

COVID-19 Exacerbates Inequality in Ukraine: Internet Access, Availability of Computers and Living Conditions

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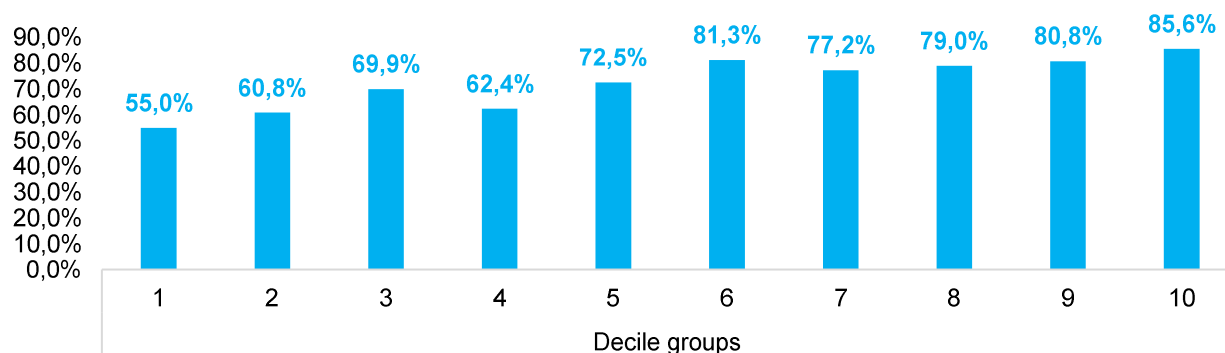
The crisis brought about by the spread of COVID-19 is unique, since the quarantine measures have affected everyone: both rich and poor stay at home and are limited in mobility. We understand, however, that not everyone who "stays at home" is living in equal conditions.

Availability of computers

For many, the availability of computer memory during the nationwide lockdown is a critically important condition for studying, teleworking, making payments online, ordering products and communicating with friends and family. Based on the data from the Household Living Conditions Survey (HLCS) conducted every year by the State Statistics Service of Ukraine, we analysed the indicator of availability of a computer, tablet or laptop in the family (before the quarantine), depending on income level and the family's place of residence.

A significant inequality was observed between richest 10 per cent and poorest 10 per cent of households in terms of having a computer/ laptop/ tablet at home. While more than 85 per cent of the richest respondents reported to have a computer (tablet, laptop), their number among the poorest was only 55 per cent (Figure 1).

Figure 1. Having a computer, a tablet or a laptop at home, depending on family income



Source: Unless otherwise specified, here and elsewhere, the authors' calculations based on data from the State Statistics Service of Ukraine (HLCS, 2018)

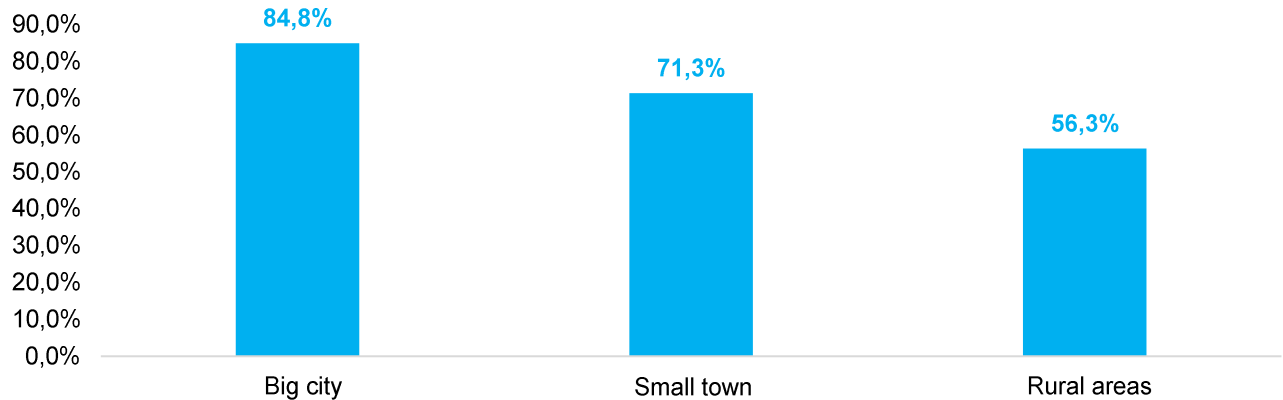
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Place of residence also significantly affects access to a computer at home. Eighty-five per cent of residents of large cities and 56 per cent of rural residents have a computer, tablet or laptop at home (Figure 2).

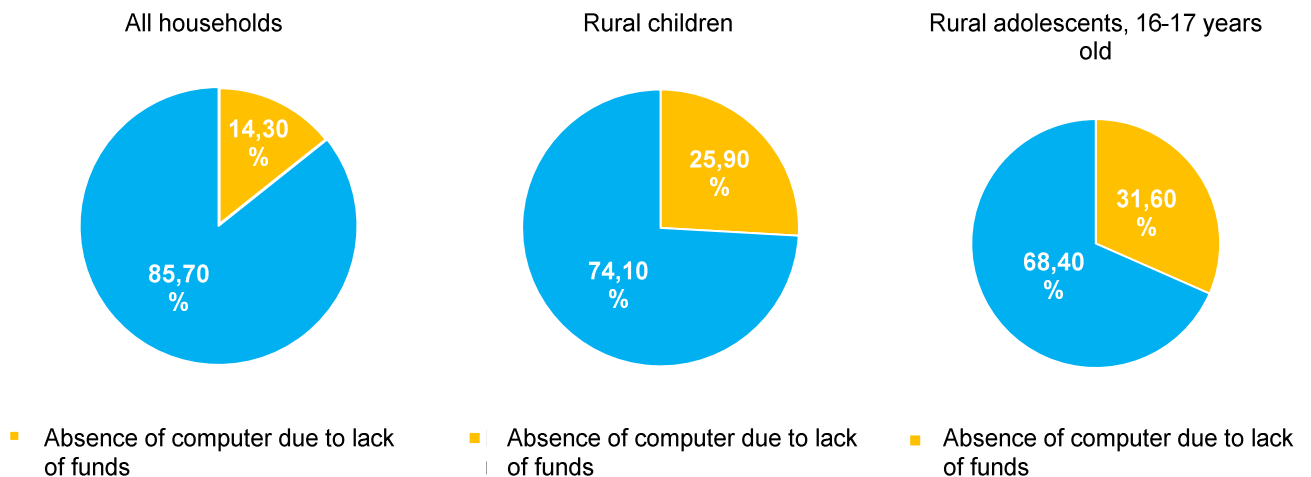
Figure 2. Having a computer, a tablet or a laptop at home, depending on place of residence



Source: State Statistics Service of Ukraine (HLCS, 2018)

Researching the level of deprivation made it possible to state that every fourth child in rural areas (and almost every third rural adolescent) is unable to buy a computer due to lack of funds, while for an average household that number is only 14.3 per cent (Fig. 3).

Figure 3. Absence of a computer due to lack of funds, all households, rural children and rural adolescents aged 16-17



Source: Calculated by the authors based on the 2017 data of the State Statistics Service of Ukraine

In contrast to computers, **the availability of a television at home is distributed almost evenly among the rich and the poor,** and is slightly lower among the highest deciles (Figure 4). A similar even distribution is observed among urban and rural residents (Figure 5).

Figure 4. Availability of a television in the household

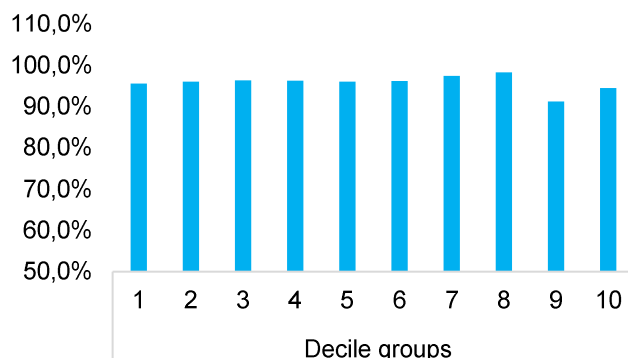
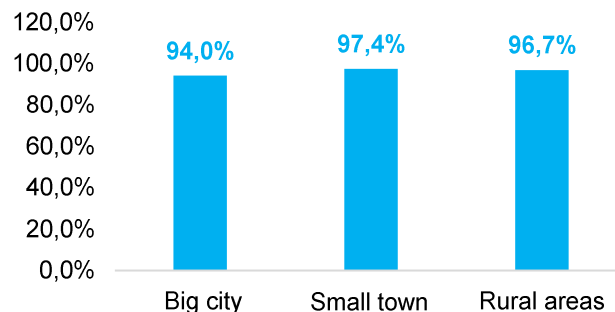


Figure 5. Availability of a television in the household



Internet connectivity

Possessing a computer opens opportunities for studies and telework only if combined with uninterrupted Internet access. Moreover, not even everyone who has internet access uses it, and therefore has the necessary knowledge and skills to, for example, pay for services online without having to wait in a queue, risking their health. The analysis showed that, before the pandemic::

- **37% of Ukraine's population (14,058,960 people) did not use the internet at all;**
- **the frequency of internet use varied significantly by (i) age group, (ii) locality, (iii) level of education and (iii) social and economic status.**

Table 1. Frequency of use of internet services over the previous 12 months, by age group

	How often have you used the internet in the last 12 months?			Never used
	Almost every day	At least once a week, but not every day	Less than once a week	
3 - 6 years old	19.8%	11.7%	.7%	67.8%
7 - 13 years old	65.8%	15.1%	1.2%	18.0%
14 - 15 years old	85.5%	3.9%	.4%	10.2%
16 - 17 years old	82.9%	6.9%	1.1%	9.1%
18 - 20 years old	88.3%	4.8%	2.1%	4.8%
21 - 25 years old	84.5%	7.6%	.2%	7.6%
26 - 30 years old	81.4%	7.1%	1.1%	10.3%
31 - 35 years old	76.3%	11.2%	1.4%	11.2%
36 - 40 years old	65.3%	18.0%	2.1%	14.7%
41 - 45 years old	55.0%	22.8%	2.9%	19.3%
46 - 50 years old	47.3%	19.6%	2.4%	30.6%

	How often have you used the internet in the last 12 months?			Never used
	Almost every day	At least once a week, but not every day	Less than once a week	
51 - 55 years old	35.2%	22.1%	4.5%	38.2%
56 - 60 years old	28.5%	18.6%	3.8%	49.1%
61 - 65 years old	19.5%	16.2%	4.6%	59.7%
66 - 70 years old	13.6%	12.5%	2.5%	71.4%
71 - 74 years old	8.0%	9.6%	2.0%	80.4%
75 and older	3.6%	3.0%	1.2%	92.2%
Total	47.3%	13.5%	2.1%	37.1%

The data indicate that a large number of older persons (up to 60 per cent of those aged 61 to 65, and up to 92 per cent of persons aged 75 and older) did not use the Internet before the pandemic. In addition, a significant share of middle-aged people who are parents (over 40 years old) did not have that experience (Table 1). Therefore, they could not enjoy all benefits of internet access, and nor were they able to help their children in their online studies during the lockdown.

Significant inequalities are observed in use of the internet between rural and urban residents. Twice as many village residents as residents of large cities never used the internet over the previous 12 months (52 per cent and 25 per cent respectively). (Figure 6). Among people with higher education, 60 per cent used the internet every day, but among people with school education (complete, basic, primary) - only 37 per cent did so (Figure 7). The form of employment (employed, employer or self-employed) had almost no effect on the frequency of Internet use, **but 75 per cent of pensioners never used the internet at all in the previous 12 months (Figure 8).**

Figure 6. Use of internet services by place of residence

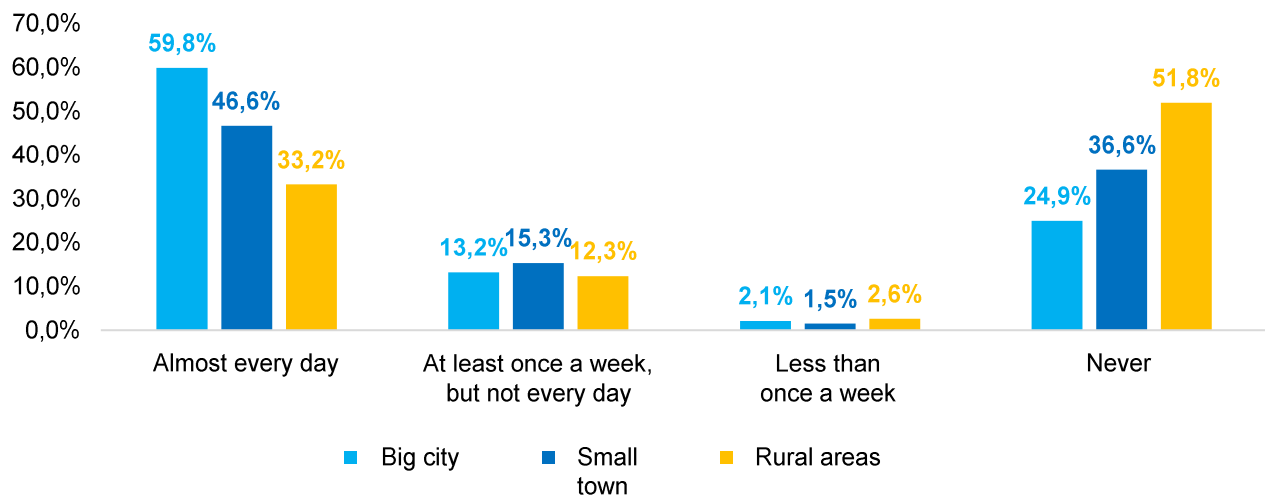


Figure 7. Use of internet services by level of education

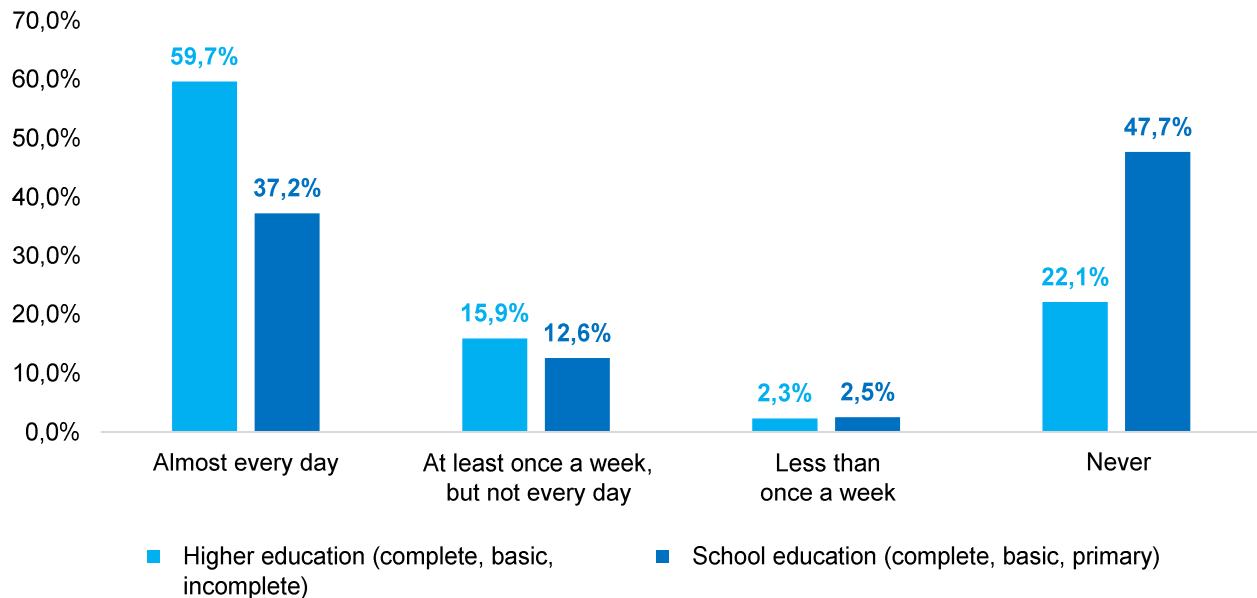
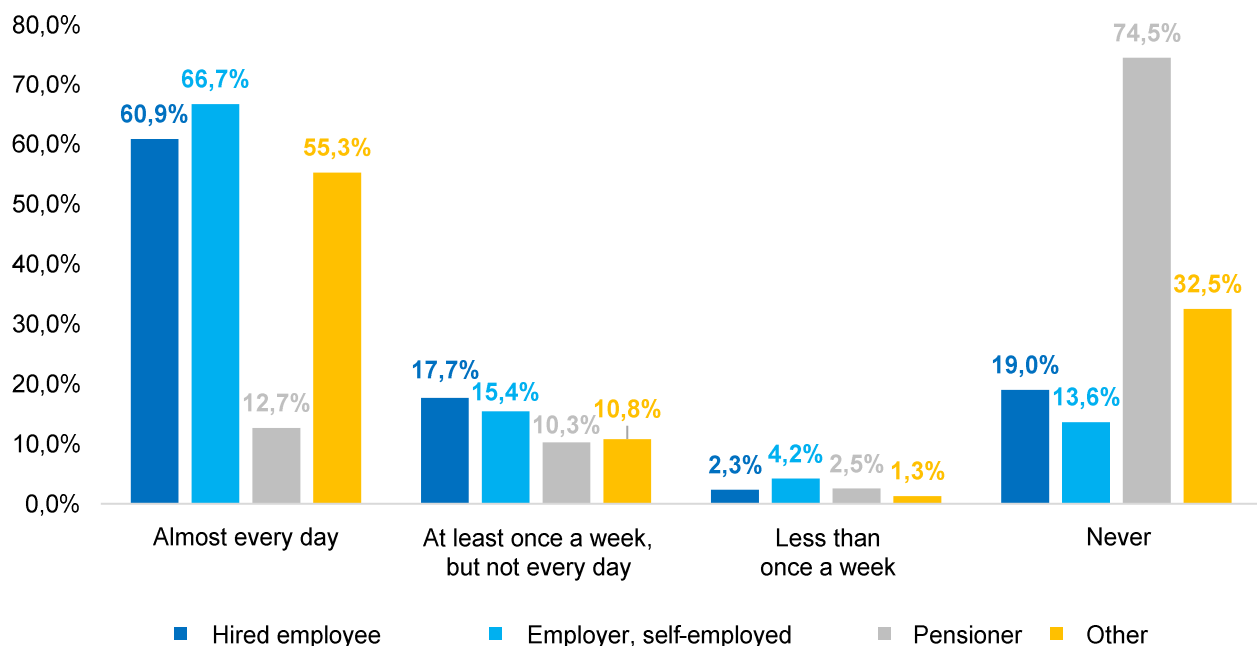
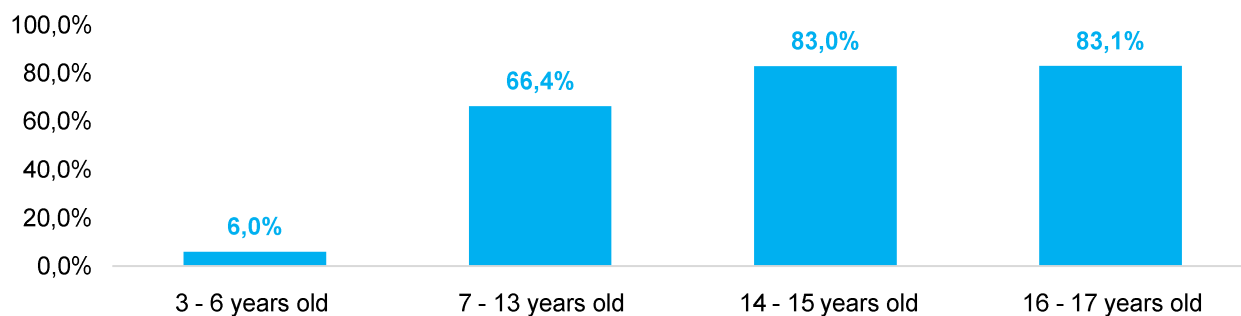


Figure 8. Use of internet services by social and economic status



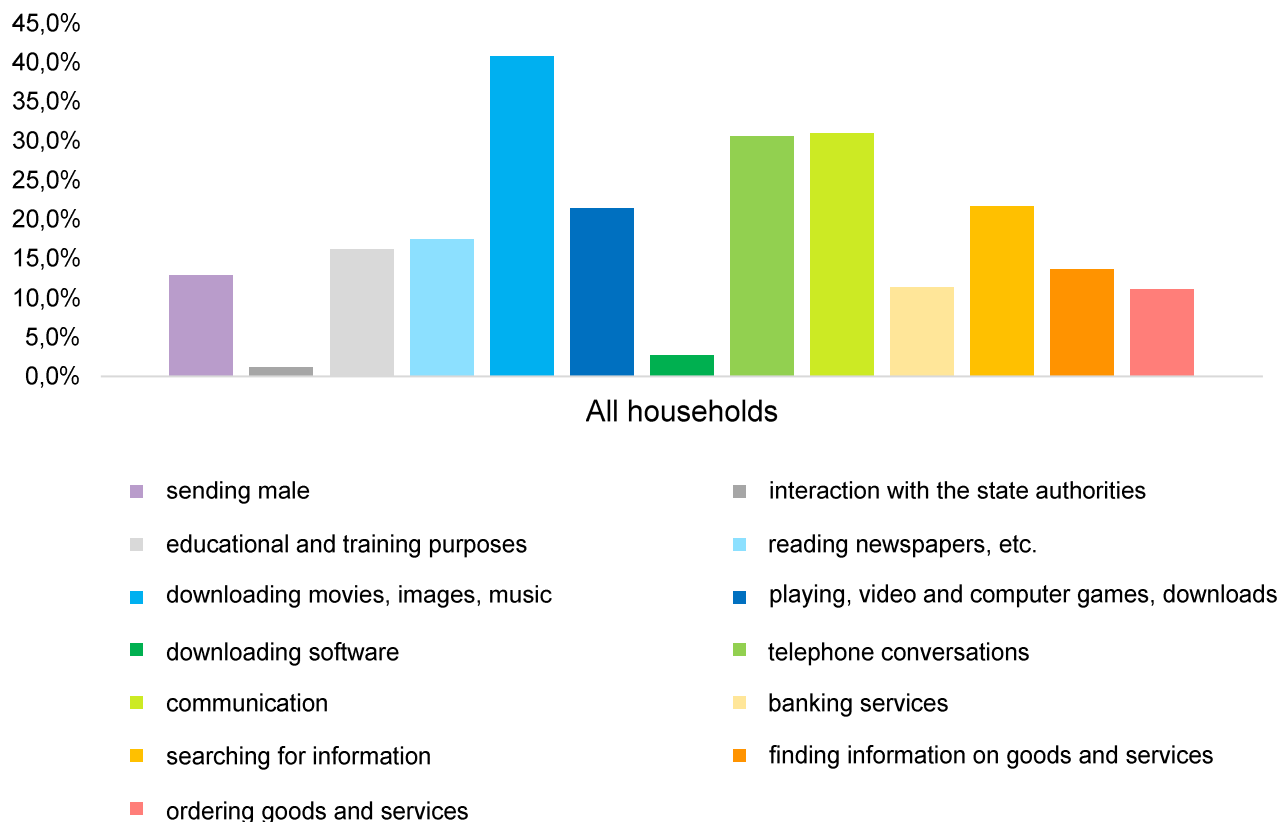
Inequality in use of the Internet is manifested among schoolchildren depending on their age. While more than 80 per cent of children aged 14-17 **used the internet for studies** before the quarantine, only lightly more than 60 per cent of primary school students did so, and fewer than 10 per cent of pre-schoolers (Figure 9). The lack of previous experience of internet use for studies indirectly indicates the potential difficulties faced by these groups (primary school children and pre-schoolers) at the sudden transition to distance learning, as well as the level of help and support required on part of their parents and teachers to enable effective studies for young children during the quarantine period.

Figure 9. Use of Internet services for studies and learning purposes among preschool and middle school age children



The internet was traditionally more frequently used for entertainment. For example, the top three uses were as follows: (i) downloading movies, images, music, (ii) telephone conversations, and (iii) communication. However, experience of telework (distance learning) or contacts with authorities was limited (Figure 10).

Figure 9. Purposes of internet use, all households



Village residents' possibilities to use the internet for work and official contacts (payment, recording of statements, submitting applications, etc.) are significantly less than those of city dwellers (Table 2). Serious infrastructural limitations and inability to get to the city during the nation-wide lockdown (except by their own vehicles), put village residents in a very difficult situation.

Table 2. Purposes of internet use, all households, by place of residence

	Sending mail	Interaction with the state authorities	Educational purposes	Reading newspapers, etc.	Downloading movies, images, music	Playing, video or computer games, downloads	Downloading software	Telephone conversations	Communication	Banking services	Finding information	Information on goods and services	Ordering goods and services
Big city	21.0%	1.8%	20.5%	22.4%	48.1%	24.1%	4.3%	39.4%	37.4%	16.0%	27.2%	18.0%	11.7%
Small town	9.4%	1.0%	14.6%	15.9%	42.8%	21.4%	2.2%	29.3%	31.1%	13.2%	22.6%	12.1%	14.0%
Rural area	6.2%	.6%	12.6%	12.9%	30.5%	18.1%	1.3%	21.4%	23.0%	4.4%	14.2%	9.8%	8.0%

Living conditions

Being locked in at home, the need for transition to teleworking or remote studies and – in some cases – decreased incomes can be challenging for any family. There is ample evidence that these conditions aggravate stress and violence, particularly against women and children.

At the same time, inequality of living conditions makes certain population groups especially vulnerable during the nation-wide lockdown. The analysis demonstrated a significant inequality of living conditions (running water, sewerage and hot water supply) between the richest and poorest 10 per cent of the population (Figure 11). Also, inequality in living conditions is between ‘cities’ and ‘villages’ (Figure 12). While 67.5 per cent of residents of large cities reported the availability of hot water, in rural areas that figure was only 19.2 per cent.

Figure 11. Availability of running water, sewerage and hot water supply, among of the poorest and the richest 10 per cent of households

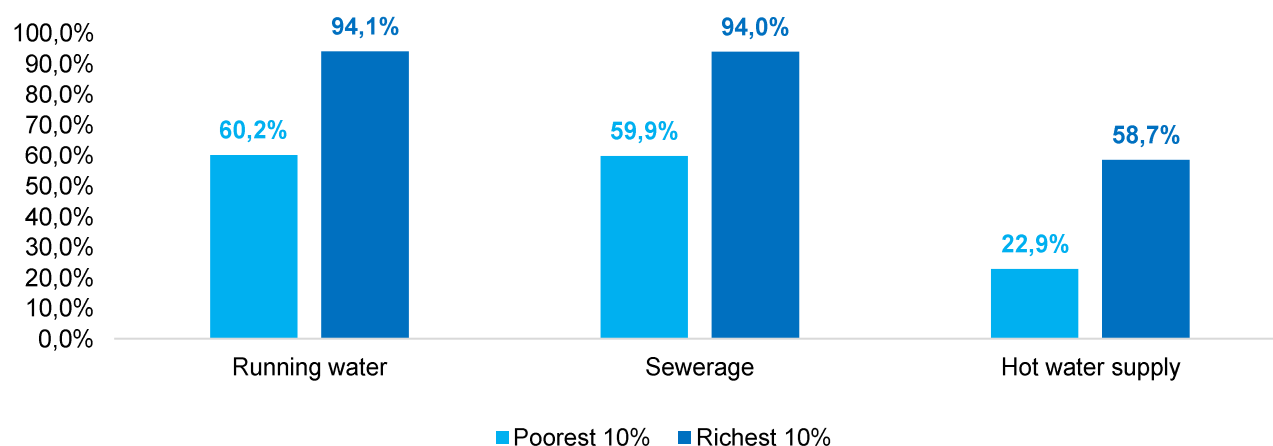
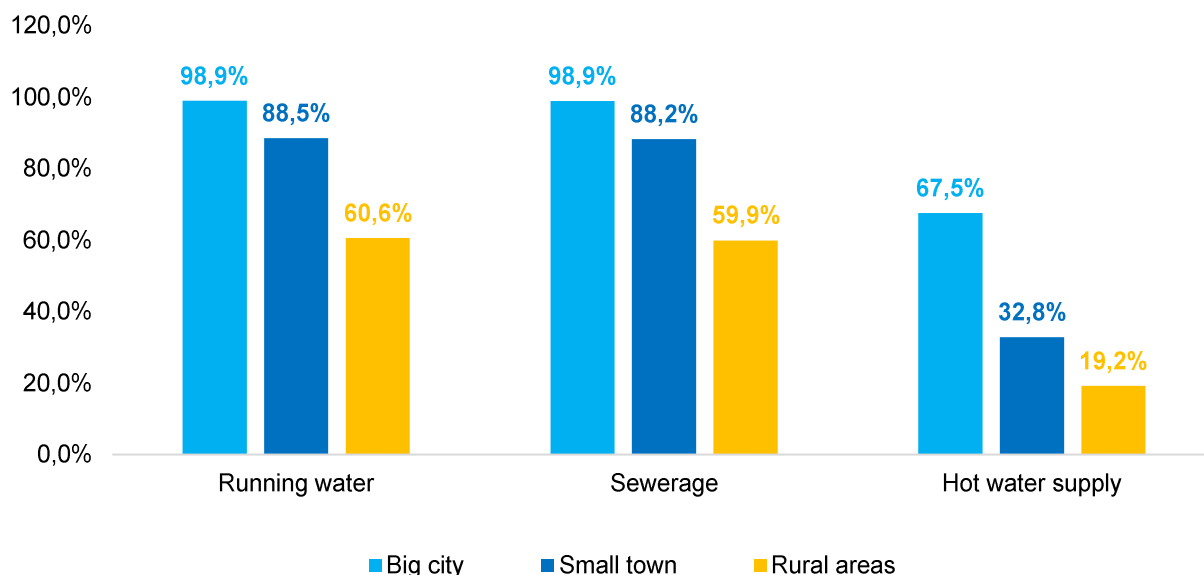


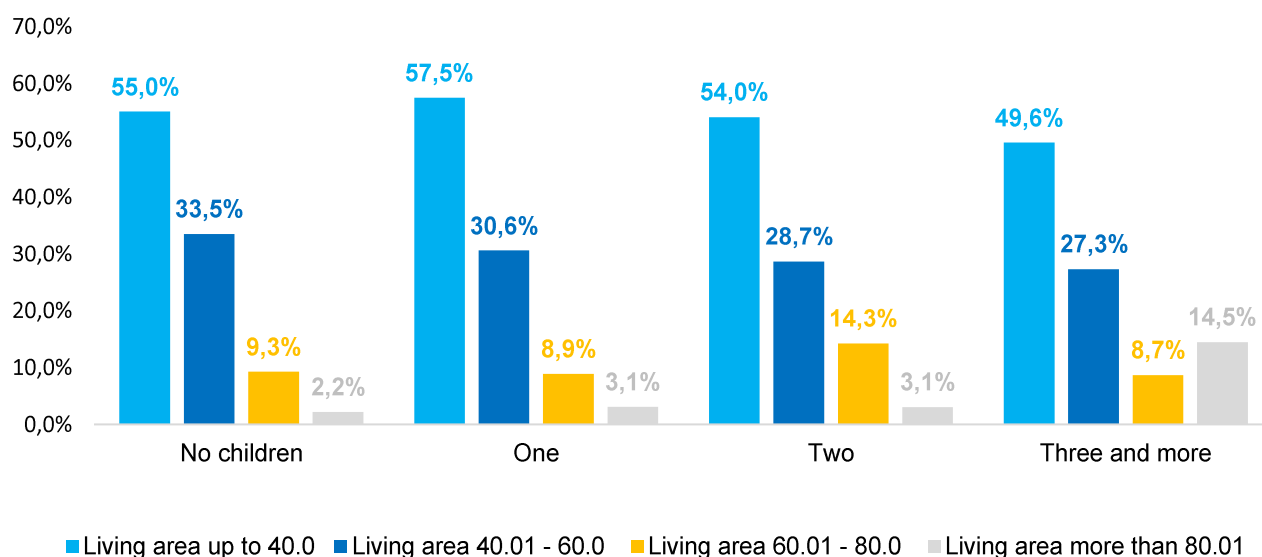
Figure 12. Availability of running water, sewerage and hot water supply, by place of residence



The analysis of deprivation among families with children confirmed significant inequalities in access to amenities between residents of cities and villages. For example, 33.4 per cent of families with children in rural areas indicated the absence of running water in the household due to lack of funds; 35.1 per cent do not have a bath or a shower room inside the house; and 43.8 per cent lack a flush toilet inside the house. Among all Ukrainian households, those figures are about twice as low (Table 3).

Sufficient living space (sufficient number of rooms) is the key to effective telework for parents and quality remote studies for children. Families that found themselves in difficult conditions during the quarantine were families with children, especially those with three or more children. Of the country's large families, more than half live in apartments with floor area of under 40 m² (Figure 13).

Figure 13. Living space by number of children in the household



Every tenth child in cities suffers from extremely insufficient living space (less than 5 m² per person). Urban families with children under six are particularly vulnerable: in this category: 12.2 per cent of families live in conditions where the living space does not exceed 5 m² per person (Table 3).

Table 3. Deprivations that are the most significant for children

Living conditions / Share of households / Vulnerable groups		
Living space under 5 m ² per person	9,3%	Urban children
	12,2%	Especially urban children under 6
Absence of running water in the house due to lack of funds	33,4%	Rural children
Absence of bathroom or shower inside the house due to lack of funds	35,1%	Rural children
Lack of flush toilet facilities inside the house due to lack of funds	43,8%	Rural children
Lack of funds to maintain sufficiently high temperatures in the house (to purchase fuel, a heater, etc.) during the heating season	23,9%	All children
	32,6%	Especially rural children

Owning a car

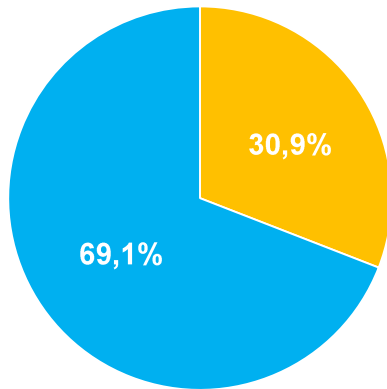
A significant inequality was observed in car possession between poor and rich households. For example, in the 10 per cent richest, 43.2 per cent own cars, while only 10.3 per cent of the 10 per cent poorest have a car (Table 4).

Table 4. Distribution of households by car possession by decile groups, by average per capita equivalent cash income

Distribution of households by possession of durable goods by decile groups of households by per capita equivalent cash income											
	All households	у тому числі за децильними (10%-ми) групами за рівнем середньодушових еквівалентних грошових доходів у місяць									
		First (lowest)	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth (highest)
Cars	23.8	10.3	13.0	19.7	19.0	21.9	25.1	21.1	33.3	31.6	43.2

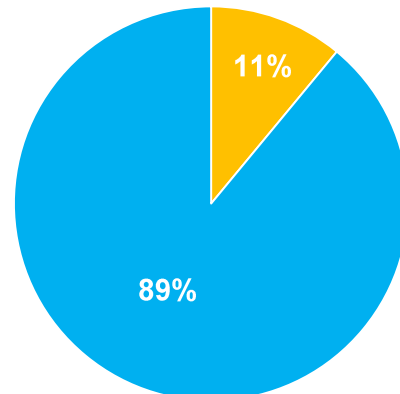
Single parents were particularly vulnerable in the conditions of the nationwide quarantine. While about 30 per cent of all households with children have a car, only 11 per cent of families where children are raised by a single parent have one (Figures 14 and 15). In conditions of public transport shutdowns, such families found themselves in a particularly difficult situation.

Figure 14. All households with children



■ have a car ■ do not have a car

Figure 15. Do not have a car



■ have a car ■ do not have a car