



Coping through crisis: COVID-19 pandemic experiences and adolescent mental health and well-being in the WHO European Region

Impact of the COVID-19 pandemic on young people's health and well-being from the findings of the HBSC survey round 2021/2022

Alina Cosma, Michela Bersia, Shynar Abdrakhmanova, Petr Badura, and Inese Gobina

ABSTRACT

COVID-19 pandemic mitigation measures, such as social distancing, school closures and isolation, have affected the mental health and well-being of children and adolescents. This report outlines three factors of adolescent mental health and well-being (life satisfaction and psychological and physical health complaints) and focuses on links between self-reported negative impacts of the COVID-19 pandemic (on school performance and relationships with family and peers) and adolescent mental health and wellbeing in 22 countries and regions of the WHO European Region. The information and data presented were collected from the Health Behaviour in School-aged Children survey round 2021/2022. Thirty per cent of adolescents reported that the COVID-19 pandemic had had a negative impact on their mental health. Relatively more adolescents (38%) experienced no impact on their mental health, and 32% reported positive impacts. Adolescents who indicated a negative impact of the COVID-19 pandemic on school performance and relationships with family and friends were more likely to report low life satisfaction and high levels of psychological and physical health complaints than the group reporting a neutral impact. Variations across countries and regions in the links between negative impacts on school performance and relationships with family and peers and mental health were wide. Girls and 15-year-olds were more likely to report low life satisfaction and high levels of psychological and physical health complaints that were linked to negative impacts of the pandemic.

Document number: WHO/EURO:2023-7680-47447-69735

© World Health Organization 2023

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Under the terms of this licence, you may copy, redistribute and adapt the work for noncommercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition: Cosma A, Bersia M, Abdrakhmanova S, Badura P, Gobina, I. Coping through crisis: COVID-19 pandemic experiences and adolescent mental health and well-being in the WHO European Region. Impact of the COVID-19 pandemic on young people's health and well-being from the findings of the HBSC survey round 2021/2022. Copenhagen: WHO Regional Office for Europe; 2023."

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Cosma A, Bersia M, Abdrakhmanova S, Badura P, Gobina I. Coping through crisis: COVID-19 pandemic experiences and adolescent mental health and well-being in the WHO European Region. Impact of the COVID-19 pandemic on young people's health and well-being from the findings of the HBSC survey round 2021/2022. Copenhagen: WHO Regional Office for Europe; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at http://apps.who.int/iris.

Sales, rights and licensing. To purchase WHO publications, see http://apps.who.int/bookorders. To submit requests for commercial use and gueries on rights and licensing, see http://www.who.int/about/licensing.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

The named authors alone are responsible for the views expressed in this publication.

KEY FINDINGS

- COVID-19 pandemic mitigation measures, such as social distancing, school closures and isolation, have affected the mental health and well-being of children and adolescents. The HBSC survey provides insights into these effects in 22 countries.
- Most adolescents did not report a negative impact on their mental health and well-being; many reported that the pandemic had had neutral or even positive impacts.
- Girls reported higher levels of negative impacts on their mental health and well-being than boys, as did 15-year-olds compared to 11-year-olds.
- Between 17% and 38% reported that the pandemic had had a negative impact on their mental health and well-being.
- Negative impacts of the COVID-19 pandemic restriction measures on adolescents' mental health and wellbeing varied widely across 22 WHO European Region countries and regions.
- Adolescents who reported negative impacts on school performance and relationships with family and peers more often rated their mental health and wellbeing negatively.

- Adolescents who experienced negative impacts on their school performance and relationships with family and friends were much more likely to have high levels of psychological health complaints.
- Twenty-five per cent of those experiencing negative impacts on school performance experienced high levels of psychological health complaints, compared to 16% for neutral.
- The equivalent share for family relationships was 29% compared to 19%, and 23% compared to 17% for peer relationships.
- Adolescents' mental health and well-being needs should be addressed during such challenging times and the support and resources they require should be provided.
- Negative changes in family, peer and school environments were strongly linked to poor mental health and well-being, although differences across countries and regions were high.
- The findings point to an immediate need for tailored policies that aim to improve adolescents' lives and well-being in family, peer and school environments.

SUMMARY

COVID-19 pandemic mitigation measures, such as social distancing, school closures and isolation, have affected the mental health and well-being of children and adolescents. This report outlines three factors of adolescent mental health and well-being (life satisfaction and psychological and physical health complaints) and focuses on links between self-reported negative impacts of the COVID-19 pandemic (on school performance and relationships with family and peers) and adolescent mental health and well-being in 22 countries and regions of the WHO European Region. The information and data presented were collected from the Health Behaviour in Schoolaged Children survey round 2021/2022.

Thirty per cent of adolescents reported that the COVID-19 pandemic had had a negative impact on their mental health and well-being. Relatively more adolescents (38%) experienced no impact on their mental health and well-being, and 32% reported positive impacts.

Adolescents who indicated a negative impact of the COVID-19 pandemic on school performance and relationships with family and friends were more likely to report low life satisfaction and high levels of psychological and physical health complaints than the group reporting a neutral impact.

Variations across countries and regions in the links between negative impacts on school performance, relationships with family and peers and mental health and well-being were wide.

Girls and 15-year-olds were more likely to report low life satisfaction and high levels of psychological and physical health complaints that were linked to negative impacts of the pandemic.

FINDINGS

COVID-19 pandemic impact on mental health and well-being: gender, age and differences across countries and regions

Adolescents were asked how the COVID-19 pandemic had affected their mental health and well-being (with response options ranging from 1 (very negative) to 5 (very positive)). On average, 32% reported a positive impact on their mental health and well-being, 38% neither a negative nor positive impact, and 30% a negative impact (Fig. 1). Thirty-eight per cent of girls and 23% of boys reported that the COVID-19 pandemic had had a negative impact on their mental health and well-being. The largest gender differences were seen in Czechia, Lithuania and Italy (23, 22 and 21 percentage points respectively) and the lowest in the Republic of Moldova (7 percentage points) and Kazakhstan (1 percentage point) (Fig. 2).

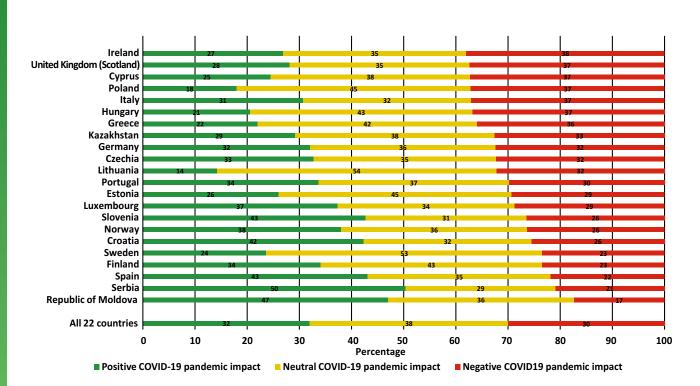
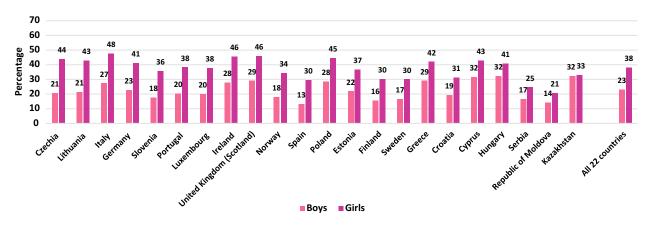


Fig. 1. Perceived COVID-19 impact on adolescent mental health and well-being

Note: countries are presented from the highest gender gap to the lowest.

Fig. 2. Gender differences in COVID-19 negative impacts on adolescent mental health and well-being



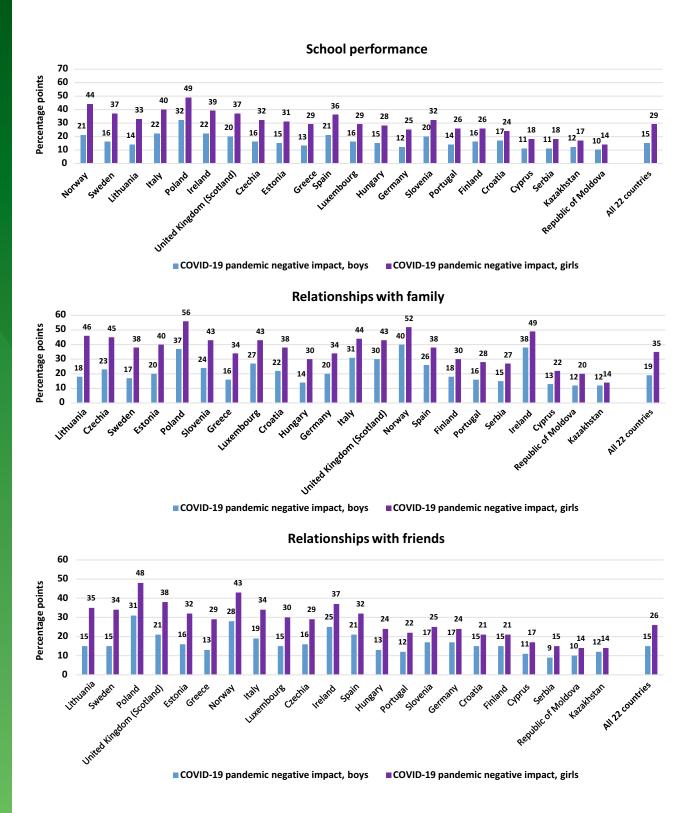
Note: countries are presented from the highest gender gap to the lowest.

COVID-19 pandemic impact and low life satisfaction

Sixteen per cent of adolescents reported low life satisfaction, with negative reports being more common in girls. The share of low life satisfaction increased with age in both genders and the gender difference was around double at ages 13 and 15. The difference in low life satisfaction between girls and boys varied across countries and regions, from 18% in Poland to 3% in Kazakhstan. Low life satisfaction ranged from 41% for girls and 23% for boys in Poland to 10% and 6% in the Republic of Moldova. On average, young people from disadvantaged families reported higher levels of low life satisfaction (18% versus 12% in those from better-off families).

The links between low life satisfaction and COVID-19 pandemic impacts followed a similar pattern across all factors investigated (school performance and relationships with family and friends). Among those experiencing negative impacts, girls were more likely to report low life satisfaction across all the factors (Fig. 3), with the largest gender differences seen in Lithuania, Norway and Sweden and the smallest in the Republic of Moldova and Kazakhstan.

Fig. 3. Gender differences in the probability of reporting low life satisfaction among those experiencing negative COVID-19 pandemic impacts on school performance and relationships with family and friends



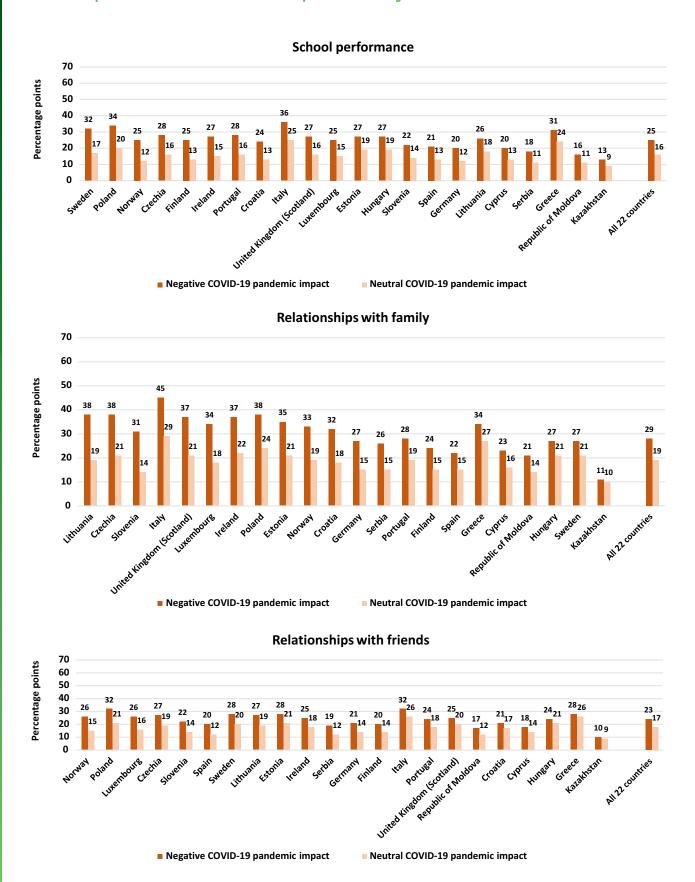
Note: countries are presented from the highest gender gap to the lowest.

COVID-19 pandemic impact and psychological health complaints

Seventeen per cent of adolescents reported high psychological health complaints. This increased with age, especially for girls (14% at age 11 and 31% at 15) and was slightly lower for adolescents from better-off families.

The links between COVID-19 pandemic impacts and psychological health complaints followed the same pattern across all factors (school performance and relationships with family and friends). On average across all three factors, the chances of reporting psychological health complaints were twice as high among adolescents experiencing negative pandemic impacts than those with a neutral impact. Adolescents experiencing negative impacts on family relationships were most likely to report high levels of psychological health complaints (29%) compared to those with neutral (19%) and positive (12%) impacts (Fig. 4).

Fig. 4. Differences in the probability of reporting high levels of psychological health complaints between adolescents experiencing negative and neutral COVID-19 impacts on school performance and relationships with family and friends



Gender and age patterns in the links between COVID-19 pandemic impacts on school performance, relationships with family and friends and psychological health complaints are similar. Girls were more likely to report high levels of psychological health complaints across the factors (Fig. 5). The share of 13- and 15-year-old girls reporting high levels of psychological health complaints, for instance, was 14 percentage points higher for those rating their school performance as being negatively affected by the pandemic than those experiencing a neutral impact (38% versus 24% in 13-year-olds and 41% versus 27% in 15-year-olds). Among 11-year-old girls, there was a 6 percentage-point difference in psychological health complaints between the groups (21% versus 15%).

The chances of reporting high levels of psychological health complaints related to negative impacts of the COVID-19 pandemic varied across countries and regions but was higher among girls in all. For those experiencing a negative impact on school performance, it ranged from 18% in Kazakhstan to 52% in Italy among girls, and from 7% in Kazakhstan to 23% in Poland in boys. Similarly, for those experiencing a negative impact on family relationships, it varied from 7% among boys and 14% among girls in Kazakhstan to 30% (boys) and 62% (girls) in Italy.

Fig. 5. Gender differences in the probability of reporting high levels of psychological health complaints among those experiencing negative COVID-19 pandemic impacts on school performance and relationships with family and friends



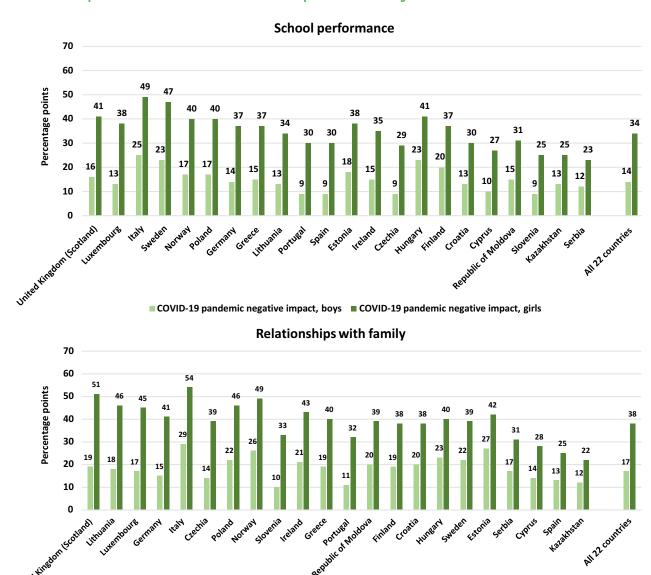
Note: countries are presented from the highest gender gap to the lowest.

COVID-19 pandemic impact and physical health complaints

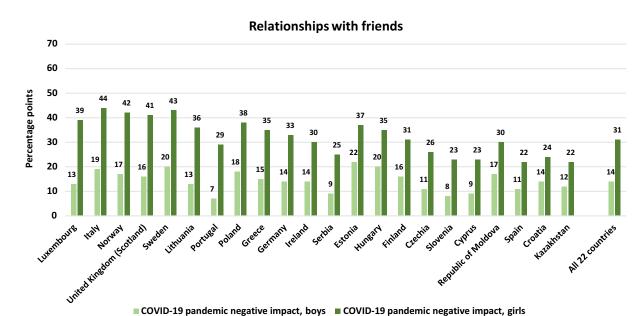
The pattern of high levels of physical health complaints was similar to the other outcomes, with 18% of adolescents reporting high levels. Older adolescents were more likely to report physical health complaints than younger ones (23% at age 15 and 12% at age 11). This held true for boys and girls, with girls reporting higher levels across all age groups. The gender gap in 15-year-olds was three-fold (11% in boys and 33% in girls).

Adolescent girls experiencing negative COVID-19 pandemic impacts on their school performance and relationships with family and peers were more likely to report high levels of physical health complaints than boys (Fig. 6), but variation across countries and regions was wide. The gender gap in links to negative impacts on family relationships, for example, ranged from 32 percentage points in United Kingdom (Scotland) to 10 in Kazakhstan.

Fig. 6. Gender differences in the probability of reporting high levels of psychological health complaints among those experiencing negative COVID-19 pandemic impacts on school performance and relationships with family and friends



■ COVID-19 pandemic negative impact, boys ■ COVID-19 pandemic negative impact, girls



POLICY ACTIONS

The COVID-19 pandemic has had a strong impact on the lives of young people worldwide. It is important to monitor the influence of the pandemic on children's and adolescents' mental health and well-being status and work out how to help them to have better mental health and well-being during any future global health challenges. Their mental health and well-being needs should be addressed during such challenging times and the support and resources they require should be provided.

One in three adolescents who participated in the Health Behaviour in School-aged Children (HBSC) survey round 2021/2022 reported that the COVID-19 pandemic had had a negative impact on their mental health and well-being. A large share, however, reported a positive impact, or no impact at all, on their mental health and well-being. The results also show that changes to family relationships and school performance due to the COVID-19 pandemic played an important role in the reporting of poor mental health and well-being.

The huge variation in results across countries and regions in the three factors explored suggests the need for country- and region-specific policies for family, peer and school environments that focus on:

- creating and implementing policies and programmes to strengthen protective environments at school, in families and among peers;
- reviewing national/regional evidence on the mental health and well-being of adolescents and tailoring services to meet need;
- collecting evidence and using it to understand how best to tailor mental health and well-being support programmes to make services adolescent-friendly and reflective of age and gender; and
- acknowledging in policies that families and peers are extremely important in helping adolescents to deal with challenges and maintain positive mental health and wellbeing.

Using the ecological approach to adolescent mental health, as recommended by WHO, could support such initiatives (1).

CONTEXT

Measures taken to reduce the spread of COVID-19, such as social distancing, school closures and isolation, have had an adverse effect on the mental health and well-being of children and adolescents (2). School closures and social distancing measures prevented them from meeting their friends face-to-face and attending out-of-school activities, resulting in large disruptions to their daily routines (3) and implications for their mental health and well-being.

Increased rates of anxiety and depression among children and adolescents as a result of these disruptions have been reported (4,5). A rise in psychological health complaints was seen during the COVID-19 pandemic, but at different rates across countries and regions and with different effects on individuals (6). Adolescent girls, older adolescents, those from more disadvantaged communities, migrants and young people with limited living space reported higher levels of mental health problems (7,8).

Life challenges brought on by the COVID-19 pandemic could be among the underlying reasons for physical health complaints (such as headaches and back or stomach pain) among adolescents. Physical health complaints were very common in adolescents infected by COVID-19 (9). Prolonged stress due to lockdown-related changes, fear about the health status of relatives and grief after losing someone close could have contributed to mental health and well-being problems (7) that appeared as physical health complaints. The lifestyles of most adolescents were affected, with reported changes in sleep patterns, physical activity habits, and time spent outdoors and in front of screens (for both school and leisure purposes) (10).

Life satisfaction among adolescents across and within countries declined during the COVID-19 pandemic (11). Studies show that the reduction in life satisfaction during the pandemic was reported by girls and boys (5,12,13), but those from disadvantaged groups reported lower levels of life satisfaction than their counterparts from better-off families (14–16).

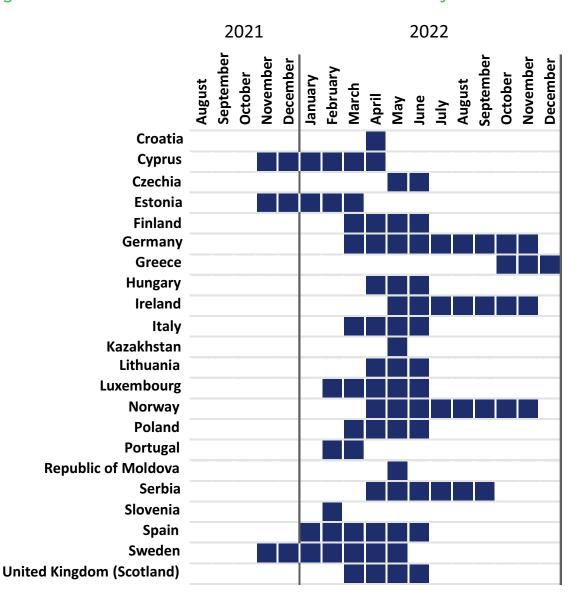
HBSC SURVEY ROUND 2021/2022

The HBSC study is a large school-based survey carried out every four years in collaboration with the WHO Regional Office for Europe. It tracks, monitors and reports on the self-reported health behaviours, health outcomes and social environments of boys and girls aged 11, 13 and 15 years. The most recent survey (2021/2022) was conducted across 44 countries and regions of the WHO European Region and Canada and included an optional set of questions that measured perceived impacts of the COVID-19 pandemic.

This report presents main findings from the HBSC survey round 2021/2022 on the COVID-19 pandemic's effects on key areas of the lives of adolescents (such as mental health, relationships with family and school performance) from 22 countries and regions of the WHO European Region. It is part of a series of five reports on understanding the impact of the COVID-19 pandemic on young people's health and well-being.

Fig. 7 shows the dates on which the 22 countries conducted the survey.

Fig. 7. Dates on which the 22 countries conducted the survey



REFERENCES¹

- 1. World Health Organization, United Nations Children's Fund. Helping adolescents thrive toolkit: strategies to promote and protect adolescent mental health and reduce self-harm and other risk behaviours. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/341327).
- 2. Fegert JM, Vitiello B, Plener PL, Clemens V. Challenges and burden of the coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. Child Adolesc Psychiatry Ment Health. 2020;14, art. 20. doi:10.1186/s13034-020-00329-3.
- 3. Cosma A, Pavelka J, Badura P. Leisure time use and adolescent mental well-being: insights from the COVID-19 Czech spring lockdown. Int J Environ Res Public Health. 2021;18(23):12812. doi:10.3390/ijerph182312812.
- 4. Meherali S, Punjani N, Louie-Poon S, Abdul Rahim K, Das JK, Salam RA et al. Mental health of children and adolescents amidst COVID-19 and past pandemics: a rapid systematic review. Int J Environ Res Public Health. 2021;18(7):3432. doi:10.3390/ijerph18073432.
- 5. Magson NR, Freeman JYA, Rapee RM, Richardson CE, Oar EL, Fardouly J. Risk and protective factors for prospective changes in adolescent mental health during the COVID-19 pandemic. J Youth Adolesc. 2021;50(1):44–57. doi:10.1007/s10964-020-01332-9.
- 6. Branje S, Morris AS. The impact of the COVID-19 pandemic on adolescent emotional, social, and academic adjustment. J Res Adolesc. 2021;31(3):486–99. doi:10.1111/jora.12668.
- 7. Ravens-Sieberer U, Erhart M, Devine J, Gilbert M, Reiss F, Barkmann C et al. Child and adolescent mental health during the COVID-19 pandemic: results of the three-wave londitudinal COPSY study. J Adolesc Health. 2022;71(5):570–8. doi:10.1016/j.jadohealth.2022.06.022.
- 8. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. JAMA Pediatr. 2021;175(11):1142–50. doi:10.1001/jamapediatrics.2021.2482.
- 9. Tarantino S, Graziano S, Carducci C, Giampaolo R, Grimaldi Capitello T. Cognitive difficulties, psychological symptoms, and long lasting somatic complaints in adolescents with previous SARS-CoV-2 infection: a telehealth cross-sectional pilot study. Brain Sci. 2022;12(8):969. doi:10.3390/brainsci12080969.
- 10. Ng K, Cosma A, Svacina K, Boniel-Nissim M, Badura P. Czech adolescents' remote school and health experiences during the spring 2020 COVID-19 lockdown. Prev Med Rep. 2021;22:101386. doi:10.1016/j. pmedr.2021.101386.
- 11. Henseke G, Schoon I, Schimmele C, Arim R, Dietrich H, Murray A et al. Youth life satisfaction during the COVID-19 pandemic in a cross-national comparison. Ottawa (ON): Statistics Canada; 2022 (https://www150.statcan.gc.ca/n1/pub/36-28-0001/2022011/article/00002-eng.htm).
- 12. van der Laan SEI, Finkenauer C, Lenters VC, van Harmelen A-L, van der Ent CK, Nijhof SL. Genderspecific changes in life satisfaction after the COVID-19-related lockdown in Dutch adolescents: a longitudinal study. J Adolesc Health. 2021;69(5):737–45. doi:10.1016/j.jadohealth.2021.07.013.
- 13. Ciudad-Fernández V, Schoeps K, Montoya-Castilla I. Emotional state, life satisfaction and worries regarding COVID-19 in Spanish and Chilean adolescents during spring 2020. Scand J Child Adolesc Psychiatr Psychol. 2022;10(1):144–52. doi:10.2478/sjcapp-2022-0015.
- 14. Soest TV, Bakken A, Pedersen W, Sletten MA. Life satisfaction among adolescents before and during the COVID-19 pandemic. Tidsskr Nor Laegeforen. 2020;140(10). doi:10.4045/tidsskr.20.0437.
- 15. Guidelines on mental health promotive and preventive interventions for adolescents: helping adolescents thrive. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/336864).
- 16. WHO European framework for action on mental health 2021–2025. Copenhagen: WHO Regional Office for Europe; 2022 (https://apps.who.int/iris/handle/10665/352549).

ACKNOWLEDGEMENTS

This report was written by: Alina Cosma, Trinity College Dublin, Ireland; Michela Bersia, University of Torino, Italy; Shynar Abdrakhmanova, National Center of Public Healthcare, Kazakhstan; Petr Badura, Palacký University Olomouc, Czechia; and Inese Gobina, Childrens' Clinical University Hospital, Latvia.

The WHO Regional Office for Europe would like to thank the Editorial Group that was responsible for technical concept and review of the five reports in this series summarizing findings from the Health Behaviour in School-aged Children (HBSC) survey round 2021/2022 on the impact of the COVID-19 pandemic on young people's health and well-being. The Editorial Group consisted of: Vivian Barnekow, WHO Regional Office for Europe, Copenhagen, Denmark; Alina Cosma, Trinity College Dublin, Ireland; and Martin W. Weber, WHO Office on Quality of Care and Patient Safety, Athens, Greece.

The five reports in the series were reviewed by: Joao Breda, WHO Office on Quality of Care and Patient Safety, Athens, Greece; Dorothy Currie, University of St Andrews, United Kingdom (Scotland); Jennifer Hall, WHO Office on Quality of Care and Patient Safety, Athens, Greece; Jo Inchley, University of Glasgow, United Kingdom (Scotland); and Oddrun Samdal, University of Bergen, Norway.

The 2021/2022 HBSC study was managed by the HBSC International Coordination Centre, University of Glasgow, United Kingdom (Scotland). The data were managed, compiled, cleaned and made available by the Databank Management Centre, Bergen University, Norway.

The national/regional data for the reports were provided by the HBSC principal investigators in participating countries and regions: Shynar Abdrakhmanova, Kazakhstan; Carolina Catunda, Luxembourg; Anna Dzielska, Poland; Anastasios Fotiou, Greece; Tania Gaspar, Portugal; Jo Inchley, United Kingdom (Scotland); Helena Jeriček Klanšček, Slovenia; Michal Kalman, Czechia; Yiasemina Karagiorgi, Cyprus; Anna Kokkevi, Greece; Galina Lesco, Republic of Moldova; Petra Löfstedt, Sweden; Nelli Lyyra, Finland; Agnieszka Malkowska-Szkutnik, Poland; Maud Moinard, Luxembourg; Irene Moor, Germany; Carmen Moreno, Spain; Ágnes Németh, Hungary; Saoirse Nic Gabhainn, Ireland; Leila Oja, Estonia; Ivana Pavic Simetin, Croatia; Leena Paakkari, Finland; Jaanika Piksööt, Estonia; Jelena Gudelj Rakic, Serbia; Matthias Richter, Germany; Francisco Rivera, Spain; Oddrun Samdal, Norway; Kastytis Šmigelskas, Lithuania; and Alessio Vieno, Italy.

The WHO Regional Office for Europe wishes to acknowledge the financial support for this publication by the Government of the Hellenic Republic through the WHO Office on Quality of Care and Patient Safety, Athens, Greece.

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania Latvia
Andorra Lithuania
Armenia Luxembourg

Austria Malta
Azerbaijan Monaco
Belarus Montenegro

Belgium Netherlands (Kingdom of the)

Bosnia and Herzegovina North Macedonia

Bulgaria Norway
Croatia Poland
Cyprus Portugal

Czechia Republic of Moldova

Denmark Romania

Estonia Russian Federation

Finland San Marino France Serbia Georgia Slovakia Slovenia Germany Greece Spain Hungary Sweden Iceland Switzerland Ireland Tajikistan

Israel Türkiye
Italy Turkmenistan

Kazakhstan Ukraine

Kyrgyzstan United Kingdom

Uzbekistan

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