World Health Organization
European Region

Ministry of Health
Republic of Poland

DIGITAL TRANSFORMATIONS FOR HEALTH LAB
GOVERNING HEALTH FUTURES 2030

Addressing the digital determinants of youth mental health and well-being

POLICY BRIEF

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POLICY BRIEF

Abstract

WHO Regional Office for Europe's Mental Health Flagship is working with Member States to address the mental health needs of children and adolescents. This policy brief aims to support countries to formulate evidence-informed policy responses to the increasing influence of digital determinants on the mental health of young people in the WHO European Region. Evidence of the impact of technology use is mixed, with studies indicating both positive and negative associations between technology use and young people's well-being. Some online activities also have both positive and negative effects simultaneously. However, the most vulnerable young people disproportionately experience negative impacts. The relationship between technology use and mental health is bidirectional: increased screen time potentially exacerbates mental health issues, which in turn may drive further technology use. Additionally, a variety of individual and environmental factors shape young people's digital behaviours and experiences, which change over time. Based on this evidence, the brief suggests eight priority actions for countries to promote and protect the mental health and well-being of young people in digital environments, and to mitigate the potential harms related to social media, artificial intelligence and other digital technologies. The full results of the evidence review and policy mapping can be found in a web annex.

Keywords

DIGITAL TECHNOLOGY, SOCIAL MEDIA, MENTAL HEALTH, ADOLESCENT HEALTH, CHILD HEALTH, ARTIFICIAL INTELLIGENCE, SCREEN TIME

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Contents

Acknowledgements iv

Executive summary v

Introduction 1

Summary of the evidence 2

The complex and multifaceted relationship between social media use and mental health and well-being 2

Evidence of harmful impact is mixed and inconclusive 2

Different levels of vulnerability to online harms among young people 2

Factors shaping the relationship between young people's technology use and mental health outcomes 3

The different impact of social media design features on young people's mental health 4

Overview of policy action taken 5

Variety of policy responses across the Region 5

Areas of concern highlighted by policy-makers 5

Different views on who should take responsibility 6

Policies developed without health sector and youth involvement 6

Eight priorities for policy action to address the digital determinants of youth mental health and well-being 7

1. Making young people's digital well-being a policy priority 7

2. Applying proven, intersectoral public health strategies to improve digital well-being 7

3. Developing clear guidance on digital well-being and healthy technology use 8

4. Holding industry and commercial interests to account 8

5. Supporting and initiating future laws and regulation to make digital environments healthy places for young people 9

6. Bolstering the capacity of the health workforce to promote healthy technology use 9

7. Increasing research into the impacts of social media on young people's mental health and well-being 10

8. Investing in and promoting alternatives to screen-based parenting, play and entertainment 10

Guiding principles for policy-makers in implementing these recommendations 11

Conclusion 12

References 13

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Executive summary

The WHO Regional Office for Europe's Mental Health Flagship is working with Member States to address the mental health needs of children and adolescents. In addition to supporting the development of effective mental health services for young people, the Flagship advocates the creation of supportive environments that promote well-being. As young people spend increasing amounts of their time in digital environments, concern has been growing that their use of digital technologies – particularly social media – may be contributing to worsening mental health and well-being.

Extensive research has been conducted over the past 5 years on the relationship between young people's technology use and various mental health outcomes including depression, anxiety, self-harm and suicide-related behaviours, and well-being outcomes such as loneliness, low self-esteem and stress. A significant focus has been on the impact of excessive or problematic technology use – particularly the impact of social media use – with increasing attention given to highly visual social media platforms such as TikTok, Instagram and Snapchat, and the role of artificial intelligence (AI). Studies have identified a range of harms that young people are exposed to online, including cyberbullying, violence, pornography, pressure to obtain an unrealistic or unhealthy physical appearance or lifestyle, sextortion, self-harm and disordered eating triggers, marketing of harmful products, and gambling.

The evidence on the impact of technology use is mixed: studies indicate both positive and negative associations between technology use and young people's well-being. While some impacts appear to be short-term, there is limited research on the longer-term effects, such as their influence on life satisfaction. Notably, the effects of technology are not uniform across all young people: the most vulnerable young people disproportionately experience negative impacts. Furthermore, certain online activities may have both positive and negative effects simultaneously, such as enabling self-expression while exposing young people to harmful content or behaviours. This dual impact highlights the complexity of technology's influence on well-being.

There is broad consensus that children and adolescents are particularly vulnerable to the risks associated with online environments owing to their developmental stage. However, establishing a clear causal link between exposure to online risks and negative mental health outcomes has proved challenging. The relationship between technology use and mental health is bidirectional: increased screen time potentially exacerbates mental health issues, which in turn may drive further technology use. Additionally, a variety of individual and environmental factors shape young people's digital behaviours and experiences, which change over time.

Policy responses to mitigate the risks of digital technology use vary across the WHO European Region but generally reflect the key online risks identified in academic literature. Many policy responses promoted within national policies place heavy responsibility on users and caregivers – for example, through following recommended age restrictions on social media and setting parental controls on devices. Other initiatives focus on improving digital literacy among young people to help them navigate the online environment safely. More recent policies show a greater focus on tackling addictive platform design and enforcing regulation of industry. Across the Region, health ministries and public health agencies, as well as young people themselves, have played a limited role in policy development. Further, evaluation of the impact of the actions taken has been limited.

As digital technologies – particularly social media and AI – evolve at a rapid pace, it is imperative that both research and policy development keep up with the changing landscape. Continued and long-term research is essential to understand the dynamic relationship between technology use and young people's well-being, and the characteristics of digital platforms that contribute most to negative outcomes for users. However, in the context of scientific uncertainty and the plausible threat that social media and digital technologies pose to health and well-being, countries also have a responsibility to:

- protect young people from potential harms;
- ensure the safety of online environments; and
- shift the burden of proof from demonstrating that social media and other digital technologies are harmful to proving that they are safe, and contribute to well-being.

Young people should also be meaningfully involved in designing, implementing and monitoring policies and public health responses to ensure that they are effective in addressing their health needs and online experiences.

Priorities for policy action on the digital determinants of youth mental health and well-being

1. **Making young people's digital well-being a policy priority**: demonstrating that promoting digital well-being is a prime concern through the establishment of policy, governance structures and accountability

2. **Applying proven, intersectoral public health strategies to improve digital well-being**: drawing on the range of effective public health and health promotion interventions already being applied across the WHO European Region to protect young people's mental health and well-being

3. **Developing clear guidance on digital well-being and healthy technology use**: establishing and promoting evidence-based guidance and recommendations to inform policy and health practice, and to support young people and families to balance digital technology benefits and risks

4. **Holding industry and commercial interests to account**: enforcing existing legislation, requiring greater transparency and data sharing, and targeting specific features of digital platforms likely to create the most harm

5. **Supporting and initiating future laws and regulation to make digital environments healthy places for young people**: driving health sector-led proposals for strong regulation of social media and digital platforms aimed at protecting health and well-being

6. **Bolstering the capacity of the health workforce to promote healthy technology use**: equipping health workers with the skills and knowledge to support young people and parents to navigate the digital world safely

7. **Increasing research into the impacts of social media on young people's mental health and well-being**: addressing research gaps to increase understanding of what aspects of social media and digital technologies are beneficial and harmful for different young people, and how these impacts vary across contexts

8. **Investing in and promoting alternatives to screen-based parenting, play and entertainment**: investing in offline alternatives in local and community settings to increase physical activity, social connection, parenting support, and engagement in arts, culture and other health-promoting activities

Introduction

Childhood and adolescence provide a unique window of opportunity to support mental health: more than half of adult mental disorders have their onset before or during adolescence *(1)*. Mental health care and support are most effective when received early; thus, intervening during this period can treat and prevent mental health difficulties. In the WHO European Region, an estimated one in seven children (aged 0–19 years) and one in five adolescents (aged 15–19 years) are living with a mental health condition *(2,3)*. Life satisfaction has been declining among adolescents, and suicide is the leading cause of death among those aged 15–25 years *(4)*. However, most children and adolescents in need of mental health care do not receive the necessary support.

To address these issues, the WHO Regional Office for Europe has prioritized the mental health and well-being of children and adolescents within the WHO European Framework for Action on Mental Health 2021–2025 *(5)*, and operationalized it as one of the working packages of the pan-European Mental Health Coalition *(6)*. Through the Coalition and the Programme on Quality of Care for Child and Adolescent Mental Health under the WHO Office on Quality of Care and Patient Safety in Athens, Greece, a number of initiatives are under way to support Member States to strengthen child and adolescent mental health systems, and to create supportive environments that promote and protect youth mental health and well-being.

The digital determinants of youth mental health

The impact of digital environments on young people's mental health and well-being is a growing concern for many countries. Every four years, WHO/Europe partners conduct the Health Behaviour in School-aged Children survey, which identifies the status of and trends in health and well-being among young people, including factors affecting their mental health. The latest data from this survey reveal a sharp rise in problematic social media use among adolescents, with rates increasing from 7% in 2018 to 11% in 2022. This, coupled with findings that 12% of adolescents are at risk of problematic gaming, raises urgent questions about the impact of digital technologies on the mental health and well-being of young people *(7)*.

The digital determinants of mental health and well-being refer to the ways in which digital technologies and online environments influence mental health outcomes. These factors have become increasingly significant, as digital technologies and data-driven processes are deeply embedded in adolescents' daily lives *(8)*. Digital technologies have the potential to affect each domain of young people's well-being both positively and negatively. They offer opportunities for creativity, exploration and social connection *(9)*, while at the same time contributing to rising concerns over mental health issues such as depression, anxiety and social isolation *(10)*.

This policy brief aims to support countries to formulate evidence-informed policy responses to the increasing influence of digital determinants on the mental health of young people in the WHO European Region. It has been informed by:

- **a rapid evidence review** of peer-reviewed literature on the impact of social media and digital technologies on young people's mental health;
- **a mapping of policy actions** implemented globally (with a focus on the WHO European Region) related to digital technology use and young people's mental health; and
- **a consultation with European and international experts**, WHO technical experts and members of the WHO pan-European Mental Health Coalition *(6)* and Youth4Health Network *(11)*.

Based on the findings of these exercises, and drawing on evidence-based public health principles and approaches, the brief identifies eight priority actions that countries can take to promote and protect the mental health and well-being of young people in digital environments, and to mitigate the potential harms related to social media, artificial intelligence (AI) and other digital technologies.[1]

1 The full results of the evidence review and policy mapping can be found in a Web annex. Addressing the digital determinants of young people's mental health and well-being: policy brief. Web annex: findings from evidence review and policy mapping. Copenhagen: WHO Regional Office for Europe (https://iris.who.int/handle/10665/381480 accessed 15 May 2025).

Summary of the evidence

The complex and multifaceted relationship between social media use and mental health and well-being

Mental health outcomes for young people related to social media and digital platform use are influenced by the characteristics of the user, the content they experience, and when, why and how much the technology is used *(12–15)*.

With depression and anxiety, passive use, online victimization *(16,17)* and appearance-focused content are often linked to negative outcomes, such as depressive symptoms *(18,19)* or suicidality *(12,15,16,20–22)*, although some evidence suggests a bidirectional relationship, where pre-existing symptoms drive increased social media use *(23)*. Similarly, psychological and emotional well-being is shaped by the type of engagement: passive use and appearance-related content reduce well-being *(12,13,24)*, while moderate use and positive interactions potentially enhance empathy and self-esteem *(18,25,26)*.

Social media use also affects social well-being, offering opportunities for connection and belonging *(18,26–28)* – particularly for vulnerable groups – but carrying risks such as loneliness, radicalization and hate speech *(18)*. Developmental and behavioural impacts include mixed outcomes: some users benefit from improved problem-solving skills *(29,30)* while others face challenges like disordered eating, poor sleep and increased aggression *(31–36)*. This highlights the nuanced effects of social media use, where context and individual factors play critical roles in determining outcomes.

Evidence of harmful impact is mixed and inconclusive

To date, most research carried out on the impact of young people's technology use has been cross-sectional (focused on a single point in time). Studies show both positive and negative associations between different measures of technology use and well-being outcomes. Some studies indicate that an online activity can have both positive and negative impacts on a young person's well-being simultaneously – for example, joining a social network may enable a user to explore their identity, but may also expose them to harmful content or conduct. The duration of these effects on young people's health and well-being is understudied, although early evidence shows that impacts may be short-term. Less research is available on longer-term outcomes such as life satisfaction *(37)*.

Different levels of vulnerability to online harms among young people

Research reinforces the presence of multiple online risks to young people's mental health, physical health and well-being, with strong consensus that children's and adolescents' stages of biological and cognitive development make them particularly vulnerable to online harms *(25)*.
Technology use carries greater risk for some young people than others.

- Younger children have greater difficulty managing their use of digital devices due to their limited cognitive development and digital literacy, and their ability to recognize and respond to online dangers is less developed than that of older children or adolescents *(25)*.
- Heavier social media use may not be as harmful to mentally healthy, socially integrated young people; similar use may exacerbate distress in vulnerable individuals *(37–39)*.
- Young people with pre-existing mental health problems and issues such as body dissatisfaction or low self-esteem seem to be more vulnerable to negative effects *(15,37,40–44)*.
- Children with offline vulnerabilities are also likely to be vulnerable online, exposed to more risks and less able to access support *(45)*.

- Gender minority young people and those from lower socioeconomic backgrounds encounter additional stressors and tend to have greater mental health problems *(13,23,40)*.
- Research is mixed on gender-related differences in vulnerability to different online risks *(46–48)*.

Factors shaping the relationship between young people's technology use and mental health outcomes

Young people's digital behaviours, and the impact of their experiences, are mediated and moderated by a wide range of individual and environmental protective and risk factors, which change over time.

Moderators are variables that change the strength or nature of the relationship, such as gender – girls and gender-diverse young people often face worse outcomes, particularly around body image-related content *(27)*. Mediators, on the other hand, explain how or why social media use affects well-being, such as engagement in upward social comparison leading to depressive symptoms.

Table 1 and Table 2 set out key protective and risk factors that may increase resilience or vulnerability. These include sociodemographic factors such as age, gender, socioeconomic status and digital literacy; psychosocial and behavioural factors such as self-esteem, independence, resilience, time spent online and social support; and household factors such as caregiver interest, modelled habits, household rules and youth involvement in decision-making.

Table 1. Protective factors that may increase resilience

Individual	Environmental
Individual temperament – for example, self-confidence and body appreciation *(38,39,49)*	Higher socioeconomic status/family education level *(50,51)*
Positive, intrinsic motivations for going online, such as information-seeking, enrichment and learning *(49,52,53)*	Social support (on- and offline) and close family/peer relationships *(22,54–56)*
Adopting strategies to protect privacy and self-regulate use – for example, turning notifications off *(22,34,53)*	Parental interest and active mediation of child's technology use *(36,57)*
Developing digital literacy and skills *(46)*	Open discussions with family, and setting boundaries on technology use together *(54,58)*
Learning about self-acceptance, body positivity and healthy digital practices *(39,59)*	Parents modelling healthy digital habits *(40,60)*
Adopting positive strategies to manage emotions and cope with negative experiences – for example reporting incidents and seeking help *(50,57)*	Digital-free spaces – for example, no devices in bedrooms *(61)*

Table 2. Risk factors that may increase vulnerability

Individual	Environmental
Existing mental health conditions *(15,37,41)*	Lower socioeconomic status/family education level *(57,62)*
Individual temperament – low self-esteem, impulsivity or fear of missing out *(42–44)*	Lack of social support and weak family communication *(22,55,63)*
Experience of offline risks or stressors – for example, violence or bullying *(26)*	Uncontrolled use of technology and internet access in child's bedroom *(64,65)*
Negative or extrinsic motivations – for example, seeking approval, avoidance or to talk to strangers *(66)*	Strict parental monitoring *(57,58)*
Remaining passive after an upsetting online experience *(67)*	Parental phubbing (ignoring one's immediate social interactions in favour of engaging with a smartphone) and negative modelling *(63)*
Maladaptive coping skills: using social media to avoid dealing with negative emotions *(53,68)*	Restrictions on other activities – such as coronavirus disease restrictions pushing more children online *(42)*

The different impact of social media design features on young people's mental health

New affordances of social media and smartphones can shape young people's developmental experiences in several ways. While limited research has explored the impact of specific design features or affordances of social media, the importance of several features has been identified:

- greater frequency, immediacy and permanence of communication and experiences *(69,70)*, including portability of smartphones, direct messaging and simultaneous interactions *(26,36,71,72)*;
- intensified demands of peers *(67)*, via notifications, alerts and rewards *(73,74)*;
- altered nature of relationships *(16)*, including quantified feedback (likes, followers) and online anonymity *(39,49)*;
- new opportunities for connection and information *(75)*, including access to support groups, online information, hashtags and trends to connect interests *(47,76,77)*;
- increased importance of imagery *(18)*, via highly visual platforms, cameras, filters and curated content *(17,19,32,46,78,79)*; and
- experiences driven by data and business models *(53,80)*, including personalization algorithms, targeted adverts and digital marketing *(81)*.

Overview of national and international policy actions

A regional and global mapping exercise was undertaken in 2024–2025 to examine policy approaches to protecting young people from online harms and promoting safe digital experiences. Policy documents from 42 countries were identified and included, along with European Union (EU)-level policies and regulatory frameworks. Documents examined included relevant legislation, acts, policies, guidelines and programmatic documents. Policy actions were categorized and analysed thematically, based on predetermined research questions.[2] The following is a summary of the major findings.

Variety of policy responses across the Region

Approaches to protect children's health and well-being in the digital environment vary across the WHO European Region, and broadly reflect the types of online risks identified in academic literature. Conceptualizations of mental health and well-being also vary widely. Some countries focus on specific aspects of health or well-being (such as addiction); others adopt broader health frameworks. Focus areas include:

- addressing addiction, problematic technology use and cyberbullying;
- content moderation and increasing accountability of digital platforms;
- stricter age restrictions and verification systems (noting that the appropriate age for children to access social media varies across the Region, from 12 to 16 years);
- stronger parental controls on devices and platforms;
- safety by design – removing design features that encourage prolonged use and promote harmful content;
- increasing digital literacy and youth empowerment;
- restrictions on smartphone use in schools; and
- awareness campaigns.

Areas of concern highlighted by policy-makers

Major risks to young people's health and well-being include:

- excessive screen time or social media use;
- harmful content, including pornography, violence, sexual abuse, hate messages and discriminatory messages;
- cyberbullying, stalking and trolling;
- sexist and stereotype-perpetuating content;
- misinformation;
- marketing of harmful foods and products (such as tobacco, alcohol and foods high in fat and salt), gambling and plastic surgery;
- data protection risks, unlawful processing of children's data and oversharing of children's images (sharenting).

Harmful features of digital platforms include:

- addictive features, such as infinite scrolling, push notifications and loot boxes;
- algorithms and content amplification features;
- harmful interaction mechanisms, such as direct messaging;

2 The full results of the evidence review and policy mapping can be found in the web annex. Addressing the digital determinants of young people's mental health and well-being: policy brief. Web annex: findings from evidence review and policy mapping. Copenhagen: WHO Regional Office for Europe (https://iris.who.int/handle/10665/381480 accessed 15 May 2025).

- a lack of protective settings as default;
- digital marketing practices that make it difficult for young users to identify advertisements; and
- manipulated images and deep fakes.

Different views on who should take responsibility

Many policy responses promoted within national policies place heavy responsibility on users and parents, such as age restrictions and parental controls on devices.

- Policies in Azerbaijan, Italy and Spain emphasize parental controls, while Croatia and Germany focus on age labelling as part of regulatory frameworks.
- The EU's Audiovisual and Media Services Directive emphasizes self-regulation by platforms, encouraging tools like parental controls and age ratings.

More recent policies show a growing concern about addictive platform design and enforcing regulation of industry.

- Policies in France, Ireland and the United Kingdom demonstrate a strong focus on platform accountability.
- The EU's Digital Services Act enforces strong obligations on very large platforms to protect the rights of children through age verification, parental control tools, rapid processing of flagged content, and ensuring transparency in algorithms and content moderation.

Policies developed without health sector and youth involvement

Health ministries and young people have played a limited role in policy development to date, but several countries are beginning to frame this issue as a broader public health concern. Policies aiming to protect children in the digital field often fall under the purview of departments like communication, technology, education or culture, with limited involvement of the health sector.

There is little evidence of young people's active involvement in policy development across the WHO European Region; however, many policies do emphasize the importance of youth empowerment and participation in decision-making processes.

- The Better Internet for Kids strategy focuses on children's involvement in shaping the digital decade through consulting, co-creating and inclusive policy development.
- Albania's National Youth Strategy and Action Plan emphasizes youth innovation and involvement in governance processes.
- Austria includes "reality checks" to validate strategies with young people.
- Belgium's Youth Policy in the country's three communities includes regional youth work focusing on outreach and support in both public and digital spaces.

Eight priorities for policy action to address the digital determinants of youth mental health and well-being

Balancing the benefits and risks of social media and digital technology use to the mental health of young people presents an urgent public health challenge for countries across the WHO European Region. There is a collective responsibility to protect young people from digital harm and to realize their right to enjoy safe and healthy digital environments.

To address the digital determinants of young people's mental health and well-being, ministries of health and public health agencies are encouraged to take forward the following eight priority policy actions emerging from the evidence and from country experience globally.

1. Making young people's digital well-being a policy priority

Addressing the digital determinants of young people's mental health and well-being should be a high priority for health ministries and public health agencies across the Region. Countries can demonstrate that promoting young people's digital well-being is a prime concern by appointing a senior official to lead and coordinate cross-governmental actions on this issue. A multisectoral advisory group can also be established to support this function, bringing together different areas of knowledge and expertise, including empowering young people to participate in all aspects of digital well-being.

Regular needs assessments and evidence reviews should be undertaken as part of a sustained data collection methodology that can inform action when the evidence is uncertain and emerging. This will help policy-makers to understand young people's diverse experiences, and to identify which groups are most vulnerable to risks such as problematic technology use, cyberbullying, online harassment and exposure to harmful content. It will also assist in highlighting gaps in critical areas such as digital literacy and skills, and identifying how young people are benefiting from engaging in digital platforms.

Based on this information, public health agencies, in collaboration with young people, should create – and regularly update – an action plan outlining steps and initiatives to achieve better digital well-being and reduce the mental health impacts of young people's technology use. Action plans should outline the public health and other strategies required to address barriers to young people's digital well-being – including prevention strategies, early detection of young people at risk, policy changes, building digital literacy and community education, and behaviour-change initiatives. Action plans should provide details of who is responsible for each action and how collaboration will be fostered with other sectors.

2. Applying proven, intersectoral public health strategies to improve digital well-being

When developing digital well-being action plans, ministries of health and public health agencies can draw on a range of effective public health and health promotion interventions already being applied across the WHO European Region to protect and promote young people's health and well-being. These include vaccination campaigns, interventions to prevent obesity, road and water safety initiatives, and tobacco control programmes.

Lessons can be learned from existing public health strategies to prevent young people being harmed by technology use in the first place, to respond to problems when they arise, and to minimize any

long-term effects resulting from negative digital experiences. Among the menu of interventions that countries can explore, some will be led by public health agencies and others will depend on collaboration with other sectors.

Examples of potential public health interventions to promote digital well-being include:

- public campaigns to promote healthy technology-use habits and to raise awareness of potential risks;
- introducing higher and enforceable age restrictions on certain platforms and types of personal devices;
- placing health warnings on smartphones and social media platforms;
- creating smartphone-free schools and other public spaces;
- requiring safety features to be on by default – such as time limits, high privacy settings and content filters – and personalization algorithms to be switched off;
- teaching children and young people digital literacy and about healthy digital habits with a mental health focus, as part of comprehensive digital education and well-being programmes in schools, with campaigns nuanced to reflect the balance of harms versus benefits, recognizing that the offline and online lives of young people are often merged;
- strengthening the digital literacy of parents and educators to raise awareness about potential harms and benefits, the mental health and health outcomes of digital engagement, and what they can do to promote digital well-being among young people;
- investing in safe and accessible offline spaces for young people, such as playgrounds, sports facilities and youth clubs; and
- strengthening support services for young people who have experienced different forms of digital harms.

3. Developing clear guidance on digital well-being and healthy technology use

Strong normative and technical guidance is necessary to inform policy and health practice, and to support young people and their families in balancing digital technology benefits and risks. While some guidance exists, such as WHO's recommendations on screen time for young children *(82)*, comprehensive, evidence-based recommendations for digital well-being and healthy and balanced technology use are lacking. With support from WHO, young people and others, countries should collaborate to establish and promote evidence-based recommendations for healthy technology use, tailored to different age groups. Issuing clear and consistent public health guidance will help young people to make informed choices about technology use, and enable caregivers, schools, youth organizations and health professionals to support young people based on the best available evidence. Any guidelines need to be reviewed regularly to reflect the emerging evidence and technological developments.

4. Holding industry and commercial interests to account

The digital environment and the forces and systems within it are largely designed and governed by technology companies, and are therefore greatly influenced by commercial interests. These interests not only affect the digital environment itself but also, with the merging of young people's online and offline lives, directly influence young people's mental health outcomes. To address digital determinants of mental health effectively, the actions, omissions and commercial interests of the technology industry must therefore be held to account. Examples of strategies to achieve this include:

- enforcing transparency in the commercial interests of digital technologies and in their role in developing digital platforms and new technologies;
- partnering with civil society, adopting conflict of interest policies and supporting safe spaces for discussions with industry;

- requiring digital platforms to share data to improve the granularity of research into the digital determinants of mental health, such as the specific mechanisms and features in digital platforms that have an impact on health – for example, "forever scrolling", "likes" and personalization algorithms;
- taxing the profits of digital technology companies to fund youth mental health services and/or alternative offline spaces for young people;
- introducing enforceable age restrictions on certain platforms and types of personal devices;
- introducing common and enforceable classifications of what is considered harmful or safe content for young people;
- supporting the inclusion of young people in the co-creation of emergent digital technologies, such as generative AI and chatbots;
- restricting and regulating the advertisements and celebrity promotion of harmful products and material on digital platforms, such as fast-food advertising;
- requiring safety features to be on by default, such as time limits, high privacy settings and content filters, and switching off personalization algorithms; and
- supporting the development of competitive locally owned technology companies and infrastructure to promote competition with the current technology monopolies and enable better access to the digital environments in the WHO European Region.

5. Supporting and initiating future laws and regulation to make digital environments healthy places for young people

Young people's use of digital technologies and their engagement in digital environments are important determinants of their health. Traditionally, the health sector has not played a major role in shaping digital, data and AI governance. In many countries, these are usually led by technology ministries or more recently established digital agencies and ministries. As more evidence emerges on how digital technologies can affect young people's development, health and well-being, public health must have a seat at the table and ensure that a health-in-all-policies approach extends to digital governance.

Ministries of health can propose and push for strong regulation of social media and other digital platforms, ensuring that innovation never comes at the expense of health and well-being. The health sector can also help to hold digital platforms to account by monitoring implementation of the EU's Digital Services Act and relevant national legislation. Efforts to put young people's health and well-being at the centre of digital policies can be reinforced by advocacy from health professionals who see firsthand the impact that using social media and digital devices has on their young patients' mental and physical health.

6. Bolstering the capacity of the health workforce to promote healthy technology use

Health workforces across the WHO European Region need to be better equipped to support young people and parents in navigating the digital world safely and promoting healthy technology use. Critically, health-care professionals should receive regular training on digital technologies and social media platforms, and on their potential impacts on young people's mental health. This will enable them to identify and understand the challenges faced by young people and provide effective, evidence-based support. Timely support should be expanded and made available for young people who are harmed by their technology use – for example, mental health counselling, bullying support, eating disorder treatment, self-harm prevention and addiction counselling.

Similarly, the benefits of digital communities and online peer support for people who have experienced online abuse should be understood and leveraged to offer the highest quality of support possible. Health-care providers, service providers and technology industries should implement conflict of interest policies to ensure the safety of digital mental health platforms for young people. Algorithms directing users to various self-help services and psychological services offer no

guarantee of quality. A regulated database of approved, evidence-based online mental health platforms could help to address this issue.

7. Increasing research into the impacts of social media on young people's mental health and well-being

While there is a growing body of evidence on the relationships between young people's technology use and mental health outcomes, further research is still urgently needed in many areas. Funding long-term studies and experimental research, and developing standardized measures for conducting high-quality research on the impacts of young people's technology use, will help to overcome current weaknesses in the evidence base. Supporting research that represents the diverse experiences of young people across a range of contexts and backgrounds is critical, as is research that provides a more granular understanding of why some young people are more vulnerable to digital harms than others, and the impact of different elements of social media platforms such as content recommendation algorithms and addictive design features. With this knowledge, countries will be in a better position to regulate the most harmful elements of digital technologies in a more targeted way.

Research on the mental health impacts of digital platforms and social media has focused on traditional mental health outcomes, but this needs to be expanded to reflect the more complex and nuanced impacts digital technologies have on young people. A multidisciplinary and diverse approach to research is required, incorporating the lived experience of young people, and exploring the full range of influences and potential outcomes.

8. Investing in and promoting alternatives to screen-based parenting, play and entertainment

Investment in offline alternatives in local and community settings will be critical to driving behavioural change at the individual and societal levels, and to reducing young people's and parents' reliance on digital devices for entertainment, learning and social connection. Creating more youth-friendly environments and offering a greater variety of accessible and affordable resources and spaces for young people will help to promote increased physical activity, social connection, parenting support, and engagement in the arts and cultural activities. These well-evidenced health promotion activities have the potential not only to have a positive impact on digital behaviours but also to promote a range of mental and physical health outcomes for young people and their wider community. National and community-level actions to consider include:

- partnering with local government and civil society organizations to educate families and communities on the benefits of limiting children's screen time – such as improved sleep, social skills and physical activity – through workshops, webinars or education campaigns on healthy screen habits;
- investing in community-based activities for early childhood, including outdoor playgrounds and parenting support groups;
- encouraging local businesses, schools and local governments/municipalities to designate screen-free zones;
- advocating local-level policies that promote real-world engagement, such as "screen-free hours" in childcare settings and in schools;
- working with local parks, recreation facilities and youth clubs to make outdoor spaces, sports facilities and clubs more accessible for young people; and
- empowering and building the capacity of parents and caregivers to set an example by reducing their own screen time, and to model and promote healthy technology use.

Guiding principles for policy-makers in implementing policy actions

Employing the precautionary principle until digital platforms are shown to be safe

In situations of scientific uncertainty where there is potential for serious harm to public health, the precautionary principle should be applied as a guiding framework for decision-making. Social media and other digital platforms, in their current form, present a plausible threat to young people's development and to their long-term health and well-being. Countries should therefore take measures to prevent serious and irreversible harm to both individuals and young generations as a whole. The burden of proof must shift from demonstrating that social media and other digital technologies are harmful to proving that they are safe. Technology companies should be required to demonstrate that their products and services are safe for young people. Any precautionary measures taken can be reviewed as new data and evidence emerge.

Co-creating policies with young people and their families

Evidence shows that young people's experiences of using social media and other digital platforms are diverse and constantly changing. Digital technologies are an important part of many young people's daily lives, and can offer benefits for their health and well-being. Young people have a right to enjoy the positive aspects of the digital world and to play a role in shaping their futures.

Young people and their families should be involved in designing, implementing and monitoring public health responses to ensure that they are effective in addressing their health needs and online experiences. Young people's insights are also invaluable for developing innovative healthy interventions that are tailored to the preferences and behaviours of different age groups. Involving young people in decisions about their digital technology use can also equip them to make informed decisions about their future digital habits.

Conclusion

Digital determinants are increasingly influential in shaping the mental health and well-being of young people, presenting both risks and opportunities. Addressing this complex challenge requires a multidisciplinary approach that amplifies the voices of young people and places them at the centre of decision-making and the development of solutions.

Ministries of health and public health institutions have a critical role to play in leading and advocating action. The eight priorities for policy action outlined in this brief provide a roadmap for shaping policies and programmes that promote digital well-being and mitigate the potential harms associated with digital spaces and technologies. This can be achieved through demonstrating commitment, implementing evidence-based regulations, enhancing offline alternatives, increasing accountability of industry for online safety, and ensuring that young people and communities are equipped with the skills and resources to navigate the digital world.

A proactive and coordinated response will be essential to safeguarding the mental health and well-being of future generations. As digital technologies continue to evolve, so too must the strategies to ensure they contribute to, rather than compromise, young people's mental health and well-being.

References[3]

1. McGrath JJ, Al-Hamzawi A, Alonso J, Altwaijri Y, Andrade LH, Bromet EJ et al. Age of onset and cumulative risk of mental disorders: a cross-national analysis of population surveys from 29 countries. Lancet Psychiatry. 2023;10(9):668–81 (https://doi.org/10.1016/S2215-0366(23)00193-1).

2. Addressing child and adolescent mental health. WHO/Europe [website]. WHO Regional Office for Europe; 2025 (https://www.who.int/europe/activities/addressing-child-and-adolescent-mental-health).

3. Global Burden of Disease Study 2021 (GBD 2021) [online database]. Seattle, United States: Institute for Health Metrics and Evaluation (IHME); 2024 (https://vizhub.healthdata.org/gbd-results?params=gbd-api-2021-permalink/17bf2588d53e3e298c2d45436d978077).

4. Cosma A, Abdrakhmanova S, Taut D, Schrijvers K, Catunda C, Schnohr C et al. A focus on adolescent mental health and wellbeing in Europe, central Asia and Canada. Health Behaviour in School-aged Children international report from the 2021/2022 survey, volume 1. Copenhagen: WHO Regional Office for Europe; 2023 (https://iris.who.int/handle/10665/373201). Licence: CC BY-NC-SA 3.0 IGO.

5. WHO European framework for action on mental health 2021–2025. Copenhagen: WHO Regional Office for Europe; 2022 (https://iris.who.int/handle/10665/352549). Licence: CC BY-NC-SA 3.0 IGO.

6. The Pan-European Mental Health Coalition. WHO/Europe [website]. WHO Regional Office for Europe; 2025 (https://www.who.int/europe/initiatives/the-pan-european-mental-health-coalition).

7. Boniel-Nissim M, Marino C, Galeotti T, Blinka L, Ozoliņa K, Craig W et al. A focus on adolescent social media use and gaming in Europe, central Asia and Canada: Health Behaviour in School-aged Children international report from the 2021/2022 survey. Copenhagen: WHO Regional Office for Europe; 2024 (https://iris.who.int/handle/10665/378982). Licence: CC BY-NC-SA 3.0 IGO.

8. Kickbusch I, Piselli D, Agrawal A, Balicer R, Banner O, Adelhardt M et al. The *Lancet* and *Financial Times* Commission on governing health futures 2030: growing up in a digital world. Lancet. 2021;398(10312):1727–76 (https://doi.org/10.1016/S0140-6736(21)01824-9).

9. Giovanelli A, Ozer EM, Dahl RE. Leveraging technology to improve health in adolescence: a developmental science perspective. J Adolesc Health. 2020;67(2S):S7–S13 (https://doi.org/10.1016/j.jadohealth.2020.02.020).

10. Carvajal L, Requejo JH, Irwin CE. The measurement of mental health problems among adolescents and young adults throughout the world. J Adolesc Health. 2021;69(3):361–2 (https://doi.org/10.1016/j.jadohealth.2021.06.009).

11. Youth4Health: the WHO Regional Office for Europe's youth initiative. WHO/Europe [website]. WHO Regional Office for Europe; 2025 (https://www.who.int/europe/initiatives/youth4health).

12. Course-Choi J, Hammond L. Social media use and adolescent well-being: a narrative review of longitudinal studies. Cyberpsychol Behav Soc Net. 2021;24(4):223–36 (https://doi.org/10.1089/cyber.2020.0020).

3 All references accessed 2–3 April 2025.

13. Dienlin T, Johannes N. The impact of digital technology use on adolescent well-being. Dialogues Clin Neurosci. 2020;22(2):135–42 (https://doi.org/10.31887/DCNS.2020.22.2/tdienlin).

14. Piteo EM, Ward K. Review: social networking sites and associations with depressive and anxiety symptoms in children and adolescents – a systematic review. Child Adolesc Ment Health. 2020;25(4):201–16 (https://doi.org/10.1111/camh.12373).

15. Vidal C, Lhaksampa T, Miller L, Platt R. Social media use and depression in adolescents: a scoping review. Int Rev Psychiatry. 2020;32(3):235–53 (https://doi.org/10.1080/09540261.2020.1720623).

16. Choukas-Bradley S, Kilic Z, Stout CD, Roberts SR. Perfect storms and double-edged swords: recent advances in research on adolescent social media use and mental health. Adv Psychiatry Behav Health. 2023;3(1):149–57 (https://doi.org/10.1016/j.ypsc.2023.03.007).

17. Panayiotou M, Black L, Carmichael-Murphy P, Qualter P, Humphrey N. Time spent on social media among the least influential factors in adolescent mental health: preliminary results from a panel network analysis. Nat Mental Health. 2023;1(5):316–26 (https://doi.org/10.1038/s44220-023-00063-7).

18. McCrory A, Best P, Maddock A. The relationship between highly visual social media and young people's mental health: a scoping review. Child Youth Serv Rev. 2020;115:105053 (https://doi.org/10.1016/j.childyouth.2020.105053).

19. Rounsefell K, Gibson S, McLean S, Blair M, Molenaar A, Brennan L et al. Social media, body image and food choices in healthy young adults: a mixed methods systematic review. Nutr Diet. 2020;77(1):19–40 (https://doi.org/10.1111/1747-0080.12581).

20. Basu N, Blanton MA, Gonzales J, Hendricks KE, Mehari K, Smith PN. Upward social comparisons and suicidal ideation on Facebook: moderating role of thwarted belongingness. Psychol Pop Media. 2024;13(3):513–17 (https://doi.org/10.1037/ppm0000505).

21. Noel JK, Sammartino CJ, Johnson M, Swanberg J, Rosenthal SR. Smartphone addiction and mental illness in Rhode Island young adults. R I Med J (2013). 2023;106(3):35–41 (https://pubmed.ncbi.nlm.nih.gov/36989096/).

22. Stoilova M, Livingstone S, Khazbak R. Investigating risks and opportunities for children in a digital world: a rapid review of the evidence on children's internet use and outcomes. Florence: UNICEF Office of Research – Innocenti; 2021 (https://doi.org/10.18356/25211110-2020-03).

23. Khan A, Moni MA, Khan SR, Burton NW. Different types of screen time are associated with low life satisfaction in adolescents across 37 European and North American countries. Scand J Public Health. 2023;51(6):918–25 (https://doi.org/10.1177/14034948221082459).

24. O'Reilly M, Levine D, Donoso V, Voice L, Hughes J, Dogra N. Exploring the potentially positive interaction between social media and mental health; the perspectives of adolescents. Clin Child Psychol Psychiatry. 2023;28(2), 668–82 (https://doi.org/10.1177/13591045221106573).

25. Van De Casteele M, Flamant N, Ponnet K, Soenens B, Van Hees V, Vansteenkiste M. Adolescents' mental health in the social-media era: the role of offline and online need-based experiences. J Adolesc. 2024;96(3):612–31 (https://doi.org/10.1002/jad.12286).

26. Chochol MD, Gandhi K, Croarkin PE. Social media and anxiety in youth. Child Adolesc Psychiatr Clin N Am. 2023;32(3):613–30 (https://doi.org/10.1016/j.chc.2023.02.004).

27. Coyne SM, Weinstein E, Sheppard JA, James S, Gale M, Van Alfen M et al. Analysis of social media use, mental health, and gender identity among US youths. JAMA Netw Open. 2023;6(7):e2324389 (https://doi.org/10.1001/jamanetworkopen.2023.24389).

28. Marciano L, Viswanath K. Social media use and adolescents' well-being: a note on flourishing. Front Psychol. 2023;14 (https://doi.org/10.3389/fpsyg.2023.1092109).

29. Haddock A, Ward N, Yu R, O'Dea N. Positive effects of digital technology use by adolescents: a scoping review of the literature. Int J Environ Res Public Health. 2022;19(21):14009 (https://doi.org/10.3390/ijerph192114009).

30. Ricci RC, de Paulo ASC, de Freitas AKPB, Ribeiro IC, Pires LSA, Facina MEL et al. Impacts of technology on children's health: a systematic review. Revista Paul Pediatria. 2023;41:e2020504 (https://doi.org/10.1590/1984-0462/2023/41/2020504).

31. Kosola S, Mörö S, Holopainen E. Smartphone use and well-being of adolescent girls: a population-based study. Arch Dis Child. 2024;109(7):576–81 (https://doi.org/10.1136/archdischild-2023-326521).

32. Livet A, Boers E, Laroque F, Afzali MH, McVey G, Conrod PJ. Pathways from adolescent screen time to eating related symptoms: a multilevel longitudinal mediation analysis through self-esteem. Psychol Health. 2024;39(9):1167–82 (https://doi.org/10.1080/08870446.2022.2141239).

33. Seekis V, Lawrence RK. How exposure to body neutrality content on TikTok affects young women's body image and mood. Body Image. 2023;47:101629 (https://doi.org/10.1016/j.bodyim.2023.101629).

34. Carter B, Payne M, Rees P, Sohn SY, Brown J, Kalk NJ. A multi-school study in England, to assess problematic smartphone usage and anxiety and depression. Acta Paediatr. 2024;113(10):2240–8 (https://doi.org/10.1111/apa.17317).

35. Dun-Campbell K, Hartwell G, Maani N, Tompson A, van Schalkwyk MC, Petticrew M. Commercial determinants of mental ill health: an umbrella review. PLoS Glob Public Health. 2024;4(8):e0003605 (https://doi.org/10.1371/journal.pgph.0003605).

36. Khalaf AM, Alubied AA, Khalaf AM, Rifaey AA. The impact of social media on the mental health of adolescents and young adults: a systematic review. Cureus. 2023;15(8):e42990 (https://doi.org/10.7759/cureus.42990).

37. Brimmel N, Bijttebier P, Eggermont S. Associations between intentions for affective social media content choices and depressive symptoms in adolescence: a cross-sectional investigation of media response styles as moderators. Psychol Pop Media. 2024;13(4):550–9 (https://doi.org/10.1037/ppm0000510).

38. Ivie EJ, Pettitt A, Moses LJ, Allen NB. A meta-analysis of the association between adolescent social media use and depressive symptoms. J Affect Disord. 2020;275:165–74 (https://doi.org/10.1016/j.jad.2020.06.014).

39. Popat A, Tarrant C. Exploring adolescents' perspectives on social media and mental health and well-being – a qualitative literature review. Clin Child Psychol Psychiatry. 2023;28(1):323–37 (https://doi.org/10.1177/13591045221092884).

40. Loleska S, Pop-Jordanova N. Is smartphone addiction in the younger population a public health problem? Pril (Makedon Akad Nauk Umet Odd Med Nauki). 2021;42(3):29–36 (https://doi.org/10.2478/prilozi-2021-0032).

41. Susi K, Glover-Ford F, Stewart A, Knowles Bevis R, Hawton K. Research review: viewing self-harm images on the internet and social media platforms: systematic review of the impact and associated psychological mechanisms. J Child Psychol Psychiatry. 2023;64(8):1115–39 (https://doi.org/10.1111/jcpp.13754).

42. Ehrenreich SE, George MJ, Burnell K, Underwood MK. Importance of digital communication in adolescents' development: theoretical and empirical advancements in the last decade. J Res Adolesc. 2021;31(4):928–43 (https://doi.org/10.1111/jora.12643).

43. Liu M, Kamper-DeMarco KE, Zhang J, Xiao J, Dong D, Xue P. Time spent on social media and risk of depression in adolescents: a dose–response meta-analysis. Int J Environ Res Public Health. 2022;19(9):5164 (https://doi.org/10.3390/ijerph19095164).

44. Schønning V, Hjetland GJ, Aarø LE, Skogen JC. Social media use and mental health and well-being among adolescents – a scoping review. Front Psychol. 2020;11:1949 (https://doi.org/10.3389/fpsyg.2020.01949).

45. Çimke S, Yıldırım Gürkan D. Factors affecting body image perception, social media addiction, and social media consciousness regarding physical appearance in adolescents. J Ped Nurs. 2023;73:e197–e203 (https://doi.org/10.1016/j.pedn.2023.09.010).

46. Dane A, Bhatia K. The social media diet: a scoping review to investigate the association between social media, body image and eating disorders amongst young people. PLoS Glob Public Health. 2023;3(3):e0001091 (https://doi.org/10.1371/journal.pgph.0001091).

47. Klinger D, Plener PL, Marboe G, Karwautz A, Kothgassner OD, Dienlin T. Exploring the relationship between media use and depressive symptoms among gender diverse youth: findings of the Mental Health Days Study. Child Adolesc Psychiatry Ment Health. 2024;18(1):104 (https://doi.org/10.1186/s13034-024-00797-x).

48. Walsh LC, Regan A, Okabe-Miyamoto K, Lyubomirsky S. Does putting down your smartphone make you happier? The effects of restricting digital media on well-being. PLoS One. 2024;19(10):e0306910 (https://doi.org/10.1371/journal.pone.0306910).

49. Weigle PE, Shafi RMA. Social media and youth mental health. Curr Psychiatry Rep. 2024;26(1):1–8 (https://doi.org/10.1007/s11920-023-01478-w).

50. Visier-Alfonso ME, López-Gil JF, Mesas AE, Jiménez-López E, Cekrezi S, Martínez-Vizcaíno V. Does socioeconomic status moderate the association between screen time, mobile phone use, social networks, messaging applications, and mental health among adolescents? Cyberpsychol Behav Soc Netw. 2024;27(11):824–34 (https://doi.org/10.1089/cyber.2024.0064).

51. Hilty DM, Stubbe D, McKean AJ, Hoffman PE, Zalpuri I, Myint MT et al. A scoping review of social media in child, adolescents and young adults: research findings in depression, anxiety and other clinical challenges. BJPsych Open. 2023;9(5):e152 (https://doi.org/10.1192/bjo.2023.523).

52. Barry CT, Moran-Miller K, Levy HF, Gray T. Social media engagement, perceptions of social media costs and benefits, and well-being in college student-athletes. J Am Coll Health. 2024;72(8):2938–47 (https://doi.org/10.1080/07448481.2022.2142797).

53. Kostyrka-Allchorne K, Stoilova M, Bourgaize J, Rahali M, Livingstone S, Sonuga-Barke E. Review: digital experiences and their impact on the lives of adolescents with pre-existing anxiety, depression, eating and nonsuicidal self-injury conditions – a systematic review. Child Adolesc Ment Health. 2023;28(1):22–32 (https://doi.org/10.1111/camh.12619).

54. Liu L, Fu J, Wu J, Wang H, Zhao J, Chen P et al. Digital health literacy among undergraduate nursing students in China: associations with health lifestyles and psychological resilience. BMC Med Educ. 2024;24(1):1139 (https://doi.org/10.1186/s12909-024-06075-w).

55. Orsolini L, Longo G, Volpe U. The mediatory role of the boredom and loneliness dimensions in the development of problematic internet use. Int Environ Res Public Health. 2023;20(5):4446 (https://doi.org/10.3390/ijerph20054446).

56. Lowthian E, Fee G, Wakeham C, Clegg Z, Crick T, Anthony R. Identifying protective and risk behavior patterns of online communication in young people. J Adolesc. 2024;96(2):235–50 (https://doi.org/10.1002/jad.12270).

57. Paulus MP, Zhao Y, Potenza MN, Aupperle RL, Bagot K, Tapert SF. Screen media activity in youth: a critical review of mental health and neuroscience findings. J Mood Anxiety Disord. 2023;3:100018 (https://doi.org/10.1016/j.xjmad.2023.100018).

58. Martín-Cárdaba MÁ, Martínez Díaz MV, Lafuente Pérez P, García Castro J. Smartphone ownership, minors' well-being, and parental mediation strategies: an analysis in the context of social media influencers. J Youth Adolesc. 2024;53(10):2202–18 (https://doi.org/10.1007/s10964-024-02013-7).

59. Priftis N, Panagiotakos D. Screen time and its health consequences in children and adolescents. Children (Basel). 2023;10(10):1665 (https://doi.org/10.3390/children10101665).

60. Pazarcikci F. Risk factors for technology addiction in young children ages 2–5 years. J Ped Nurs. 2024;78:e141–e147 (https://doi.org/10.1016/j.pedn.2024.06.029).

61. Holly L, Demaio S, Kickbusch I. Public health interventions to address digital determinants of children's health and wellbeing. Lancet Public Health. 2024;9(9):e700–e704 (https://doi.org/10.1016/S2468-2667(24)00180-4).

62. Bitto Urbanova L, Holubcikova J, Madarasova Geckova A, Van Dijk JP, Reijneveld SA. Adolescents with emotional and behavioural problems are at higher risk to become excessive or addicted Internet users: is this association moderated by gender? Eur J Public Health. 2024;34(2):283–8 (https://doi.org/10.1093/eurpub/ckae009).

63. Bozzola E, Spina G, Agostiniani R, Barni S, Russo R, Scarpato E et al. The use of social media in children and adolescents: scoping review on the potential risks. Int J Environ Res Public Health. 2022;19(16):9960 (https://doi.org/10.3390/ijerph19169960).

64. Jo S, Jang MY. Concept analysis of adolescent use of social media for emotional well-being. Int J Nurs Pract. 2023;29(1):e13116 (https://doi.org/10.1111/ijn.13116).

65. Karabel M, Onur H, ÓimÓek Ó. Internet addiction and depression: a study among adolescents. Cir Cir. 2024;92(4):13448 (https://doi.org/10.24875/CIRU.24000002).

66. Vissenberg J, d'Haenens L, Livingstone S. Digital literacy and online resilience as facilitators of young people's well-being? A systematic review. Eur Psychol. 2022;27(2):76–85 (https://doi.org/10.1027/1016-9040/a000478).

67. Benedetto L, Rollo S, Cafeo A, Di Rosa G, Pino R Gagliano, A et al. Emotional and behavioural factors predisposing to internet addiction: the smartphone distraction among Italian high school students. Int J Environ Res Public Health. 2024;21(4):386 (https://doi.org/10.3390/ijerph21040386).

68. Armstrong-Carter E, Garrett SL, Nick EA, Prinstein MJ, Telzer EH. Momentary links between adolescents' social media use and social experiences and motivations: individual differences by peer susceptibility. Dev Psychol. 2023;59(4):707–19 (https://doi.org/10.1037/dev0001503).

69. Hamilton JL, Dalack M, Boyd SI, Jorgensen S, Dreier MJ, Sarna J et al. Positive and negative social media experiences and proximal risk for suicidal ideation in adolescents. J Child Psychol Psychiatry. 2024;65(12):1580–9 (https://doi.org/10.1111/jcpp.13996).

70. Ferguson CJ, Kaye LK, Branley-Bell D, Markey P, Ivory JD, Klisanin D et al. Like this meta-analysis: screen media and mental health. Prof Psychol Res Pr. 2022;53(2):205–14 (https://doi.org/10.1037/pro0000426).

71. Engel E, Gell S, Heiss R, Karsay K. Social media influencers and adolescents' health: a scoping review of the research field. Soc Sci Med. 2024;340:116387 (https://doi.org/10.1016/j.socscimed.2023.116387).

72. Pottie K, Ratnayake A, Ahmed R, Veronis L, Alghazali I. How refugee youth use social media: what does this mean for improving their health and welfare? J Public Health Policy. 2020;41(3):268–78 (https://doi.org/10.1057/s41271-020-00231-4).

73. Khetawat D, Steele RG. Examining the association between digital stress components and psychological well-being: a meta-analysis. Clin Child Family Psychol Rev. 2023;26(4):957–74 (https://doi.org/10.1007/s10567-023-00440-9).

74. Angelini F, Gini G. Differences in perceived online communication and disclosing e-motions among adolescents and young adults: the role of specific social media features and social anxiety. J Adolesc. 2024;96(3):512–25 (https://doi.org/10.1002/jad.12256).

75. Odgers CL, Jensen MR. Adolescent development and growing divides in the digital age. Dialogues Clin Neurosci. 2020;22(2):143–9 (https://doi.org/10.31887/DCNS.2020.22.2/codgers).

76. Moss C, Wibberley C, Witham G. Assessing the impact of Instagram use and deliberate self-harm in adolescents: a scoping review. Int J Ment Health Nurs. 2023;32(1):14–29 (https://doi.org/10.1111/inm.13055).

77. Yu DJ, Wing YK, Li TMH, Chan NY. The impact of social media use on sleep and mental health in youth: a scoping review. Curr Psychiatry Rep. 2024;26(3):104–19 (https://doi.org/10.1007/s11920-024-01481-9).

78. Markey CH, August KJ, Gillen MM, Rosenbaum DL. An examination of youths' social media use and body image: considering TikTok, Snapchat, and Instagram. J Media Psychology. 2024;37(1):52–9 (https://doi.org/10.1027/1864-1105/a000420).

79. Ferguson CJ, Kaye LK, Branley-Bell D, Markey P. There is no evidence that time spent on social media is correlated with adolescent mental health problems: findings from a meta-analysis. Prof Psychol Res Pr. 2024;56(1):73–83 (https://doi.org/10.1037/pro0000589).

80. National Academies of Sciences, Engineering, and Medicine. Social media and adolescent health. Washington, DC: The National Academies Press; 2024 (https://doi.org/10.17226/27396).

81. Blanchard L, Conway-Moore K, Aguiar A, Önal F, Rutter H, Helleve A et al. Associations between social media, adolescent mental health, and diet: a systematic review. Obes Rev. 2023;24 Suppl 2:e13631 (https://doi.org/10.1111/obr.13631).

82. Guidelines on physical activity, sedentary behaviour and sleep for children under 5 years of age. Geneva: World Health Organization; 2019 (https://iris.who.int/handle/10665/311664). Licence: CC BY-NC-SA 3.0 IGO.

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