World Health Organization

European Region

Report on the impact of the COVID-19 pandemic on the daily routine and behaviours of school-aged children: results from 17 Member States in the WHO European Region

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Abstract

The WHO Regional Office for Europe established the WHO European Childhood Obesity Surveillance Initiative (COSI) in 2007 in response to the need for standardized surveillance data on the prevalence of overweight and obesity among school-aged children. The availability of such information is essential to develop effective policies and strategies to tackle childhood obesity in the WHO European Region.

The sixth data collection round of COSI involves 37 Member States and data collection is still ongoing in some of these. This report presents the results from the 13 States that collected information during the 2021–2022 school year on the impact of the COVID-19 pandemic on children's health, and four that collected information during the 2022–2023 school year.

The findings of this research on the pandemic's consequences are extremely important for participating Member States to help prepare for the future.

Keywords

EUROPE

CHILD

OBESITY

OVERWEIGHT

PUBLIC HEALTH SURVEILLANCE

COVID-19

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Contents

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Contributors

Principal Investigators and collaborators for COSI

Collecting data, Member State-level management, contributing comments to the report and reviewing the final draft.

Albania

Jolanda Hyska, Ervin Toçi, Institute of Public Health, University of Medicine, Tirana.

Azerbaijan

Nabil Seyidov, Public Health and Reforms Centre of the Ministry of Health.

Bulgaria

Vesselka Duleva, Ekaterina Chikova-Iscener, National Centre of Public Health and Analysis.

Croatia

Sanja Musić Milanović, University of Zagreb; Croatian Institute of Public Health.

Helena Križan, Dora Bukal, Nika Šlaus, Sanja Meštrić, Maja Lang Morović, Croatian Institute of Public Health.

Cyprus

Eliza Markidou Ioannidou, Ministry of Health.

Elpidoforos Soteriades, Open University of Cyprus.

Georgia

Natia Kakutia, Lela Sturua, Vera Gegenava, National Centre for Disease Control and Public Health of Georgia.

Italy

Silvia Ciardullo, Angela Spinelli, Paola Nardone, Silvia Andreozzi, Angela Giusti, National Centre for Disease Prevention and Health Promotion, Italian National Institute of Health [Istituto Superiore di Sanità] (WHO Collaborating Centre on Childhood Obesity).

Kazakhstan (Almaty)

Shynar Abdrakhmanova, National Centre of Public Health of the Ministry of Health of the Republic of Kazakhstan, Kazakhstan School of Public Health.

Malta

Lorraine Tabone, Primary Health Care.

Montenegro

Enisa Kujundzic, Borko Bajic, Institute of Public Health of Montenegro.

Poland

Anna Fijalkowska, Anna Dzielska, Institute of Mother and Child.

Portugal

Ana Rito, National Institute of Health Dr Ricardo Jorge (WHO Collaborating Centre for Nutrition and Childhood Obesity).

Ana Dinis, Carla Rascôa, Elsa Feliciano, Maria do Carmo Faria, Rita Carvalho, Rosa Silvério, Susana Cardoso, Teresa Sofia Sancho; Regional Directorates of Health – National Health Service.

Republic of Moldova

Maria-Victoria Racu, National Agency for Public Health.

Cociu Svetlana, University of Medicine and Pharmacy Nicolae Testemiteanu.

Romania

Constanta Huidumac-Petrescu, National Institute of Public Health.

Alexandra Cucu, Lacramioara Brinduse, University of Medicine and Pharmacy Carol Davila Bucharest, National Institute of Public Health.

San Marino

Andrea Gualtieri, Elena Sacchini, Health Authority.

Slovakia

Ľubica Tichá, Paediatric Department, Medical Faculty of Comenius University, National Institute of Children's Diseases.

Daniela Kallayová, Department of Public Health, Screening and Prevention, Ministry of Health.

Jana Hamade, Public Health Authority.

Türkiye

Mustafa Kemal Başaralı, Melek Atabey, General Directorate of Public Health.

Uzbekistan

Dilorom Akhmedova, Nilufar Akhmedova, Artur Popenkov, Tashkent Paediatric Medical Institute.

Other contributors

Wolfgang Ahrens, Leibniz Institute for Prevention Research and Epidemiology, Germany (WHO Collaborating Centre for Obesity Prevention, Nutrition and Physical Activity) – scientific advice on the design of the study protocol; report reviewer.

Inês Figueira, Centre for Studies and Research in Social Dynamics and Health (CEIDSS), Portugal – design of the study protocol, external report drafting and reviewer.

Viktoria Kovacs, Hungarian School Sport Federation, Hungary – scientific advice on the design of the study protocol; report reviewer.

Tim Lobstein, World Obesity Federation – scientific advice on the design of the study protocol; report reviewer.

Sofia Mendes, CEIDSS, Portugal – design of the study protocol; report reviewer.

Cassie Redlich, Mental Health Flagship, WHO Regional Office for Europe – report reviewer.

Harry Rutter, University of Bath, United Kingdom – scientific advice on the design of the study protocol; report reviewer.

Angela Spinelli, Italian National Institute of Health [Istituto Superiore di Sanità] (WHO Collaborating Centre on Childhood) – scientific advice on the design of the study protocol; report reviewer.

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Abbreviations

AVG	average value resulting from pooled analysis
COSI	Childhood Obesity Surveillance Initiative
COVID-19	coronavirus disease
KAZ-AL	Almaty — Kazakhstan
NA	not available
NCD	noncommunicable disease
SARS-CoV-2	severe acute respiratory syndrome coronavirus 2
SNI	Special Initiative on NCDs and Innovation

International Standards Organization (ISO) 3-digit codes for Member States of the WHO European Region for Member States included in the report[1]

Country code	Country name
ALB	Albania
AZE	Azerbaijan
BGR	Bulgaria
CYP	Cyprus
GEO	Georgia
HRV	Croatia
ITA	Italy
KAZ	Kazakhstan
MDA	Republic of Moldova
MLT	Malta
MNE	Montenegro
POL	Poland
PRT	Portugal
ROU	Romania
SMR	San Marino
SVK	Slovakia
UZB	Uzbekistan

[1] This report uses a standardized code system for Member States to align with other international reports. This is different from the codes used in previous Childhood Obesity Surveillance Initiative reports and publications.

Executive summary

Overweight and obesity among children remains one of the major public health challenges facing the WHO European Region. As well as affecting a child's immediate physical and mental health, educational potential and quality of life, unhealthy body weight in early life can increase the risk of obesity and noncommunicable diseases (NCDs) later in life. Tackling obesity – including childhood obesity – is vital for achievement of the Sustainable Development Goals and for implementation of the *WHO European Programme of Work 2020–2025 – "United Action for Better Health".*

In order to generate reliable and valid Member State-level data on the prevalence of overweight and obesity among primary school-aged children, the WHO European Childhood Obesity Surveillance Initiative (COSI) was established in 2007. The COSI initiative allows systematic collection of data on the measured weight status of children aged 7–9 years and on dietary intake, physical activity, sedentary behaviour, family background and school environment.

Over 2020 and 2021, governments worldwide implemented containment measures to curb the spread of the severe acute respiratory syndrome coronavirus 2, such as periods of restricted movements, social distancing, self-isolation, mask mandates, school and public space closures. These measures disrupted daily life for families globally and had profound impacts on children and adolescents' daily routines, health and well-being.

Considering the negative effects of COVID-19 on mental health, physical activity and eating behaviours among children and adolescents, it is important to better understand the impact of the pandemic on children's daily routines and behaviours, particularly with the epidemic of childhood obesity and other chronic diseases in the long-term. This report presents the main results of the impact of the COVID-19 pandemic (2020–2022; referred to hereafter as "the pandemic") on children's daily routines, well-being, eating behaviours, physical activity and perception of the weight status, which was collected by 17 Member States.

Regarding children's eating behaviours, on average, for all items, consumption remained unchanged for most children (70–80%). While healthy foods such as fresh fruits and vegetables were consumed more rather than less frequently during the pandemic period in most of the Member States, unhealthy foods such as savoury snacks and sweets, showed also higher consumption during the pandemic period. Conversely, any change in the frequency of consumption of soft drinks with sugar was observed to be a decrease rather than an increase. A similar pattern was observed for eating fish; while meat consumption and consumption of breakfast cereals did not show a prevailing change. Dairy products were consumed more frequently during the pandemic period.

The study investigated also how family consumption behaviours in a weekly routine have changed during the pandemic compared with prior. Overall, the percentage of families that did not report any change varies among behaviours, ranging from 46–77%. The behaviours that were observed to have had the highest increases during the pandemic were "eating home-cooked meals" (30%), "eating together as a family" (29%), "cooking meals together with your child" (26%) and "buying food in large quantities" (28%). One in five families reported an increase in "planning purchases and meals in advance". Conversely "eating meals prepared outside of the home" as well as "eating ready-to-eat meals" decreased in all Member States, varying between 15% and 57%. And approximately one in five families reported a decrease in "buying foods in super- or hypermarkets" and in "buying online grocery shopping".

Regarding the frequency of consumption of meals ordered via applications and/or other online delivery services by children, there were no major changes during the pandemic, with around 75% consuming these meals less than once a month or not at all in either period.

Sleep patterns remained the same for most children during the pandemic. If a change occurred, an increase was observed more frequently than a decrease; on average, 15% of children increased sleep time on weekdays and 17% on weekends.

When asked whether the time children spent outside school hours playing actively or vigorously changed when pandemic restrictions were in place, one in two parents reported that, on average, their children spent an equal amount of time on these activities, while decreased time spent was observed on weekdays for 28% of children and on weekends for 23%.

On average, for sedentary behaviours, 36% of children increased time spent watching TV, playing video/computer games or using social media for non-educational purposes on weekdays, and 34% on weekends during the pandemic. The percentage of children who decreased their recreational screen time was much smaller, below 10%.

Parents were asked how they perceived their children's weight status both during and before the pandemic period: as underweight, normal weight, a little overweight or extremely overweight. Over the period, the percentage of children perceived as normal weight dropped from 82 to 73%, whereas those perceived as overweight doubled, from 8 to16%.

The study investigated how the emergence of the pandemic and its restrictive measures impacted on children's well-being by investigating parents' perceptions regarding a set of 10 specific behaviours and feelings that children exhibited during both the pandemic and the pre-pandemic period separately. For most of the investigated behaviours and feelings, the situation worsened more than improved. Overall, most Member States reported a general worsening in the perceived well-being of their children, with different intensities.

On average, according to parent's perceptions, the capacity for having fun with friends worsened for 42% of children, observed in ways such as the ability to enjoy activities in a child's free time (27%) or reporting "having enough time for him/herself" (19%). Perceived sadness was also more frequent in the pandemic period for one out of five children (20%), although still most parents never or seldomly reported that their children were feeling this way (82%). Perceived loneliness was also experienced more frequently by one out of four children (24%). One in four children were perceived by their parents as feeling fit and well less frequently. The same pattern also emerged concerning feeling full of energy. Observed capacity to pay attention worsened in 23% of children, and so-called "getting on well" or basic coping at school was also reported by parents as being reduced during the pandemic.

Regarding perceived family wealth, the majority of families observed (55%) were able to survive a month comfortably or without serious problems with their earnings during the pandemic; however, an increase was observed in the number of families that reported having difficulty making ends meet each month with their earnings (from 13% before the pandemic period, to 18% during) and barely making ends meet each month (from 5–9%). On average, during the pandemic parents' employment status also changed, with a decrease in parents working either full- or part-time, between 52–44% among mothers and 70–62% among fathers ("parent", "father" or "mother", in the context of parental employment and having COVID-19, includes the following: (step) mothers, (step) fathers and/or their partners). Overall, 22% of children, 30% of mothers and 26% of fathers tested positive for COVID-19.

These observations underscore the need to "build back better" post-pandemic with a focus on preventing and controlling obesity, particularly in children. Addressing childhood obesity requires a comprehensive approach that promotes healthy diets and ample physical activity for both early childhood and school-aged children, as well as preconception, pregnancy care and weight management programmes where necessary. Obesity prevention and management necessitates multisectoral policies and actions implemented through a coordinated whole-of-society approach with a range of ministries and partnerships. WHO has identified a range of policy options that include structural, fiscal, and regulatory actions aimed at creating healthy environments, namely marketing restrictions on unhealthy products, nutrition labelling policies (including front-of-pack labelling), fiscal policies (including taxes and subsidies), public food procurement and reformulation policies as well as school-based policies to improving diet and physical activity. A

whole-of-society approach also requires actions at subnational and local levels and can include collaboration with the community and organizations working towards a common goal. These options are detailed in the *WHO European 2022 Obesity Report* and the *WHO Acceleration Plan to Stop Obesity 2023*.

The Special Initiative on NCDs and Innovation is committed to supporting Member States in taking comprehensive, integrated, multisectoral action to halt the rise of childhood obesity in the Region. It is also essential to use the lessons learned from this study to prepare for future pandemics and emergencies in the region and safeguard children's health. Data from the COSI project is crucial to defining the problem of obesity, informing action, drawing comparisons between Member States and tracking progress over time.

Introduction

Childhood obesity is a major public health problem in the WHO European Region. In recent years, a plateau in reduction has been observed in some Member States, but levels remain high *(1–3)*. As well as affecting children's immediate physical and mental health, educational potential and quality of life, unhealthy body weight in early life can increase the risk of obesity and noncommunicable diseases (NCDs) in later life *(2)*. Tackling obesity – including childhood obesity – is vital for the achievement of the Sustainable Development Goals and for implementation of the *WHO European Programme of Work 2020–2025 – "United Action for Better Health" (4)*. This is also reflected in the vision of the Special Initiative on NCDs and Innovation (SNI), which supports Member States in their efforts to reduce avoidable NCDs in the population. It champions both immediate changes to progress towards the NCD-related Sustainable Development Goal commitments for 2030 ("race to the finish") and promoting key generational shifts required to address NCDs within the permacrisis of war, climate change, pandemic and beyond.

The year of 2020 was affected by a global pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which was declared a Public Health Emergency of International Concern on 30 January 2020 by WHO and characterized as a pandemic on 11 March 2020 *(5)*. Over 2020 and 2021, governments worldwide implemented containment measures to curb the spread of the virus, such as periods of restricted movements, social distancing, self-isolation, mask mandates, school and public space closures *(6)*. Throughout Europe, the severity and timing of containment measures have varied from Member State to Member State *(7)*. These measures disrupted daily life for families globally and had profound impacts on children and adolescents' daily routines, health and well-being *(8–13)*.

Childhood and adolescence are critical stages of life for mental health and well-being *(14)*. As a result of the pandemic, restrictive measures were put in place and important and urgent inquiries arose regarding potential impact on education, social relationships, health, the growth environment and on the intellectual, physical and emotional development of children and adolescents *(15)*. Multiple studies reported symptoms of depression, anxiety, anger, irritability, psychological distress, boredom and fear among young people due to coronovirus disease (COVID-19) restrictions *(16,17)*. School closures and home quarantine contributed to loneliness and negative emotional behaviours in children *(16,18)*.

Regular physical activity is important for the prevention of NCDs and their associated risk factors including overweight and obesity. It is associated with improved mental health, quality of life and well-being *(19,20)*. Physical activity is important for children to ensure healthy growth and development and is associated with many health benefits including improved physical fitness, reduced adiposity, cognitive outcomes and cardiometabolic, bone and mental health *(21,22)*. Higher amounts of sedentary behaviour are associated with poor health outcomes such as increased adiposity, poorer cardiometabolic health and fitness, conduct/pro-social behaviour and reduced sleep duration *(23)*.

According to the results on children's physical activity and sedentary behaviours of the fifth round of COSI, conducted between 2018 and 2020, a large (87%) majority of 6–9-year-olds spent at least one hour a day on average in active or vigorous play. However, four in 10 children did not spend any time doing sports or dancing and only 41% of 6–9-year-old children travelled to and from school actively *(24)*. Regarding sedentary behaviour, 43% of children aged 6–9 years spent at least two hours a day on average watching television or using electronic devices.

The pandemic and its restrictions disrupted physical activity, sedentary behaviour and sleep patterns among children and adolescents *(10,11)*. Outdoor activity restrictions and the closure of school and recreational facilities limited opportunities for maintaining an active and healthy lifestyle *(25,26)*, exacerbating current public health problems related to low physical activity levels and high prevalence of sedentary behaviours *(27,28)*.

Establishing good nutrition behaviours early in life is another important aspect of promoting children's long-term health and decreasing the risk of childhood obesity *(29,30)*. The latest results on children's eating behaviours from the fifth round of COSI revealed that overall, less than half (43%) of 6–9-year-old children consumed fresh fruit daily, and more than one in 10 (11%) did not eat vegetables at all or did so

less than once a week *(24)*. Additionally, almost a quarter (22%) of the children consumed soft drinks on more than three days a week. Some studies showed that the pandemic had mixed effects on children and adolescents' eating pattern, contributing to changes in their dietary behaviours *(31,32)*.

The pandemic has also had major negative impacts on the worldwide economy, with families experiencing job losses and financial instability *(33)*. Households' disposable income in the European Union was significantly affected by the pandemic, with lower income households being more severely hit *(34)*. This may lead to increased poverty and disrupted access to food, which has been linked with numerous adverse individual and public health outcomes *(35,36)*.

COSI

In order to generate reliable and valid Member State-level data on the prevalence of overweight and obesity among primary school-aged children, COSI was established in 2007. The initiative established a common protocol which allowed systematic collection of data on children's weight status by routine and standardized measurement of body weight and height of children aged 7–9 years. Additional data on dietary intake, physical activity, sedentary behaviour, family background and school environments are also collected in many Member States. COSI is now the childhood obesity surveillance initiative with the widest coverage in the world, with participation increasing from 13 Member States in 2007 to 45 Member States in 2020. In total, the first five rounds of data collection have yielded measured anthropometric data on over 1.3 million children *(37)*.

When considering the effects of COVID-19 on mental health, physical activity and eating behaviours among children and adolescents, it is important to better understand the impact of the pandemic on children's daily routines and behaviours, particularly with the epidemic of childhood obesity and other chronic diseases in the long term *(38)*. This report presents the main results of the impact of the pandemic between 2020 and 2022 on children's daily routines, well-being, eating behaviours, physical activity and perception of their weight status, collected by 17 Member States.

1. Methodology

1.1 Study design, site and setting

Data collection was conducted in 13 Member States during the 2021–2022 school year (Azerbaijan, Croatia, Cyprus, Italy, Kazakhstan, Malta, Montenegro, Poland, Portugal, Romania, San Marino, Slovakia and Uzbekistan) and in four Member States during the 2022–2023 school year (Albania, Bulgaria, Georgia and the Republic of Moldova).

Countries could decide to implement the study together with the sixth round of data collection or to implement it separately from the sixth round. The sixth data collection round of COSI involves 37 Member States. Of the Member States that decided to collect information on the impact of COVID-19, most decided to collect this data as part of the sixth COSI round, following the common COSI protocol for sample design *(39)*. Italy, Poland, Romania and San Marino implemented the study separately from the sixth round of data collection, and data were collected according to the study protocol devised for this specific purpose by the WHO European Office for the Prevention and Control of NCDs and Member States.

The target population consisted of children enrolled in primary school and their families. According to the protocol, Member States had the option of targeting one or more of the following four age groups: 6.0–6.9, 7.0–7.9, 8.0–8.9 and 9.0–9.9 years; therefore, one or more primary school grades have been included in the survey depending on which grades were mostly attended by the targeted children in each Member State. Countries that implemented the study separately from the sixth COSI round selected the same school grades included in previous rounds of COSI and adopted a similar sampling design. The study covered the whole national territory in all Member States except for Kazakhstan, where only children and families living in Almaty City were included in the study.

Family participation in the study varied from 32% of selected families in Poland to over 80% in Albania, San Marino and Uzbekistan, with eight Member States reporting a participation rate between 60% and 80%. Information about the level of participation was not available for three Member States. Table 1 provides an overview of the main characteristics of the study design in each Member State that participated in the COSI-COVID-19 survey.

Table 1. Main methodological features of the study by Member State

Member State (acronym)	Type of study	Data collection period	Study representativeness	Primary school grades included in the study	Number of primary schools included in the study	Families' response rate (%)	Number of observations included in the analysis
Albania (ALB)	COSI-COVID	Oct 22 – Nov 22	National	2nd and 3rd grades	144	81.7	5253
Azerbaijan (AZE)	COSI-COVID	Apr 22 – Jun 22	National	3rd grade	128	44.6	2391
Bulgaria (BGR)	COSI-COVID	Apr 23 – May 23	National	1st grade	201	79.6	3142
Croatia (HRV)	COSI-COVID	Feb 22 – Apr 22	National	2nd and 3rd grades	257	73.1	5500
Cyprus (CYP)	COSI-COVID	Jan 22 – Jun 22	National	1st and 4th grades	38	NA	650
Georgia (GEO)	COSI-COVID	Oct 22 – Dec 22	National	2nd grade	245	73.8	3214
Italy (ITA)	COVID	Apr 22 – Sep 22	National	3rd grade	270	46.6	4863
Almaty – Kazakhstan (KAZ-AL)	COSI-COVID	May 22	Subnational	2nd and 3rd grades	46	67.9	1663
Malta (MLT)	COSI-COVID	Mar 22 – Jun 22	National	3rd grade	99	70.3	2867
Montenegro (MNE)	COSI-COVID	May 22 – Jun 22	National	1st and 2nd grades	110	75.9	3062
Poland (POL)	COVID	Nov 21 – Feb 22	National	2nd grade	109	31.6	856
Portugal (PRT)	COSI-COVID	Apr 22 – Jun 22	National	1st and 2nd grades	234	64.2	5139
Republic of Moldova (MDA)	COSI-COVID	Feb 23 – Mar 23	National	1st grade	90	61.1	2823
Romania (ROU)	COVID	Oct 21 – Jan 22	National	2nd and 3rd grades	152	NA	5033
San Marino (SMR)	COVID	Mar 22 – Apr 22	National	3rd grade	14	87.4	272
Slovakia (SVK)	COSI-COVID	May 22 – Oct 22	National	1st, 2nd and 3rd grades	186	NA	4131
Uzbekistan (UZB)	COSI-COVID	Apr 22 – May 22	National	1st grade	147	90.4	3514

NA: not available

1.2 Data collection

Information on children's daily routines and behaviours regarding physical activity/inactivity, eating behaviours, well-being and family's background during pandemic confinement periods, was collected through 12 questions. Parents/caregivers of children selected to participate were invited to answer these questions. The questionnaire was attached to the letter that was given to them to inform them about this initiative and ask for their consent. This questionnaire was voluntary, and it could be completed and delivered in paper format and/or completed online in the LimeSurvey platform in the Member State's national language.

1.3 Data management

After completion of the data collection, the data were forwarded to the national coordinating centre for processing. The data were entered into either the LibreClinica system or another data entry system of the Member State's choice. Throughout this process, Member State teams were responsible for entering data collected on the paper forms and/or in an electronic system and for archiving the paper forms. The LibreClinica data entry system was developed for the purpose of the study by WHO and participating Member States were provided free access to it. The system was web-based, ensured that access to the data was regulated with secure account-management and kept a full audit trail of all changes.

The data manager was responsible for archiving the forms as well as data cleaning, validation and backup. If a Member State did not use the online system, the Member State sent a copy of the cleaned data file to the WHO Regional Office for Europe, along with a detailed report of the data cleaning procedures. Common data checking procedures was carried out both at the Member State and European level in order to validate datasets.

Post-stratification weights to adjust for sampling design, oversampling and nonresponse were estimated by the WHO Regional Office for Europe following a common approach *(37)* for all except for Cyprus, Poland and Romania. These weights were used in all analyses to infer results from sample to population. For Cyprus, Poland and Romania the analysis was unweighted. In the pooled analysis, an adjusting factor was applied to the sampling weights to take account of differences in population size and sample size of the Member States involved. The adjusting factor was calculated based on the number of children belonging to one age group according to Eurostat figures or national official statistics for 2021.

The percentage of respondents that did not provide information about being infected by COVID-19 or about the family socioeconomic status in the pandemic and pre-pandemic period (for example perceived family wealth and employment status) was particularly high in some Member States and, in general, much higher than that registered for all other questions. Country-specific and overall distributions of these variables have been calculated including the answer category "no answer provided".

2. Children's demographic characteristics, family socioeconomic status and COVID-19 infection[2]

2.1 Children's demographic characteristics

Table 2 presents the distribution of child population by sex and age in all participating Member States. Overall, 52% were male, 30% of children were 7-year-olds and 55% were 8-year-olds. Due to differences among Member States in terms of targeted age group(s), the distribution by age varied across the Member States, with the highest percentages of 6-year-old children or younger in Montenegro (25%), 7-years-old in Bulgaria (100%), 8-years-old in Azerbaijan (100%) and 9-years-old or older in Croatia (52%).

Table 2. Percentage of boys and distribution of children by age group (%) by Member State

Member State	Boys (%)	Age in years (%)			
		6-year-olds or younger	7-year-olds	8-year-olds	9-year-olds or older
ALB	51.3	0.5	37.5	54.4	7.6
AZE	53.3	0.0	0.0	100.0	0.0
BGR	51.5	0.0	100.0	0.0	0.0
CYP	49.8	21.0	29.9	1.4	47.8
GEO	52.1	4.4	80.6	15.0	0.1
HRV	51.3	0.0	2.2	45.8	52.0
ITA	52.1	0.0	0.3	73.4	26.3
KAZ-AL	49.3	0.1	19.1	50.5	30.3
MDA	52.4	5.5	84.2	10.3	0.0
MLT	52.9	0.1	68.2	31.4	0.3
MNE	51.7	25.4	50.0	24.1	0.4
POL	52.1	0.1	4.1	91.6	4.1
PRT	49.7	21.3	48.1	29.5	1.2
ROU	47.5	0.1	2.5	48.0	49.5
SMR	53.3	0.0	0.7	61.8	37.5
SVK	50.9	0.0	49.9	50.1	0.0
UZB	53.0	0.0	82.5	17.3	0.2
AVG	51.8	1.3	30.5	54.8	13.4

AVG: average value resulting from pooled analysis

[2] For the purposes of this document, "COVID-19 infection" is used as a shorthand for coronavirus disease, caused by the SARS-CoV-2 virus.

2.2 Family socioeconomic status

The majority of families easily pass a month with their earnings or without serious problems (55%) during the pandemic (Fig. 1; Table 3). Although, an increase was observed in the number of families that reported having trouble making ends meet each month with their earnings (from 13% before the pandemic period to 18% during) and barely making ends meet each month (from 5–9%). Families from Albania and Azerbaijan reported most often (> 30%) a worsening of their household financial situation during the pandemic period (Fig. 2; Table 4). More than one in five respondents from Italy, the Republic of Moldova and Romania were not able to or did not answer this question for both periods.

Fig. 1. Perceived family wealth during the pandemic in comparison to the pre-pandemic period (%, pooled estimates)

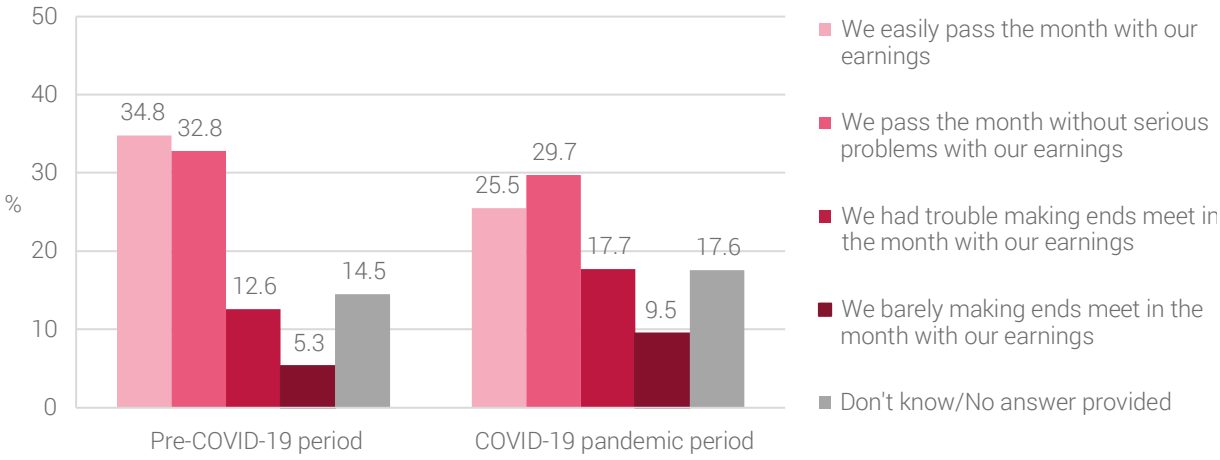
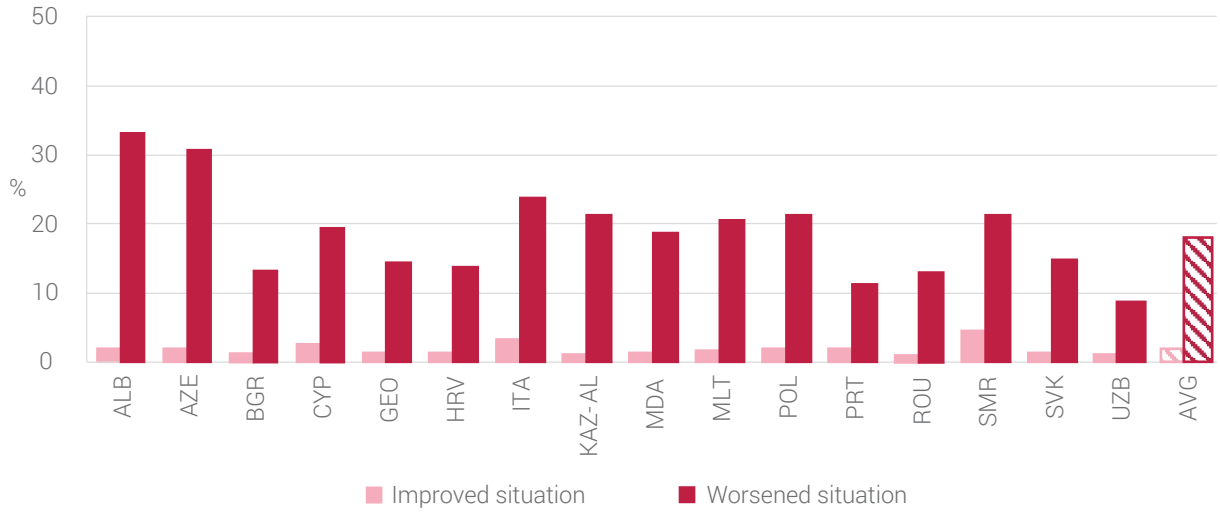


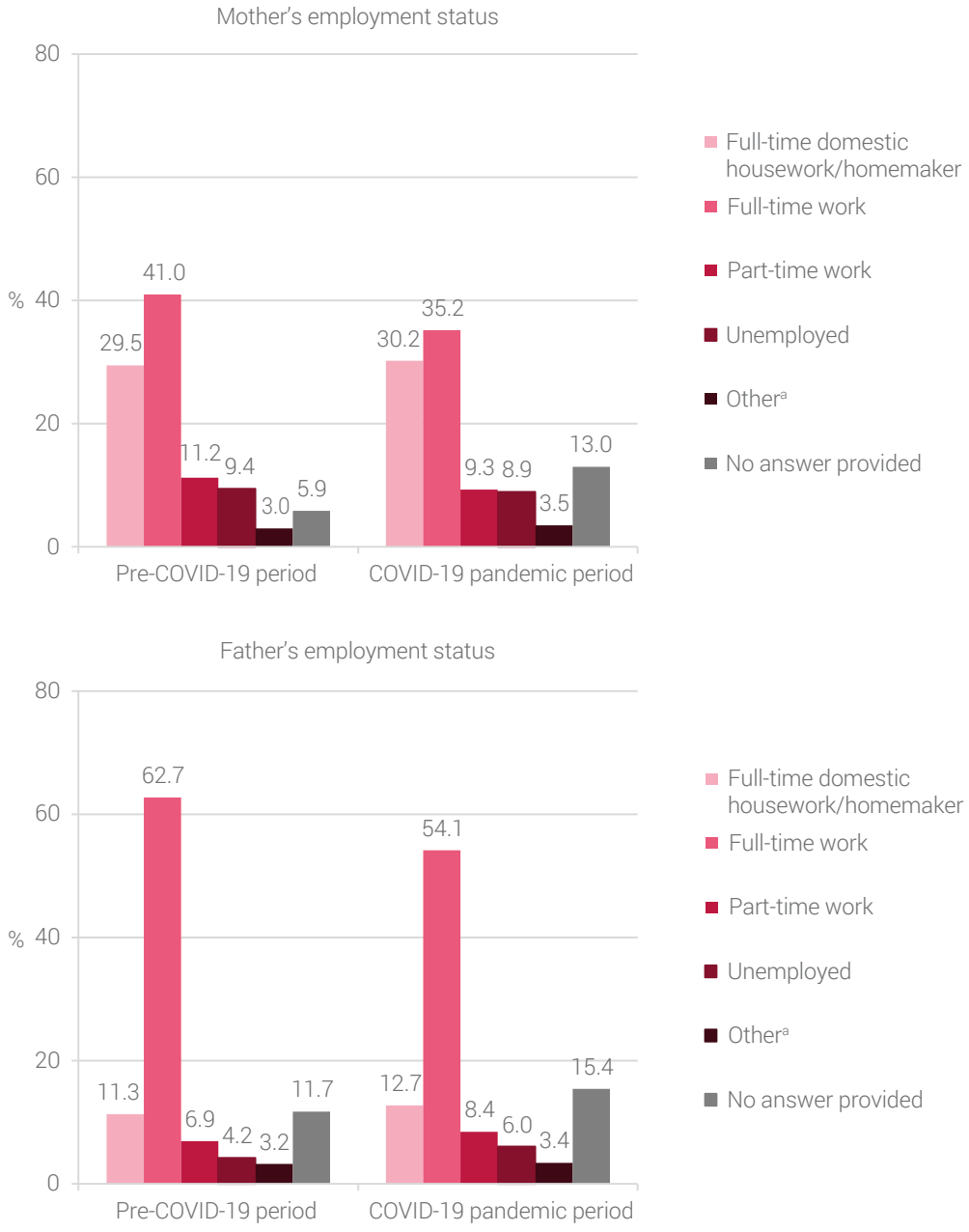
Fig. 2. Change in perceived family wealth during the pandemic in comparison to the pre-pandemic period by Member State (%)[a]



[a] Data on perceived family wealth were not collected in Montenegro.

On average during the pandemic, parental employment status also changed, with a decrease in parents working either full- or part-time from 52 to 44% among mothers and from 70 to 62% among fathers (Fig. 3; Tables 5 and 6).[3] The percentage of mothers and fathers that did not provide information on their employment status was higher for the pandemic period compared with prior.

Fig. 3. Mother's and father's employment status during the pandemic in comparison to the pre-pandemic period (%, average figures)

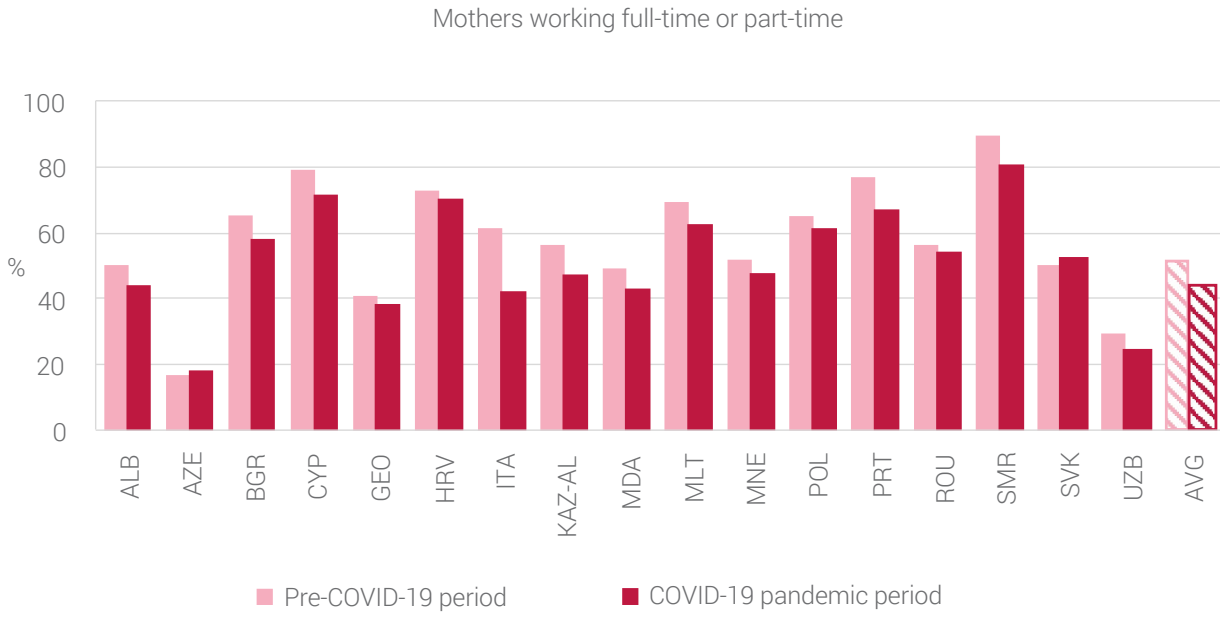


[a] "Other" includes those in full-time education or sick, disabled, retired, etc.

[3] For parental employment status. "parent", "father" or "mother" includes the following: (step) mothers, (step) fathers and/or their partners.

In most participating Member States, the percentage of mothers and fathers working either full- or part-time during the pandemic was lower compared with the pre-pandemic period, except for mothers in Slovakia, where the opposite occurred, and Azerbaijan where no change was observed (Fig. 4; Tables 5 and 6). The percentage of parents that did not answer this question was particularly high in Italy and in the Republic of Moldova, where more than one in five respondents did not provide the information for the pandemic period.

Fig. 4. Percentage of mothers and fathers that were working full-time or part-time during the pandemic in comparison to the pre-pandemic period by Member State (%)



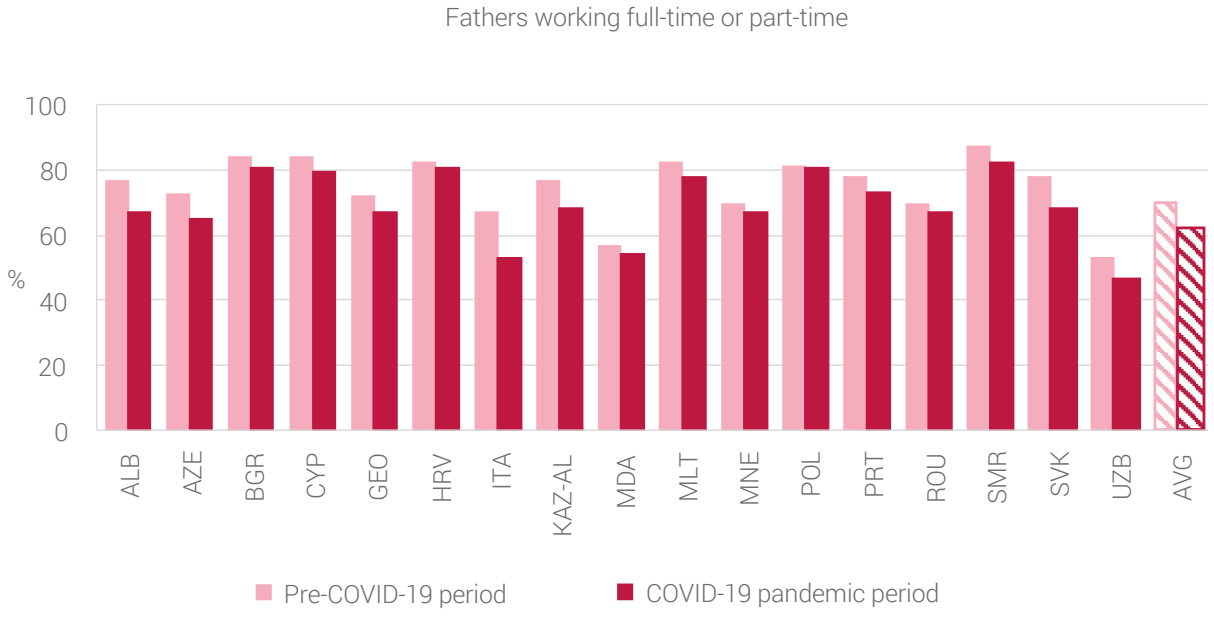


Table 3. Perceived family wealth during the pandemic in comparison to the pre-pandemic period by Member State (%)

Member State	Pre-pandemic period (%)					Pandemic period (%)				
	With our earning…					With our earning…				
	We easily pass the month	We pass the month without serious problems	We had trouble making ends meet in the month	We barely making ends meet in the month	Don't know or no answer provided	We easily pass the month	We pass the month without serious problems	We had trouble making ends meet in the month	We barely making ends meet in the month	Don't know or no answer provided
ALB	33.8	34.6	12.6	6.1	13.0	17.2	26.2	25.8	17.1	13.7
AZE	32.9	25.1	20.8	18.4	2.8	17.9	19.7	29.9	29.2	3.3
BGR	29.8	49.4	11.8	3.9	5.2	23.5	48.1	16.3	5.9	6.2
CYP	42.3	37.5	7.5	2.6	10.0	32.2	35.8	12.8	7.2	12.0
GEO	42.5	37.9	9.6	5.0	4.9	32.8	37.8	13.0	7.9	8.5
HRV	50.5	39.8	3.3	3.1	3.3	42.7	42.2	5.9	5.0	4.2
ITA	22.2	37.5	15.7	3.3	21.2	14.1	26.8	22.6	11.8	24.7
KAZ-AL	30.3	29.9	18.7	3.6	17.6	18.3	28.0	22.8	7.9	23.0
MDA	18.0	36.3	12.9	8.8	24.0	10.9	27.7	19.6	13.6	28.2
MLT	37.8	41.1	6.4	2.2	12.4	27.2	37.0	15.9	5.5	14.4
MNE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
POL	49.1	34.0	3.5	1.6	11.8	34.2	38.3	10.7	3.3	13.4
PRT	30.9	46.3	15.1	3.1	4.7	26.7	43.1	19.3	4.7	6.2
ROU	32.0	35.3	6.3	6.0	20.4	24.8	33.3	10.6	8.7	22.5
SMR	22.8	51.5	16.2	3.3	6.3	19.9	41.9	21.7	10.3	6.3
SVK	36.2	46.0	3.8	0.4	13.6	28.0	44.0	11.0	1.6	15.4
UZB	40.1	19.8	19.2	7.4	13.5	33.4	19.2	18.8	8.8	19.8
AVG	34.8	32.8	12.6	5.3	14.5	25.5	29.7	17.6	9.5	17.6

Table 4. Change in perceived family wealth during the pandemic in comparison to the pre-pandemic period by Member State (%)

Member State	Worsened situation	Same situation	Improved situation	Don't know or no answer provided
ALB	33.2	47.3	1.8	17.7
AZE	30.8	63.8	1.8	3.7
BGR	13.3	79.3	1.1	6.3
CYP	19.5	64.8	2.8	12.9
GEO	13.7	76.4	1.2	8.7
HRV	12.3	82.0	1.1	4.6
ITA	23.7	44.2	3.2	28.9
KAZ-AL	21.4	53.6	1.3	23.6
MDA	18.7	50.3	1.5	29.5
MLT	20.4	62.5	1.7	15.3
MNE	NA	NA	NA	NA
POL	21.4	63.1	1.9	13.7
PRT	11.4	79.5	2.0	7.1
ROU	13.0	62.0	1.0	24.0
SMR	21.3	68.0	4.4	6.3
SVK	14.9	67.0	1.4	16.7
UZB	8.5	70.0	1.0	20.5
AVG	17.8	61.1	1.8	19.2

Table 5. Mother's employment status during the pandemic in comparison to the pre-pandemic period by Member State (%)[a]

Member State	Percentage of forms filled in by the mother or the father (%)	Pre-pandemic period (%)						Pandemic period (%)					
		Full-time domestic housework/homemaker	Full-time work	Part-time work	Unemployed	Other[b]	No answer provided	Full-time domestic housework/homemaker	Full-time work	Part-time work	Unemployed	Other[b]	No answer provided
ALB	**98.8**	28.7	42.8	8.4	9.3	1.5	9.3	29.0	27.8	16.3	11.6	1.8	13.5
AZE	**93.3**	63.5	13.5	4.8	17.4	0.7	0.2	60.5	10.6	7.8	19.4	1.4	0.2
BGR	**97.9**	22.1	60.2	5.8	4.3	4.0	3.6	24.2	50.3	8.7	6.1	6.1	4.8
CYP	**100.0**	12.5	72.7	7.1	2.5	0.5	4.8	15.0	57.1	15.0	4.3	1.4	7.3
GEO	**98.1**	51.4	34.3	7.4	2.3	1.6	3.1	47.7	30.4	8.5	3.3	1.8	8.2
HRV	**98.8**	14.5	68.9	4.8	3.4	4.5	4.0	13.0	64.6	5.5	3.9	5.8	7.3
ITA	**99.1**	17.3	40.7	20.9	4.5	5.1	11.5	15.5	29.7	12.9	4.6	3.8	33.5
KAZ-AL	**99.1**	34.3	49.5	7.6	6.4	2.2	0.0	39.2	35.3	12.7	10.2	2.6	0.0
MDA	**96.8**	30.8	44.5	5.4	6.8	2.6	9.9	27.9	36.0	7.7	7.3	3.7	17.4
MLT	**99.2**	19.8	53.3	16.8	2.9	3.3	3.9	20.0	48.6	13.9	4.8	3.5	9.2
MNE	**99.5**	22.5	48.5	3.6	12.2	1.8	11.5	19.9	39.9	8.4	12.2	3.0	16.6
POL	**99.4**	21.5	57.1	8.0	2.7	3.1	7.6	21.8	52.8	9.3	2.8	4.7	8.5
PRT	**98.9**	9.0	70.6	6.1	6.6	3.8	3.9	10.5	59.6	7.9	9.0	5.8	7.3
ROU	**97.5**	32.0	54.5	2.5	1.3	3.8	5.9	28.6	51.1	3.0	2.0	4.0	11.3
SMR	**99.3**	6.3	61.0	28.7	1.5	2.6	0.0	9.2	52.9	27.6	4.4	5.9	0.0
SVK	**99.5**	2.0	17.8	32.8	41.0	1.8	4.6	20.6	47.8	4.7	6.6	8.4	12.0
UZB	**96.1**	48.4	21.2	8.7	20.9	0.9	0.0	53.3	16.1	8.7	20.9	1.0	0.0
AVG	**97.9**	29.5	41.0	11.2	9.4	3.0	5.9	30.2	35.2	9.3	8.9	3.5	13.0

[a] Percentages are calculated including only forms that were filled in by the mother or the father.
[b] The "other" category includes people that were in full-time education or that were sick, disabled, retired, etc.

Table 6. Father's employment status during the pandemic in comparison to the pre-pandemic period by Member State (%)[a]

Member State	Pre-pandemic period (%)						Pandemic period (%)					
	Full-time domestic housework/homemaker	Full-time work	Part-time work	Unemployed	Other[b]	No answer provided	Full-time domestic housework/homemaker	Full-time work	Part-time work	Unemployed	Other[b]	No answer provided
ALB	3.7	64.4	13.4	5.7	1.5	11.3	5.8	40.9	26.7	12.1	1.7	12.8
AZE	5.6	57.8	15.2	15.7	2.5	3.2	4.5	44.1	20.8	24.8	2.7	3.1
BGR	0.4	77.5	7.0	5.3	2.4	7.5	0.6	71.8	9.2	7.3	2.9	8.2
CYP	2.0	81.6	2.2	0.6	0.6	13.1	3.1	71.1	8.5	2.9	0.8	13.6
GEO	4.5	59.0	13.5	6.9	4.9	11.3	4.4	51.5	15.0	9.9	5.2	14.0
HRV	0.4	81.5	1.3	2.2	4.0	10.6	0.5	79.3	1.9	3.2	4.5	10.6
ITA	2.9	62.3	5.2	2.3	3.7	23.6	4.2	47.7	5.0	3.6	4.0	35.5
KAZ-AL	20.7	71.3	5.5	1.6	0.9	0.0	24.6	52.9	15.7	5.9	0.9	0.0
MDA	8.6	53.4	3.9	8.5	4.1	21.5	8.2	46.7	7.6	9.3	4.2	24.0
MLT	1.4	80.1	2.1	0.9	2.3	13.1	1.8	73.7	3.7	2.6	3.0	15.2
MNE	5.8	66.3	4.0	5.9	2.3	15.6	4.7	58.8	8.8	8.4	2.7	16.7
POL	1.8	79.6	1.9	2.1	3.9	10.7	1.7	77.0	3.9	2.2	3.7	11.6
PRT	1.9	74.6	3.0	3.0	3.7	13.8	2.1	68.7	5.3	4.3	4.2	15.4
ROU	9.5	67.2	2.4	2.2	5.8	12.9	8.9	64.1	3.0	2.8	6.1	15.1
SMR	1.8	82.0	5.5	1.5	3.7	5.5	3.3	75.7	7.0	2.9	5.5	5.5
SVK	4.1	74.1	3.9	4.8	2.3	10.9	13.5	65.2	3.0	2.1	2.8	13.4
UZB	39.5	40.4	13.4	5.4	1.3	0.0	44.1	32.5	14.6	7.5	1.2	0.0
AVG	11.3	62.7	6.9	4.2	3.2	11.7	12.7	54.1	8.4	6.0	3.4	15.4

[a] Percentages are calculated including only forms that were filled in by the mother or the father.
[b] The "other" category includes people that were in full-time education or that were sick, disabled, retired, etc.

2.3 COVID-19 infection

Overall, 22% of the children, 30% of the mothers and 26% of the fathers were infected with COVID-19 confirmed by a doctor and/or a positive test (Table 7).[4]

The Member State with the highest percentage of children and parents that did not have COVID-19 confirmed by a doctor and/or a positive COVID-19 test was Azerbaijan (93% of children, 82% of mothers and 81% of fathers; Fig. 5; Table 7). The Member States that had the highest percentage of children in home isolation were Cyprus, Portugal, San Marino and Slovakia (> 55%). The highest percentage of parents in home isolation were observed in Croatia, Cyprus, Georgia, Montenegro, Portugal, San Marino and Slovakia.

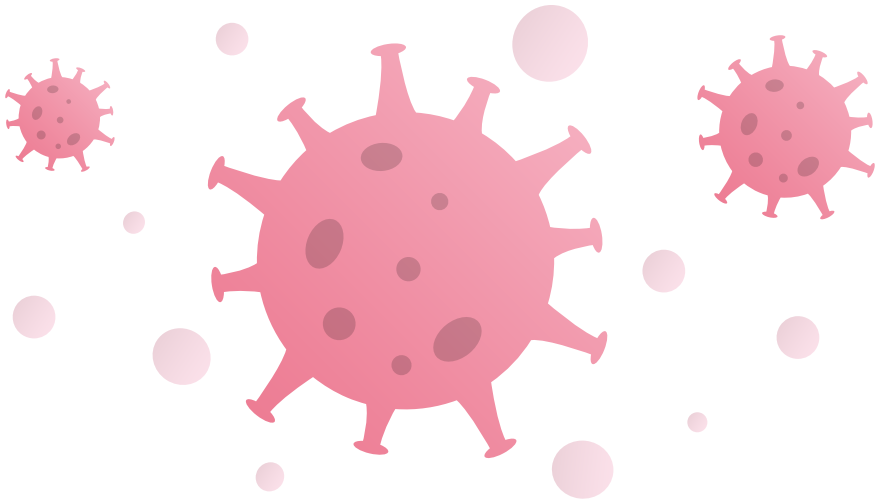
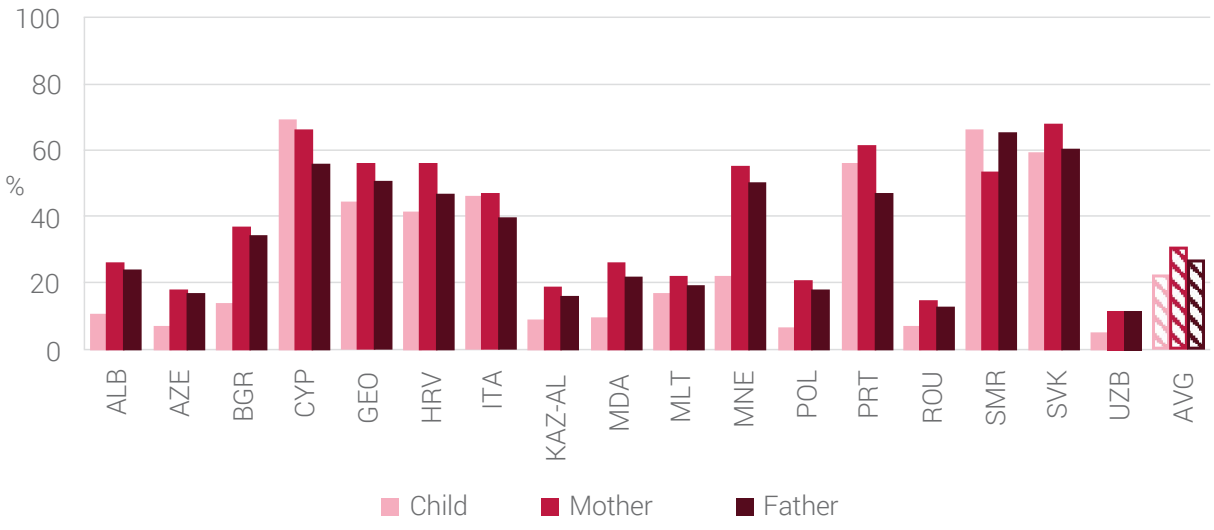


Fig. 5. Percentage of children and parents with COVID-19 confirmed by a doctor and/or a positive COVID-19 test by Member State (%)



[4] "Parent", "father" or "mother" includes the following: (step) mothers, (step) fathers and/or their partners.

Table 7. COVID-19 confirmed by a doctor and/or a positive COVID-19 test by Member State (%)

Member State	Child (%)				Mother (%)[a]				Father (%)[a]			
	No	Yes, at home isolation	Yes, admitted at the hospital	No answer provided	No	Yes, at home isolation	Yes, admitted at the hospital	No answer provided	No	Yes, at home isolation	Yes, admitted at the hospital	No answer provided
ALB	77.8	10.1	0.3	11.9	64.1	25.8	0.7	9.5	65.3	23.2	0.9	10.5
AZE	92.8	7.1	0.1	0.0	82.5	16.8	0.5	0.3	80.6	16.3	0.8	2.2
BGR	80.4	13.7	0.1	5.9	59.5	36.2	0.8	3.5	59.1	31.5	2.0	7.4
CYP	26.2	68.9	0.5	4.5	30.7	65.7	0.9	2.6	31.5	54.6	1.2	12.7
GEO	47.5	43.4	1.1	8.0	38.9	53.4	2.5	5.3	38.8	48.9	2.1	10.2
HRV	51.1	41.5	0.0	7.4	40.8	55.1	0.4	3.7	42.3	46.4	0.7	10.5
ITA	52.0	45.7	0.3	2.0	51.7	46.6	0.6	1.2	56.6	39.2	0.6	3.7
KAZ-AL	84.5	7.9	0.6	6.9	78.2	16.5	1.9	3.4	71.2	13.7	2.2	12.8
MDA	74.5	8.7	0.9	15.8	66.8	24.1	2.3	6.8	65.0	19.1	1.9	13.9
MLT	73.8	16.8	0.2	9.1	71.5	22.0	0.2	6.2	66.8	18.6	0.4	14.1
MNE	60.1	21.2	0.5	18.2	38.9	53.6	1.1	6.3	39.3	48.6	1.3	10.8
POL	88.1	6.3	0.0	5.6	75.8	20.0	0.4	3.9	76.5	16.8	0.8	5.9
PRT	38.7	55.3	0.4	5.6	35.4	59.6	0.7	4.2	38.5	46.3	0.6	14.6
ROU	80.5	6.9	0.3	12.3	55.8	13.8	0.8	29.6	71.6	11.4	1.1	15.9
SMR	34.6	65.4	0.0	0.0	41.1	53.3	0.0	5.6	32.6	65.6	0.0	1.9
SVK	29.0	58.9	0.1	12.1	21.5	67.6	0.2	10.7	24.8	60.5	0.1	14.5
UZB	81.4	4.7	0.3	13.7	80.8	10.4	1.3	7.5	76.2	9.8	1.9	12.1
AVG	70.8	21.6	0.2	7.3	63.3	29.5	0.8	6.4	65.2	25.3	1.1	8.4

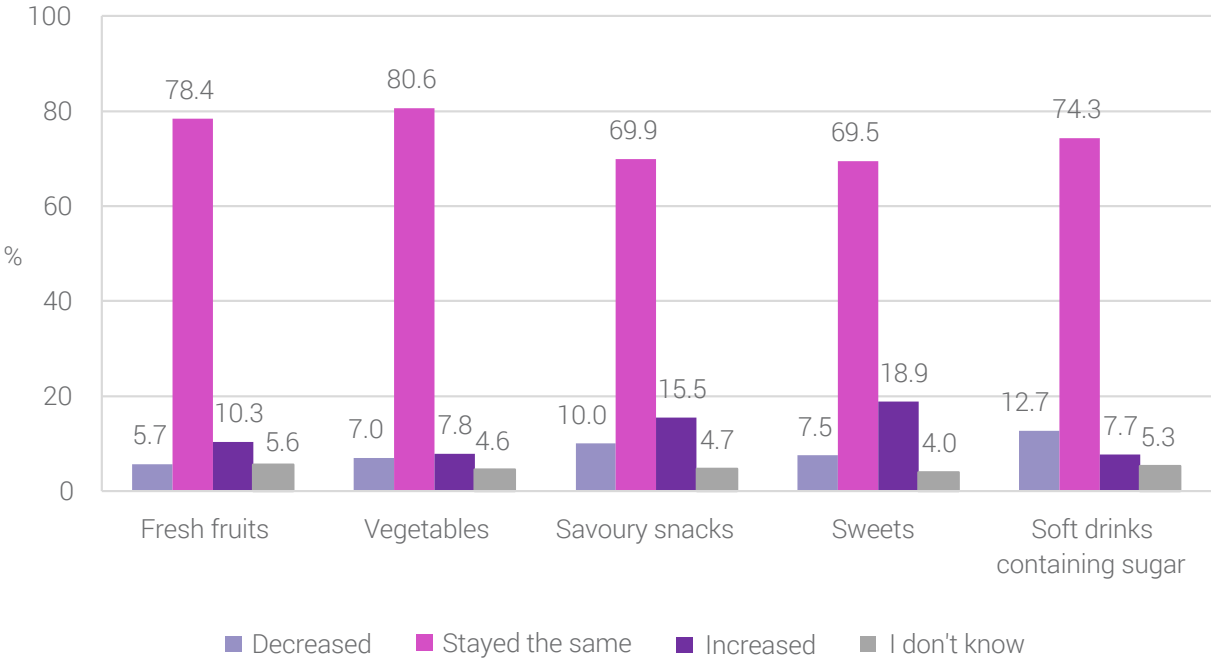
3. Eating behaviours

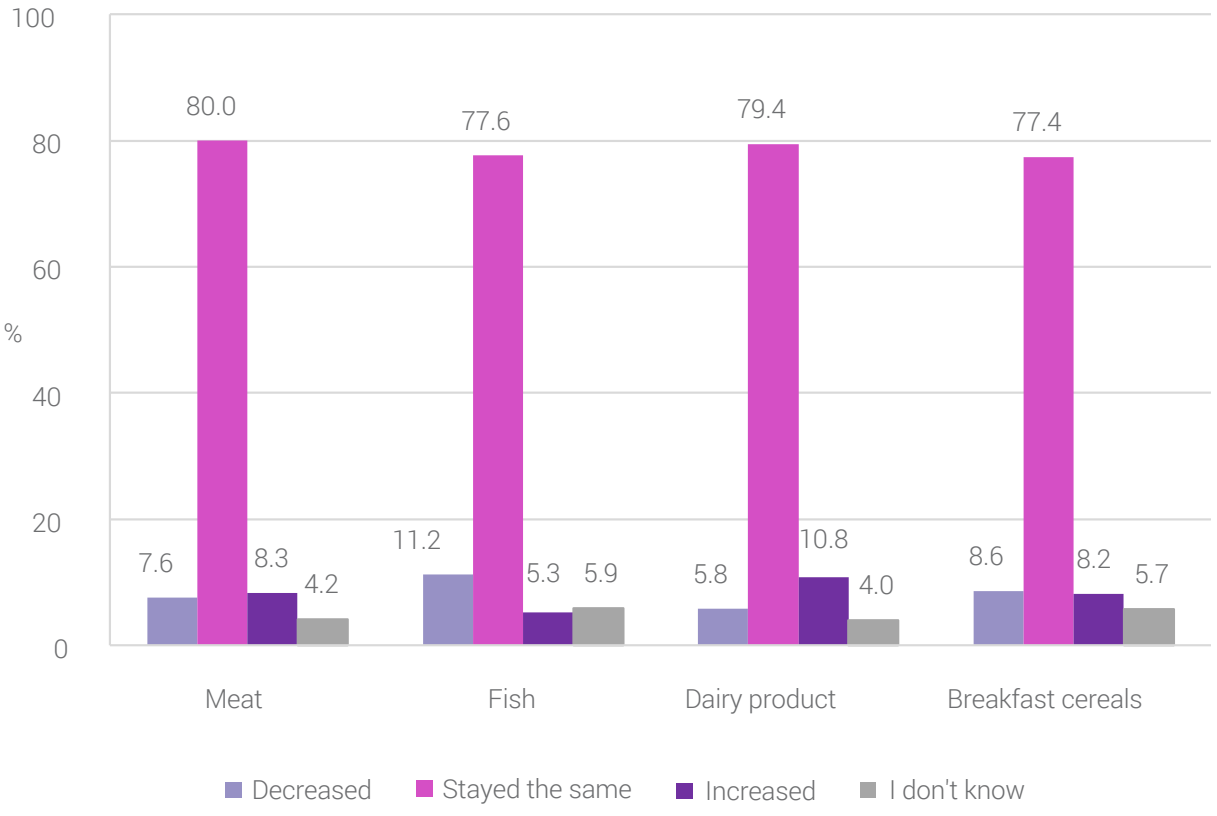
3.1 Children's eating behaviours

Parents were asked if their children's consumption of fresh fruit; vegetables; savoury snacks; sweets; soft drinks containing sugar; meat; fish; dairy products or breakfast cereals decreased, stayed the same or increased during the pandemic period in comparison to prior.

On average, for all items, consumption remained unchanged for most children (70–80%; Fig. 6; Tables 8–12). While healthy foods such as fresh fruits and vegetables were consumed more frequently during the pandemic period in most Member States, unhealthy foods such as savoury snacks and sweets also showed higher consumption during the pandemic period. Conversely, where a change in the frequency of consumption of soft drinks with sugar was observed, the tendency was for it to be decreased rather than increased. A similar pattern was observed for eating fish; while consumption of meat and breakfast cereals did not show a prevailing change. Dairy products were consumed more frequently during the pandemic period.

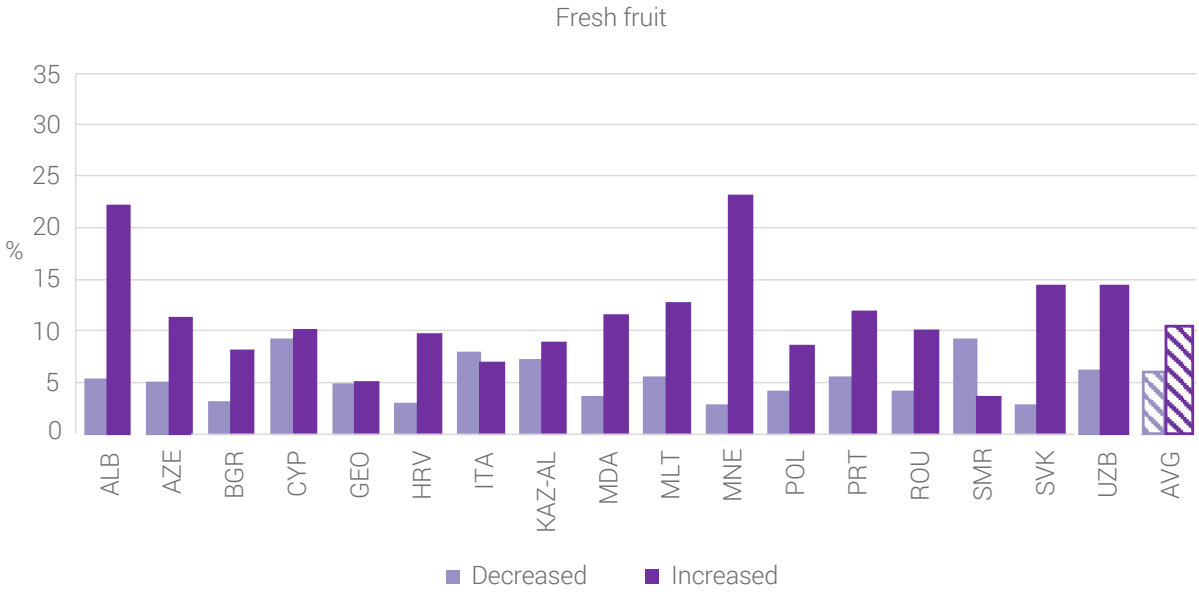
Fig. 6. Change in some food items and soft drink consumption during the pandemic in comparison to the pre-pandemic period (%)





Albania and Montenegro were the Member States with the highest increase in children's consumption of fresh fruit (22% and 23%, respectively) and vegetables (18% in both Member States; Fig. 7; Tables 8–12). Malta was the Member State with the highest increase in savoury snacks (31%), sweets (31%) and breakfast cereals (18%) consumption. In comparison, Georgia and the Republic of Moldova had the lowest increase in consumption of savoury snacks (4% in both Member States). For sweets, Bulgaria had the lowest percentage of parents reporting an increase (5%). Albania had the highest decrease of soft drink consumption (26%) during the pandemic.

Fig. 7. Change in some food items and soft drinks consumption during the pandemic in comparison to the pre-pandemic period by Member State (%)



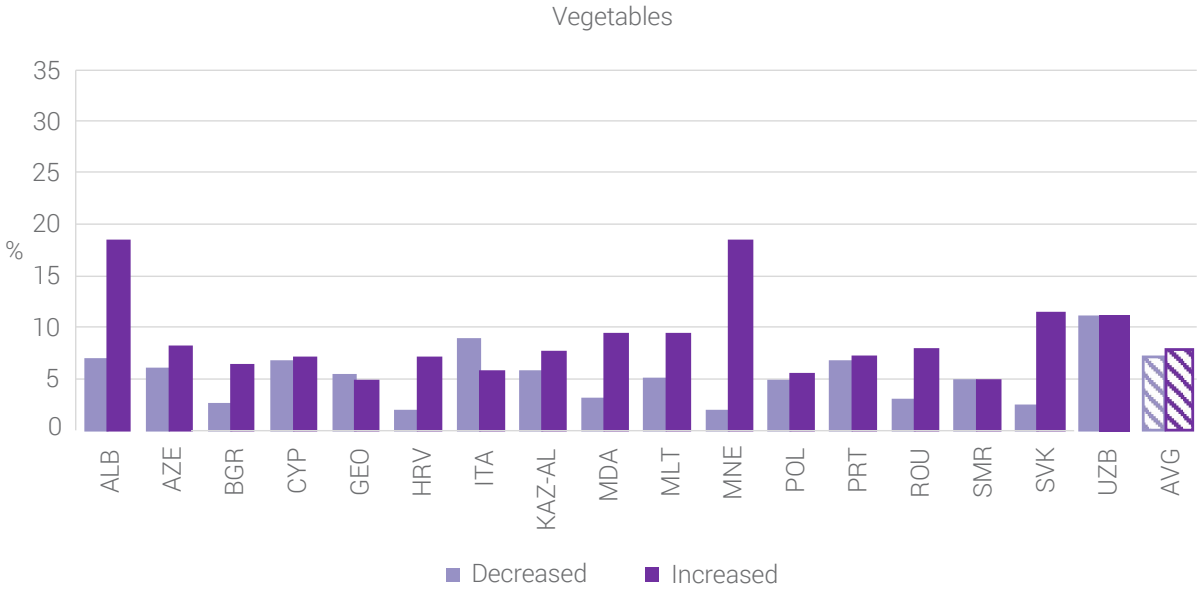


Fig. 7. contd.


Savoury snack
35
30
25
20
15
10
5
0
%
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased
Sweets
35
30
25
20
15
10
5
0
%
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased
Soft drinks
35
30
25
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15
10
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0
%
ALB
AZE
BGR
CYP
GEO
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KAZ-AL
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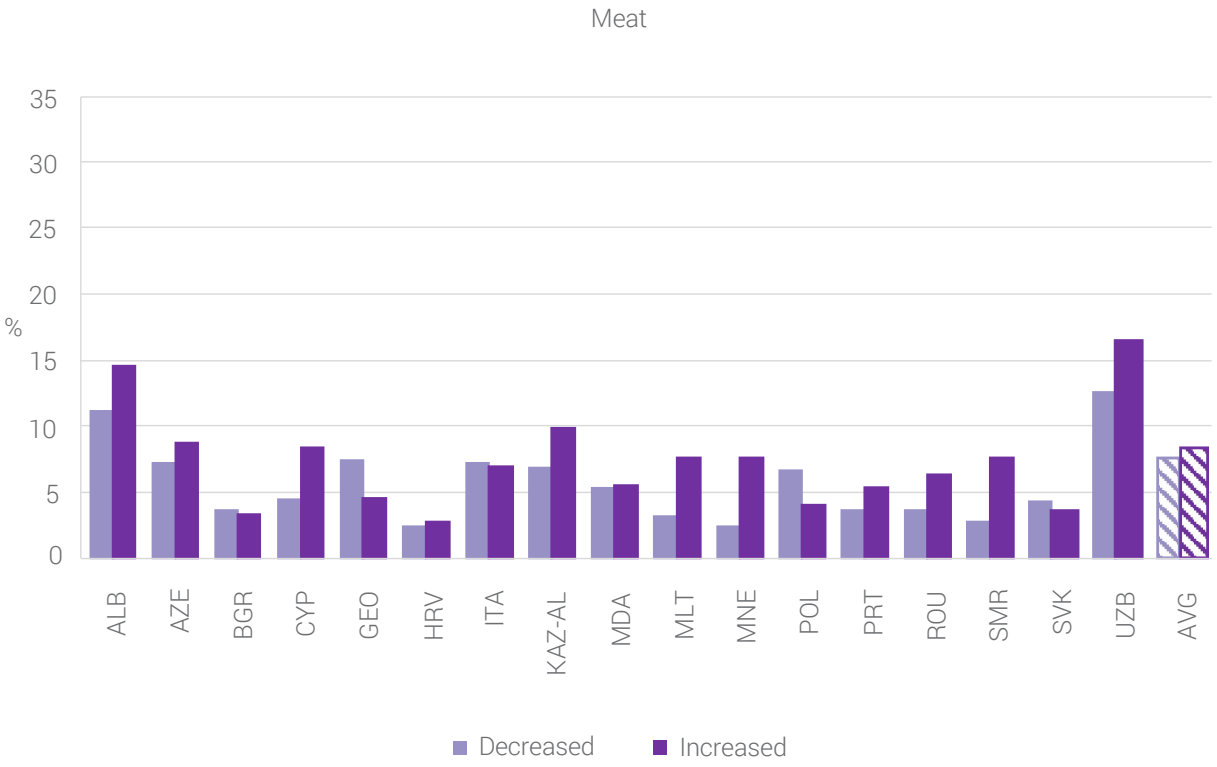
AVG
Decreased
Increased

Fig. 7. contd.


Meat
35
30
25
20
%
15
10
5
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ALB
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CYP
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Decreased
Increased

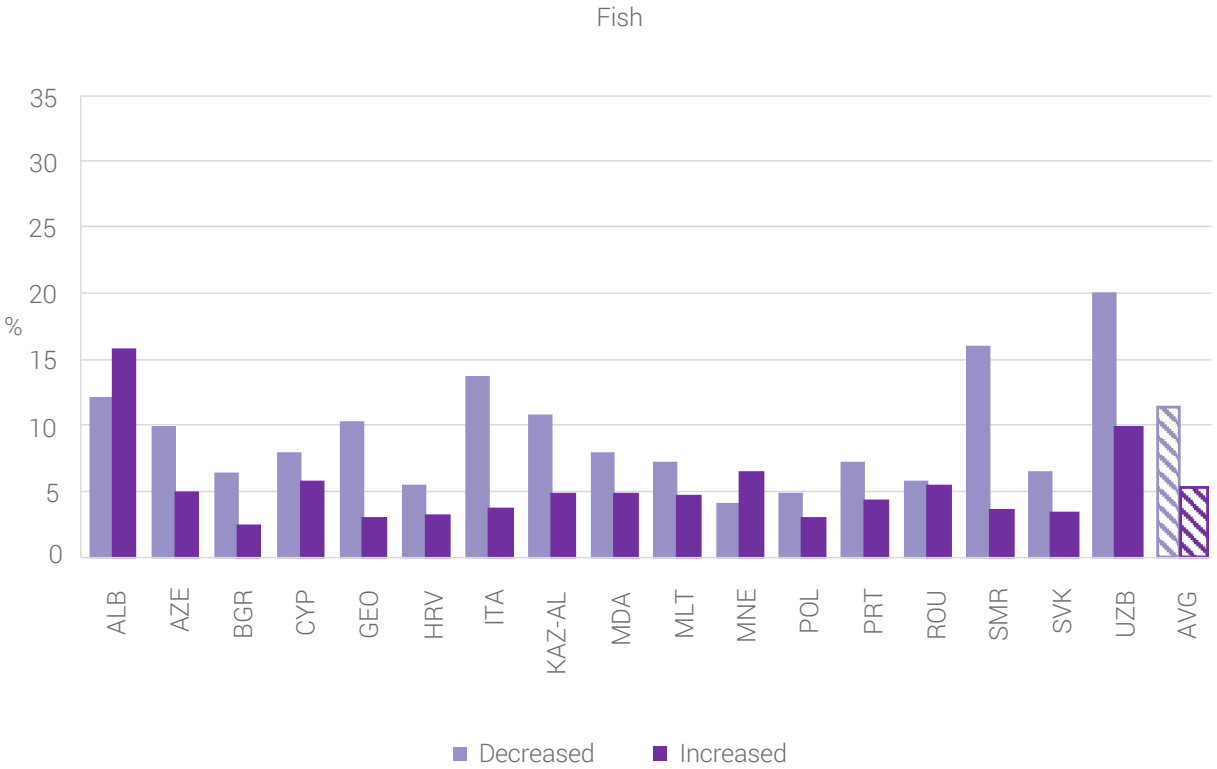
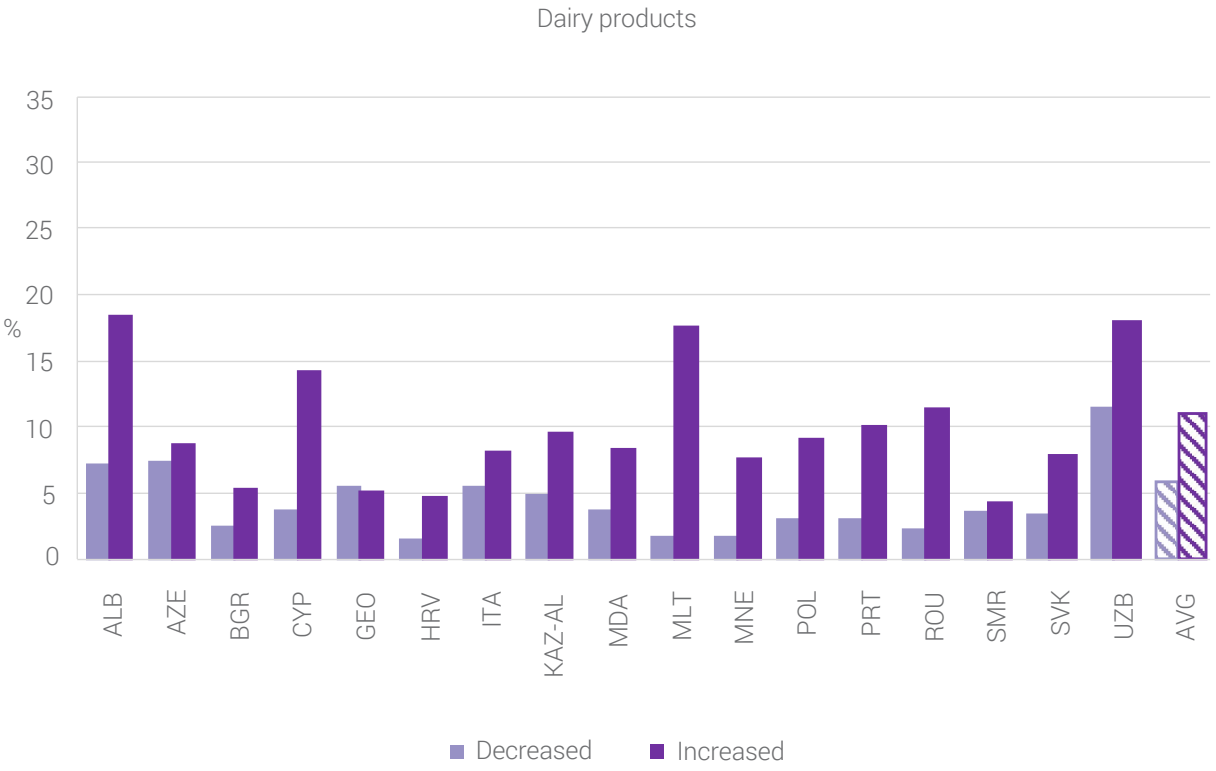
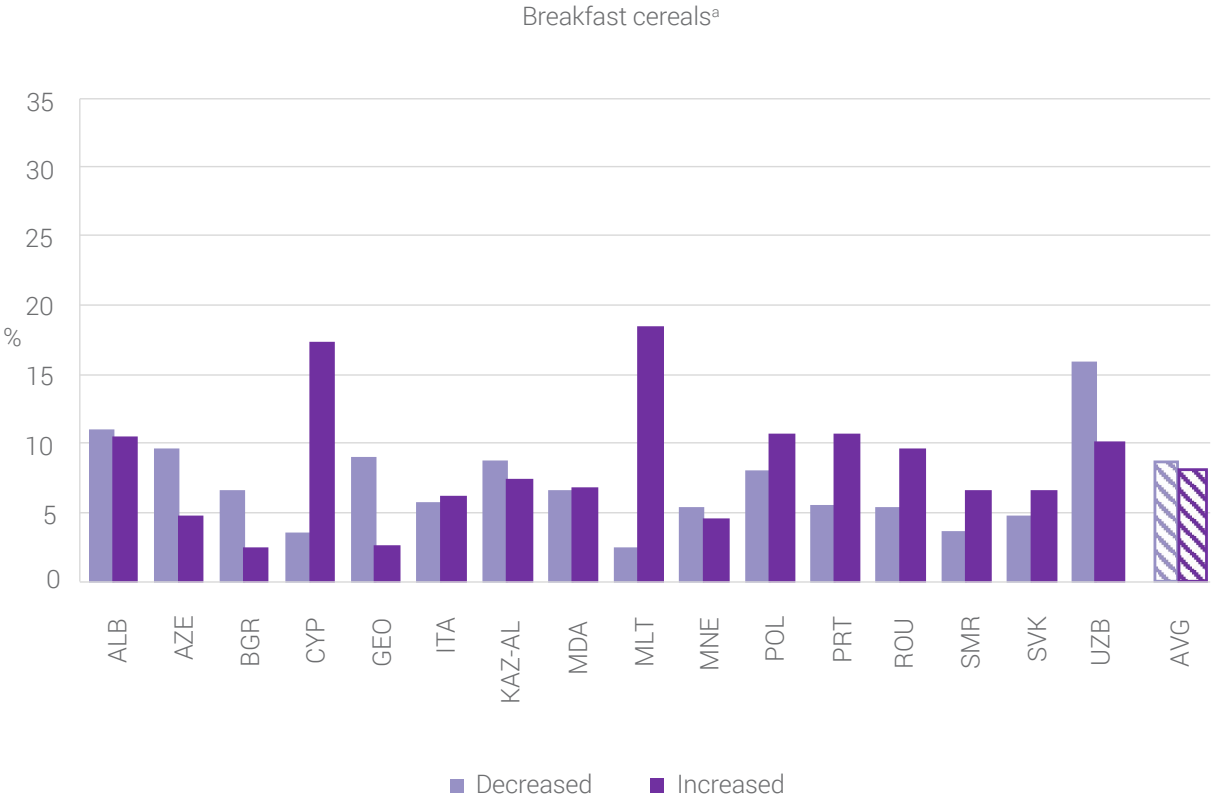

Fish
35
30
25
20
%
15
10
5
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Fig. 7. contd.





[a] Data on breakfast cereals consumption were not collected in Croatia.

Table 8. Change in consumption of fresh fruit and vegetables during the pandemic in comparison to the pre-pandemic period (%)

Member State	Fresh fruit				Vegetables			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	5.4	67.5	22.2	4.9	6.9	70.9	18.4	3.8
AZE	5.0	76.9	11.2	6.9	6.0	79.2	8.2	6.6
BGR	3.1	79.2	8.2	9.6	2.7	82.2	6.4	8.8
CYP	9.4	77.1	10.3	3.1	6.7	83.3	7.1	2.9
GEO	4.8	87.0	5.0	3.2	5.4	87.0	4.9	2.8
HRV	3.0	84.4	9.7	2.9	2.0	88.5	7.2	2.3
ITA	8.0	79.9	6.9	5.2	8.9	80.8	5.8	4.5
KAZ-AL	7.2	67.6	8.9	16.1	5.7	73.2	7.7	13.4
MDA	3.7	76.1	11.4	8.7	3.1	80.1	9.4	7.4
MLT	5.4	79.4	12.8	2.4	5.0	83.3	9.3	2.5
MNE	2.8	69.0	23.3	5.0	1.9	75.2	18.4	4.5
POL	4.2	80.8	8.6	6.3	4.8	84.5	5.5	5.2
PRT	5.4	79.9	11.9	2.7	6.8	83.6	7.1	2.4
ROU	4.1	80.7	10.1	5.1	2.9	84.2	7.8	5.1
SMR	9.2	84.9	3.7	2.2	4.8	88.2	4.8	2.2
SVK	2.7	81.4	14.5	1.4	2.5	84.7	11.5	1.3
UZB	6.2	72.8	14.5	6.4	11.3	73.3	11.3	4.1
AVG	5.7	78.4	10.3	5.6	7.0	80.6	7.8	4.6

Table 9. Change in consumption of savoury snacks and sweets during the pandemic in comparison to the pre-pandemic period (%)

Member State	Savoury snacks				Sweets			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	15.7	65.3	15.3	3.6	15.1	67.1	14.1	3.7
AZE	9.7	75.8	8.7	5.8	5.7	79.2	10.1	5.0
BGR	7.1	78.2	4.7	10.0	5.4	80.6	4.9	9.1
CYP	5.3	64.2	27.8	2.7	5.3	62.7	29.6	2.4
GEO	10.3	82.4	3.9	3.5	6.6	84.1	6.7	2.6
HRV	5.5	82.6	9.9	2.0	5.1	82.4	10.5	2.0
ITA	5.9	66.8	23.9	3.5	5.1	66.2	25.3	3.4
KAZ-AL	15.6	65.6	5.4	13.4	10.1	71.4	7.0	11.5
MDA	16.0	69.7	3.9	10.3	9.1	76.5	6.7	7.7
MLT	3.1	64.5	30.7	1.6	3.7	63.9	31.0	1.5
MNE	8.7	76.8	8.5	6.0	9.3	75.9	9.2	5.6
POL	7.1	71.0	17.0	4.9	6.8	66.3	22.6	4.3
PRT	10.9	72.1	13.8	3.1	9.1	68.9	19.4	2.7
ROU	9.1	71.3	13.7	5.9	7.4	71.0	16.7	4.9
SMR	4.8	69.1	22.8	3.3	2.9	67.6	28.3	1.1
SVK	6.7	84.1	7.3	1.9	5.4	82.9	10.2	1.5
UZB	18.7	64.0	12.1	5.2	11.9	66.0	18.3	3.8
AVG	10.0	69.9	15.5	4.7	7.5	69.5	18.9	4.0

Table 10. Change in consumption of meat and fish during the pandemic in comparison to the pre-pandemic period (%)

Member State	Meat				Fish			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	11.3	70.2	14.7	3.8	12.3	66.5	15.8	5.4
AZE	7.5	77.1	8.8	6.6	9.9	76.2	5.1	8.8
BGR	3.8	84.1	3.5	8.6	6.4	81.5	2.5	9.6
CYP	4.6	84.4	8.5	2.5	7.9	83.2	5.8	3.1
GEO	7.5	85.3	4.7	2.4	10.4	83.2	3.0	3.4
HRV	2.5	92.6	2.9	2.1	5.4	88.9	3.1	2.6
ITA	7.4	82.0	7.2	3.4	13.8	77.5	3.9	4.8
KAZ-AL	7.1	72.0	9.9	11.0	10.8	68.5	4.9	15.8
MDA	5.4	81.5	5.7	7.4	8.0	78.5	5.0	8.6
MLT	3.2	86.9	7.9	2.0	7.1	85.0	4.8	3.1
MNE	2.5	84.8	7.7	5.0	4.2	82.5	6.5	6.8
POL	6.7	84.3	4.2	4.8	5.0	86.3	2.9	5.8
PRT	3.7	88.5	5.5	2.4	7.2	85.7	4.6	2.5
ROU	3.8	84.4	6.6	5.2	5.8	81.5	5.5	7.3
SMR	2.9	88.6	7.7	0.7	16.2	79.0	3.7	1.1
SVK	4.5	90.1	3.8	1.6	6.7	87.2	3.5	2.6
UZB	12.7	67.1	16.6	3.7	20.1	62.9	10.0	7.0
AVG	7.6	80.0	8.3	4.2	11.2	77.6	5.3	5.9

Table 11. Change in consumption of dairy products and breakfast cereals during the pandemic in comparison to the pre-pandemic period (%)

Member State	Dairy products				Breakfast cereals			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	7.1	71.1	18.4	3.4	11.0	72.0	10.5	6.5
AZE	7.3	77.6	8.9	6.3	9.5	79.6	4.8	6.1
BGR	2.4	83.6	5.5	8.5	6.7	79.7	2.5	11.0
CYP	3.9	79.7	14.3	2.0	3.5	76.6	17.5	2.5
GEO	5.6	86.6	5.3	2.5	9.1	82.4	2.8	5.6
HRV	1.6	91.8	4.7	1.9	NA	NA	NA	NA
ITA	5.6	82.7	8.0	3.7	5.7	81.0	6.1	7.1
KAZ-AL	5.1	74.9	9.7	10.2	8.9	72.1	7.5	11.6
MDA	3.9	80.3	8.4	7.3	6.5	78.7	6.7	8.2
MLT	1.8	78.9	17.7	1.5	2.5	77.2	18.4	1.8
MNE	1.8	86.1	7.7	4.5	5.4	82.9	4.5	7.2
POL	3.1	83.4	9.3	4.2	8.1	77.5	10.6	3.9
PRT	3.1	84.2	10.2	2.4	5.4	81.2	10.6	2.8
ROU	2.5	81.4	11.4	4.7	5.3	79.7	9.5	5.5
SMR	3.7	90.1	4.4	1.8	3.7	87.1	6.6	2.6
SVK	3.3	87.2	8.1	1.4	4.9	86.3	6.4	2.4
UZB	11.4	67.2	18.1	3.3	15.8	68.3	10.2	5.6
AVG	5.8	79.4	10.8	4.0	8.6	77.4	8.2	5.7

Table 12. Change in consumption of soft drinks containing sugar during the pandemic in comparison to the pre-pandemic period (%)

Member State	Soft drinks containing sugar			
	Decreased	Stayed the same	Increased	Don't know
ALB	26.5	59.8	6.7	7.1
AZE	8.3	78.2	7.2	6.3
BGR	9.7	77.1	1.9	11.3
CYP	9.9	79.0	6.3	4.8
GEO	11.4	81.7	3.7	3.2
HRV	7.1	86.7	3.1	3.0
ITA	9.8	75.1	10.6	4.4
KAZ-AL	14.0	65.6	4.5	15.9
MDA	15.5	71.2	3.0	10.3
MLT	6.7	82.4	8.3	2.6
MNE	10.7	78.1	4.2	7.0
POL	11.1	78.7	5.8	4.4
PRT	13.8	78.0	5.2	3.1
ROU	12.8	74.2	7.0	6.0
SMR	9.2	79.0	9.2	2.6
SVK	8.9	86.0	2.8	2.3
UZB	19.9	63.8	10.0	6.3
AVG	12.7	74.3	7.7	5.3

3.2 Family consumption behaviours in weekly routines

The study investigated also how family consumption behaviours in a weekly routine have changed during the pandemic compared with before. Overall, the percentage of families that did not report any change varies with behaviour type, ranging from 46 to 77% (Fig. 8).

The behaviours that were observed to have had the highest increases during the pandemic were “eating home-cooked meals” (30%), “eating together as a family” (29%), “buying food in large quantities” (28%) and “cooking meals together with your child” (26% ; Fig. 8; Tables 13–18). One in five families reported an increase in “planning purchases and meals in advance”. Conversely “eating meals prepared outside of the home” as well as “eating ready-to-eat meals” decreased in nearly all Member States, varying between 15% and 57% (Fig. 8; Tables 13–18). On average, 31% and 28% of the parents, respectively, reported a decline. With regards grocery shopping, approximately one in five families reported a decrease in “buying foods in super- or hypermarkets” and in “buying online grocery shopping”.

Fig. 8. Change in families' behaviours during the pandemic in comparison to the pre-pandemic period (%)

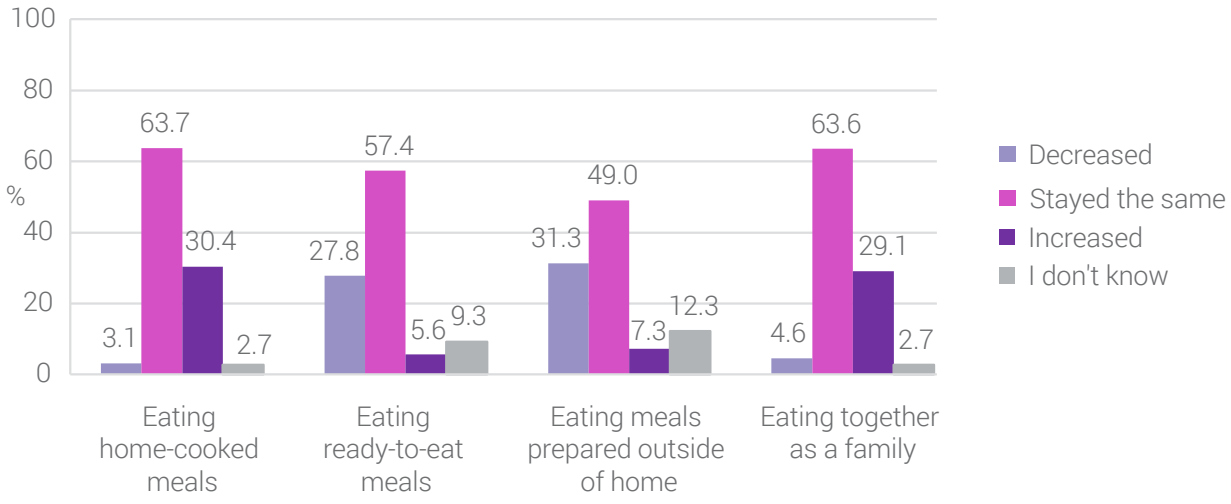
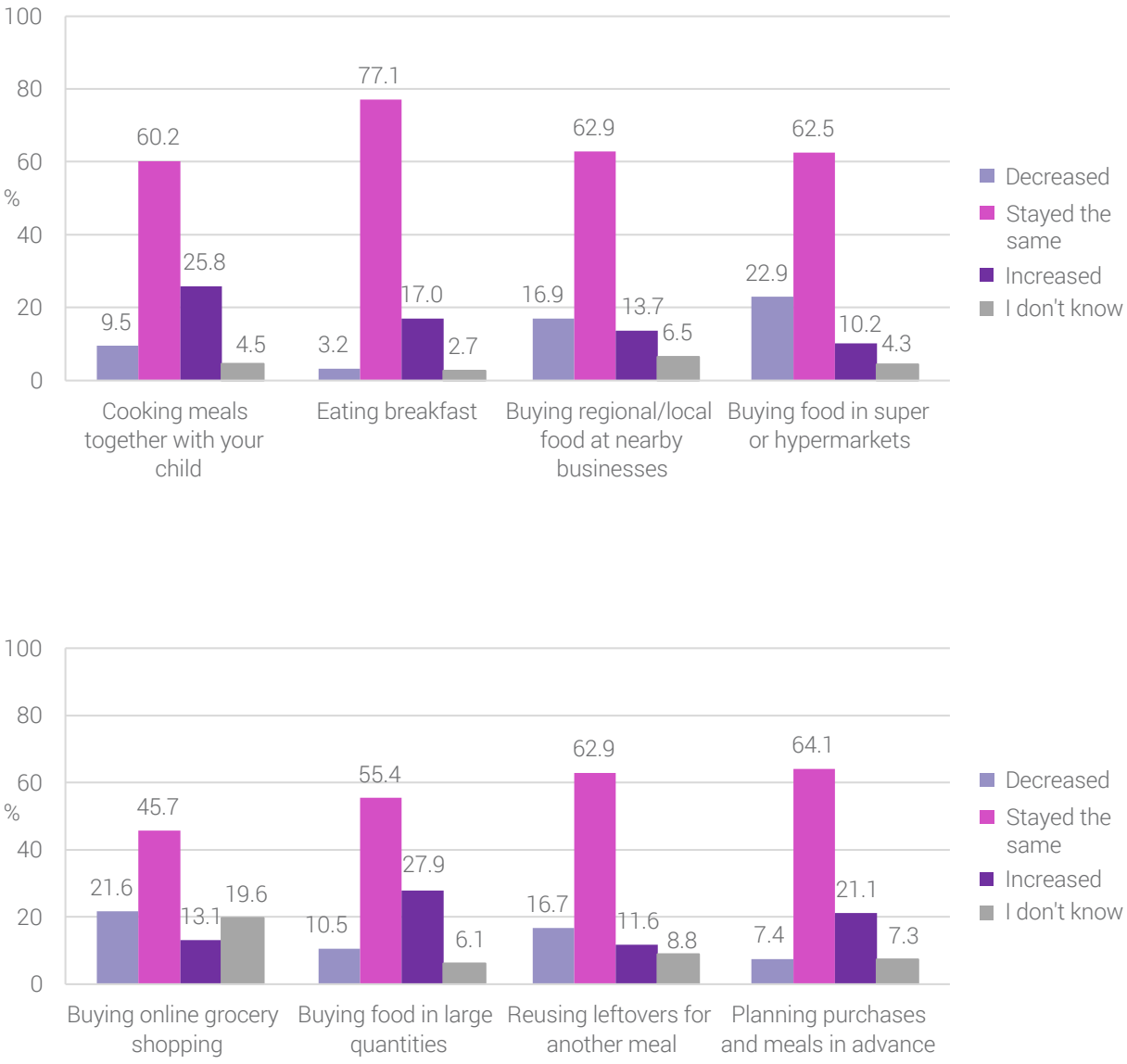


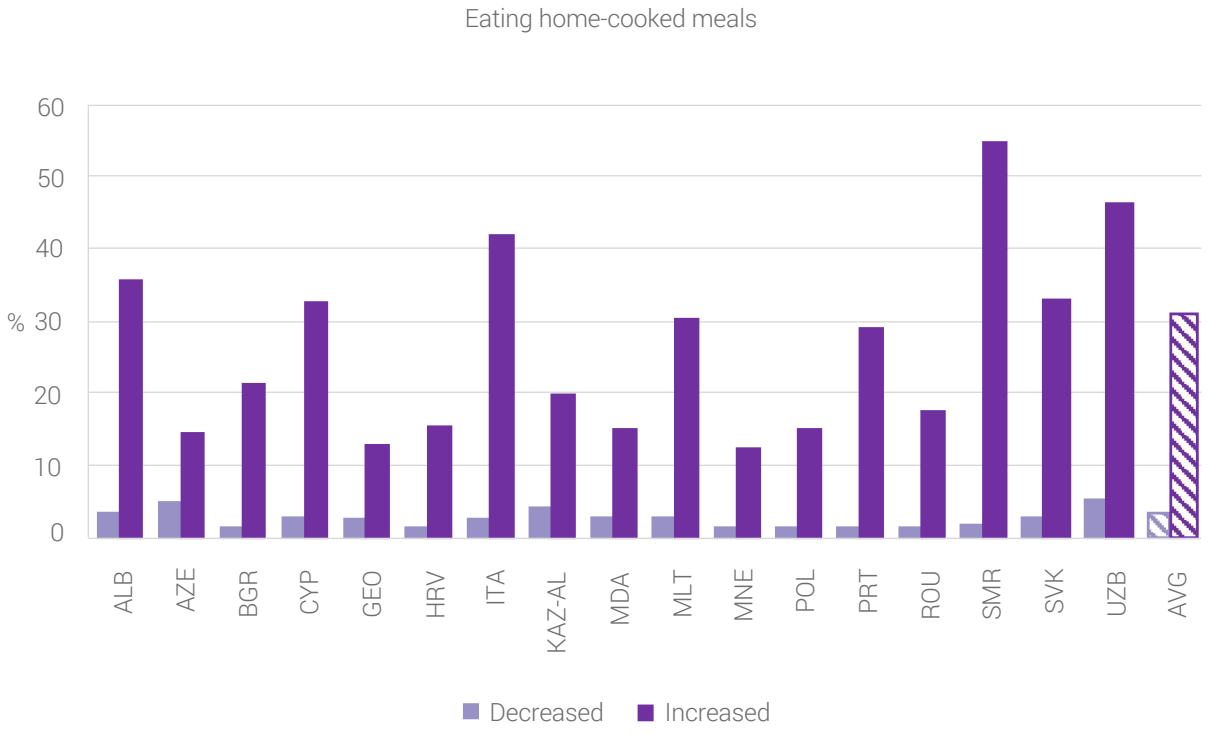
Fig. 8. contd.



San Marino was the Member State with the highest increase in the behaviours: "eating home-cooked meals" (55%), "buying food in large quantities" (55%) and "planning purchases and meals in advance" (44%; Fig. 9; Tables 13–18). Both Italy and San Marino observed the highest increase in "cooking meals together with your child" (around 40%).

Both Albania and Uzbekistan observed a decrease in the behaviours of "eating ready-to-eat meals" (> 45%), "eating meals prepared outside of home" (> 50%) and "buying online grocery shopping" (> 40%) much greater than in all other Member States. Uzbekistan also observed the highest decrease for "reusing leftovers for another meal" (60%) and the highest increase for "eating together as a family" (43%; Fig. 9; Tables 13–18).

Fig. 9. Change in families' behaviours during the pandemic in comparison to the pre-pandemic period by Member State (%)



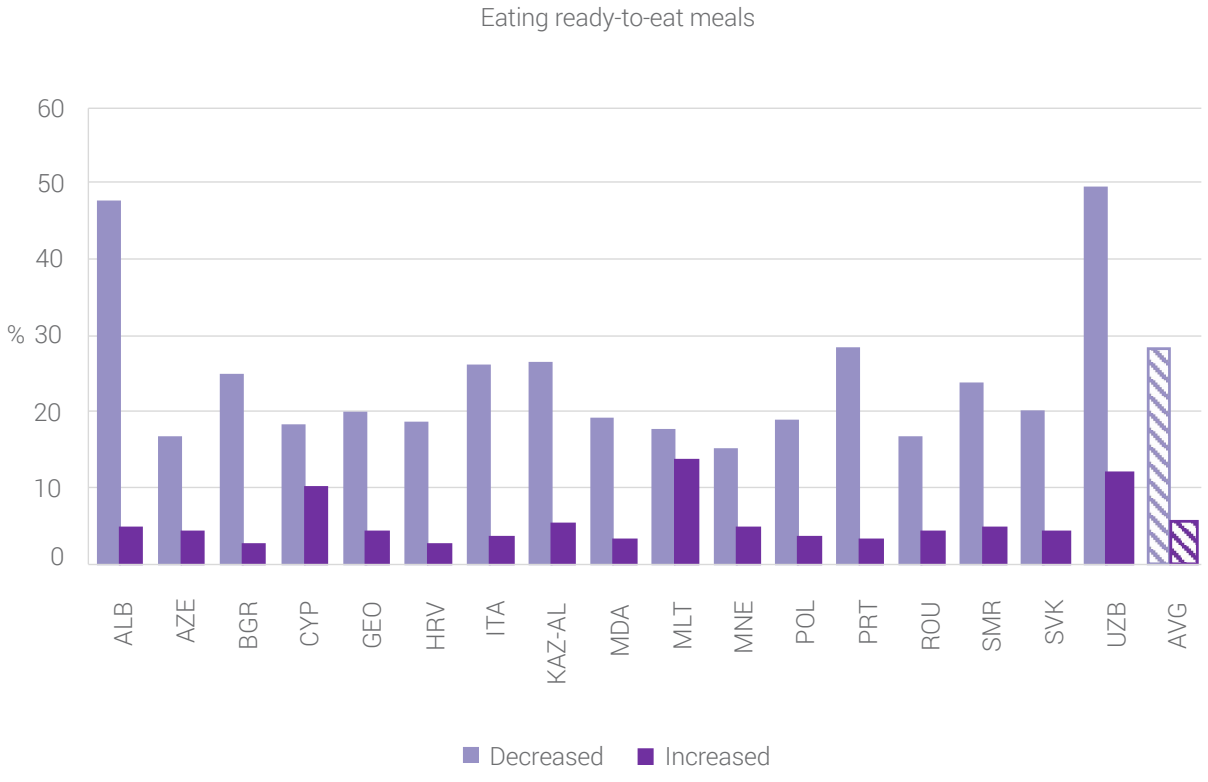
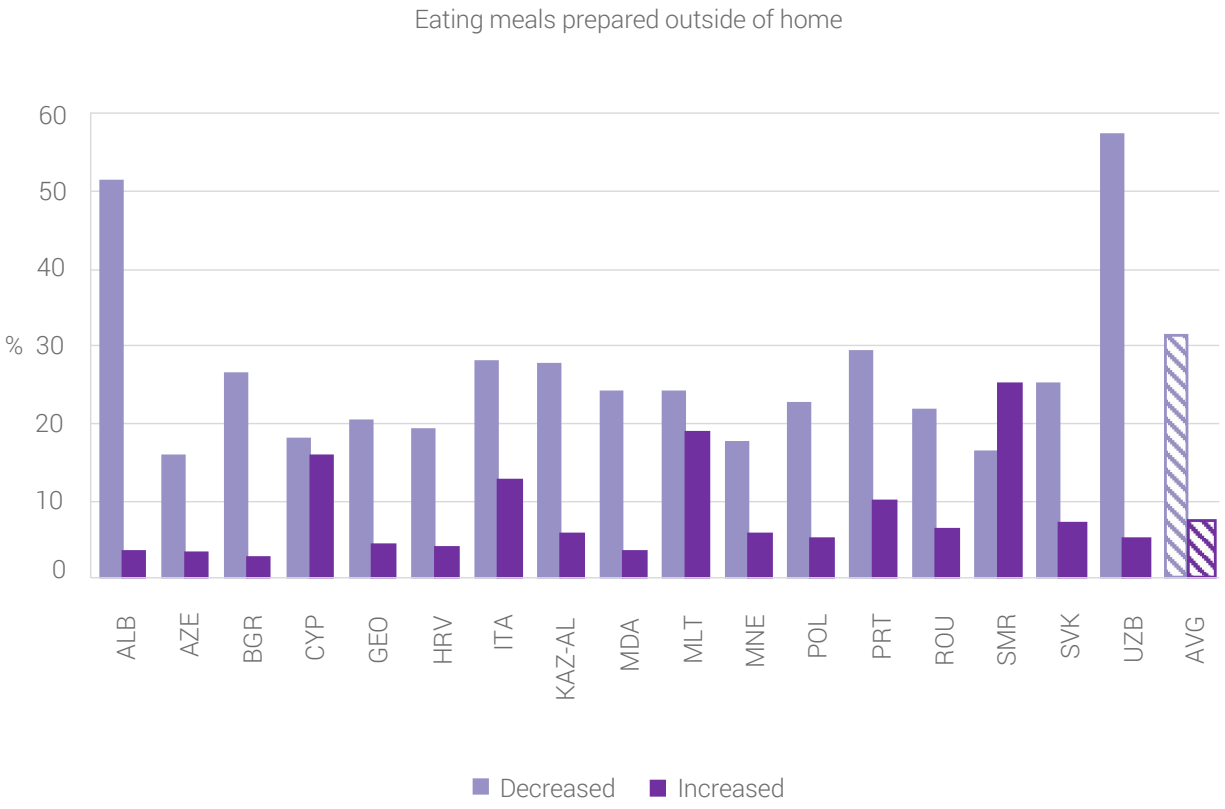


Fig. 9. contd.


Eating meals prepared outside of home
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

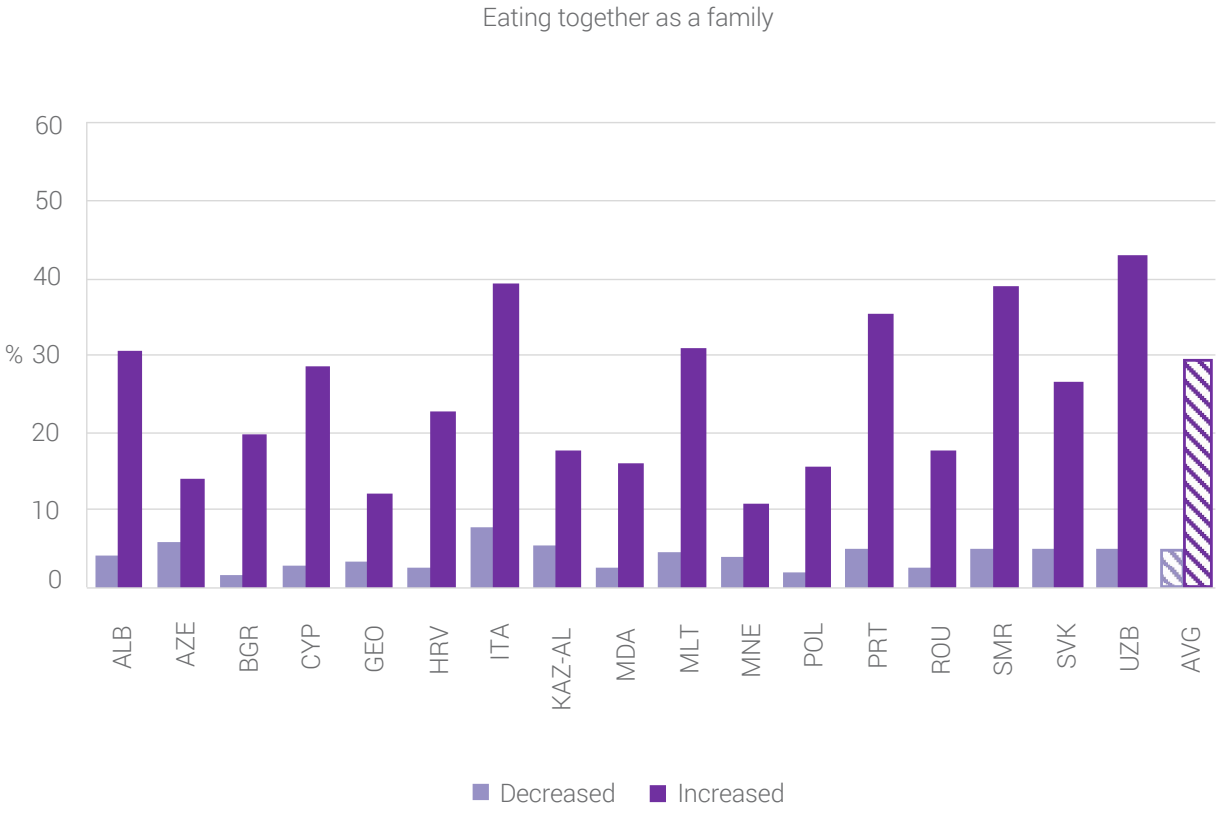
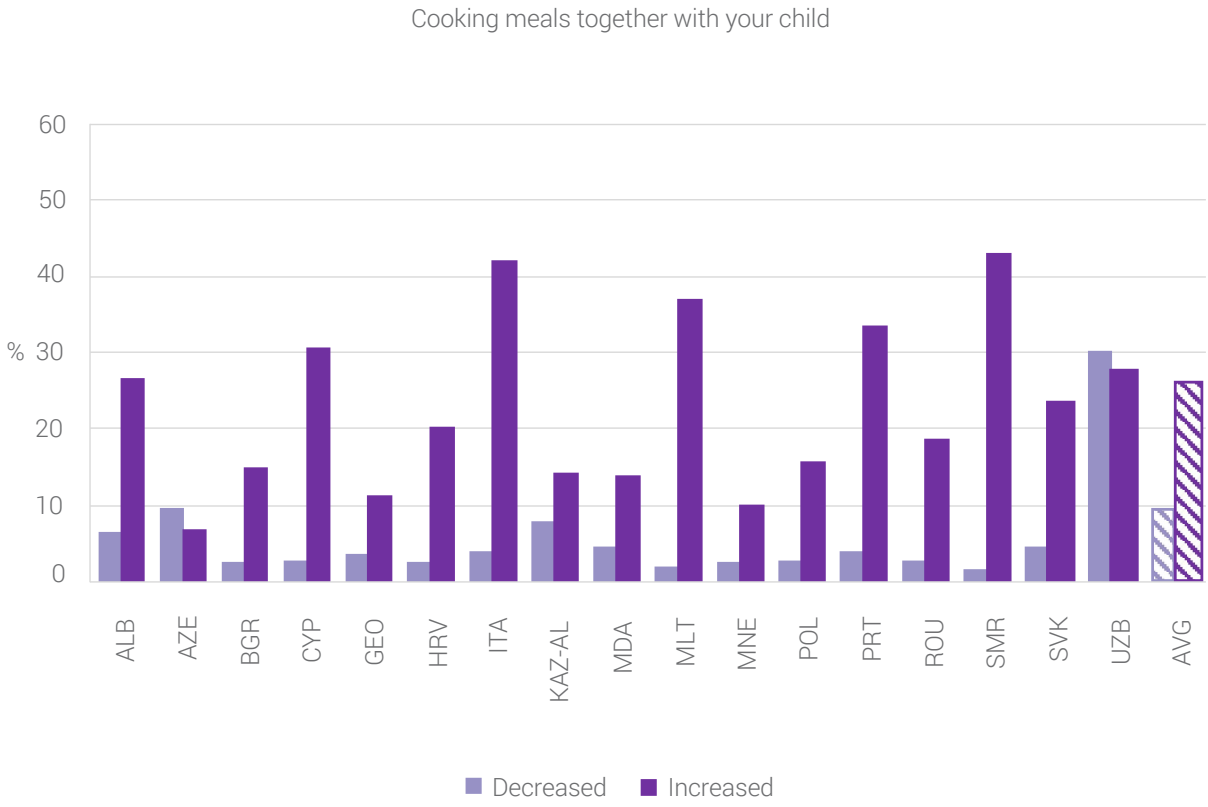

Eating together as a family
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Fig. 9. contd.


Cooking meals together with your child
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

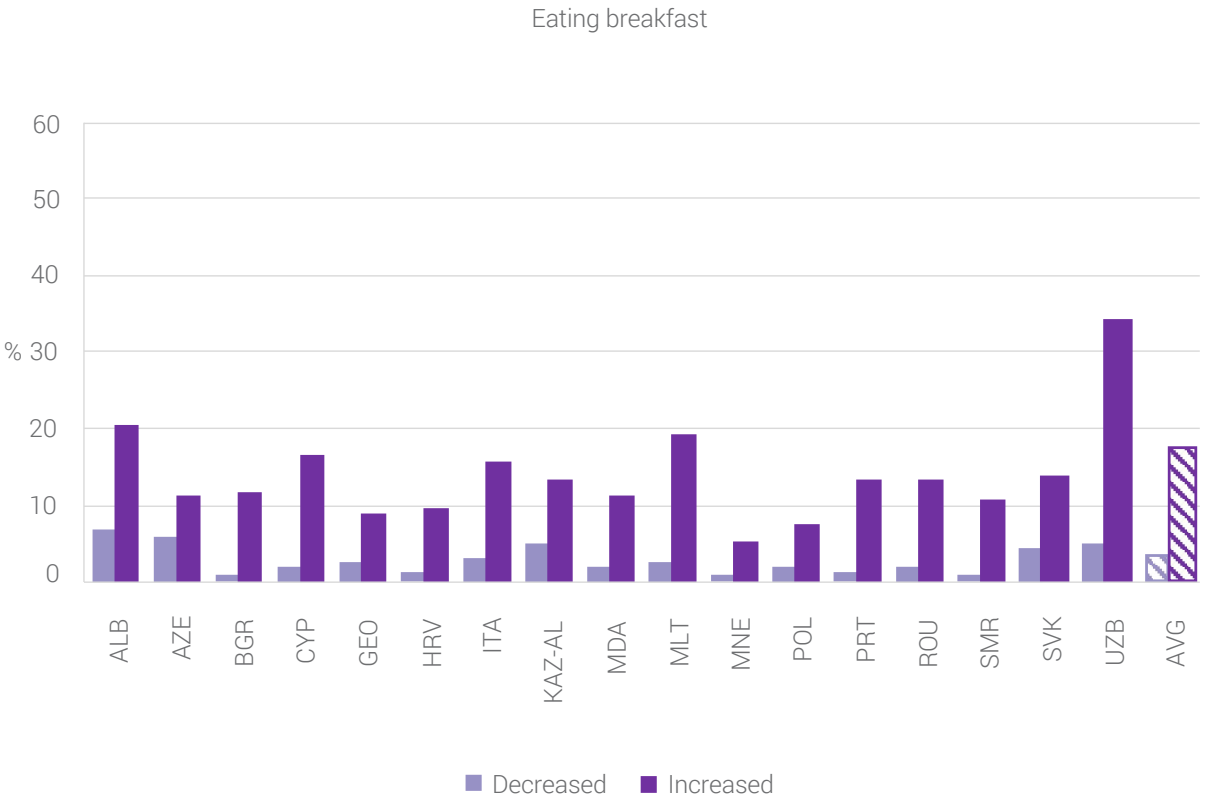

Eating breakfast
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Fig. 9. contd.


Buying regional/local food at nearby businesses
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

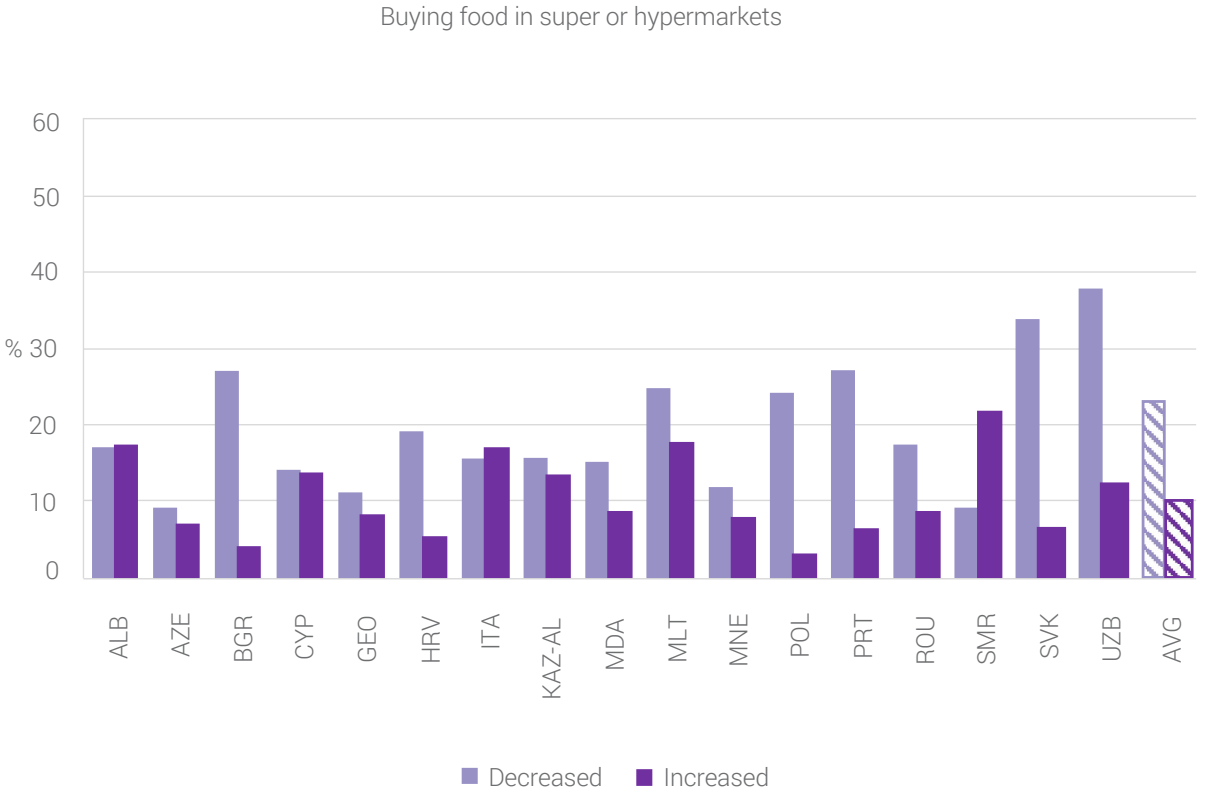
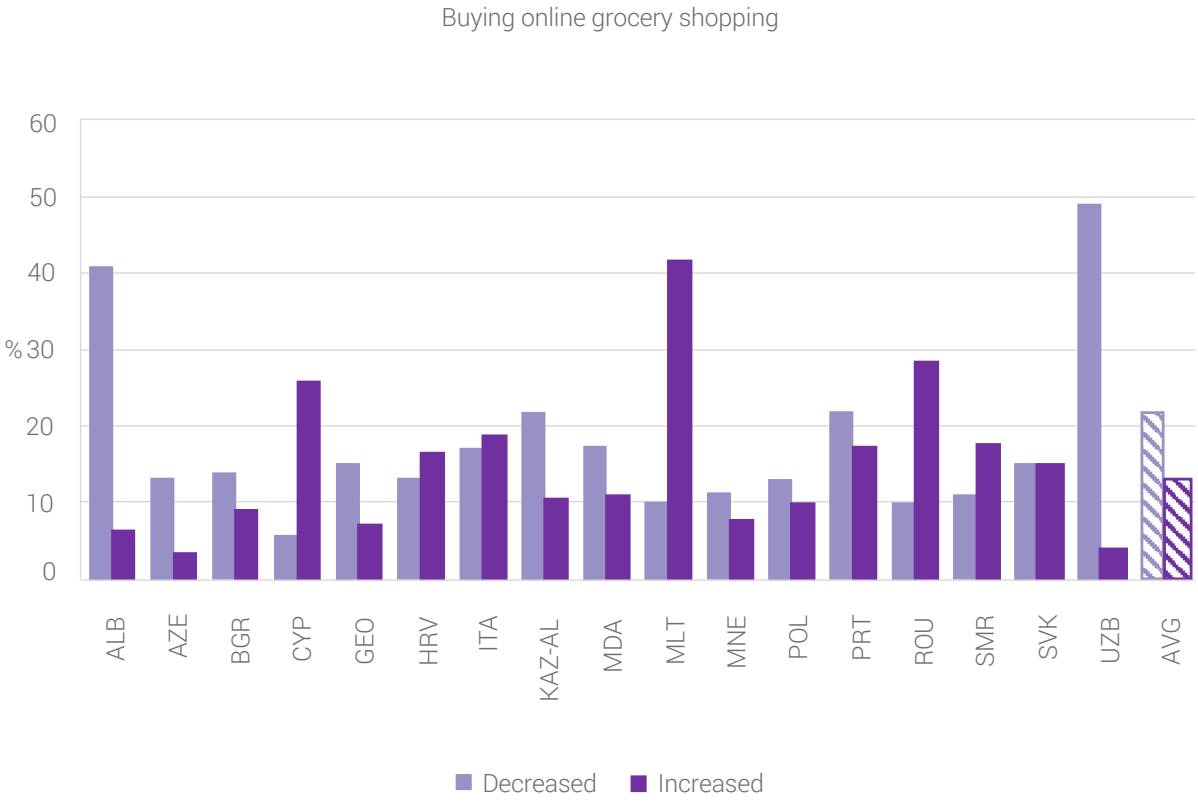
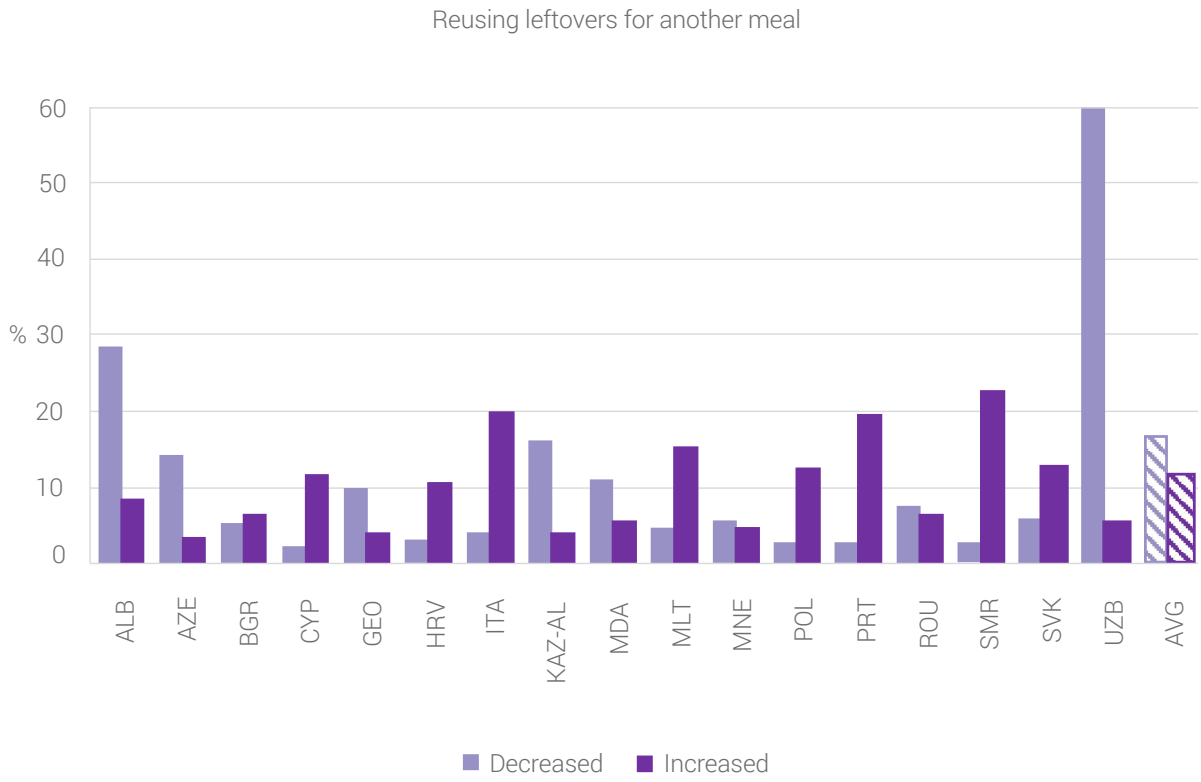

Buying food in super or hypermarkets
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Fig. 9. contd.


Buying online grocery shopping
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased


Buying food in large quantities
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Fig. 9. contd.


Reusing leftovers for another meal
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

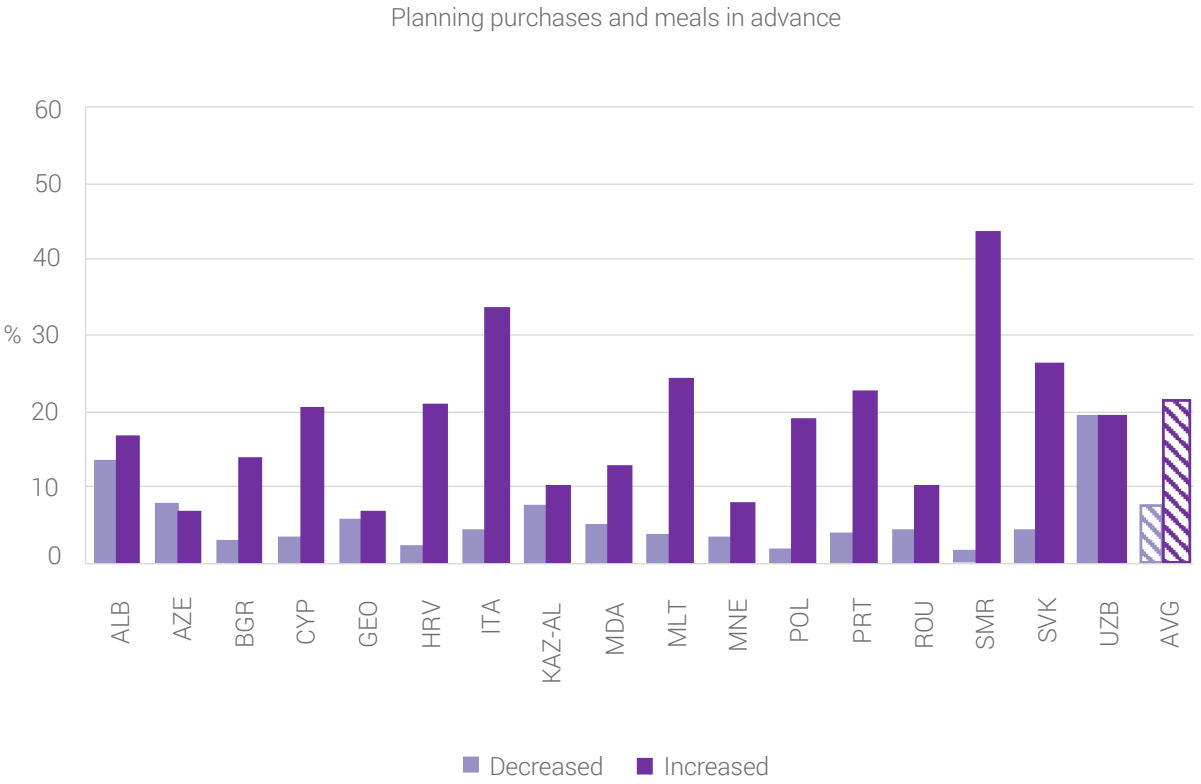

Planning purchases and meals in advance
60
50
40
% 30
20
10
0
ALB
AZE
BGR
CYP
GEO
HRV
ITA
KAZ-AL
MDA
MLT
MNE
POL
PRT
ROU
SMR
SVK
UZB
AVG
Decreased
Increased

Table 13. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "eating home-cooked meals" and "eating ready-to-eat meals"

Member State	Eating home-cooked meals				Eating ready-to-eat meals			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	3.8	58.3	35.8	2.1	47.7	38.5	4.8	9.0
AZE	5.4	75.2	14.8	4.6	16.7	70.7	4.6	8.0
BGR	1.3	71.7	21.7	5.3	24.7	59.4	2.7	13.3
CYP	3.3	61.8	33.0	1.9	18.6	66.8	9.8	4.9
GEO	2.6	81.4	13.1	2.9	20.3	65.8	4.1	9.8
HRV	1.4	81.9	15.4	1.3	18.8	72.8	2.5	5.9
ITA	2.7	52.2	42.2	2.9	26.1	55.1	3.7	15.1
KAZ-AL	4.3	65.1	19.9	10.7	26.8	47.6	5.5	20.1
MDA	3.0	74.5	15.1	7.4	19.5	58.9	3.4	18.2
MLT	3.0	64.0	30.6	2.3	18.0	64.1	13.5	4.4
MNE	1.2	82.3	12.3	4.2	15.2	67.5	4.7	12.5
POL	1.3	82.1	15.0	1.5	19.0	71.4	3.7	5.9
PRT	1.8	66.6	29.1	2.5	28.2	63.2	3.5	5.1
ROU	1.8	76.8	17.6	3.8	16.9	70.1	4.2	8.9
SMR	1.8	40.8	54.8	2.6	23.9	63.6	4.8	7.7
SVK	2.9	61.1	32.8	3.3	20.3	63.1	4.5	12.1
UZB	5.6	46.3	46.2	1.9	49.2	33.4	12.2	5.2
AVG	3.1	63.7	30.4	2.7	27.8	57.4	5.6	9.3

Table 14. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "eating meals prepared outside home" and "eating together as a family"

Member State	Eating meals prepared outside of home				Eating together as a family			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	51.5	32.8	3.7	12.1	4.3	63.2	30.6	1.9
AZE	15.9	70.3	3.4	10.5	5.7	76.0	14.1	4.2
BGR	26.6	56.8	3.0	13.6	1.2	74.4	19.7	4.7
CYP	18.3	62.2	15.9	3.7	3.0	66.4	28.6	2.0
GEO	20.5	63.7	4.2	11.6	3.2	81.8	12.2	2.8
HRV	19.5	68.2	4.1	8.2	2.3	73.7	22.7	1.3
ITA	28.1	43.9	12.8	15.1	7.7	50.7	39.2	2.5
KAZ-AL	27.8	44.5	5.6	22.1	5.6	66.3	17.6	10.5
MDA	24.0	49.7	3.6	22.6	2.5	74.8	15.7	7.1
MLT	24.0	53.3	18.9	3.8	4.7	63.1	31.0	1.1
MNE	17.5	62.7	5.9	13.8	4.0	80.6	10.6	4.7
POL	22.6	64.3	5.0	8.2	1.9	80.8	15.3	2.0
PRT	29.4	54.8	10.1	5.7	5.0	57.3	35.4	2.3
ROU	21.7	59.2	6.4	12.6	2.4	76.5	17.7	3.5
SMR	16.5	52.2	25.0	6.3	5.1	53.3	39.0	2.6
SVK	24.9	55.6	7.1	12.5	5.1	65.5	26.4	2.9
UZB	57.5	23.1	5.2	14.2	4.8	49.9	43.1	2.2
AVG	31.4	49.0	7.3	12.3	4.6	63.6	29.1	2.7

Table 15. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "cooking meals together" and "eating breakfast"

Member State	Cooking meals together with your child				Eating breakfast			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	6.3	64.4	26.6	2.7	6.7	70.3	20.6	2.4
AZE	9.9	76.4	7.0	6.7	5.8	78.3	11.5	4.4
BGR	2.7	74.1	15.1	8.1	1.1	82.2	11.6	5.1
CYP	2.7	63.7	30.7	2.9	1.9	79.3	16.6	2.2
GEO	3.6	82.0	11.0	3.4	2.5	86.5	8.6	2.4
HRV	2.5	75.2	20.2	2.1	1.4	87.6	9.7	1.3
ITA	3.8	50.0	42.0	4.2	3.1	78.4	15.7	2.8
KAZ-AL	7.8	62.3	14.2	15.6	4.8	71.0	13.6	10.5
MDA	4.5	71.8	13.9	9.8	2.3	79.5	11.2	7.0
MLT	2.3	58.6	36.9	2.3	2.4	76.3	19.4	1.9
MNE	2.4	80.2	9.8	7.7	0.9	89.8	5.1	4.2
POL	2.8	77.8	15.5	3.9	1.8	88.2	7.6	2.4
PRT	3.8	59.3	33.6	3.3	1.4	83.3	13.3	2.1
ROU	2.7	73.8	18.6	4.9	2.3	80.8	13.1	3.8
SMR	1.5	51.8	43.0	3.7	1.1	85.7	10.7	2.6
SVK	4.5	67.2	23.7	4.5	4.2	79.1	13.8	3.0
UZB	30.3	37.4	27.9	4.4	4.9	59.2	34.3	1.6
AVG	9.4	60.2	25.8	4.5	3.2	77.1	17.0	2.7

Table 16. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "buying regional/local food at nearby businesses" and "buying food in super or hypermarkets"

Member State	Buying regional/local food at nearby businesses				Buying food in super or hypermarkets			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	20.4	59.5	15.4	4.8	17.2	63.2	17.4	2.3
AZE	11.4	75.5	5.2	7.9	9.2	78.2	6.8	5.9
BGR	15.1	65.9	12.9	6.5	26.8	63.1	4.2	5.9
CYP	7.9	70.8	18.6	2.7	14.0	70.3	13.8	1.9
GEO	13.1	76.0	7.6	3.3	11.2	76.6	8.3	3.9
HRV	13.6	70.9	13.1	2.3	19.1	73.7	5.5	1.7
ITA	23.0	51.8	15.0	10.2	15.8	63.7	16.9	3.5
KAZ-AL	11.3	58.0	12.2	18.5	15.4	58.8	13.5	12.4
MDA	14.8	66.4	8.9	9.9	14.9	68.5	8.5	8.2
MLT	13.6	55.1	29.1	2.2	24.7	56.0	17.9	1.4
MNE	11.2	74.4	9.2	5.2	11.7	76.2	7.6	4.5
POL	10.3	74.5	10.5	4.7	24.2	70.3	3.1	2.4
PRT	13.6	58.7	24.9	2.8	27.2	64.5	6.2	2.1
ROU	8.1	71.3	14.8	5.8	17.2	69.7	8.5	4.6
SMR	24.3	58.8	12.1	4.8	8.8	66.9	21.7	2.6
SVK	21.0	57.0	17.1	4.9	33.6	55.9	6.6	4.0
UZB	22.3	57.1	15.3	5.4	38.0	42.3	12.6	7.0
AVG	16.9	62.9	13.7	6.5	23.0	62.5	10.2	4.3

Table 17. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "buying online grocery shopping" and "buying food in large quantities"

Member State	Buying online grocery shopping				Buying food in large quantities			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	41.0	31.1	6.5	21.4	22.2	50.0	21.9	5.9
AZE	13.3	71.1	3.4	12.2	11.7	72.4	7.5	8.4
BGR	14.1	57.1	9.2	19.5	9.4	61.4	18.1	11.0
CYP	5.7	54.8	25.9	13.7	4.3	63.1	29.0	3.5
GEO	15.1	63.0	7.5	14.4	12.5	69.3	12.6	5.6
HRV	13.1	59.9	16.7	10.2	5.7	63.0	27.9	3.4
ITA	16.9	41.1	18.9	23.2	6.6	40.4	47.1	5.8
KAZ-AL	21.8	40.8	10.7	26.7	11.9	56.2	15.4	16.5
MDA	17.2	44.3	11.0	27.5	11.7	58.7	18.1	11.5
MLT	10.1	41.4	41.5	7.0	3.4	55.8	37.5	3.3
MNE	11.3	60.6	7.6	20.5	5.6	71.4	15.1	7.9
POL	12.8	58.0	9.9	19.4	8.7	62.0	24.2	5.1
PRT	22.0	49.7	17.6	10.7	6.9	56.3	33.6	3.3
ROU	10.2	48.8	28.5	12.5	5.6	66.3	20.3	7.8
SMR	11.0	58.8	17.6	12.5	1.1	40.1	54.8	4.0
SVK	15.2	51.5	15.3	18.0	7.0	53.4	33.0	6.6
UZB	48.9	22.7	4.1	24.4	19.8	54.2	20.3	5.7
AVG	21.6	45.7	13.1	19.6	10.5	55.4	27.9	6.1

Table 18. Change in family consumption behaviours in weekly routine during the pandemic in comparison to the pre-pandemic period (%) – "reusing leftovers for another meal" and "planning purchases and meals in advance"

Member State	Reusing leftovers for another meal				Planning purchases and meals in advance			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	28.8	52.2	8.5	10.5	13.6	60.7	16.6	9.2
AZE	14.5	71.0	3.5	10.9	7.8	75.1	7.2	9.9
BGR	5.6	76.3	6.8	11.3	3.4	72.3	13.9	10.4
CYP	2.1	82.4	11.7	3.7	3.7	71.5	20.4	4.4
GEO	9.8	78.6	4.1	7.4	5.9	79.9	6.9	7.3
HRV	3.1	83.2	10.6	3.2	2.3	74.0	20.9	2.7
ITA	4.1	69.3	19.7	7.0	4.4	54.4	33.8	7.4
KAZ-AL	16.2	44.5	4.1	35.2	7.8	60.1	10.3	21.8
MDA	11.1	60.8	5.5	22.6	5.0	71.0	12.8	11.2
MLT	4.7	75.4	15.2	4.7	4.0	68.2	24.4	3.4
MNE	5.5	77.0	4.8	12.7	3.4	77.3	8.1	11.1
POL	2.5	79.3	12.7	5.4	2.0	74.6	19.1	4.2
PRT	2.7	74.7	19.7	2.9	4.2	69.8	22.5	3.5
ROU	7.7	71.3	6.7	14.2	4.4	72.8	10.5	12.4
SMR	2.6	69.9	22.8	4.8	1.8	48.9	43.8	5.5
SVK	5.9	69.5	13.0	11.6	4.6	63.2	26.6	5.6
UZB	59.8	23.1	5.8	11.3	19.4	53.7	19.4	7.5
AVG	16.7	62.9	11.6	8.8	7.4	64.1	21.1	7.3

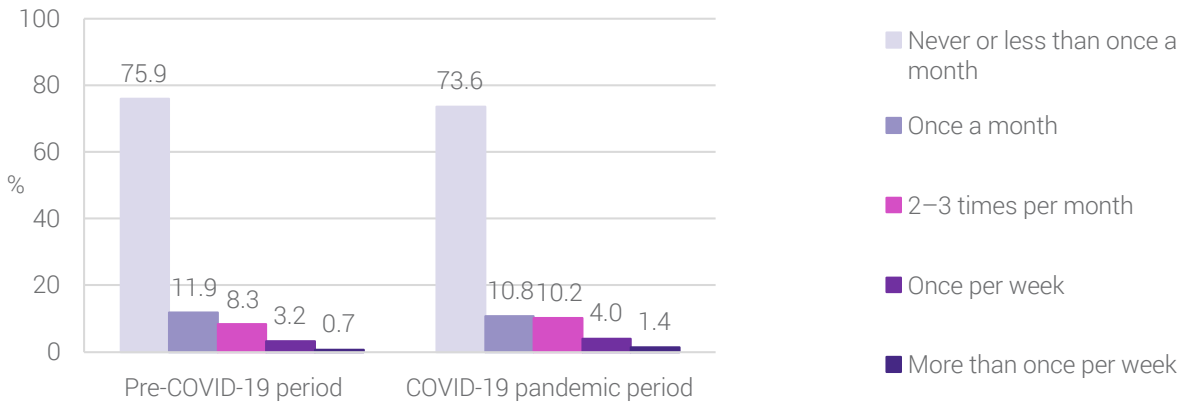
3.3. Children's consumption of meals ordered using applications or other online delivery services

Parents were asked how often children consumed meals ordered via applications and/or other online delivery services during the pandemic compared with prior.

Overall, there were no major changes in consumption of these types of meals (Fig. 10; Table 19), with around 75% of children consuming these meals less than once a month or not consuming them at all in both periods.

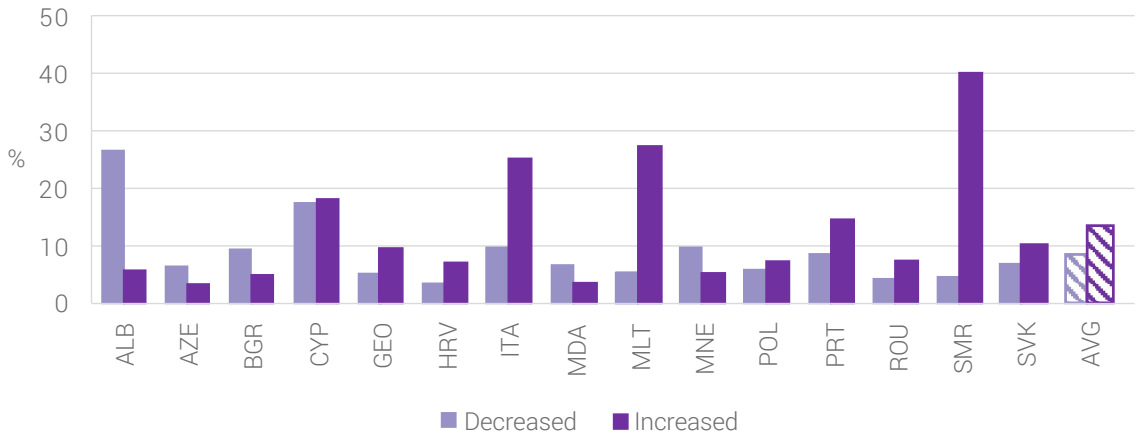
However, results differed when looking at Member States individually, with the highest increases observed in Italy (25%), Malta (27%) and San Marino (40%; Fig. 11; Table 20).

Fig. 10. Changes in consumption of meals ordered using applications or other online delivery services during the pandemic in comparison to the pre-pandemic period (%)[a]



[a] Data on consumption of meals ordered by applications or other online delivery services were not collected in Kazakhstan (Almaty) and Uzbekistan.

Fig. 11. Change in consuming meals ordered using applications or other online delivery services during the pandemic in comparison to the pre-pandemic period by Member State (%)[a]



[a] Data on consumption of meals ordered using applications or other online delivery services were not collected in Kazakhstan (Almaty) and Uzbekistan.

Table 19. Children's consumption frequency of meals ordered using applications or other online delivery services during the pandemic in comparison to the pre-pandemic period by Member State (%)

Member State	Pre-pandemic period					
	Never	Less than once a month	Once a month	2–3 times per month	Once per week	More than once per week
ALB	47.8	16.2	13.7	9.8	10.1	2.4
AZE	77.9	7.6	5.5	5.4	2.7	0.9
BGR	55.9	22.4	9.2	7.4	4.2	0.8
CYP	5.8	9.8	10.3	29.0	37.4	7.8
GEO	67.2	15.2	5.4	5.5	3.0	3.6
HRV	48.3	25.8	14.6	9.2	1.9	0.3
ITA	61.1	16.9	10.2	7.1	4.3	0.4
KAZ-AL	NA	NA	NA	NA	NA	NA
MDA	72.4	13.4	7.7	5.0	1.4	0.1
MLT	52.6	12.1	8.3	12.7	13.2	1.2
MNE	53.7	19.7	10.7	11.6	3.6	0.7
POL	36.8	35.9	16.6	9.8	0.7	0.2
PRT	52.2	22.8	12.4	8.9	3.4	0.4
ROU	58.2	18.7	11.3	8.3	2.6	0.9
SMR	57.4	18.8	10.3	7.7	5.5	0.4
SVK	26.3	31.5	23.0	14.7	4.0	0.5
UZB	NA	NA	NA	NA	NA	NA
AVG	54.1	21.8	11.9	8.3	3.2	0.7

Table 19 contd.

Member State	Pandemic period (%)					
	Never	Less than once a month	Once a month	2-3 times per month	Once per week	More than once per week
ALB	63.9	13.6	8.7	6.1	5.7	2.1
AZE	80.6	7.0	4.9	4.2	2.0	1.4
BGR	61.5	19.9	7.3	6.2	3.6	1.5
CYP	13.7	9.7	9.7	23.7	28.9	14.4
GEO	66.6	13.7	5.0	6.0	3.1	5.5
HRV	48.4	24.2	14.0	10.5	2.3	0.7
ITA	54.7	15.4	10.5	11.8	6.2	1.5
KAZ-AL	NA	NA	NA	NA	NA	NA
MDA	75.9	11.7	6.0	4.8	1.3	0.4
MLT	43.2	10.5	6.9	16.4	18.9	4.1
MNE	58.1	17.3	9.7	10.5	3.4	1.0
POL	38.6	34.0	14.3	11.3	1.5	0.2
PRT	52.2	19.8	10.6	11.7	4.0	1.6
ROU	58.4	17.6	9.9	9.4	3.3	1.4
SMR	38.6	20.2	14.0	13.6	11.4	2.2
SVK	27.9	29.2	20.2	16.2	5.1	1.3
UZB	NA	NA	NA	NA	NA	NA
AVG	53.4	20.2	10.8	10.2	4.0	1.4

Table 20. Change in children's consumption of meals ordered through applications or other online delivery services during the pandemic in comparison to the pre-pandemic period (%)

Member Statez	Decreased	Stayed the same	Increased
ALB	26.7	67.3	6.1
AZE	6.8	89.8	3.4
BGR	9.3	85.9	4.8
CYP	17.8	64.2	18.1
GEO	5.4	84.5	10.1
HRV	3.7	89.3	7.0
ITA	10.0	64.8	25.2
KAZ-AL	NA	NA	NA
MDA	6.6	89.6	3.8
MLT	5.4	67.7	26.8
MNE	9.9	84.6	5.5
POL	6.1	86.4	7.5
PRT	8.4	77.1	14.5
ROU	4.1	88.6	7.3
SMR	4.8	55.1	40.1
SVK	6.6	82.9	10.5
UZB	NA	NA	NA
AVG	7.9	78.8	13.3

4. Sleep patterns, physical activity and sedentary behaviours

4.1 Children's sleep patterns

Parents were asked whether their child's sleep pattern changed during the pandemic compared with the pre-pandemic period on weekdays and weekends.

For most children (75%), their sleep pattern stayed the same (Fig. 12; Table 21). The parents that reported a change in their child's sleep pattern indicated an increase in the amount of sleep on weekdays and weekends rather than a decrease during the pandemic period. On average, 15% and 17% of the children increased sleep time during pandemic on weekdays and weekends, respectively. In San Marino children increased their sleep most during weekdays (26%) during the pandemic compared with prior and the same pattern was observed in Uzbekistan for the weekends (33%; Fig. 13; Table 21).

Fig. 12. Change in children's sleep pattern during the pandemic in comparison to the pre-pandemic period by Member State (%)

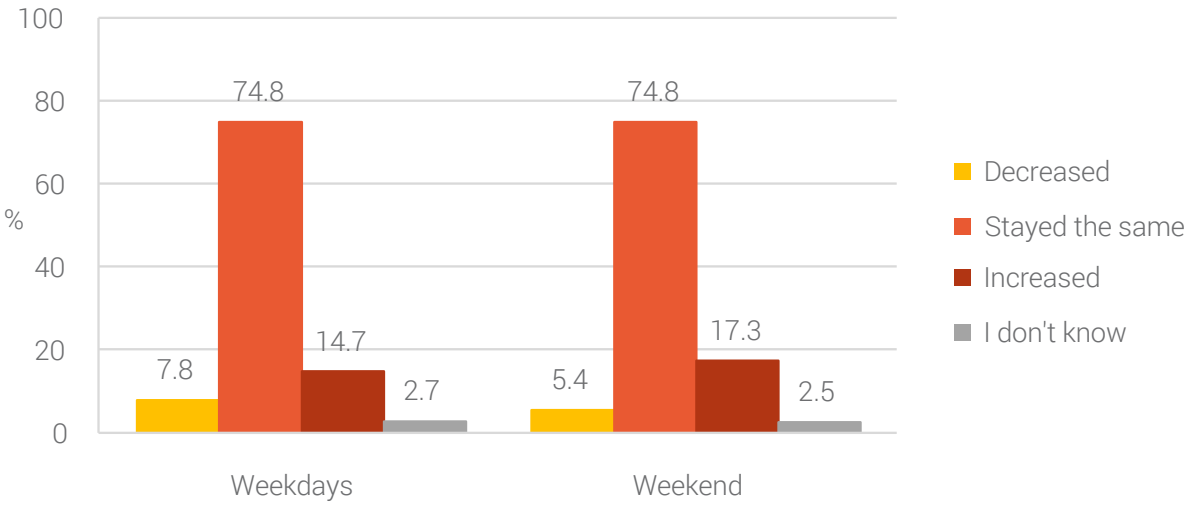
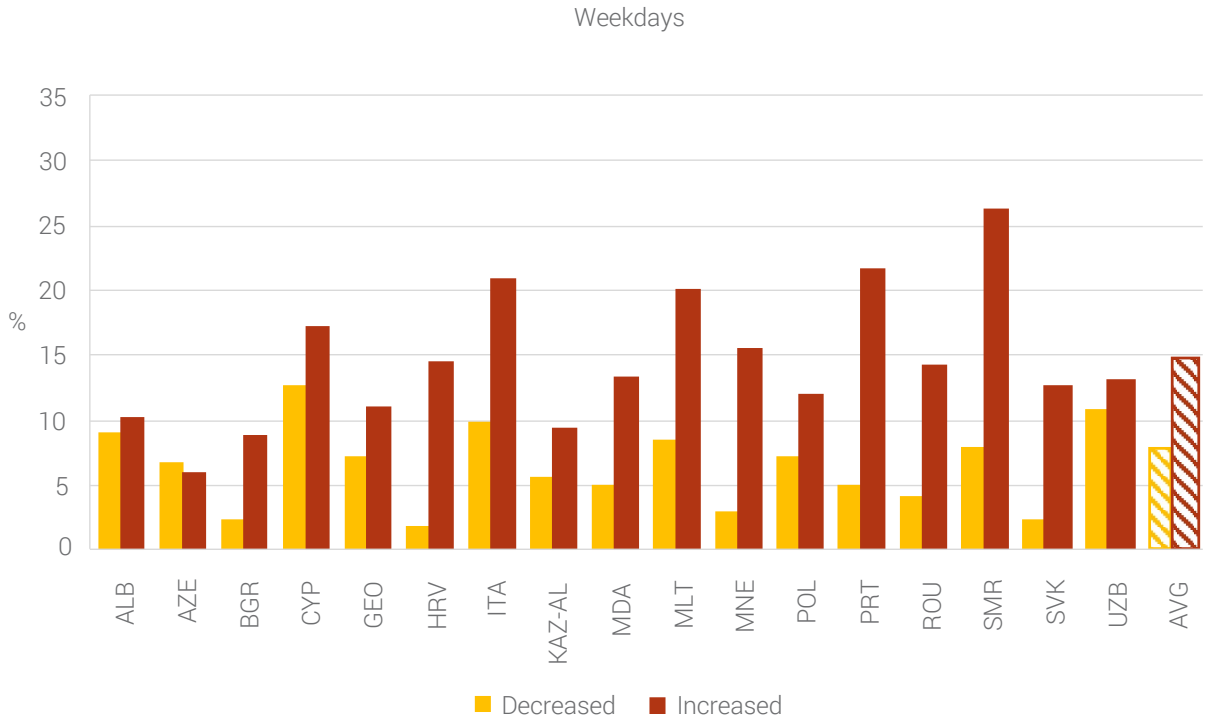


Fig. 13. Change in children's sleep patterns during the pandemic in comparison to the pre-pandemic period by Member State (%)



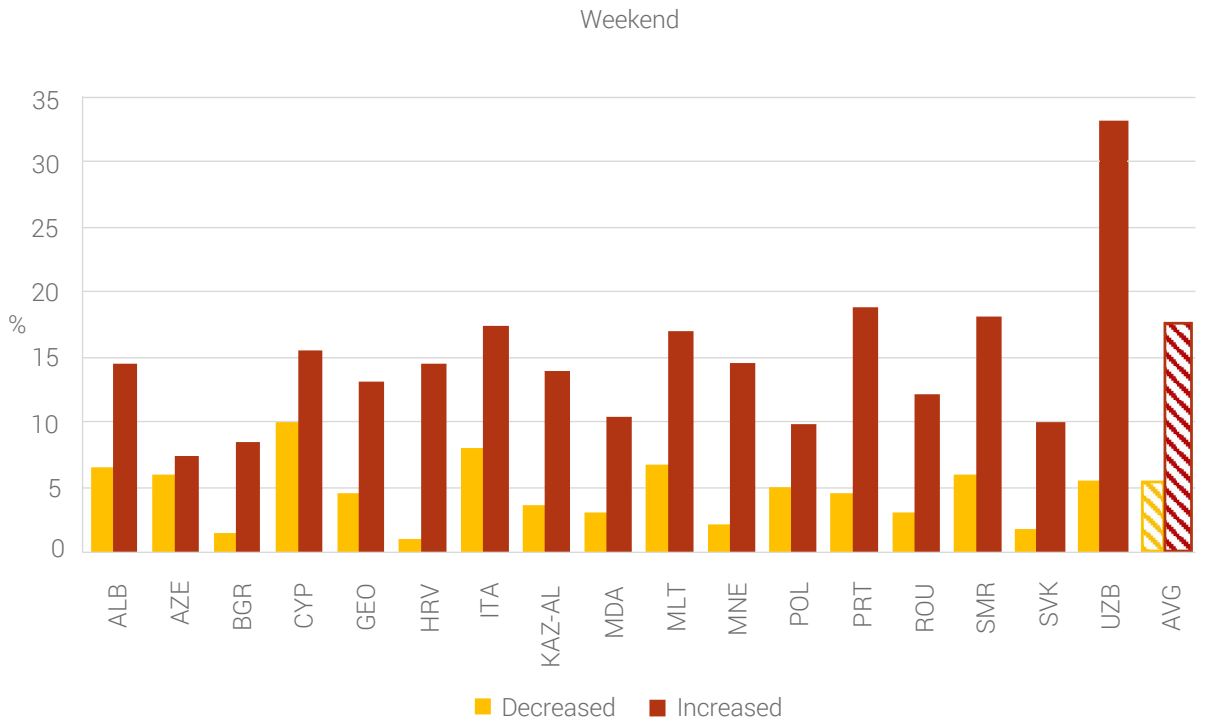


Table 21. Change in children's sleep patterns during the pandemic in comparison to the pre-pandemic period by Member State (%)

Member State	Weekdays				Weekends			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	9.0	78.5	10.1	2.4	6.5	76.1	14.5	2.9
AZE	6.8	83.1	6.0	4.1	6.1	82.0	7.3	4.6
BGR	2.3	83.3	8.8	5.6	1.5	84.7	8.5	5.2
CYP	12.7	68.9	17.2	1.3	10.0	73.0	15.6	1.4
GEO	7.2	79.7	11.0	2.2	4.5	80.2	13.1	2.2
HRV	1.9	82.3	14.5	1.3	1.2	83.0	14.5	1.3
ITA	10.0	67.0	20.9	2.1	8.0	72.6	17.3	2.1
KAZ-AL	5.6	76.4	9.3	8.6	3.5	74.7	13.8	8.0
MDA	4.8	75.6	13.3	6.4	3.2	80.4	10.5	5.9
MLT	8.5	69.9	20.1	1.5	6.6	74.9	17.0	1.5
MNE	2.9	77.0	15.6	4.5	2.1	79.7	14.4	3.8
POL	7.1	78.2	12.0	2.6	4.9	83.1	9.8	2.3
PRT	5.0	71.8	21.7	1.4	4.4	75.3	18.8	1.5
ROU	4.0	78.4	14.3	3.3	3.0	82.2	12.0	2.8
SMR	7.7	63.6	26.1	2.6	5.9	73.9	18.0	2.2
SVK	2.3	82.8	12.5	2.5	1.9	85.8	9.8	2.5
UZB	10.6	73.9	12.9	2.6	5.3	60.0	32.8	1.9
AVG	7.8	74.8	14.7	2.7	5.4	74.8	17.3	2.5

4.2 Time spent playing actively/vigorously

Parents were asked if the time their children spent outside school hours playing actively or vigorously (for example, running and jumping outside, or playing actively and playing fitness games inside) had changed when pandemic restrictions were in place, in comparison to the prior period.

On average, one in two children spent the same amount of time on these activities, while a decrease in time spent was observed on weekdays in 28% of children and on weekends in 23% (Fig. 14; Table 22). In most Member States, if a change was observed, a decrease was more frequent than an increase, with the highest drops registered in Italy, Malta and San Marino (more than 40% of children) and the lowest in Azerbaijan, Georgia, Kazakhstan (Almaty) and the Republic of Moldova; below 15% (Fig. 15; Table 22).

Fig. 14. Change in time spent by children, outside school hours, playing actively/vigorously during the pandemic in comparison to the pre-pandemic period by Member State (%)

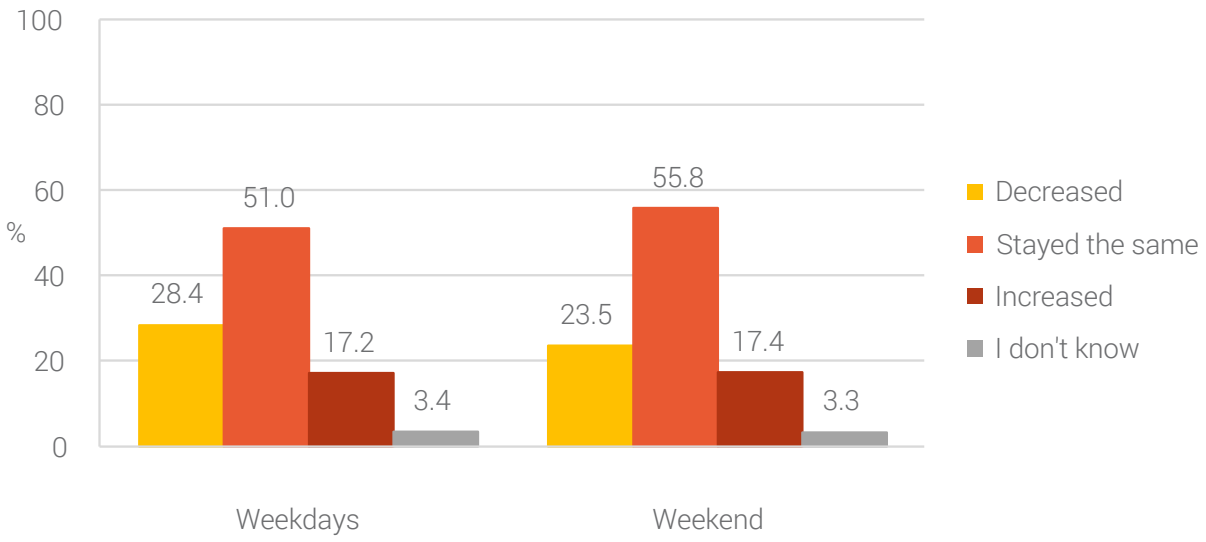
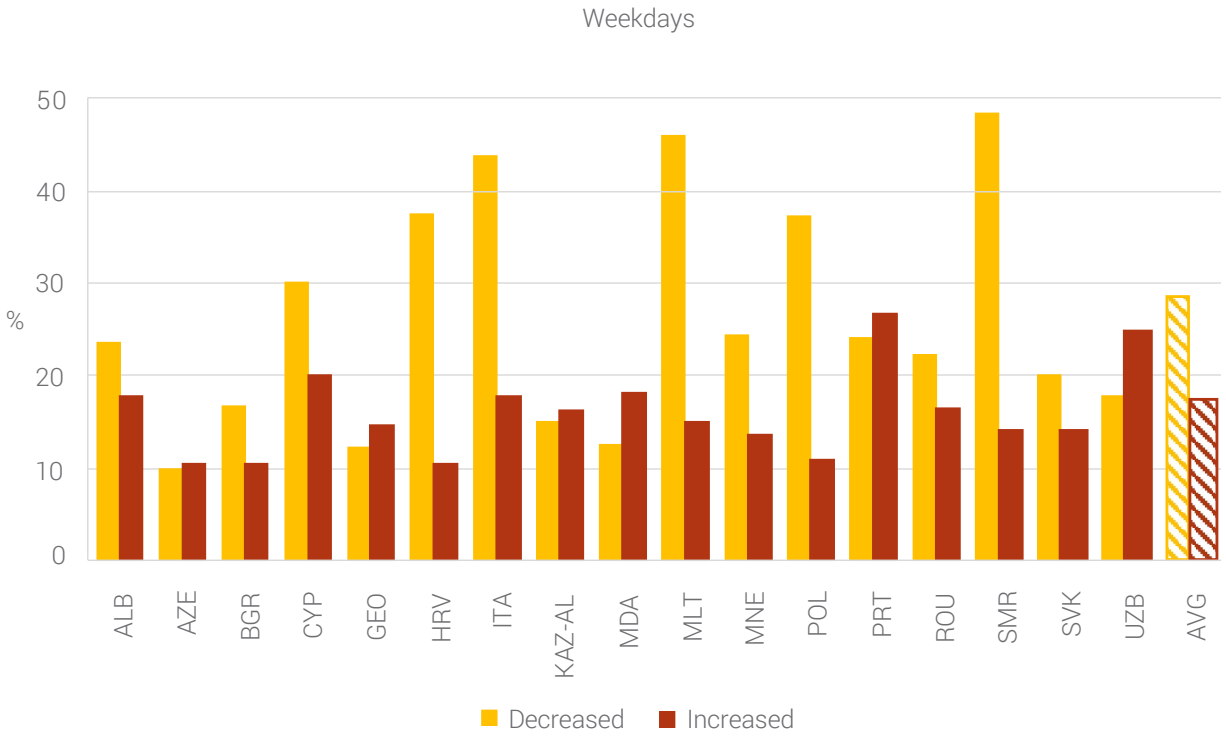


Fig. 15. Change in time spent by children, outside school hours, playing actively/vigorously during the pandemic in comparison to the pre-pandemic period by Member State (%)



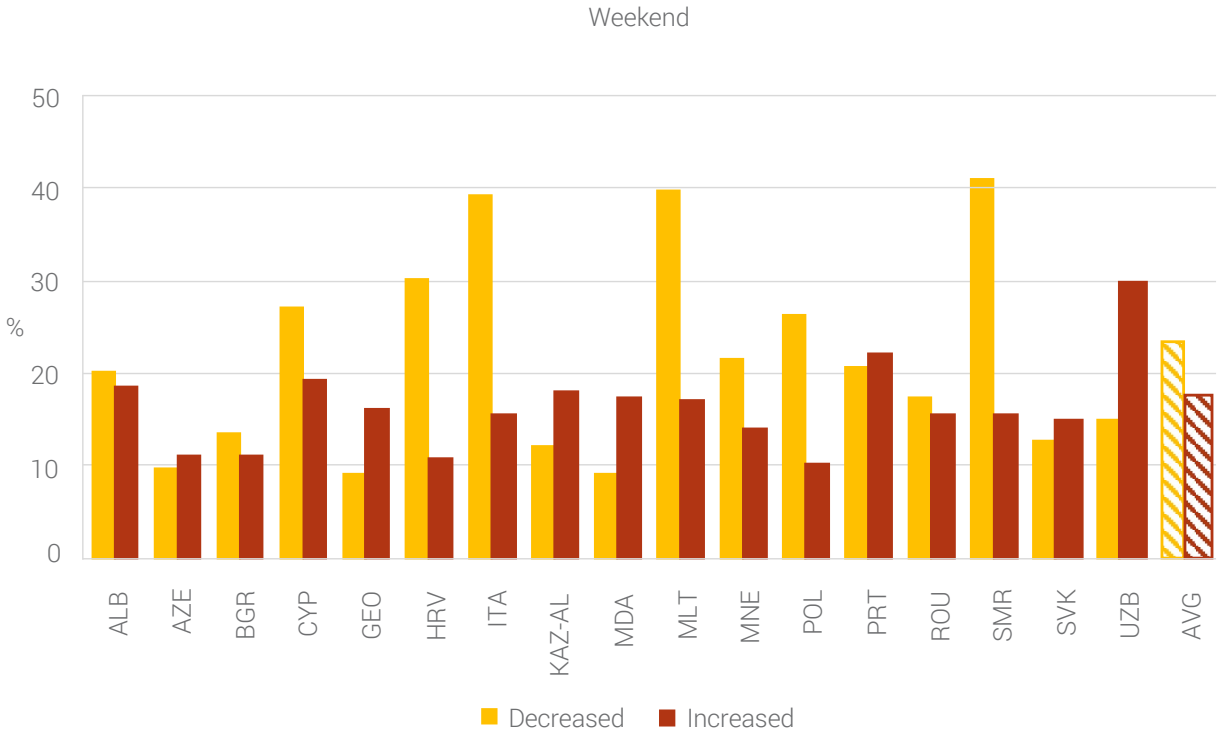


Table 22. Change in time spent by children, outside school hours, playing actively/vigorously during the pandemic in comparison to the pre-pandemic period (%)

Member State	Weekdays				Weekend			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	23.4	55.2	17.8	3.6	20.2	57.6	18.7	3.5
AZE	9.7	73.8	10.4	6.0	10.2	73.0	11.2	5.6
BGR	17.0	65.3	10.7	7.0	13.5	68.8	11.0	6.7
CYP	30.2	48.0	20.1	1.7	27.3	51.7	19.3	1.7
GEO	12.2	70.5	14.5	2.9	9.1	71.9	16.0	2.9
HRV	37.3	50.1	10.4	2.1	30.3	56.6	10.9	2.2
ITA	44.0	35.9	17.8	2.3	39.3	42.5	15.7	2.5
KAZ-AL	14.9	59.8	16.1	9.3	12.2	60.1	18.2	9.4
MDA	12.5	62.5	18.0	7.0	9.0	66.3	17.3	7.4
MLT	45.9	36.1	15.2	2.8	39.6	40.1	17.1	3.2
MNE	24.6	57.2	13.5	4.6	21.5	59.5	14.1	4.9
POL	37.2	48.9	11.0	2.9	26.6	60.3	10.3	2.8
PRT	24.0	47.3	26.7	2.0	20.8	55.1	22.1	2.1
ROU	22.3	58.4	16.5	2.9	17.3	64.1	15.8	2.8
SMR	48.5	35.3	14.0	2.2	41.2	41.2	15.4	2.2
SVK	20.0	61.7	14.0	4.3	12.7	68.2	15.0	4.1
UZB	17.5	54.2	24.5	3.9	14.8	52.5	29.5	3.3
AVG	28.4	51.0	17.2	3.4	23.5	55.8	17.4	3.3

4.3 Sedentary recreational screen time

On average, 36% of the children increased the time spent watching TV, playing video/computer games or using social media for non-educational purposes on weekdays and 34% on weekends during the pandemic period (Fig. 16; Table 23). In comparison, the percentage of children who decreased their recreational screen time was much smaller, below 10%. This picture was observed in all Member States except in Albania for both weekdays and weekends and Uzbekistan for weekdays where the increase matched the drop (Fig. 17; Table 23). In five out of 17 Member States, over 40% of children spent more time in sedentary recreational activities compared with the pre-pandemic period, both on weekdays and the weekend, with the highest values recorded in Malta and San Marino (over 60% on weekdays, and over 50% on weekends).

Fig. 16. Change in children's sedentary recreational screen time during the pandemic in comparison to the pre-pandemic period by Member State (%)

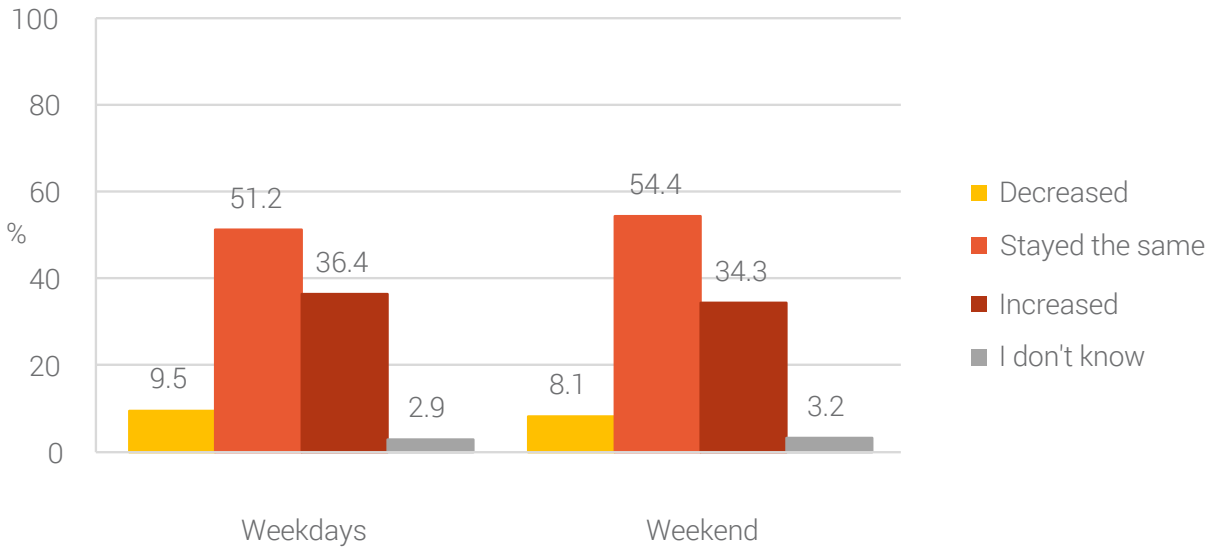


Fig. 17. Change in children's sedentary recreational screen during the pandemic in comparison to the pre-pandemic period by Member State (%)

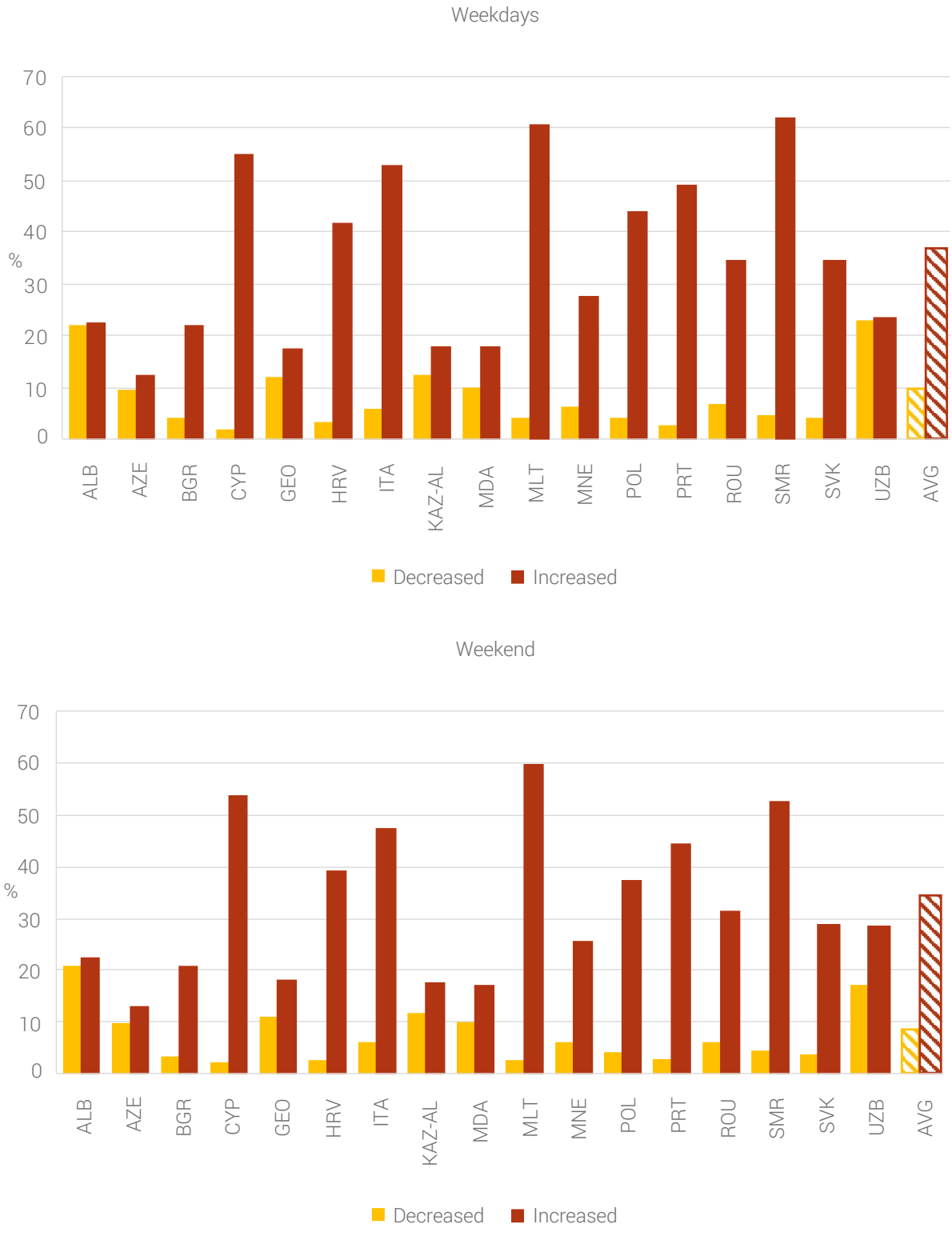


Table 23. Change in children's sedentary recreational screen during the pandemic in comparison to the pre-pandemic period (%)

Member State	Weekdays				Weekend			
	Decreased	Stayed the same	Increased	Don't know	Decreased	Stayed the same	Increased	Don't know
ALB	21.8	53.4	22.2	2.6	20.7	53.8	22.2	3.4
AZE	9.7	72.9	12.5	4.9	9.6	72.8	12.9	4.8
BGR	4.3	67.0	22.1	6.5	3.4	69.5	20.8	6.3
CYP	2.0	41.8	54.9	1.2	2.3	42.7	53.5	1.4
GEO	12.0	67.4	17.5	3.1	11.1	68.1	17.9	2.9
HRV	3.1	53.7	41.7	1.5	2.6	56.5	39.2	1.7
ITA	5.4	39.6	52.7	2.3	6.0	44.1	47.3	2.7
KAZ-AL	12.4	60.3	17.8	9.5	11.8	60.9	17.6	9.8
MDA	9.9	66.2	18.0	5.9	9.7	67.0	17.0	6.3
MLT	4.3	33.9	60.7	1.2	2.5	36.6	59.8	1.2
MNE	6.3	61.2	27.7	4.8	5.9	63.3	25.5	5.3
POL	4.0	50.4	43.6	2.0	3.8	56.7	37.4	2.0
PRT	3.1	46.2	48.7	2.0	2.8	50.6	44.5	2.0
ROU	6.7	55.3	34.7	3.3	5.7	58.8	31.5	3.9
SMR	4.8	31.3	62.1	1.8	4.4	40.4	52.9	2.2
SVK	4.0	58.4	34.7	2.8	3.6	64.8	28.7	2.9
UZB	22.6	51.5	23.0	2.9	16.7	51.9	27.9	3.6
AVG	9.5	51.2	36.4	2.9	8.1	54.4	34.3	3.2

4.4 Time spent learning at home

On average, 34% of children increased the time spent learning at home (including home schooling) by more than three hours per day during the pandemic; while only 8% decreased it (Fig. 18; Table 24). Malta and Croatia were the Member States with the highest increase, where one in two children spent more time learning at home.

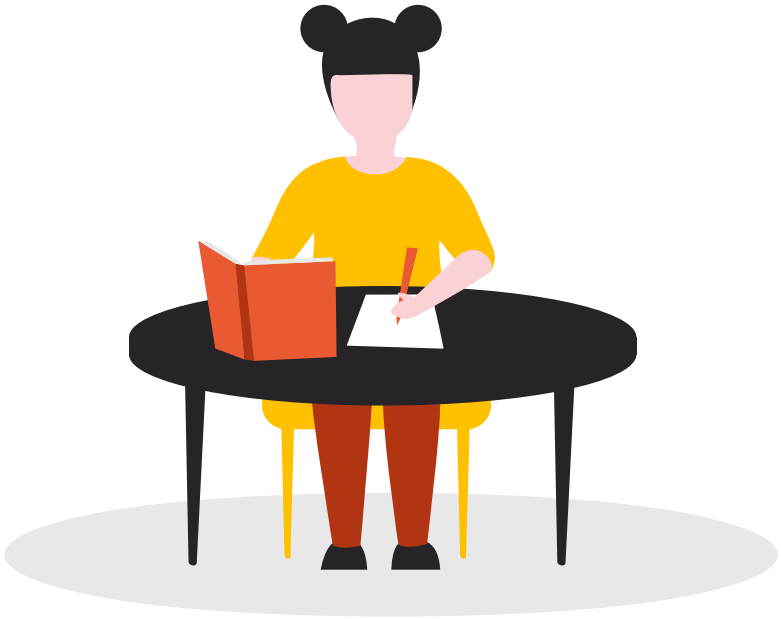


Fig. 18. Change in time spent by children learning at home (including home schooling), during the pandemic in comparison to the pre-pandemic period by Member State (%), compared with an average of 3 hours per day

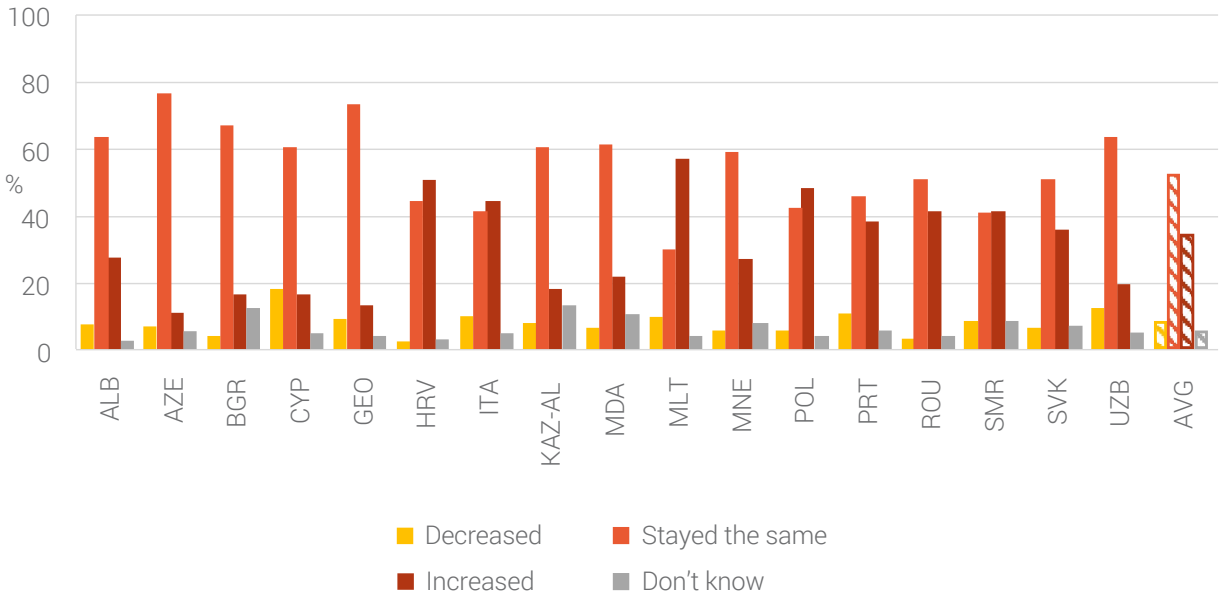


Table 24. Change in time spent by children learning at home (including home schooling), if more than three hours/day, during the pandemic in comparison to the pre-pandemic period (%)

Member State	Decreased	Stayed the same	Increased	Don't know
ALB	7.2	63.1	26.9	2.9
AZE	6.9	76.4	11.0	5.6
BGR	4.4	66.8	16.1	12.7
CYP	18.2	60.2	16.6	5.0
GEO	9.4	73.1	13.4	4.1
HRV	2.5	43.8	50.4	3.3
ITA	9.7	40.9	44.3	5.1
KAZ-AL	8.3	60.7	17.4	13.6
MDA	6.6	61.2	21.3	11.0
MLT	9.8	29.5	56.8	3.9
MNE	5.5	59.5	27.2	7.8
POL	5.9	42.0	48.0	4.2
PRT	10.8	45.4	38.2	5.5
ROU	3.5	51.2	41.2	4.1
SMR	8.8	41.2	41.5	8.5
SVK	6.1	50.9	36.0	6.9
UZB	12.2	62.9	19.6	5.3
AVG	8.3	52.0	34.5	5.2

5. Parents' perception of their children's weight status

5.1 Parents' perception of their children's weight status

Parents were asked how they perceived their children's weight status both during and before the pandemic period: as underweight, normal weight, a little overweight or extremely overweight.

Over the period, the percentage of children perceived as a normal weight dropped from 82–73%, whereas those perceived as overweight doubled, from 8 to 16% (Fig. 19; Table 25). The percentage of parents who perceived their child as overweight almost doubled everywhere, with the highest rises recorded in Albania, Malta, Italy and Romania (more than double) and the lowest in Croatia, Georgia, Poland and Slovakia (Fig. 20; Table 25).

Fig. 19. Parents' perception of their children's weight status during the pandemic in comparison to the pre-pandemic period (%)

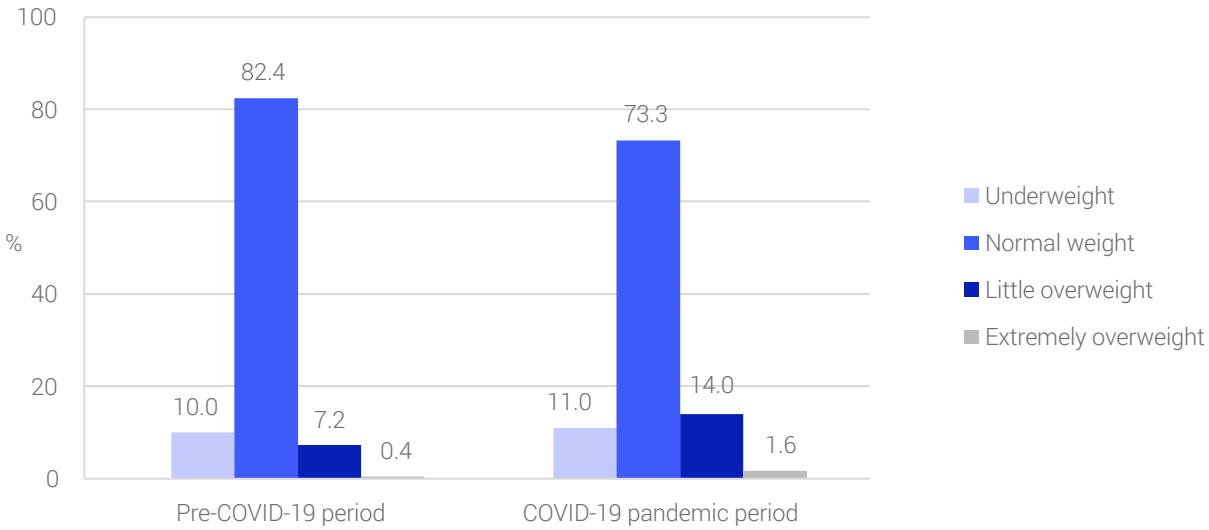


Fig. 20. Children perceived by their parents as a little or extremely overweight: change during the pandemic in comparison to the pre-pandemic period by Member State (%)

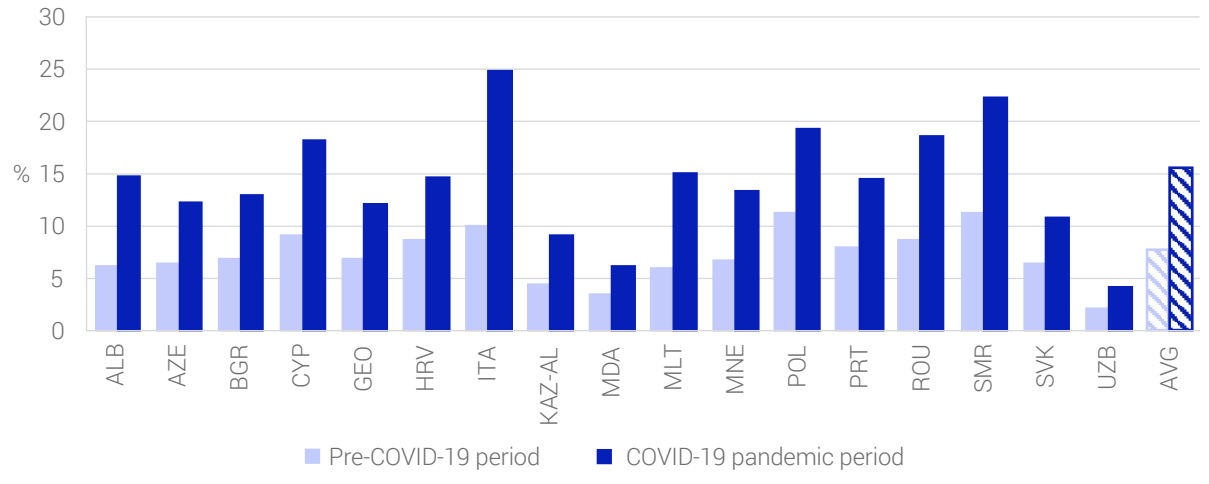


Table 25. Parents' perception of their children's weight status during the pandemic in comparison to the pre-pandemic period by Member State (%)

Member State	Pre-pandemic period				Pandemic period			
	Underweight	Normal weight	Little overweight	Extremely overweight	Underweight	Normal weight	Little overweight	Extremely overweight
ALB	7.6	86.1	6.0	0.3	6.4	78.8	13.7	1.1
AZE	20.7	72.9	5.6	0.8	19.8	67.8	10.7	1.7
BGR	5.9	87.1	6.6	0.4	5.1	81.8	12.2	0.9
CYP	8.3	82.5	8.9	0.3	6.9	74.8	17.3	1.0
GEO	8.1	84.8	6.8	0.3	8.1	79.7	11.4	0.8
HRV	1.7	89.5	8.3	0.5	1.3	83.8	13.9	1.0
ITA	6.3	83.5	9.8	0.4	5.7	69.4	23.3	1.6
KAZ-AL	15.8	79.5	4.4	0.2	18.6	72.2	8.6	0.6
MDA	6.4	90.1	3.5	0.0	5.9	87.8	5.9	0.4
MLT	6.0	87.8	5.7	0.4	4.0	81.0	13.9	1.1
MNE	2.5	90.8	5.9	0.8	2.0	84.5	11.2	2.3
POL	7.7	80.9	10.7	0.6	6.8	73.9	15.6	3.7
PRT	5.2	86.9	7.6	0.3	4.8	80.6	13.9	0.7
ROU	5.6	85.7	8.3	0.4	3.6	77.6	18.1	0.7
SMR	9.2	79.4	7.0	4.4	7.0	70.6	17.3	5.1
SVK	2.7	90.7	6.2	0.4	2.2	86.9	10.4	0.5
UZB	18.0	79.7	2.0	0.3	25.4	70.4	3.6	0.6
AVG	10.0	82.4	7.2	0.4	11.1	73.3	14.0	1.6

6. Children's quality of life and well-being

6.1 Children's quality of life and well-being

The study investigated how the emergence of the pandemic and its restrictive measures affected children's well-being by investigating parents' perceptions regarding a set of 10 specific behaviours and feelings that children exhibited during both the pandemic and the pre-pandemic period separately.

For most of the investigated behaviours and feelings, the situation worsened more than improved (Figs. 21–30; Tables 26–35). Overall, most Member States reported a general decline in the parents' perceived well-being of their children, with different intensities.

On average, the frequency of children having fun with friends worsened for 42% of children (Fig. 21; Table 26), as did the ability to enjoy activities in their free time (27%; Fig. 22; Table 27) and reporting "having enough time for him/herself" (19%; Fig. 23; Table 28).

Fig. 21A-B. "Has your child had fun with his/her friends?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

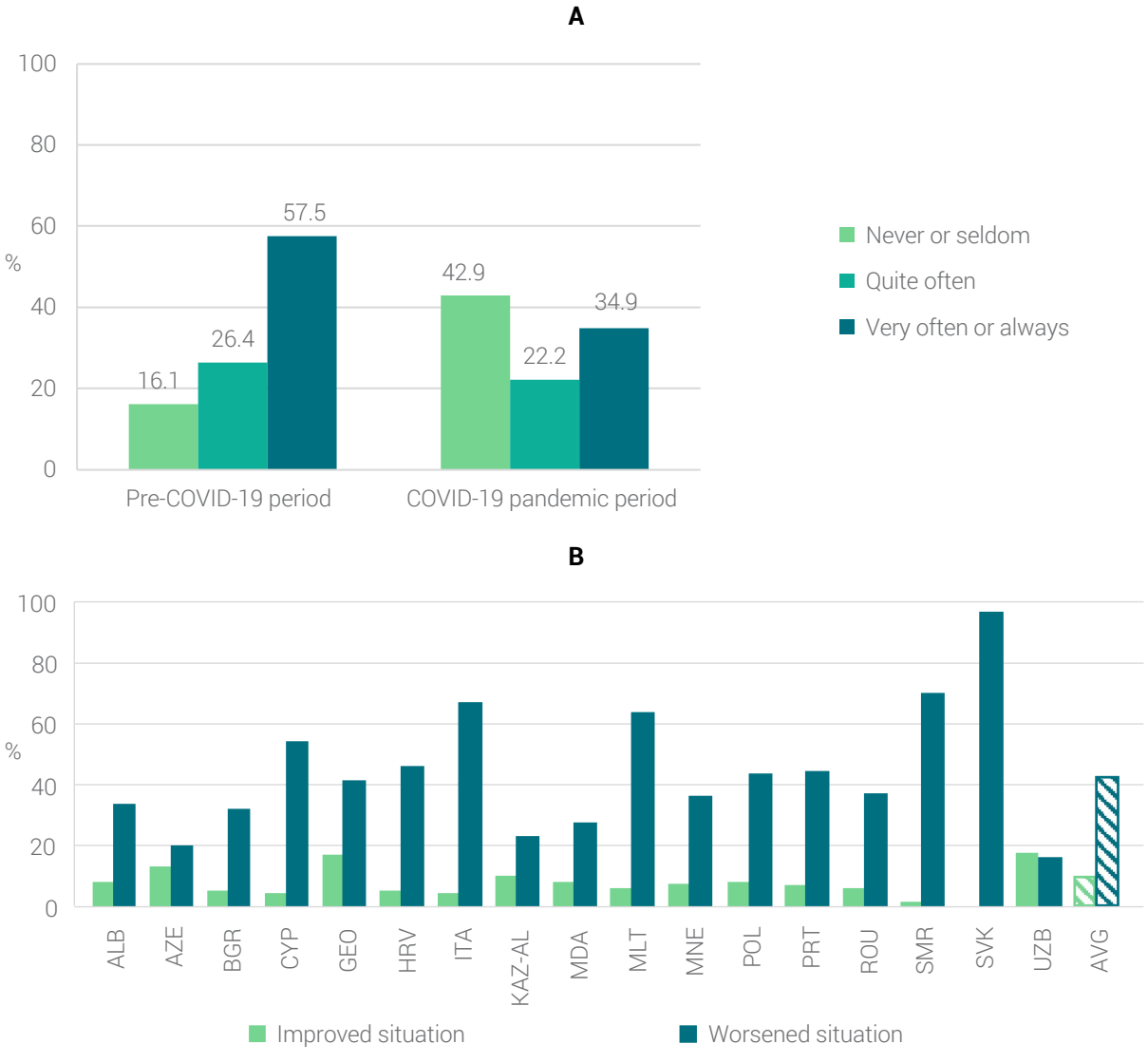


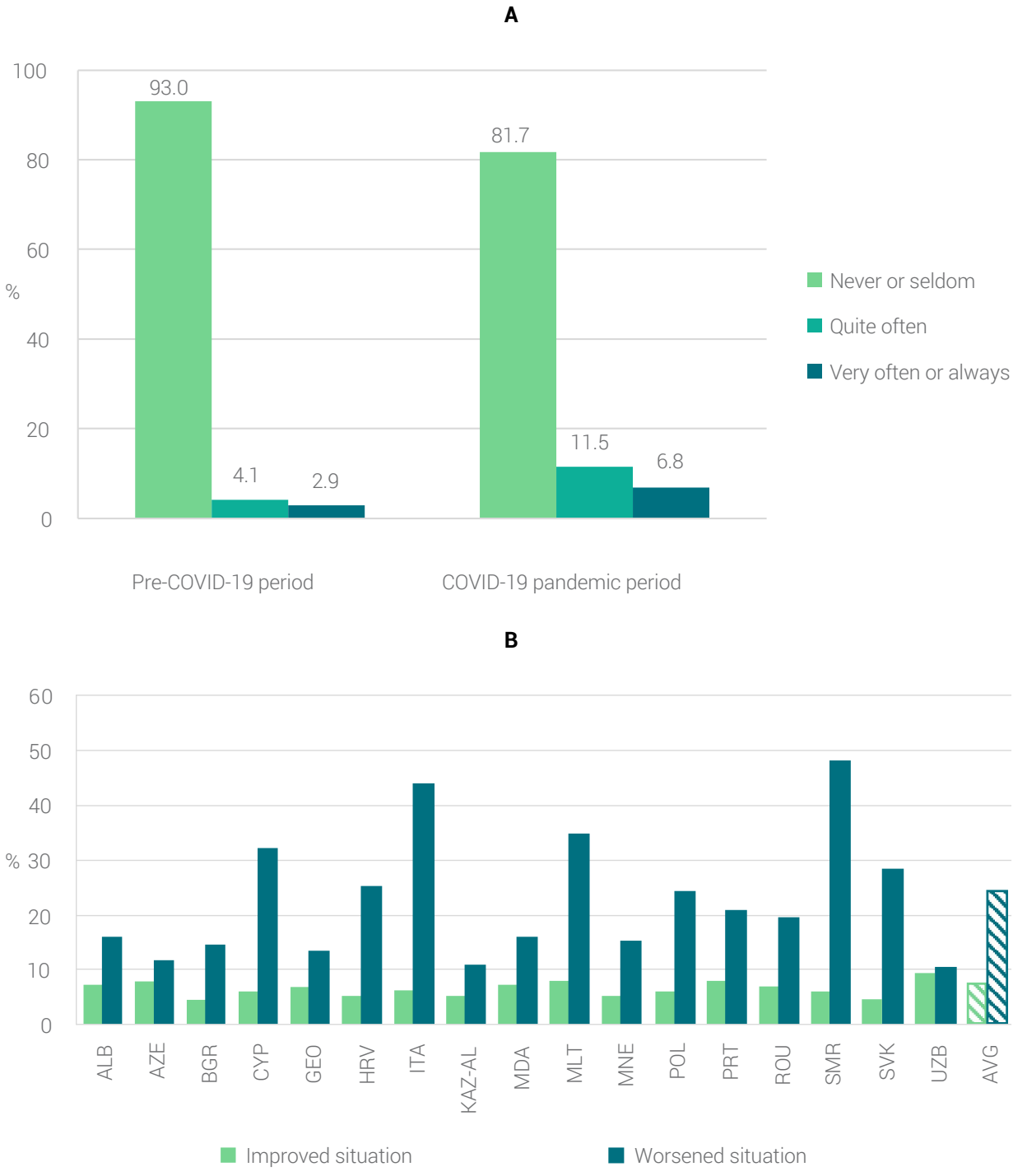
Fig. 22A-B. "Has your child been able to do the things that he/she wants to do in his/her free time?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

Fig. 23A-B. "Has your child had enough time for him/herself?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

Perceived sadness was also more frequent in the pandemic period for one out of five children (20%), although most parents still never or seldomly reported that their children were feeling this way (82%; Fig. 24; Table 29). Perceived loneliness was also experienced more frequently by one out of four children (24%; Fig. 25; Table 30).

Fig. 24A-B. "Has your child felt sad?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

Fig. 25A-B. "Has your child felt lonely?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)



The reported percentages of children that very or extremely felt fit and well dropped: from around 76% pre-pandemic to 65% (Fig. 26; Table 31). One in four children were perceived by their parents as experiencing these positive feelings less frequently. Reporting on feeling full of energy, one in four parents reported that their children experienced this feeling less frequently (Fig. 27; Table 32).

Fig. 26A-B. "Has your child felt fit and well?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

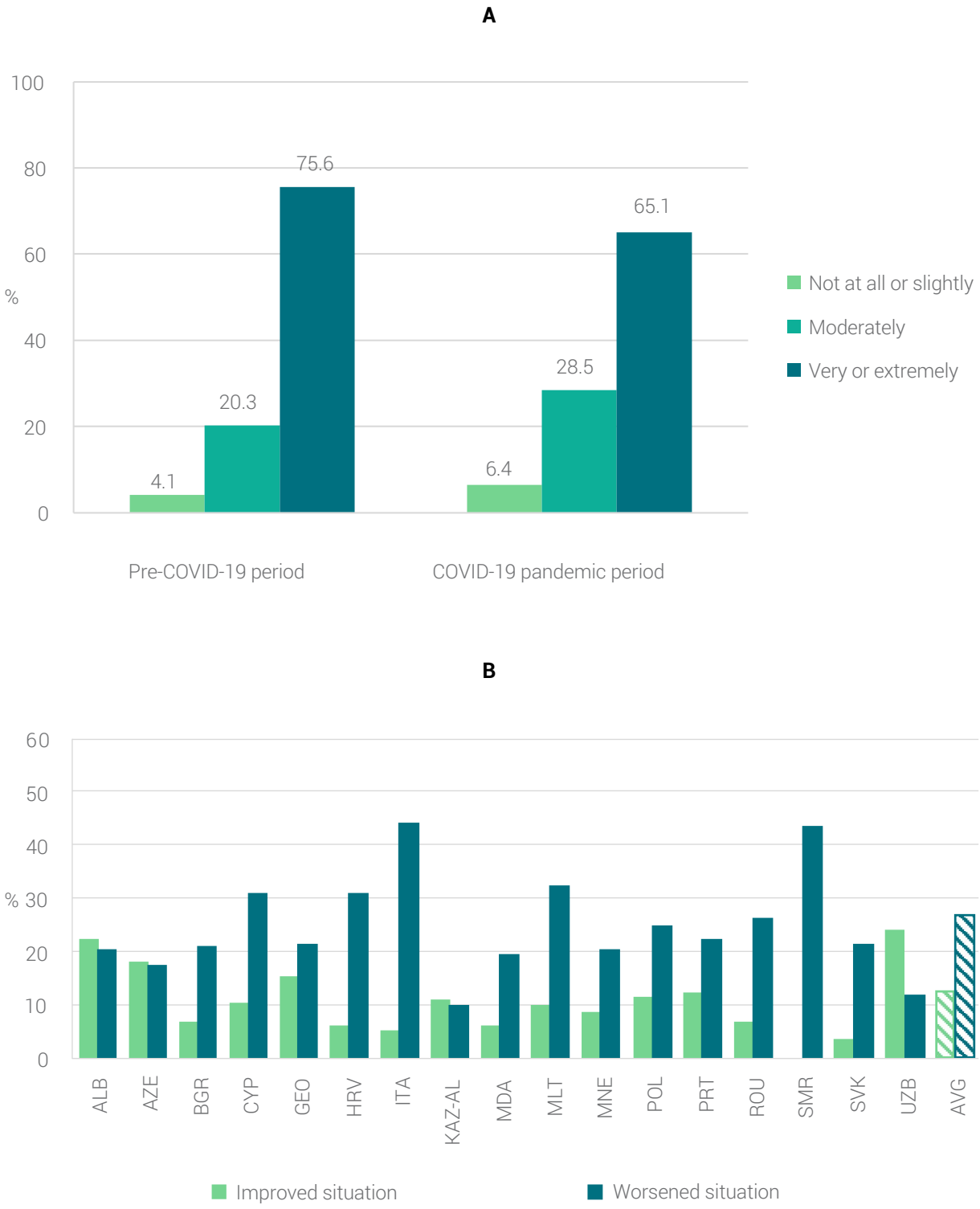
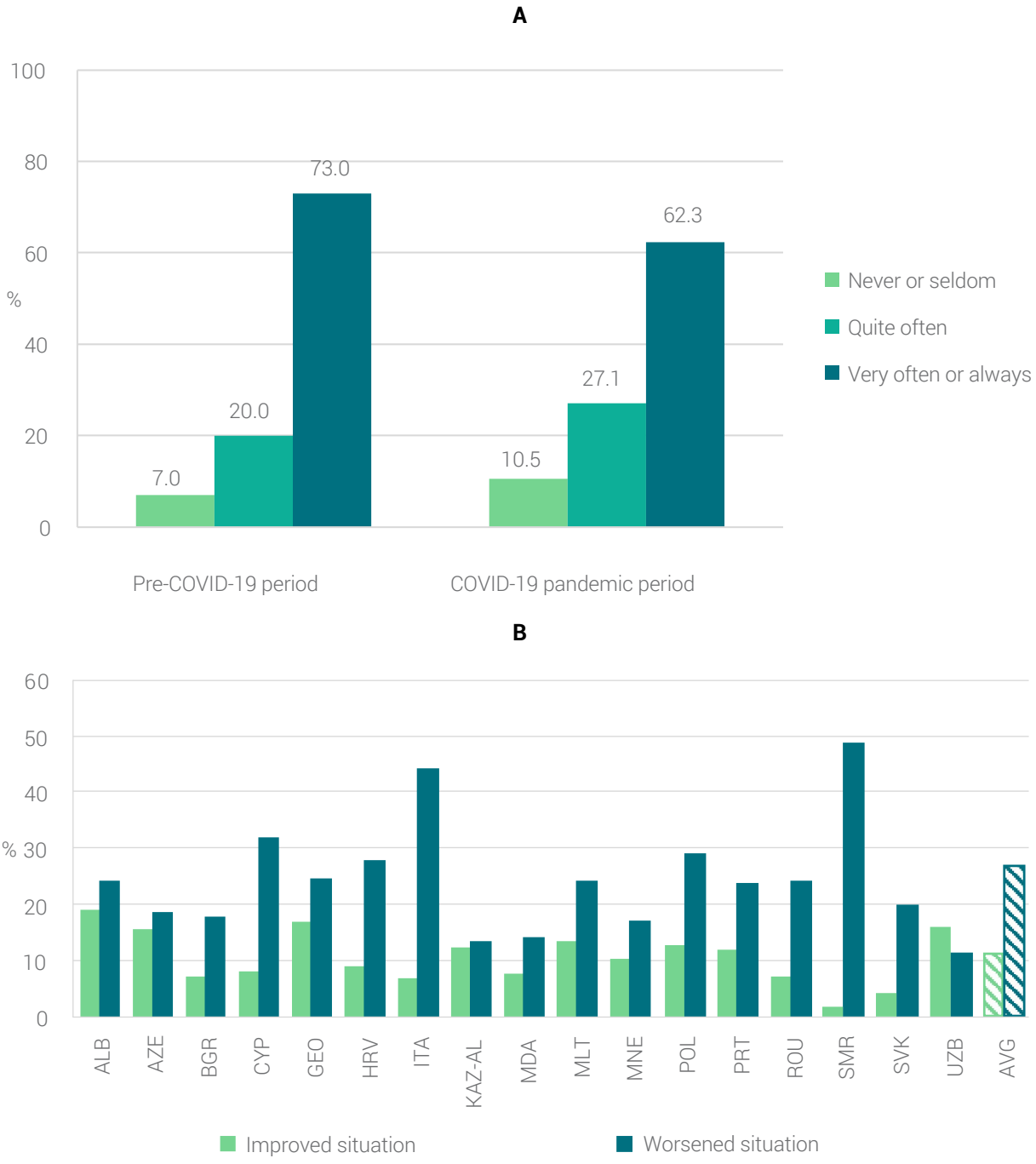


Fig. 27A-B. "Has your child felt full of energy?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)



The observed capacity to pay attention worsened in 23% of children, with a decrease of almost 10 percentage points in children who were previously observed by their parents to be very often or always able to concentrate (Fig. 28; Table 33). Additionally, the perception that their children were getting on very or extremely well at school – was reported less frequently by parents during the pandemic (Fig. 29; Table 34). According to Fig. 30 (Table 35) regarding parents' perceptions during the pandemic about whether or not their children felt treated fairly, the results indicated there were significant changes either before or during the pandemic period.

Fig. 28A-B. "Has your child been able to pay attention?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

Fig. 29A-B. "Has your child got on well at school?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)[a]

[a] Data on parents' perception on whether their child has got on well at school were not collected in Bulgaria.

Fig. 30A-B. "Has your child felt that his/her parent(s) treated him/her fairly?": parents' perception during the pandemic in comparison to the pre-pandemic period (A, %) and change between the two periods (B, %)

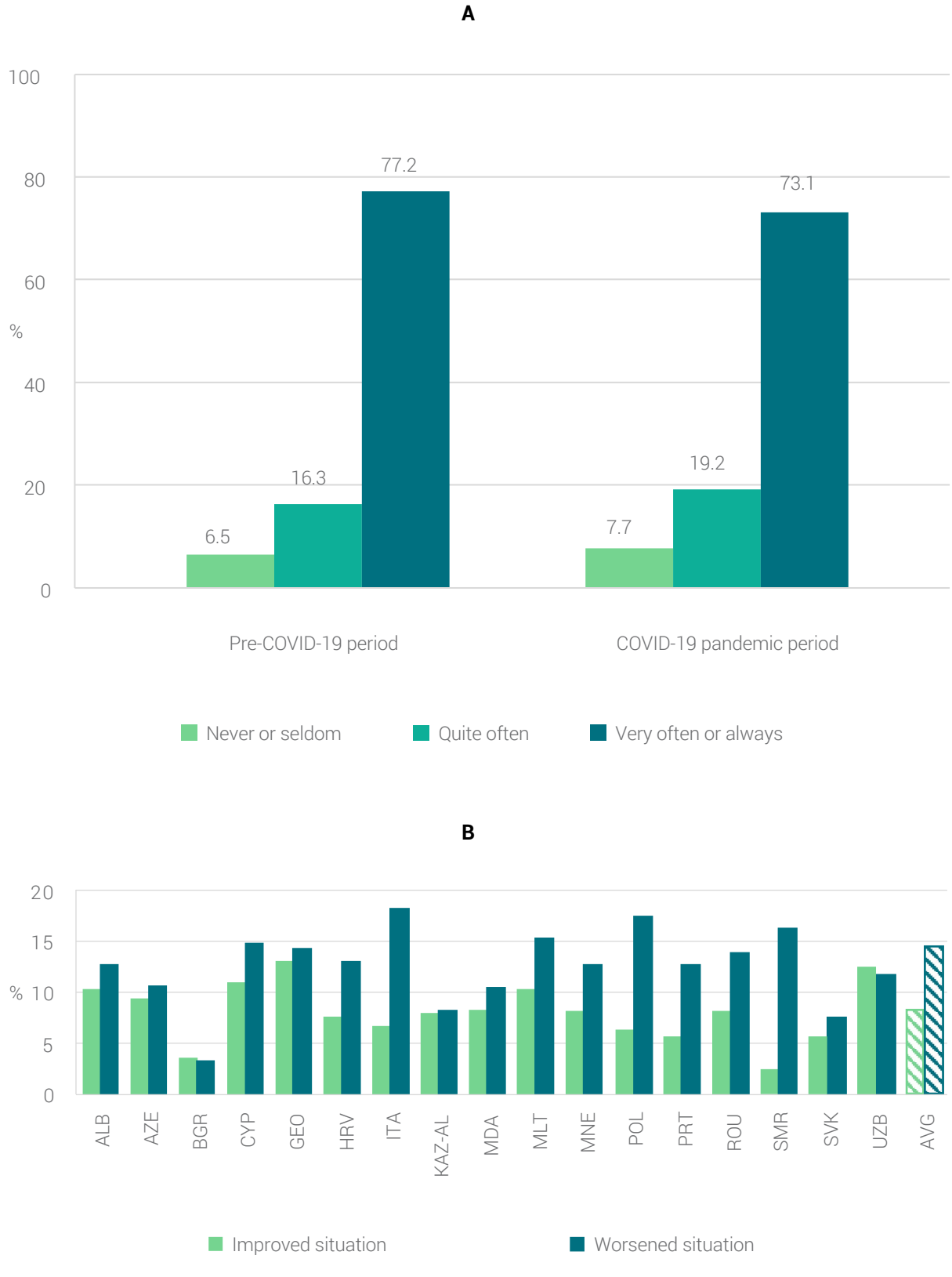


Table 26. "Has your child had fun with his/her friends?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	13.3	21.3	65.4	33.8	18.4	47.8	8.2	34.0
AZE	18.7	37.8	43.5	24.7	34.5	40.7	13.4	20.0
BGR	4.0	19.4	76.6	22.2	20.2	57.5	5.4	31.9
CYP	15.7	29.9	54.4	52.3	21.9	25.9	5.0	55.0
GEO	15.0	30.2	54.8	16.8	48.2	35.0	16.7	41.1
HRV	12.7	27.5	59.8	39.3	30.8	30.0	5.3	46.2
ITA	12.9	22.1	65.0	66.6	13.8	19.6	4.9	67.4
KAZ-AL	12.6	18.8	68.6	22.6	17.5	59.9	10.5	22.7
MDA	21.5	25.9	52.6	37.8	21.4	40.8	8.4	27.8
MLT	13.5	30.4	56.1	64.9	17.6	17.6	5.8	63.8
MNE	13.4	20.1	66.5	34.6	19.9	45.4	7.9	36.6
POL	13.3	34.1	52.6	42.0	27.4	30.6	8.2	43.2
PRT	21.7	27.7	50.6	51.2	25.2	23.6	7.3	44.3
ROU	15.0	24.2	60.8	36.2	23.1	40.6	5.9	37.0
SMR	3.7	8.1	88.2	53.3	22.4	24.3	1.5	70.2
SVK	8.9	0.8	90.3	66.4	19.7	13.9	0.9	96.1
UZB	23.7	26.6	49.8	26.7	20.4	52.9	17.4	16.0
AVG	16.1	26.4	57.5	42.9	22.2	34.9	9.3	42.2

Table 27. "Has your child been able to do the things that he/she wants to do in his/her free time?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	8.4	24.2	67.4	15.3	24.6	60.1	15.6	24.9
AZE	16.6	34.1	49.4	18.4	30.0	51.6	16.8	15.0
BGR	2.6	24.1	73.3	6.3	21.8	71.9	11.2	15.0
CYP	5.0	28.8	66.2	18.0	28.5	53.4	13.8	31.7
GEO	5.6	29.9	64.4	6.4	28.7	64.9	17.0	16.2
HRV	5.8	27.1	67.1	15.6	32.8	51.6	10.2	32.0
ITA	10.0	33.6	56.4	41.6	28.0	30.4	13.2	50.9
KAZ-AL	22.7	25.5	51.8	22.2	27.4	50.3	17.0	17.0
MDA	7.5	27.5	65.0	9.0	26.9	64.1	14.2	14.8
MLT	7.0	40.5	52.6	24.4	32.9	42.7	18.8	35.9
MNE	5.8	20.8	73.4	13.5	23.3	63.2	11.2	25.3
POL	2.4	35.3	62.4	5.3	36.8	57.9	8.3	15.6
PRT	5.4	36.6	58.0	10.4	37.9	51.7	13.2	21.7
ROU	7.7	26.7	65.6	15.5	28.3	56.3	10.6	25.4
SMR	3.3	20.6	76.1	38.6	26.8	34.6	8.5	56.6
SVK	2.4	0.4	97.2	12.0	0.2	87.7	5.1	22.0
UZB	28.1	12.6	59.3	29.8	12.5	57.8	14.9	16.1
AVG	11.9	27.1	61.0	22.8	25.9	51.3	12.5	26.7

Table 28. "Has your child had enough time for him/herself?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	2.7	19.4	77.8	3.8	21.6	74.6	13.0	19.3
AZE	8.1	31.2	60.7	8.9	29.0	62.1	15.5	15.4
BGR	9.0	29.9	61.1	6.9	26.5	66.6	17.8	10.4
CYP	4.5	31.9	63.6	5.7	28.7	65.6	17.3	16.0
GEO	6.0	35.1	58.9	5.1	31.1	63.8	21.6	15.5
HRV	2.6	26.4	71.0	4.3	27.9	67.7	12.3	19.9
ITA	5.3	38.5	56.2	7.6	33.7	58.7	23.8	22.2
KAZ-AL	67.2	17.5	15.3	61.2	18.2	20.5	19.1	11.8
MDA	11.7	32.9	55.3	10.2	31.9	57.9	16.6	12.7
MLT	7.6	42.0	50.4	8.8	36.5	54.7	23.8	18.7
MNE	1.1	12.4	86.5	1.9	14.2	83.9	9.4	18.2
POL	1.2	28.7	70.0	3.2	30.0	66.8	12.3	20.6
PRT	2.4	33.7	63.9	3.1	36.3	60.5	11.6	17.4
ROU	5.6	24.7	69.7	6.4	28.1	65.5	10.0	19.3
SMR	3.7	29.4	66.9	4.4	19.1	76.5	26.8	11.4
SVK	2.4	0.4	97.2	3.6	0.3	96.1	7.6	10.2
UZB	11.3	4.0	84.6	14.7	4.3	81.1	13.1	16.6
AVG	6.0	25.2	68.8	7.8	24.4	67.8	15.9	18.6

Table 29. "Has your child felt sad?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	87.5	9.3	3.2	82.9	13.5	3.5	17.6	15.6
AZE	92.2	5.1	2.7	89.6	7.7	2.7	12.4	12.9
BGR	96.0	2.7	1.3	90.7	7.2	2.1	6.2	11.5
CYP	85.9	11.1	3.0	70.8	24.1	5.1	8.0	25.2
GEO	92.2	4.2	3.6	90.6	5.7	3.7	17.8	15.1
HRV	93.3	4.8	1.9	82.4	14.0	3.6	7.9	19.0
ITA	91.9	4.1	4.0	68.1	20.0	11.9	7.1	37.4
KAZ-AL	92.8	3.8	3.4	92.6	4.3	3.1	14.4	8.6
MDA	90.7	4.9	4.4	86.9	7.9	5.2	9.6	14.1
MLT	84.8	10.4	4.7	68.9	19.5	11.6	8.8	33.0
MNE	94.3	3.8	1.9	90.9	6.2	2.9	10.7	11.8
POL	93.2	5.8	1.0	80.8	16.3	2.8	8.2	17.9
PRT	93.9	4.5	1.6	85.5	11.3	3.2	8.3	17.7
ROU	89.8	6.1	4.1	81.3	12.6	6.1	8.9	18.1
SMR	80.5	12.1	7.4	52.2	27.9	19.9	4.8	57.4
SVK	94.9	0.0	5.1	85.3	0.4	14.3	5.8	17.8
UZB	93.0	2.8	4.3	93.0	2.8	4.2	12.0	7.8
AVG	92.4	4.4	3.2	81.8	12.0	6.2	9.3	20.2

Table 30. "Has your child felt lonely?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	92.6	5.4	2.0	88.7	8.4	3.0	7.7	16.0
AZE	92.9	4.0	3.1	90.1	6.0	3.9	8.1	11.5
BGR	96.7	1.9	1.4	91.0	6.3	2.7	4.5	14.8
CYP	85.5	11.7	2.8	67.3	25.0	7.7	6.1	32.2
GEO	94.1	3.3	2.6	91.5	4.6	3.8	6.4	13.2
HRV	93.6	4.8	1.5	81.0	15.0	4.1	5.2	25.5
ITA	90.9	5.4	3.7	65.1	21.0	13.9	6.6	43.7
KAZ-AL	96.6	1.4	2.0	94.8	2.4	2.8	5.4	10.8
MDA	90.8	3.3	5.9	86.7	6.3	7.0	7.3	15.6
MLT	86.7	8.1	5.2	70.2	17.9	11.9	7.9	34.8
MNE	94.1	4.1	1.8	89.5	7.6	2.9	5.2	15.4
POL	95.3	3.8	0.9	82.2	14.2	3.6	6.1	24.2
PRT	92.1	5.9	2.1	83.8	12.5	3.8	7.7	20.8
ROU	91.0	5.2	3.9	83.6	10.5	5.8	6.8	19.6
SMR	82.0	10.3	7.7	56.3	22.1	21.7	5.9	48.2
SVK	95.0	0.1	4.9	83.2	0.2	16.6	4.6	28.4
UZB	94.1	2.8	3.1	93.9	2.8	3.4	9.3	10.5
AVG	93.0	4.1	2.9	81.7	11.5	6.8	7.1	24.2

Table 31. "Has your child felt fit and well?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Not at all or slightly	Moderately	Very or extremely	Not at all or slightly	Moderately	Very or extremely	Improved situation	Worsened situation
ALB	7.6	34.1	58.2	8.6	33.1	58.3	22.2	20.6
AZE	4.4	43.3	52.2	6.0	42.0	52.0	18.0	17.7
BGR	2.9	13.6	83.5	6.9	15.8	77.3	6.9	21.4
CYP	3.4	15.7	80.9	5.3	28.8	66.0	10.4	31.1
GEO	4.4	42.1	53.5	5.8	47.2	46.9	14.8	21.2
HRV	2.6	26.7	70.6	7.4	35.0	57.5	6.4	31.0
ITA	2.7	19.8	77.5	9.0	38.8	52.2	5.1	44.0
KAZ-AL	2.6	8.9	88.5	1.7	7.2	91.1	11.0	10.2
MDA	4.6	15.9	79.5	6.3	21.4	72.4	6.6	19.5
MLT	5.8	32.2	62.0	12.9	37.8	49.3	10.3	32.3
MNE	1.1	11.4	87.5	2.3	14.5	83.1	8.7	20.7
POL	2.0	15.4	82.7	3.9	26.1	70.0	11.7	24.8
PRT	2.6	27.0	70.4	3.7	33.5	62.8	12.3	22.2
ROU	7.4	20.1	72.6	9.5	29.9	60.6	7.3	26.6
SMR	0.7	14.0	85.3	12.1	34.2	53.7	0.4	43.0
SVK	2.0	0.4	97.7	6.0	0.6	93.4	3.8	21.3
UZB	6.5	16.6	76.9	4.8	15.4	79.8	24.2	12.0
AVG	4.1	20.3	75.6	6.4	28.5	65.1	12.4	26.3

Table 32. "Has your child felt full of energy?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	8.8	28.4	62.7	10.9	30.6	58.5	19.0	24.1
AZE	10.7	32.7	56.6	12.7	32.3	55.0	15.6	18.7
BGR	1.6	13.2	85.2	3.5	16.6	79.9	6.9	17.7
CYP	4.4	21.0	74.6	10.3	31.4	58.3	8.1	31.8
GEO	6.7	33.2	60.1	8.6	36.0	55.4	16.3	24.1
HRV	5.7	26.5	67.8	10.7	32.3	57.0	8.7	27.7
ITA	3.3	20.4	76.3	12.3	38.0	49.7	6.4	44.3
KAZ-AL	4.6	14.2	81.1	4.5	14.3	81.2	12.2	13.3
MDA	4.4	16.4	79.3	6.3	21.5	72.2	7.8	18.8
MLT	2.7	28.3	69.0	5.5	30.2	64.3	13.4	24.2
MNE	3.4	15.9	80.8	3.5	16.9	79.6	10.5	17.2
POL	1.7	24.5	73.8	6.7	33.4	60.0	13.0	29.1
PRT	2.2	27.4	70.4	3.6	32.5	63.9	11.7	23.8
ROU	6.2	21.8	72.0	9.1	29.2	61.7	7.4	24.1
SMR	1.5	11.8	86.8	11.0	35.7	53.3	1.8	48.9
SVK	2.1	0.3	97.6	6.1	0.5	93.4	4.1	20.0
UZB	17.7	10.4	71.9	15.1	9.4	75.5	16.1	11.4
AVG	7.0	20.0	73.0	10.5	27.1	62.3	11.1	26.8

Table 33. "Has your child been able to pay attention?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	4.2	24.3	71.5	6.7	27.4	65.9	8.3	17.6
AZE	15.9	33.1	51.0	18.1	30.8	51.1	10.6	12.7
BGR	8.0	26.2	65.8	9.4	26.6	64.0	5.8	8.3
CYP	5.3	22.9	71.8	8.5	25.8	65.8	6.3	20.6
GEO	71.1	15.3	13.6	71.7	15.2	13.1	14.5	16.1
HRV	5.6	25.8	68.6	8.5	28.7	62.8	6.5	17.0
ITA	8.8	32.2	59.0	19.3	40.3	40.5	7.3	35.0
KAZ-AL	11.4	21.7	66.9	12.8	21.2	66.0	9.4	11.1
MDA	8.3	25.7	66.1	9.6	26.7	63.7	8.7	12.1
MLT	7.5	31.9	60.6	19.0	40.1	40.9	6.5	35.5
MNE	4.2	15.5	80.3	4.9	16.6	78.5	7.2	11.2
POL	6.6	34.0	59.4	11.6	38.2	50.2	8.8	23.4
PRT	7.0	35.4	57.6	10.7	40.3	49.1	5.8	19.2
ROU	5.8	24.6	69.6	6.5	29.4	64.1	6.5	17.6
SMR	6.3	26.5	67.3	18.0	39.7	42.3	1.5	39.0
SVK	3.2	0.4	96.5	34.7	37.7	27.6	0.3	94.1
UZB	19.5	14.3	66.2	17.6	13.1	69.3	12.9	8.6
AVG	12.0	26.2	61.8	16.6	30.5	52.9	8.8	22.7

Table 34. "Has your child got on well at school?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Not at all or slightly	Moderately	Very or extremely	Not at all or slightly	Moderately	Very or extremely	Improved situation	Worsened situation
ALB	3.5	30.9	65.6	5.8	35.7	58.5	6.9	17.1
AZE	6.8	54.3	38.9	8.4	55.4	36.2	6.5	10.6
BGR	NA	NA	NA	NA	NA	NA	NA	NA
CYP	2.4	11.4	86.2	3.2	19.2	77.6	5.0	21.1
GEO	3.8	50.4	45.8	6.7	32.8	60.5	35.2	12.4
HRV	1.6	17.0	81.4	3.2	23.5	73.2	4.3	18.7
ITA	3.3	22.8	73.9	6.4	30.4	63.2	4.4	22.8
KAZ-AL	4.5	25.0	70.4	5.1	26.6	68.3	7.0	8.5
MDA	7.9	24.8	67.3	10.9	25.7	63.4	7.6	14.1
MLT	4.8	26.9	68.3	14.8	36.6	48.7	5.3	36.0
MNE	1.1	13.7	85.3	1.8	16.1	82.0	6.9	13.1
POL	1.0	12.0	87.1	3.4	20.2	76.5	4.4	17.6
PRT	2.4	17.5	80.2	8.0	28.8	63.2	5.7	27.9
ROU	4.7	22.1	73.1	4.4	28.7	66.9	4.8	15.9
SMR	2.6	15.1	82.4	5.9	18.4	75.7	5.1	17.3
SVK	2.4	0.2	97.3	27.5	37.3	35.2	0.5	94.5
UZB	5.0	39.1	56.0	4.4	38.1	57.5	10.4	7.4
AVG	3.6	26.4	70.0	6.0	31.9	62.1	6.6	18.6

Table 35. "Has your child felt that his/her parent(s) treated him/her fairly?": parents' perception during the pandemic in comparison to the pre-pandemic period and change between the two periods

Member State	Pre-pandemic period			Pandemic period			Change between the two periods	
	Never or seldom	Quite often	Very often or always	Never or seldom	Quite often	Very often or always	Improved situation	Worsened situation
ALB	4.4	15.0	80.6	5.0	16.7	78.3	10.2	12.8
AZE	6.9	20.5	72.6	8.2	19.6	72.2	9.3	10.6
BGR	1.1	5.8	93.1	1.2	5.9	92.9	3.7	3.4
CYP	2.3	27.4	70.2	4.3	28.3	67.4	11.0	14.7
GEO	5.0	20.7	74.4	5.0	21.8	73.2	12.7	14.2
HRV	2.4	20.1	77.5	3.9	21.9	74.1	7.7	13.0
ITA	1.8	20.2	78.0	4.4	26.0	69.6	6.8	18.1
KAZ-AL	22.8	10.4	66.7	23.4	9.3	67.2	8.0	8.3
MDA	6.9	16.1	77.0	7.3	17.1	75.6	8.3	10.5
MLT	4.8	29.4	65.8	7.6	29.5	63.0	10.3	15.3
MNE	3.8	13.4	82.8	5.1	14.7	80.2	8.2	12.7
POL	4.6	19.8	75.6	7.1	25.4	67.5	6.3	17.5
PRT	3.3	26.6	70.1	5.2	29.4	65.4	5.8	12.7
ROU	4.8	16.9	78.4	4.3	19.8	75.8	8.1	13.9
SMR	1.8	18.4	79.8	7.0	22.4	70.6	2.6	16.5
SVK	4.1	0.3	95.7	5.3	0.3	94.4	5.6	7.7
UZB	16.4	8.2	75.4	16.3	7.6	76.1	12.5	11.8
AVG	6.5	16.3	77.2	7.8	19.2	73.1	8.3	14.3

Conclusion

During the COVID-19 pandemic, most of the 17 participating Member States from the WHO European Region observed an increase rather than a decrease in the consumption of healthy foods such as fresh fruits and vegetables; however, higher consumption was also observed in unhealthy foods such as savoury snacks and sweets. Physical activity among children decreased by almost 30% during weekdays compared with the pre-pandemic period and approximately one third of children increased time spent watching TV, playing video/computer games or using social media for non-educational purposes during the pandemic period. The findings also highlighted the negative impact that the pandemic has had on children's well-being, which has the potential to further impact their lifestyles and behaviours. These findings corroborate other findings, showing that the pandemic has adversely affected the health of children globally, including through increased intake of unhealthy food and physical inactivity *(25,40,41)*.

The pandemic taught several sobering lessons about the link between obesity/overweight and COVID-19: (i) people with obesity/overweight did not have access to management services during the pandemic which may have exacerbated their disease; (ii) COVID-19 patients who were also affected by obesity/overweight experienced worse outcomes, including ICU admissions and mortality; and (iii) the stress of the pandemic, its economic consequences and disruptions to daily life increased the exposure to obesity/overweight-related risk factors including unhealthy diets and physical inactivity *(25,42)*. Furthermore, COVID-19-related school closures were likely to disrupt exposure to the healthy food- and physical-activity environments of schools, putting children at increased risk of overweight/obesity during the pandemic *(13)*.

These observations underscore the need to provide support to Member States in order to respond to and manage the negative consequences from the pandemic, as well as to better prepare for future emergencies. It is crucial that emergency preparedness plans for the future include consideration of NCD risk factors – ensuring that children continue to have access to nutritious food and opportunities for physical activity. Often, these considerations are lost as public health experts respond to more acute problems that the emergency brings, but for the long-term benefit of the population it is important that following questions are addressed:

- how can we ensure that when children stay home from school that they continue to have opportunities to be active? *(43)*
- how do we ensure that they continue to have access to healthy foods?
- what kinds of resources can be developed now, to prepare for the future?

Reducing childhood obesity and overweight in the WHO European Region will require a comprehensive approach that promotes healthy diets and physical activity across the life course, as well as pre-conception and pregnancy care and weight management programmes where necessary. Obesity prevention and management necessitates multisectoral policies and actions implemented through a coordinated whole-of-society approach with a range of ministries and partnerships. WHO has identified a range of policy options which can help create environments where children have access to healthy foods, opportunities for physical activity and the structural support that is required to maintain a healthy weight. A whole-of-society approach also requires actions at subnational and local levels and can include collaboration with the community and organizations working towards a common goal *(44,45)*.

Promising areas for intervention include addressing the commercial determinants of health, which play a large role in shaping food environments. Possible areas for policy intervention include marketing restrictions of unhealthy products or front of pack nutrition labelling, which can lead to reformulation of foods high in fats, sugar and salt; fiscal policies (including both taxes and subsidies); and public food procurement *(46)*. Encouraging physical activity will require multisectoral efforts to create active societies by enhancing knowledge and understanding of the benefits of regular physical activity, active environments that give all people access to safe places and spaces to engage in physical activity, active people through the creation of programmes across settings including schools to promote physical activity and active systems to create and strengthen leadership, governance, multisectoral partnerships, workforce capabilities and advocacy efforts *(47,48)*.

Young people have a critical role to play in the unprecedented challenges that the world is facing today. They should be active participants in shaping their lives and directing their futures. The EU project "Confronting obesity: co-creating policy with youth" (CO-CREATE), developed in collaboration between the Norwegian Institute of Public Health, the WHO European Office for the Prevention and Control of NCDs and 14 international research and advocacy organizations, helped to advance this area, engaging young people in the policy process and providing a range of resources and tools for their involvement. The tools developed in this project should be integrated into future policy efforts, including ideas about how to ensure that in any future pandemic, children and young people can be better protected from the adverse effects of school disruptions and online learning *(49)*.

In addition, policy considerations to mitigate impact on children's well-being should include actions that address the full spectrum of interventions across mental health promotion, illness prevention and treatment: targeting individual children and families, but also aimed at the community and systems levels and addressing individual risk and protective factors as well as social and structural determinants of well-being. Health and education sector actions can include delivery of universal mental health promotion/prevention activities for school-aged children, expanding access to family and parenting support initiatives, identifying opportunities for provision of accessible psychosocial support within community and primary health-care settings, and building the protection of mental health and well-being into future pandemic response plans. Broader social and environmental actions to address the drivers of well-being include investment in social protection to prevent income, housing, food and fuel insecurity for families and communities, and to prevent the accumulation of adverse childhood experiences *(50)*.

The SNI is committed to supporting Member States in taking comprehensive, integrated, multisectoral action to halt the rise of childhood obesity in the WHO European Region. It is also essential to use the lessons learned from this study to prepare for future pandemics and emergencies in the Region and safeguard children's health. Data from the COSI project are crucial for defining the problem of obesity and overweight, informing policy action, drawing comparisons between Member States and tracking progress over time.

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World Health Organization
Regional Office for Europe

UN City, Marmorvej 51,
DK-2100 Copenhagen Ø, Denmark
Tel.: +45 45 33 70 00 Fax: +45 45 33 70 01
Email: eurocontact@who.int
Website: www.who.int/europe

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