
9. Marangon F., Tempesta T., Troiano S., Vecchiato D. Food waste, consumer attitudes and behaviour. A study in the North-Eastern part of Italy //Rivista di Economia Agraria. 2014;LXIX (2-3):201-209. DOI: 10.13128/REA-16922.
10. Ramos-Morcillo A.J., Moreno-Martínez F.J., et al. Social Determinants of Health, the Family, and Children's Personal Hygiene: A Comparative Study //Int J Environ Res Public Health. 2019;16(23):4713.
11. Satish Kumar Bp, Lipika Das, Darshan Jc., et al. Importance of understanding the need of personal hygiene: A comprehensive review //International Journal of Research in Pharmacy and Pharmaceutical Sciences. 2020;5(6):56-61.
12. Spina, D. Beversluis, A. Irwin et al. Learning from water treatment and hygiene interventions in response to a hepatitis E outbreak in an open setting in Chad //Journal of Water and Health. 2018;16(2):223–232.
13. Yoshikawa H., Hsueh J. Child development and public policy: toward a dynamic system perspective //Child development. 2001;72(6):1887-1903.4.