



# The EU Mutual Learning Programme in Gender Equality

## Gender Equality, Mental Health and Gender Mainstreaming Health Policies 18-19 November 2021

Discussion paper – Sweden



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*This publication is supported by the European Union Citizens, Equality, Rights and Values Programme (2021-2027).*

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# Digitalisation and the mental well-being among girls and boys, young women and young men

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## 1. Introduction

Children and young people today increasingly live their lives in digital environments. For girls and boys, the digitalisation of education and the access to online units such as mobile phones have had a large impact on their everyday lives. According to the Swedish preschool curriculum, even younger children will have access to digital tools. Furthermore, after the ordinary school day, children and young people spend a large part of their spare time on streamed media, games, and social platforms. According to The Swedish Media Council, nine out of ten children at the age of 11 have access to a smartphone (The Swedish Media Council, 2020).

A wide range of reports, both national and international, have in the past decade showed that there has been an increase in mental health issues among children and young people. The current Covid-19 pandemic adds additional challenges, many of whom are yet to be researched. Within the framework of this Mutual Learning Seminar, Sweden wishes to highlight the implications that digital and social media may have on the mental wellbeing of children and young people.

### 1.1 Mental wellbeing

There is no common, generally accepted, definition of the concept “mental health”. Most experts, however, agree that the concept of “mental health” involves at least three dimensions: emotional, psychological, and social well-being. According to The World Health Organisation, mental health is “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (World Health Organization, 2018). It is important to acknowledge that mental well-being is hard to define, as are related concepts such as “mental illness” or “psychiatric conditions”. They are complex and may include, and/or address, a great variety of mental conditions. The Swedish Media Council argue that there is no way of measuring all dimensions of mental health or mental illness, however the dimensions can be measured separately using the terms “mental well-being” or “impaired mental-wellbeing” (Swedish Media Council, 2020:12).

There are uncertainties about what may be the root cause of the impaired mental well-being among children and young people, as there are many important factors that need to be accounted for. The Swedish Media Council investigated the possible correlation between the amount of time that young people between the age of 13 and 18 spend on digital media and a general impairment of their mental wellbeing, as perceived by themselves. According to this report, girls and young women generally experience a higher degree of impaired mental well-being than boys and young men. There are, however, specific patterns emerging concerning boys and young men. One of the most pressing concerns is that the increase of digital- and social media use has made pornography more easily accessible. In a report by the Swedish Gender Equality Agency, it is argued that there may be a correlation between impaired mental well-being and pornography consumption among boys. The implications that pornography consumption may have on the mental well-being of both boys and girls ought to be addressed at an early age, e.g. through a more comprehensive sexuality education (The Swedish Gender Equality Agency, 2021).

Girls and boys with an impaired mental health also display different patterns. A higher number of girls and young women are experiencing stress and are being diagnosed with depression and anxiety, as well as being treated for self-inflicted damages or suicide attempts. Paradoxically, studies show that more boys and men commit suicide. This gender paradox raises questions about gender-differences in relation to mental health, as well as how gender norms affect the mental health of young men and women in different ways. Research shows that gender-norms make young women feel pressured to live up to societal expectations characterized by success, beauty, and sexuality. However, gender-norms also affect the mental health of boys and young men, which is part of the previously explained gender-paradox. Masculine norms characterized by stoicism, self-control, and "lone is strong"-mantras are a fundamental part of why young men abstain from seeking professional help as compared to young women (The Swedish Gender Equality Agency, 2021:8).

In short, the consumption of digital- and social media and its consequences has a clear gender dimension. In fact, a person's sex is the variable that shows the clearest connection of all variables with a person's mental well-being, as perceived by themselves (The Swedish Media Council, 2020:6). It may be argued that girls are more used to introspection than boys and therefore more likely to acknowledge a sense of ill-being. It may also be argued that girls are more exposed to negative gender norms and societal pressure concerning sexuality. Whatever the cause of the differences in pattern between girls and boys in the consumption of digital- and social media, it shows that solutions must be gender-responsive and adapted to girls' and boys' various needs.

## 2. Disposition

This discussion paper aims at outlining the effects of extensive consumption of digital- and social media on girls' and boys' mental well-being, as perceived by themselves. Furthermore, this paper provides examples of possible solutions, adapted to girls' and

boys' needs. The paper will proceed as follows; First, the current situation is dispensed, exemplified with a questionnaire produced by the Swedish Media Council. Second, four good practices are presented: The Swedish Media Council, The Youth Policy Communication and its Action Plan, The Ombudsman for Children in Sweden's mapping of pornography use and mental health, as well as Comprehensive Sexuality Education. Last, a discussion is provided, presenting possibilities, opportunities, and challenges with the good practices.

### **3. The current situation**

In recent years, "gaming disorder" has become an official diagnosis according to the International Classification of Diseases (ICD-11), and the concept "addiction", i.e. internet addiction, has grown into describing other forms of problematic media usage. Internet and especially social media are often described in terms of a two-edged sword. On the one hand, the digital technology has several advantages for the wellbeing of young people, as it enables new acquaintances, contributes to experiences, and enhances social skills. On the other hand, social media constantly exposes both young girls and boys to representations of looks, bodies, and ways of life that are meant to appear perfect, which in its turn may provoke comparisons and feelings of inadequacy.

According to an American researcher, Jean M. Twenge, the smartphone-generation grows up later than previous generations. They do not take a driver's licence as often as previous generations, they start dating later, their sex debut is later, and they spend considerably more time on the internet. At the same time, the impaired mental well-being of the smartphone-generation is significant. This implies a correlation, and maybe a causality (Twenge, 2017).

#### **3.1 The questionnaire of the Swedish Media Council**

The Swedish Media Council regularly produces questionnaires and reports on young people, social media, and mental well-being. The latest questionnaire contains questions both regarding media usage, the extent of media usage, and questions regarding self-perceived mental well-being. According to the latest report, compiled in 2020, approximately 27 percent of the young people responding to the questionnaire (ages 13-18) experienced an impaired mental well-being (The Swedish Media Council, 2020).

As already stated, the respondent's sex has a strong correlation with his/her experienced mental well-being. As a consequence, it is imperative that statistics are disaggregated by sex, and that analysis of the causes and effects of media usage on girls and boys are gender responsive.

The questionnaire compiled by the Swedish Media Council contained, among other things, a set of questions regarding different symptoms of stress and anxiety. Questions ranged from whether the respondent (between 13 and 18 years of age) had experienced sore eyes to whether she or he had experienced headache, stomach aches, felt unhappy or dejected, felt tense or anxious or whether she or he had

experienced sleeping difficulties. In total, twelve indicators were listed. The respondents were then divided into two groups, one group experiencing three or less variables and one group experiencing four or more variables. The sample of respondents was based on an unbounded random sample from the population register, with a response rate of 32,9 %. The Swedish government agency Statistics Sweden has carried out an analysis of the drop-out and calibrated the answers in order to counteract possible biased or distorted answers. The result showed the following pattern (in %):

**Table 1: Sample of respondents**

	Boy	Girl	Total
3 or less variables	87	61	73
4 or more variables	13	39	27
Total	100	100	100

Although the majority of the responding girls and boys experience three or less variables, it is notable that the number of girls experiencing four or more variables are more than double than the number of boys. This result coincides with results from other studies carried out within the OECD.

Moreover, a further investigation of the correlation between mental well-being and age within the age group 17-18 shows the following pattern among girls and boys experiencing four or more variables:

**Table 2: Sample of respondents: Four or more variables**

Sex and age group	Four or more variables (%)
Boys 13-16	13
Girls 13-16	37
Total	26
Boys 17-18	14
Girls 17-18	44
Total	30

The answers show that the gender differences remain regardless of age, as the number of girls experiencing four or more variables, once again, are more than double than the number of boys. Furthermore, these differences tend to increase with age as there is a correlation between higher age and a deterioration of mental well-being among girls.

### 3.1.1 How often did the respondents use media?

The questionnaire also contains several questions regarding the respondents' media usage. One set of questions focuses on various media activities such as buying/selling things over the internet, looking at YouTube, listening to music, listening to podcasts, blogging, or reading other person's blogs, playing games, or looking at pornography.

The respondents were asked how often they participated in the activity; daily, a couple of times a week, once a week, seldom or never. The answers were then compared to the number of variables impairing their mental well-being that each girl or boy had listed.

In total, 14 media activities were enumerated in the questionnaire. Due to the limitations of this discussion paper, only a couple of the respondents' answers will be replicated here.

**Table 3. Q: Thinking about your free time, how often do you listen to music? (%)**

		Three or less variables (%)	Four or more variables (%)
Boys	Daily	57	74
	A couple of times a week	29	17
	Once a week	4	5
	Seldom/never	10	4
Girls	Daily	72	81
	A couple of times a week	22	14
	Once a week	2	0
	Seldom/never	4	5

Comment: As noted in table 3, daily listening to music is common among both girls and boys. This appear to be a risk factor for both girls and boys. Compared to other media activities, the correlation between daily listening to music and the impaired mental well-being is rather noticeable.

**Table 4. Q: Thinking of your free time, how often do you play games on your console/pc?**

		Three or less variables (%)	Four or more variables (%)
Boys	Daily	46	56
	A couple of times a week	30	30
	Once a week	9	1
	Seldom/never	16	13
Girls	Daily	3	7
	A couple of times a week	12	16
	Once a week	8	9
	Seldom/never	77	68

Comment: As shown by table 4, girls and boys experiencing four or more variables impairing their mental well-being, to a higher extent plays games on their console/pc daily.

**Table 5. Q: Thinking of your free time, how often do you watch clips from YouTube?**

		Three or less variables (%)	Four or more variables (%)
Boys	Daily	78	86
	A couple of times a week	16	8
	Once a week	2	3
	Seldom/never	4	3
Girls	Daily	58	70
	A couple of times a week	34	22
	Once a week	5	5
	Seldom/never	3	3

Comment: Table 5 shows that girls and boys experiencing four or more variables impairing their mental well-being, to a higher extent watches clips from YouTube daily.

**Table 6. Q: Thinking of your free time, how often do you watch pornography?**

		Three or less variables	Four or more variables
Boys	Daily	6	17
	A couple of times a week	15	31
	Once a week	6	3
	Seldom/never	73	49
Girls	Daily	0	0
	A couple of times a week	1	3
	Once a week	2	5
	Seldom/never	97	92

Comment: Table 6 shows that girls hardly watch pornography, but among those who do, the relative number of girls experiencing four or more variables impairing their mental well-being is high. The difference is even more pronounced among boys. Boys experiencing four or more variables impairing their mental well-being, watch pornography to a much higher extent than other boys. Among boys, watching pornography shows the strongest correlation of all between mental ill-being and how often a media activity is carried out.

### 3.1.2 How long at a time did the respondents use media?

Besides the question of how often the respondent participated in the respective activity, the survey covered how many hours per day the respondent engaged in the activity. It is not at all unusual for young people to use the internet more than three hours per day, girls slightly more often than boys (76 % and 72 % respectively). In fact, the majority of girls and boys in the ages 13-18 use the internet either 3-4 hours per day or 4-5 hours per day (The Swedish Media Council, 2020:43).



Based on these findings, teenagers can roughly be divided into three groups: the limited users (three or less hours per day), the moderate users (3-5 hours per day), and the extensive users (more than five hours per day). The correlation between digital media usage in hours per day and impaired mental well-being can be depicted as follows.

**Table 7: Limited and moderate users' mental well-being**

	Hours/day	Three or less variables (%)	Four or more variables (%)
Boys	Do not use	0	0
	Three or less	31	10
	More than three	69	91
Girls	Do not use	0	0
	Three or less	28	18
	More than three	72	82
Total	Do not use	0	0
	Three or less	30	17
	More than three	70	83

Comment: The table shows a correlation between the number of hours per day spent on media usage and an increased number of variables indicating an impaired mental well-being. Limited users (using media three or less hours per day) are the ones demonstrating the highest levels of mental well-being.

**Table 8: Moderate and extensive users' mental well-being**

	Hours/day	Three or less variables (%)	Four or more variables (%)
Boys	Do not use	0	0
	Five or less	74	51
	More than five	26	49
Girls	Do not use	0	0
	Five or less	70	57
	More than five	30	44
Total	Do not use	0	0
	Five or less	72	55
	More than five	28	45

Comment: The table shows a correlation between extensive media usage (more than five hours per day) and an impaired mental well-being among both girls and boys. The strength of the correlation increases when the breaking point is raised to five hours per day. There are significantly larger proportions of girls and boys with four or more variables who use media more than five hours per day.

### 3.1.3 Beneficial factors

Despite an extended media usage, there are factors that can be protective and beneficial for an increased mental well-being. Three such protective factors are:

- speaking to one's parents daily about one's day and how the day has been
- exercise (the positive correlation is particularly prominent among boys)

- meeting regularly with friends (not on the internet).

#### **3.1.4 Covariance with other factors**

Factors such as socio-economic background, ethnicity, and lack of exercise also influences girls and boy's mental well-being. When set in conjunction with media usage, interesting patterns emerge.

In short, four groups emerge among which the pattern between extended media usage and mental well-being needs to be examined further. This is imperative in order to better understand correlations and to examine the need of possible preventative measures. These groups are:

- girls where both parents are born abroad;
- girls with an intellectual disability;
- boys that either avoid digital social connection entirely; or
- boys that seek out other digital forums than the bigger platforms.

#### **3.1.5 Conclusion**

To conclude, the questionnaire and the subsequent analysis shows several connections between impaired mental well-being and more extensive media usage among Swedish teenagers. Girls and boys experiencing four or more variables of mental ill-being spend more time on the internet, their mobile phones, watching movies, clips from YouTube and listening to music, thus implying a possible correlation between extended media usage and impaired mental well-being.

## **4. Good practices**

Within the framework of a report on Mental well-being among teenagers and young adults, The Swedish Gender Equality Agency identifies several gaps in research pertaining to the mental well-being of girls and boys. The Agency also identifies a need to increase knowledge of how gendered norms and gendered power structures in various environments, such as school and digital media, affect young girls and boys and their general level of experienced stress and mental well-being (The Swedish Gender Equality Agency, 2021).

In short, we lack knowledge about the possible correlation between gender norms and stereotypes online and the mental well-being of both girls and boys. In this section, we will present good practises from Sweden that relate to learning more about the effects that digitalisation may have on the mental wellbeing of girls and boys.

The following four good practices are selected: The Swedish Media Council, The Youth Policy Communication and its Action Plan, The Ombudsman for Children in Sweden's mapping of pornography use and mental health, as well as Comprehensive Sexuality Education.

## 4.1 The Swedish Media Council

The first practice, The Swedish Media Council, is an Agency created in 2011 under the auspices of the Ministry of Culture. It is small, with 22 employees. The task of the Swedish Media Council is to protect children and young people from harmful effects of the media and help them to become more aware media users. The Council is also responsible for setting age limits for films intended for public screenings to children under the age of fifteen.

### 4.1.1 Questionnaires, reports and publications

The Swedish Media Council regularly produces questionnaires and reports on young people, social media, and mental well-being. The reports of The Swedish Media Council are often cited and referred to as a source of knowledge and expertise.

#### 4.1.1.1 Questionnaires

The Swedish Media Council usually sends out one questionnaire every two years. The latest questionnaire was conducted in 2018 and the results were published in 2019. The next publication based on a new questionnaire is therefore due in 2021.

The questionnaire of 2018 (published 2019) was sent to a total of 2 000 children, divided into two major age groups, 9-12 years, and 13-18 years of age. The older of the two cohorts was in its turn divided into two subgroups, 13-16 years of age and 17-18 years of age.

The respondents could choose between filling out a paper questionnaire or a digital one. The reply rate was between 32 and 33 percent, down six percent from the questionnaire carried out two years earlier.

A low participation rate increases the risk of the result being skewed, i.e. that those who reply to the questionnaire differ from the groups that do not. In order to compensate for such a risk, the answers are statistically calibrated by Statistics Sweden.

#### 4.1.1.2 Reports

On the basis of the information collected every second year (as described above), various reports and publications are compiled and published, among them the report referred to earlier in this discussion paper. It is imperative to perform reports such as these to pinpoint patterns and trends, and to be able to follow development over time. Furthermore, sex-aggregated statistics is of vital importance to identify gender-based differences.

## 4.2 The Youth Policy Communication and its Action Plan

The second practice is The Youth Policy Communication and its Action Plan. Approximately every four years, the Swedish Government presents a new Swedish Youth Policy Communication which reports the development towards the national youth policy objective, stating that all young people should have good living conditions, the power to shape their own lives, and have influence over the development of society. The most recent Youth Policy Communication was published

in March 2021, in which one part of the analysis focuses on young people's wellbeing and mental health (The Government Offices of Sweden, 2021a). In the Youth Policy Communication, four new priorities were presented, one of them being that mental health among young people should increase. Furthermore, the Youth Policy Communication includes an action plan with measures that aim to contribute to the fulfilment of the national youth policy objective.

#### **4.2.1 The Action Plan**

The action plan contains a total of over 100 initiatives for the period 2021-2024, such as a mission to strengthen investments in mental health, suicide prevention and the psychiatry, measures to improve accessibility to child and adolescent psychiatry and shorten the queues, as well as launching a pilot project for strengthened care of young people with complex needs. Another initiative presented in the action plan includes a mission to conduct a survey concerning young people's mental health. The survey aims to provide answers to how young people perceive their mental well-being, mental disorders, factors that promote and strengthen young people's mental health, what kind of support young people require, as well as which actors young people feel they want to receive support from. This mission was given to the Swedish Agency for Youth and Civil Society, in close collaboration with the Public Health Agency. In the context for this survey, young people are estimated as persons between 13 and 25 years of age, in accordance with the target group of the youth policy. Young LGBTIQ-people should be given special attention in this work that will be presented in 2023.

#### **4.3 The Ombudsman for Children in Sweden's mapping of pornography use and mental health**

The third practice is presented as a measure in the Youth Policy Communications' action plan, and concerns exposure to pornography. As a consequence of increased digitalization, children and young people are to a higher extent exposed to pornography, which in turn may have numerous consequences on their mental wellbeing. In chapter "The current situation", we gave an account of the Swedish Media Council's estimation of pornography consumption among young girls and boys. The results show that pornography consumption has the strongest correlation with mental ill-being among all the activities presented in the study. Despite this fact, very little research has been conducted on the topic, and it has remained unclear what concrete effects pornography consumption may have on children and young people's health and relationships (The Government Offices of Sweden, 2021a:177).

In February 2020, the Swedish Government gave the Ombudsman for Children in Sweden a mission to compile existing knowledge about how children and young people's health and relationships are affected by pornography. The mission entailed gathering knowledge through scholarly research, interviews, and workshops. During the mission's execution, the Ombudsman for Children met with more than 200 representatives from 93 different authorities, organizations, and businesses. Furthermore, 42 children and young people between the ages of 15 and 26 were interviewed in order to discuss their own views on what impact pornography may have on their wellbeing.

### 4.3.1 What impact does pornography have on children's and young people's health?

The survey conducted by the Ombudsman for Children was released in June 2021. Among other things, the survey showed that children and young people consume less pornography today as compared to 15 years ago, however the number of frequent consumers has escalated (The Ombudsman for Children in Sweden, 2021a). Furthermore, the results were divided into eight sub-themes such as “How do young people get in contact with pornography?”, “Intimate partner violence” and “How does the debate around pornography affect children and young people?” One of the sub-themes analysed the impact of pornography on the health of children and young people. Due to this discussion paper's specific focus, we will only account for the survey's result regarding this theme.

The information gathered through interviews was concordant with previous research on the field, showing that pornography consumption correlates with symptoms such as depression, anxiety, and stress. Some children and young people even develop a compulsive consumerist behaviour, meaning that they may feel an obsessive need to consume pornography. As a matter of fact, the young people being interviewed for this report find pornography to be of addictive nature. There is no current diagnosis such as “pornography addiction”, however scholars agree that individuals can develop a compulsive behaviour towards pornography (The Ombudsman for Children in Sweden, 2021c:28).

Compulsive pornography consumption is also related to other factors such as smoking, drinking alcohol, and consuming drugs. Furthermore, boys are more prone to consume pornography, as well as more likely to develop compulsive behaviours. A compulsive behaviour of consuming pornography interferes with family-, friends-, and partner relationships and can cause grave feelings of anxiety and shame. The interviews reveal that shame and feelings of embarrassment are very common among young pornography consumers, which is part of the reason as to why they avoid seeking professional help. Boys do not seek professional care through e.g. youth clinics to the same extent as girls. Their aversion to seeking help has the effect of their behaviour rarely being detected until it has already become a major problem in their everyday lives. Furthermore, the survey concludes that there is a lack of systematic efforts to perform surveys, as well as mapping the scope of compulsive pornography consumption among children and young people (The Ombudsman for Children in Sweden, 2020c:34-35).

## 4.4 Comprehensive sexuality education

The fourth practice is Comprehensive sexuality education. According to the previously mentioned survey presented by the Ombudsman for Children in Sweden, children consider a comprehensive sexuality education to be the most important tool to counteract the negative effects of porn consumption (The Ombudsman for Children in Sweden, 2020c:46-47). Comprehensive sexuality education has been defined as “a rights-based and gender-focused approach to sexuality education, whether in school or out of school”. According to The Swedish International Development

Cooperation, a holistic vision of sexuality and sexual behaviour, rather than just focusing on prevention of pregnancy and sexually transmitted infections, can enable children and young people to “acquire accurate information about sexuality, sexual and reproductive health and human rights” (SIDA, 2016). It can also enable children and young people to “explore and nurture positive values and attitudes towards their sexual and reproductive health, and develop self-esteem, respect for human rights and gender equality” (ibid).

The survey by the Ombudsman for Children in Sweden also provides information about the varying quality of sexuality education among different schools in Sweden. More often than not, the quality is dependent on a singular teacher, or the engagement of the student health personnel. The results of this survey suggest that sexuality education is an important tool in order to combat the negative effects that pornography may have on young people and the interviewees identify and welcome the planned changes within the Swedish sexuality education curriculum, which will take place in 2022. The changes will include introducing a more consent- and value-based system compared to the old curriculum as “Sex education” (Sex och samlevnad) will be re-named “Sexuality, consent, and relationships” (Sexualitet, samtycke och relationer). The focus will be placed on e.g. discussing norms, values, and consent-based sex. Furthermore, the curriculum will include discussing pornography consumption (The Government Offices of Sweden, 2021b. The Swedish National Agency for Education, 2021).

The interviewees in the survey conducted by the Ombudsman for Children in Sweden argue that pornography, consent, sexual pleasure, intimate partner violence, and gender norms all are aspects that should be encompassed as parts of the new syllabus. In fact, the survey shows that children and young people can problematize and reason both about the content of pornography and the norms they believe it conveys. Sexual educators and student health staff also emphasize that Swedish children and young people generally are good at debating issues of pornography from various perspectives (The Ombudsman for Children in Sweden, 2020c:4).

The Ombudsman for Children in Sweden could further identify that young LGBTIQ persons find Swedish sexual education irrelevant to some degree. They perceive it to be heteronormative as well as excluding other sexualities, sexual practices, and gender identities. It is therefore common for this group of children and young people to turn to the internet as an important source of information on sexual health (The Ombudsman for Children in Sweden, 2020c:36).

## 5. Discussion

### 5.1 Possibilities

In previous chapters, we described the possible negative effects that digitalization may have on the mental wellbeing of children and young people. However, we also depicted a range of Swedish good practices that may counteract these effects. These practices are examples of what can be done in order to achieve an understanding of



the reason for the increase of mental health issues among children and young people. A general reflection from academia is that there is a lack of research, as well as a scientific focus, on this topic when discussed.

### 5.1.1 Monitoring of digital media usage

We believe that the monitoring of digital media usage and its effects on young girls and boys is a first step, allowing us to increase our knowledge of its gender-specific impact. The improved knowledge may in its turn result in concrete measures to counteract mental ill-being among girls and boys.

The monitoring performed by the Swedish Media Council has been referred to and cited on numerous occasions in various inquiries, reports, and communications. It has had a major impact on the general level of knowledge regarding the media usage among girls and boys, young women, and young men, as well as a concrete impact on measures taken by the Swedish government.

- We would like to know whether monitoring of digital media usage takes place in other Member States than Sweden. If so, what aspects do they cover, and what result are noted?

### 5.1.2 Comprehensive Sexuality Education

As previously mentioned, The Ombudsman in Children for Sweden reported in their study that Swedish girls and boys consider a comprehensive sexuality education to be the most important tool to counteract the negative effects of pornography (The Ombudsman for Children in Sweden, 2020c). Sweden is currently working on a new curriculum that is to be launched in fall 2022. After the Swedish School Inspectorate's review of the current sexuality education, it was decided that there is a need to revise this area of teaching. The changes in the curricula underline the importance to contribute to promote students' health and well-being, as well as strengthen their ability to make conscious and independent choices. According to the Swedish Ministry of Education, the school system has an important role in helping to create a culture of consent, where sex is based on mutual consent, and sexual harassment is not normalized. Students will also be given opportunities to develop a critical approach to how sexuality and relationships are portrayed in various media contexts, such as pornography (The Government Offices of Sweden, 2021b).

- We would like to know if comprehensive sexuality education is part of the curriculum in other Member States. If yes, how is it designed, and in which ways does it address the negative impacts of pornography?

## 5.2 Opportunities and Challenges

Reports are indicating that there may be a correlation between extensive use of digital media and the impaired mental well-being among girls and boys. It must however be kept in mind that a statistically established correlation is not equivalent to a causality. In order to examine the possibility of a causality, more research is needed concerning, *inter alia*, risk factors, protective factors, and covariance.

### 5.2.1 Insufficient research

The daily use of digital media is rapidly expanding to younger age cohorts. In order to keep pace with this tendency, we need to know more about the long-term effects of digital media usage. There is a lack of knowledge about the psychological impact of daily digital media usage among girls and boys. More research concerning, *inter alia*, risk factors, protective factors, and covariance is therefore needed.

### 5.2.2 Lack of gender specific research

As mentioned, the consumption of digital- and social media and its consequences has a clear gender dimension. We do know that a young person's sex is the variable that shows the clearest connection of all variables with a young person's mental well-being as perceived by themselves, at least among Swedish girls and boys.

Still, there is limited knowledge about the contextual elements behind the differences between girls' and boys' digital media usage and its effects on their mental wellbeing. How come that girls' digital media consumption correlates with impaired mental well-being to a higher degree than boys'? Could it be that girls are more used to introspection than boys and therefore more aware and conscious of their mental health? Could it be that boys do not want to admit a weakness by acknowledging that they feel anxiety, etc.? Or, could it be that girls are more under pressure from negative gender norms and expectations from society?

These questions are not answered by the type of questionnaires carried out by the Swedish Media Council and described in this discussion paper. A survey is nevertheless a necessary first step to establish if there are gender-specific patterns. If yes, such patterns may be a stepping-stone to further queries and further research.

- We would like to know whether the consumption of digital- and social media and its consequences demonstrates a clear gender dimension in other Member States than Sweden. If yes, what patterns are discernible?

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# Addressing the consequences of digital media for gender equality in mental health in youth

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## 1. Setting the scene

Digital technologies have dominated young people's lifestyles in recent decades, where all kinds of digital devices such as smartphones, computers, tablets, and social media are ubiquitous. While young people's everyday lives consist of digital interaction with others to a large extent, this coincides with an increasing mental illness in youth (McCrae et al., 2017). The increase in mental illness is general, but there is a discrepancy between girls and boys and young women and young men, showing that girls and young women are consistently more affected and that the increase has been greatest in this group (Public health agency of Sweden, 2020, 2019a; The Swedish national board of health and welfare, 2017).

With this in mind, adolescence is one of the most vulnerable periods in life. It is the transition from being a child to becoming an adult, which is characterised by pressures, challenges, and the need for social adjustments, including emancipation from parents towards an increasing need of friends and other grownups.

Patton et al. describes that adolescence lays the foundation for both physical and mental health. The cognitive development of the brain is largely shaped by experiences during adolescence and becomes crucial to how future adversity is mastered (Patton et al, 2016).

During puberty, the brain undergoes major changes as it matures and grows. The combination of increased sensations and risk-seeking, as well as an increased need for social status makes young people particularly susceptible to psychosocial stress. They are particularly malleable and fall more easily for peer pressure. Choices and risk behaviours made during adolescence can have consequences for the mental and physical health for the rest of their lives. Youth should, therefore, be seen as a time window where health promotion has a major impact. Similarly, this time window should be seen as an extra sensitive period as regards stress, as stress can lay the foundation for mental illness in adulthood (Dahl & Gunnar, 2009). Achieving equity and gender equality in mental health throughout society requires a focus on the mental well-being of children and young people. Stress and mental illness at a young age increase the risk for future mental illness and could impair the ability to deal with future – often normal – setbacks in life (Lindbom, 2021).

In January 2021, the Swedish Gender Equality Agency published a report, the evaluation to the interim objective “Gender equality in health” (The Swedish gender equality agency, 2021a). The overarching goal of gender equality policy is that women and men should have the same power to shape society and their own lives. The target was adopted with broad political agreement in 2006. To fulfil the goal, the Swedish government has set six interim objectives where the Swedish Gender Equality Agency are imposed to monitor and evaluate developments within each interim objective. “Gender equality is not only about gender balance, but also about paying attention to attitudes, norms, values, and ideals that affect the living conditions of women and men in the various areas of society. Therefore, the work for gender equality is often conducted with two different focuses, one of which helps us to create a clear picture of different situations and conditions using measurable factors, while the other problematises and examines what norms and values are behind the reported figures” (The Swedish gender equality agency, 2021b). The report mentioned above focuses mainly on causes and progress of mental illness with a gender perspective and contains several supporting reports consisting of six literature reviews. The conclusions were many and a summary of these is outside the purpose of this discussion paper. In this discussion paper we focus and problematise digital media as one of the potential factors mediating impaired mental well-being and mental illness for girls, boys, young women, and young men, and the possible consequences this may have for gender equality in mental health.

## 1.1 Outsets and definitions

The World Health Organisation’s definition of health emphasises the importance of mental health; “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”(Constitution of the World Health Organisation, 1948). “Mental health is a state of well-being in which an individual realizes his or her own ability, can cope with the daily stresses in life, can work productively and are able to make a contribution to his or hers community” (WHO, 2018).

The concept of mental illness is complex and difficult to define as it includes many different mental conditions, ranging from mild mental symptoms such as impaired wellbeing to anxiety and depression, but also severe psychiatric conditions such as bi-polarity, schizophrenia and other psychoses (Bremberg & Dalman, 2015). The term mental illness is widely used in both Swedish and international literature, but the definition is fluid and can include both normal, everyday stresses and diagnosed mental illness (FORTE, 2015).

There are several outsets we need to address when problematizing digital media consumption in relation to young people's mental health.

First, we need to address mental wellbeing as a human right stated by the UN Covenant on Civil and Political Rights; International Covenant on Civil and Political Rights (United Nations, 1966).

Second, the convention on the right of the child (UNCRC) is the most ratified convention of all human rights across the globe (Convention on the rights of the child,

1989), and since January 2020 incorporated in Swedish national law. Article 3 determines the best interest of the child and needs to be considered in all decisions concerning children. UNCRC explicitly highlight the adults' responsibility to always protect the best interest of the children. This is of relevance when it comes to protecting children from potential harmful media influences (The Swedish media council, 2021). Every country that ratified the convention (all EU countries) has obligations to fulfil the right of the child and address the convention when developing good practices recommendations.

Third, there is a gender dimension we need to address. In order for Agenda 2030 and the Global Sustainability Goals on Health (SDG 3.4) and Gender Equality (SDG 5) to be achieved, knowledge in this area needs to be conceptualized, hence we need to integrate a gender perspective into the existing research of how digital media affect mental health. Mental illness at a young age has negative consequences in several areas of life and can, among other things, lead to poor educational outcomes as well as labour market outcomes and thus poorer income development. This development can be unequal between different groups as persons with low socio-economic status have a stronger link between mental illness and lower economic outcomes from a life course perspective. But it can also lead to increased economic inequality between men and women as young women account for the largest proportion of people suffering from mental illness (Linder A. et al., 2019).

As mentioned above, in addition to the gender of young people, other social determinants also contribute to the development of mental illness. The intersectional perspective emphasises the importance of social categories such as age, gender, ethnicity, and other social determinants to be seen as deeply intertwined, rather than being analysed individually (Cole, 2009). By analysing how these interconnected hierarchical structures permeate society from micro- to macro-level, the intersectional perspective aims to capture the impact of these social structures on, for example, the health of individuals (Hankivsky, 2012).

Fourth, the last two years have deeply changed preconditions due to the covid-19 pandemic. New concerns have been added to an already alarming mental health crisis among our youth, with an expected increase in mental illness (The Lancet, 2020).

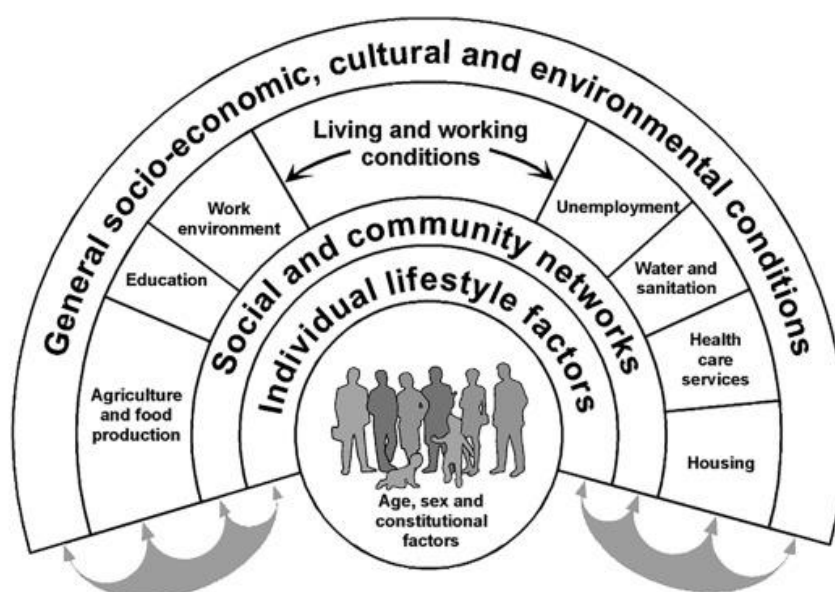
The pandemic has created a daily life of the youth where the interaction with peers and other grownups is dependent on digital and online activities. This has led to both positive and negative effects. Digital technology has enabled most young people to maintain their education in the EU, however this is not the case for many other children around the globe. But while many creative solutions have been invented, the pandemic risks widening gaps where vulnerable young people with difficult home conditions are at greater risk of consequences of the restrictions (O'Reilly et al., 2021).

Hence there are several outsets we need to address when problematizing the effects that digital media may have on the mental health and well-being of young people.

## 2. Mental health in youth and digital media-illuminating the gender differences

### 2.1 The social determinants of health

To understand the aetiology, i.e., the complex background to mental illness, the impact of social determinants on the health of individuals, i.e., health determinants, is a fundamental starting point. Health determinants are found in the environment the individual lives in. The determinants are continuously in interaction with each other and affects the individual throughout their lives. Biological factors such as inheritance, gender and age interact with more malleable factors such as family relationships, lifestyle, social relationships, school and working life. Other, additional factors are more overarching social structures such as political, economic, cultural, and environmental conditions in society. A common model in public health is Dahlgren and Whitehead's so-called rainbow model (Dahlgren & Whitehead, 1991).



Source: adapted from Dahlgren and Whitehead, 1991

Figure from: Dahlgren and Whitehead (2021) The Dahlgren-Whitehead model of health determinants: 30 years on and still chasing rainbows, *Public Health* vol199 p.20-24

<https://www.sciencedirect.com/science/article/pii/S003335062100336X>

Age, gender, and inheritance of individuals, which are located at the core of the model, are factors at the individual level that are seen as relatively insusceptible. These interact with influential factors in the environment in which the individual lives (represented by the four layers of the model) and have consequences for the individual's health. The outer layer represents superior social structures and includes political, economic, cultural, and environmental conditions in society. Biological sex, as mentioned, is at the core of the model, while the societal construct of gender and norms around gender, i.e., the gender structures of society, can be found in the overall

cultural layer at the end of the model, from which it profoundly affects all other levels. While the biological sex is seen as relatively stable, gender structures in society are seen as changeable.

The theoretical starting point is to highlight the part of mental illness that can be linked to the individual being subjected to some type of prolonged stress. In this respect, stress is explained by external causes ranging from difficult upbringing conditions, economic vulnerability, inequality, and discrimination, to demands from school and working life. There are many different definitions of stress, but a common definition in social epidemiology and public health is Lazarus and Folkman's definition. They describe the concept of stress as a condition that arises due to an experience or event that is beyond what the individual has resources and ability to cope for (Lazarus & Folkman, 1984).

From a biological and evolutionary perspective, stress can be seen as a natural bodily response to increase chances of survival. However, when the brain experiences reoccurring stress, the system can get out of balance and this reaction can have harmful and lasting consequences.

## **2.2 Gender differences in mental health**

The causes of mental illness are both many and complex, and the same applies to the differences that are visible regarding mental illness in boys and girls. In this chapter we address the conclusions from the report published by the Swedish Gender Equality Agency about how social structures and gender norms can affect and contribute to the statistical gender differences in mental health and the implications of digital media in youth. Both Swedish- and international reports highlight an increase in mental illness i.e., depression, anxiety related symptoms and impaired wellbeing, especially among girls (Collishaw, 2015; The Swedish gender equality agency, 2021a). Self-rated internalizing symptoms have increased in young people of both sexes, however the increase has been greater among girls and young women (The Swedish gender equality agency, 2021a). Girls and young women are more likely to express symptoms such as worry, stomach-ache and headaches. They are also more frequently diagnosed with depression and anxiety, while boys and young men are more often diagnosed with ADHD and exhibit more externalizing behaviours as well as gambling and substance abuse problems. Girls and young women are overrepresented in terms of both self-assessed mental illness and diagnosed mental illness such as depression and anxiety disorders. They are also more often being treated for self-harm and suicide attempts. However, young men are overrepresented when it comes to suicide (Lager et al., 2012). This gender paradox raises questions about the causes of gender differences in mental illness and how society's social structures and norms around gender, which in combination with contemporary societal changes, drive both the increase, gender gap and gender paradox in mental illness.

### **2.2.1 The rising mental illness in youth**

Expectations and norms related to gender can be a contributing factor to the increasing mental illness, where power and gender structures affect girls' mental



health, and norms about being a man affect boys' expression of mental illness. The norms cause different expressions of mental illness for boys and girls.

According to the Ombudsman for Children in Sweden, one explanation of the increasing mental illness among girls is changed norms around gender and that these changes place higher demands on girls and young women, since they have both increased choices and increased freedom (The ombudsman for children in Sweden, 2015). The experience of performance requirements to be recognized and respected is related to stress and anxiety (Landstedt, 2010). Scientific studies and government reports highlight that increased performance related pressure and expectations of girls and young women have led to increased stress (The ombudsman for children in Sweden, 2015; Landstedt, 2010; Strömbäck et al., 2015; Wiklund et al., 2015).

A common view in Sweden is that the increased individualization in society has led to increased stress at the individual level. From a previous more collectivist view, it is today the responsibility of every citizen to achieve success, prosperity, and good health (Sturfelt & Levander, 2019).

This places high demands on the individual, which also entails increased demands for higher education. Increased demands at school can lead to increased stress with a risk of mental illness such as anxiety and depression in students experiencing grade stress. This may also increase the risk of antisocial behaviours, criminality and abuse in students who feel resigned and have difficulty living up to performance requirements (Patton et al., 2016).

These expectations and requirements reflect norms about how the young woman in society should be and behave. Through the stress caused by the risk of not being able to live up to society's norms, girls and young women embody the context in which they live as stress, which can have lasting consequences in adulthood through increased vulnerability to mental illness. Another risk is that girls and young women perceive stress as "normal", which may result in them pushing themselves too far (Strömbäck et al., 2015; Wiklund et al., 2015). Clarification of the concept of mental illness is needed to clarify what is classed as every day, normal, adversity and what is unhealthy and may need medical expertise.

Research also shows that the discourse on mental illness has changed in recent decades. From mental illness being seen as a problem that affects mainly socially vulnerable children and society having a great responsibility to help, to today's discourse where mental illness is seen as a general public health problem that risks affecting all young people and where developed mental illness is attributed to shortcomings in coping strategies and competence of the individual (Sturfelt & Levander, 2019). The underlying causes of the currently common internalizing symptoms, i.e. anxiety and depression are seen as complex and unclear. It is also common that girls and young women experiencing these symptoms are viewed upon as irrational. In conclusion, if girls and young women with mental illness cannot live up to the opportunities offered by society, this is regarded as a weakness of the individual instead of a societal problem (Callegari & Levander, 2019).

Gender norms not only harm girls and young women's mental health, but boys' and young men's as well. This is reflected by the previously mentioned gender paradox that can be explained by norms around masculinity that contribute to men committing suicide to a greater extent than women (Rice et al., 2018; Smith et al., 2018). Although suicide is by far most common among older men, statistics show that young men – in contrast to the rest of age categories – rather have an increasing trend in suicide (The Swedish national board of health and welfare, 2020).

Masculine norms characterized by stoicism and self-reliance may lead men to have a higher threshold for seeking professional help as compared to young women, as mental illness and help seeking are generally associated with femininity. This is seen as a partial explanation of the underdiagnosis of depression and anxiety disorders among boys and young men (Seidler et al., 2016). Another reason leading to boys and young men being underdiagnosed is that they may have different symptoms of depression and anxiety than girls and young women. Addiction, criminality and aggressive behaviours can mask depressive conditions in men. Research shows that the diagnostic instruments used to determine depression do not always capture men's symptoms of depression, as the instruments are designed based on a female symptom picture (Rice et al., 2018; Smith et al., 2018).

In today's society, mental illness tends to be perceived as a typical female disease, which can have negative consequences for both women and men. On the one hand, there is a risk that the power relations between the sexes will be maintained or strengthened when women are perceived as the "weaker sex", which has also been a historically predominant sight. On the other hand, the masculine norms hinder men from seeking medical care for mental illness because this is seen as a typical female condition. The discourse on mental illness therefore needs to be problematised and changed (Lindbom, 2021).

### **2.2.2 Adolescence- a certain vulnerable period in life**

Given that social structures and gender norms impact the mental health of girls, boys, young women and young men, it is also of importance to take into account the biological changes that occur in the brain during teenage years, as stress during puberty is potentially harmful (Dahl & Gunnar, 2009).

The clear gender gap in internalising, i.e., introverted symptoms, is greatest during puberty and then decreases slightly during early adulthood. This also coincides with the time in life where the gap in pubertal status is the greatest as girls generally goes into puberty one to two years earlier than boys (Lindbom, 2021). Crone et al. describes that social media potentially influences development and affects the brain of young adolescents. The research shows that key areas that the brain uses when consuming social media are social reward systems, emotion-based processes, regulation and mentalization about other people, all of which in early puberty are not fully developed. Young people often manage these processes worse than adults. As these neural systems is underdeveloped and under reconstruction during early adolescents, they may have potential difficulties to cope with online-rejection, peer-influences, norms, and other emotion-loaded interactions (Crone & Konijn, 2018).



### 2.2.3 Increased bullying and harassment

On the basis of this knowledge, it is therefore worrying that there are reports showing that bullying and harassment has increased especially towards girls and young women and these harassments take place both within schools and online (Public health agency of Sweden, 2019b; Rönningen, 2019; The Swedish media council, 2019, 2020). According to the latest HBSC survey (health behaviour in school-aged children in Sweden, exposure to bullying has increased in all age groups since 2009, but the largest increase has been in the group of girls 13-15 years of age (Public health agency of Sweden, 2019b). It is unfortunate given that bullying and harassment increase during an already vulnerable period of life, it becomes more difficult to deal with this type of stress (Crone & Konijn, 2018; Spielberg et al., 2019). Bullying and harassment reinforce the stress of not fitting in and clarify expected norms, which many young women describe as a stress factor regardless of whether they have been exposed to this or not (Strömbäck et al., 2015; Wiklund et al., 2015).

## 2.3 The effects of digital media on youth mental health

### 2.3.1 The digital media use

Since digital media has become ubiquitous in adolescents' everyday life, it is important to acknowledge the potential effects that digital media may have on the mental health of young people. The digital media use among youth's has declined in age in recent years and is also highly gender segregated. Boys and young men spend more time playing games while girls spend their time on social media (Patton et al., 2016; The Swedish media council, 2019; Twenge & Martin, 2020). The Swedish Media Council, reports that more than 40% of 12-year-olds use digital media more than three hours per day. In addition, technology has changed in just a few years from computers and tablets to smartphones that are constantly present. Nearly 95% of all 12-year-olds own a smartphone and 89% of them use it daily. There are also gender differences where girls are more prone to use the smartphone as a tool to socialize with others through i.e., texts, video messages. They also use it daily to a higher extent and spend more time on social media. Boys are more likely to play online games on a daily basis (The Swedish media council, 2019).

Research about the connection between digital media and the potential effects that it may have on the mental health of young people has increased significantly. In a report from 2018, OECD concludes that slight internet use may increase the mental wellbeing, while in contrast, extensive internet use may increase mental illness (OECD, 2018). Although there is prominent research in this area, there is a lack of both longitudinal and qualitative studies in order to determine the causality as well as gaining a deeper understanding of the mechanisms behind the relationships (Dickson et al., 2019).

Hökby et al concludes that the correlation between digital media and depression is complex. It is rather the consequences of using digital media that to a larger extent explain the correlation with mental illness. In particular, the study shows that consequences such as sleep deprivation and symptoms of addictive behaviour have the strongest association (Hökby et al., 2016). Several reviews have been conducted

where the conclusions are relatively coherent, that is, the empirical research is not completely coherent, but much suggests that there is a significant relationship between social media use and anxiety and depression symptoms (McCrae et al., 2017), as between digital media and mental well-being (Twenge & Martin, 2020). Though, it should be added, that there is little consensus between researchers, and some concludes that the evidence of a direct relationship between social media use and depression is so vague that it is risky to draw such conclusions, and instead highlights the potential benefits of using the digital media to connect and reach vulnerable youth with mental health problem (Odgers & Jensen, 2020). However, the current literature emphasizes the importance to increase the understanding of how, why and to whom social media and other networking sites can have potential positive and negative effects on the development and mental health of young people (Nesi, 2020).

### **2.3.2 Research about social media and mental health**

Several systematic reviews have been conducted about the relationship between social media and different mental health outcomes. In a systematic review from 2017, McCrae et al concludes that there is a small positive correlation between social media and depression. They conclude that longitudinal research and qualitative research are lacking in the research area which aggravate the interpretations of causality between social media and mental health. Their review concludes that the longitudinal studies that exist often have a short time span and that sample sizes vary largely. Either too few to have statistical power or too many which can generate significant results but where these do not have clinical relevance (McCrae et al., 2017).

For example, a study from 2018, examining social media habits of over 10,000 children in the age of 14 in U.K., concludes that there is an association between social media and depression symptoms, with the association being stronger for girls than boys. However, several other factors mediated the relationship such as sleep-duration and -quality, harassment, self-esteem and body image. Social media use was associated with online harassment, poor sleep, low self-esteem and body image concerns, which were directly linked to depressive symptoms (Kelly et al, 2018). Furthermore, Primack et al. found a strong association between social media use and development of depression (Primack et al., 2021).

Social media has also been linked to body image concerns, Rodgers et al. concludes in an Australian cross-sectional study that both teenage girls and boys are affected by social media in that it affects their body image concern, eating habits, muscles building habits and concerns due to comparison and pictures of thin and muscular people (Rodgers et al., 2020).

In contrast with these studies, Coyne et al. concludes in their eight-year cohort study of adolescents in north-western USA, that time spent on social media has no effect on depression and anxiety symptoms. Instead, they highlight the importance to see beyond the time debate and instead focus on context and content as potential leading causes in between social media use and depression and anxiety in adolescence (Coyne et al., 2020).

Also, in a cohort study of young adolescents in northern Italy, Calandri et al. conclude that there is no significant relationship between social media and impaired mental wellbeing. The relationship is partly modified with self-efficacy in emotional control and gender. Girls, with low self-efficacy using social media, had a decreased mental wellbeing. In contrast girls with high self-efficacy in emotional control using social media increased their mental wellbeing. No effects were found among boys. This highlights the importance of showing both positive and negative effects of using social media and that promoting self-efficacy in emotion can be a fruitful intervention (Calandri et al, 2021).

Van den Eijden et al. evaluated and problematised addiction behaviour diagnoses connected to gaming and social media among adolescents. Their longitudinal study examined whether symptoms of gaming addiction and social media addiction affected life satisfaction, social competence, and grade points average which are criteria for addictive behaviour. Their results shows that mental health is not adversely affected by frequency and conclude that one may distinguish between the concepts of “engaged gamer” vs. “gamer with addictive behaviour” and the same applies to social media addiction. In general, both gambling and social media consumption indicates higher social skills, and it is only when addictive behaviour appears that it results in negative consequences. They conclude that symptoms arising from gaming and social media use disorder should be regarded as addictive behaviour diseases (van den Eijden et al., 2018). Also, Andreasson et al. reviews the research on social media addiction and argue that there are several factors describing the addiction and behaviour which is the same as other addiction like behaviours. However, there is no research on treatment available and the addiction has no medical nosology yet (Andreassen, 2015).

The addictive behaviour can also stem from fear of missing out (FOMO). Fabris et al. investigated the relationship between the concept of FOMO and emotional symptoms in adolescent. Their study supports the theory of FOMO and decreased emotional wellbeing, and FOMO was associated with increased stress due to experiences of neglect or negative reactions of peers on social media. FOMO also seem to fuel stress of not receiving feedback online which trigger addictive behaviour of social media (Fabris et al., 2020).

### **2.3.3 Social media affects sleep and mental health**

The Public Health Agency of Sweden describes in a previous report that young people who use some form of digital media for more than four hours per day report more psychosomatic symptoms than those who use digital media to a lesser extent (Public health agency of Sweden, 2015). Furthermore, in the latest survey of Health Behaviour in School-aged Children (HBSC) it is found that young people in Sweden are increasingly reporting insomnia, but whether this is an outcome of increased mental illness or an explanatory factor to the increased mental illness and how digital media use contributes, is unclear (Public health agency of Sweden, 2019b).

In the context of social media, several studies indicate an association between social media use and sleep quality, while also suggesting that the connection is complex

and that it is important to look at the content and how the social media is tackled by the individual. In a recently published review of 42 studies, Alonzo et al. conclude that poor sleep quality and sleep duration may partly explain the association between social media use and poor mental health. However as most of the other reviews in the research area the association between social media use and poor mental health outcomes is evaluated from cross-sectional research design, hence it is not possible to verify the directionality and only one of the included studies evaluated mental health status before start. Despite the difficulties to interpret the results, the authors highlight that it is important to have an awareness of the potential relationships between social media use, sleep quality and mental health. This knowledge may be useful to improve sleep quality and other sleep outcomes in youth, to improve mental health outcomes such as anxiety, depression, and psychological distress and to promote self-regulated use of social media applications (Alonzo et al., 2021).

In a study on adolescents in Scotland by Woods et al. it is shown that those who used social media more, and were more emotionally engaged, had poorer sleep quality, lower self-confidence, and more anxiety and depression symptoms. The study also showed that those who used social media at night and invested more emotionally had the most impact on sleep and wellbeing (Woods & Scott, 2016).

Van de Schuur et al. concludes in their cross-sectional and longitudinal research on Dutch adolescents that social media stress is associated to increased sleep latency and daytime sleepiness but time of use of social media does not affect sleep latency, instead it is when social media becomes stressful that it correlates with sleep latency. This study adds support to other studies that highlight the importance of disentangle between frequency of use and the way adolescents cope and manage with their social media use (van der Schuur et al., 2018).

#### **2.3.4 Neuropsychiatric disabilities and digital media**

The Swedish Media Council published an in-depth report on mental illness in young people linked to digital media use. In summary, the report shows that over 27 percent of respondents (13-18 years) report impaired mental well-being and that there is a weak correlation between mental illness and time spent on media use, where adolescents who have reported mental illness tend to use digital media more than young people without these symptoms. Boys who report mental illness are more likely to watch and play video games and watching pornography, while girls with this type of inconvenience spend more time than other girls on You-tube, mobiles, and social media. The report also highlights that youth with neuropsychiatric disabilities are more frequent users of digital media and tend to use it more often and for longer times (The Swedish media council, 2020).

Indeed, the empirical research confirms that social media can have adverse effects on the mental health of young people with ADHD. Boer et.al investigated the relationship between ADHD-symptoms and problematic use of social media vs. intensiveness of social media consumption in a longitudinal study. The authors conclude there is a unidirectional relationship between problematic social media use and increased ADHD-symptoms. As other researchers they emphasize the

importance to distinguish between intense social media consumption and problematic social media behaviour which relate to addictive behaviour. They also emphasize that while intense social media consumption does not have a negative impact on mental health, youth with problematic social media behaviours are at heightened risk of worsening their ADHD-symptoms (Boer et al., 2020).

### **2.3.5 Digital media and sexual harassment**

A recently published Swedish study aimed at investigating young people's sexuality, experiences of abuse, sexual exploitation, and sexual exposure via digital media show that young women are significantly more vulnerable online as compared to young men. The study recurs approximately every five years and examines young women and young men aged 17-18. Data has been collected 2004, 2009, 2014 and now 2021. The study shows that 43% of girls has sent undressed digital images via some form of digital media. The corresponding figure for boys was 29%. However, it was most common among those who did not identify as female or male (46%). Most people did it because it was "fun and exciting", but as many as 28% of the young women did this "to get comments on how they looked" compared to 12% of the young men. But in addition to the gender differences, there were also large demographic differences. Those who sent pictures went to a much higher extent on vocational preparation programmes and generally rated the family's finances as worse compared to the students who did not send pictures. Those who had sent undressed images had significantly worse mental health and more trauma symptoms as well as more anxiety and depression symptoms.

The study also shows that 38% of young women were contacted sometime before the age of 15 by an unknown adult for sexual purposes i.e., grooming compared to only 11% of boys. However, as before, young people who did not identify as female or male had the most experience of this (44%) (Svedin et al., 2021).

### **2.3.6 Pornography and mental health**

The same study as above examines associations between watching pornography and mental illness. Generally, boys watch pornography significantly more often than girls. Watching pornography at some point was associated with poorer mental health. This was true for both boys and girls, but girls, like other studies, generally had a worse mental health rate regardless watching pornography or not. The group of boys who watched daily and who had difficulty not watching or switching off felt significantly worse than the other boys. Again, these investigations are of cross-sectional design which therefore cannot determine causality. Those girls who often watched pornography had been more exposed to previous sexual abuse. Similarly, it was much more common to have sent undressed images so-called "sexting" among the young people who often watched pornography in both boys and girls. In addition, the study also found that there were significant differences between young women and young men in how they perceived pornography. Boys found the pornography to be arousing to a greater extent, while girls were far more likely to perceive it as off-putting or even disgusting. About 15% felt they had difficulties refraining from watching pornography, as well as difficulties to stop once they started. This was also significantly more

common in boys. In this study, 22% of boys watched daily and 76% watched 1-2 times a week or every day. Girls showed a different pattern where 81% watched 1-2 times a month or once a week. The authors conclude that young people today consume a lot of pornography, but the increase have been undramatic during the 15 years that the study has been active. Around 15% of young boys have a form of addictive behaviour of watching pornography, corresponding numbers was about 5% in girls. This means that there is a need for support activities for these types of problems. The survey also asks questions about the experience and only – or – as many as 12% think that pornography adds an understanding of sexual relations. The authors highlight that pornography has a teaching purpose, but this should instead be addressed by improved sex education in schools. Here, the new Swedish curriculum on sex education can provide this teaching in a more inclusive way (Svedin et al., 2021).

### **3. Digital media and the implications for gender equality in mental health**

#### **3.1 Digital media – a gender segregated world, consolidating current gender norms**

Comprehensive research and reports highlight the segregated digital media consumption between boys and girls and young women and young men. This divide in different activities with different outcomes in mental illness and symptomatology is a mirror of societies' gender structures.

Boys and young men spend more time playing online games while girls and young women spend more time on social media (The Swedish media council, 2019; Twenge & Martin, 2020). There is also some evidence of gender differences in outcome even though the research is scarce. Twenge et al. shows that girls have a stronger association between high digital media use and low well-being, as compared to boys of the same age and this association was particularly strong regarding smartphone use and social media use (Twenge & Martin, 2020).

Social media also provides opportunities for people to share pictures of themselves, which in turn may lead to judgements. Due to the development processes of adolescence, which involve identity development that involves social comparison and feedback-seeking, it is no wonder that young people turn to a platform that enables these particular facilities (Nesi & Prinstein, 2015). Nesi et al. found that girls had a stronger association between technology-based social comparison feedback-seeking and depression symptoms as compared to boys. These processes are also evident in the Swedish study of Svedin et al, which shows that girls send undressed pictures more often than boys due to wanting to have comments on their appearance (Svedin et al, 2021).

Crone et al. concludes that social media affect adolescents' brains in such a way that during this time in life they may have potential difficulties to cope with online-rejection,



peer-influences, norms and other emotion-loaded interactions (Crone & Konijn, 2018). Girls and young women are more often and to a greater extent exposed to these types of events than boys and young men because of the social structures around gender that exist in society which prompts girls using social media to a greater extent. Swedish qualitative research shows that girls in today's society are exposed to higher demands and to succeed at all levels (The ombudsman for children in Sweden, 2015; Strömbäck et al., 2015). Here, social media becomes both a tool to ensure that you are good enough but also to be able to constantly compare yourself with others. Rodgers et al. concludes that social media may affect both teenage boy's and teenage girl's body image concerns, eating habits and self-esteem (Rodgers et al., 2020). Being subjected to all these pressures stresses the brain at an already vulnerable time in life which can potentially lead to the development of mental illness later in life (Dahl & Gunnar, 2009; Patton et al., 2016).

The Swedish Media Council also highlights in their report that the demographic factor with the strongest association between time spend on digital media and impaired mental wellbeing is girls with two foreign parents. This can be related to the intersectional research showing that girls belonging to an ethnic minority have an increased risk of stress as a result of being exposed to several norm systems at the same time (Patil et al., 2018). The context and majority ideals and norms are clarified online and cause these girls to be subjected to additional stress and a feeling of not fitting in. Digital media are arenas where norms are created and where young people compare themselves to others and are assessed (Public health agency of Sweden, 2019a; The Swedish media council, 2019). Digital media risks strengthening current norms, which will have consequences for gender equality work.

Tackling inequality problems requires changes in social structures and prevailing gender norms that often portray girls subordinate to boys as well as beauty ideals associated with Western ideals. Few studies investigate how the content in digital media affects stress levels among girls and young women.

The descriptive data available indicates that youth and especially girls have a deteriorating mental wellbeing and express more stress-related illnesses, which has implications for gender equality in mental health. Girls who are experiencing more stress are at heightening risk of developing mental illnesses such as depression and anxiety later in life and may have more difficulties tackling and dealing with, often, normal setbacks in life.

This has not only implications for gender equality in mental health, but also increased gender equality with regards to income since there is a relationship between mental health and lifetime income (Linder A. et al, 2019). As was pointed out at the beginning of the report, it is therefore of grave importance to find causes and preventive measures early in life in order to counteract further differences and increases in mental illness. Increasing knowledge and understandings of how digital media affect, in particularly girls' mental well-being, can therefore be an important piece of the puzzle in order to find the right and balanced recommendations for digital media use.

## **3.2 Digital media has implications for youth with neuropsychiatric disabilities**

The research indicates that youth with neuropsychiatric disabilities have an increased vulnerability online. The Swedish National Media Council identifies young women with neuropsychiatric disabilities as a particularly vulnerable group, as they both spend more time on digital media and are more often subjected to bullying and harassment on the internet (The Swedish media council, 2020). But they also use digital media more often and longer, which allows them to potentially encounter more harmful activities online.

Moreover, research suggests that girls are underdiagnosed for neuropsychiatric disabilities due to gender norms which postpone diagnoses to later in adolescence, causing these girls to a greater risk of developing mental illness such as anxiety and depression as a result of lack of support and help they may need. The fact that these girls are now also exposed to increased stress and negative impact by the digital media further increases the risk of suffering from mental illness later in life.

Another side is that young people with neuropsychiatric disabilities are particularly vulnerable as these young people are at higher risk of getting caught up in addictive behaviour (Boer et al., 2020). Many studies show that it is only in the case of addictive behaviour that the digital media, regardless of gaming addiction or social media addiction, has negative consequences for mental health. However, this should be problematized as gaming and gambling addiction have their own nosology and diagnosis code while social media addiction has no diagnostic code or treatment strategy. This could potentially lead to young women not getting help for their addiction. Which could have great consequences in in the long run.

### **3.2.1 Interventions and preventing efforts need to target boys' and girls' special needs**

Even though research shows that you can't draw conclusions about causality, it's clear that that both girls and boys who use digital media also point out a worse mental health than young people who use digital media to a lesser extent. And even if research is lacking, the combined picture is that there are risks associated with overconsumption of digital media. Both that there is an obvious increased risk of encountering potentially harmful activities that have direct consequences for mental health such as grooming and sexual exploitation, but also in relation to the fact that it may simply take up a lot of time, which therefore competes with other important activities for mental well-being such as sleep, relaxation, physical activity and physical contact with others, offline (Coyne et al., 2020). Due to the complex situation many research reports suggest that the frequency of use is not decisive but has to do with how one relates to the information and content and what type of media is used and when it is being used. There are many concerns with the increasing media use and what kind of consequences this has for young women and young men, but there is also a lot of research that highlights the benefits and endless possibilities of digital technology. There are studies that show that most people who are doing well have increased life skills and better social skills than those who do not use social media.



Furthermore, digital media enables arenas to connect with vulnerable and young people with mental illness. Especially boys and young men can be helped by being able to talk anonymously to someone. This can be a way to lower the thresholds for young men to seek care when they feel unwell.

Given these difficulties and the fact that there are positive effects of digital media, a balancing act is required. One way may be: that the focus should be on preventing efforts targeting the consequences of digital media use such as sleep loss and addictive behaviour (Hökby et al., 2016). However, it is important that these preventive measures have a gender perspective where interventions and recommendations meet the specific needs of both boys and girls, as research shows that boys and girls use digital media in different ways, which has different consequences for mental health. Swedish research shows, for example, that there is a group of boys who need support for online pornography addictive behaviour (Svedin et al., 2021), and boys' greater propensity for gaming addiction. As mentioned earlier, gaming addiction has been classified as a disease which facilitates support and treatment. For addictions linked to social media, there is no such classification of the disease, which hinders treatment and support and leads to many young girls being unaided.

In addition to addressing the individual consequences, efforts need to be made concerning changes on a structural level. The fact that the consequences of digital media consumption often become more serious in terms of girls and young women's mental health is a structural problem that results in an increased gender gap. It needs to be solved through changes in social structures and should not be imposed to the individual to solve.

## 4. Discussion

### 4.1 The research is lacking in showing causality

There is much in the research that is lacking on how, to whom and why digital media affect mental health in youth. There are great difficulties in establishing the causality and there is a lack of a consensus concerning the relationship between digital media in terms of time with impaired mental well-being and other aspects of mental illness. The relationship between digital media and mental health may be bi-directional i.e., digital media can cause mental illness but people with mental illness also tend to use digital media more, but it may also cause a vicious spiral in which the digital media feeds and exacerbates symptoms. Most of the empirical research consists of cross-sectional studies and many times both methods and study populations are so different that the results of studies are difficult to compare with each other. There is also often a lack of a review of the mental health condition of the study participants before the study. Moreover, few studies have a gender perspective and at best, data are separately identified by gender.

## 4.2 Challenges

An identified challenge is to be able to find a balance where restrictions and limitations are well considered. Where they meet the requirement to protect children from harmful media influence under Article 3 of the UNCRC (Convention on the rights of the child, 1989). On the other hand, children have the right to participation, development, the right to be heard. Restricting access to communicate digitally can have effects that make it more difficult for children to participate in society, but also to older children's right to independence and emancipation (article 6&12).

Swedish research also shows that young non-binary people in particular watch more pornography and think that it has a greater value for educational purposes. This could be a way to find information outside the deeply heteronormative society.

But on the other hand this is also a possible arena for sexual exploitation that affects both girls and boys which must be prevented at all costs (article 19&34).

We need to take into careful consideration what the implications of imposed restrictions and recommendations are in relation to UNCRC. How can the endless possibilities that digital media create such as participation, opportunities for education and acquisition of knowledge be set against the fact that young people are feeling worse, and that digital media potentially exacerbate these problems?

## 4.3 Digital technologies and the COVID-19 pandemic

In the last two years, the world has changed dramatically as a result of the ongoing COVID-19 pandemic. Everyone has had to adapt to lockdowns, closed schools with digital distance learning, social distancing, and other restrictions. COVID-19 will, undoubtedly, have consequences for mental health in youth and a rise in mental health support both on- and off-line (O'Reilly et al., 2021). As puberty involves an extension of the social network and emancipation from parents and where friends play an increasing role in social support, can the aggravating circumstances of connecting with friends lead to increased stress and impaired development for young people. In addition to this, there is increased zoom fatigue with tired eyes and headaches (The Lancet, 2020). In recent decades, there have been reports of rising mental illness, where the impact of the COVID-19 pandemic on social, economic and individual factors will lead to a further increase.

Within the framework of the Gender Equality Agenda, it is important to acknowledge girls who, even before the pandemic, expressed more internalising symptoms such as anxiety and depression. Since girls tend to use social media to a higher extent than boys, there is a risk that girls' mental illness is now on the rise. We are now talking about the COVID generation, and research and other reports show that many young people have developed an addictive behaviour for digital media during the pandemic (The Lancet, 2020), which the research specifically highlights as an important factor behind the link between social media and mental illness.

Alonzo et al. points out that young people who have been separated from their friends due to school closures may feel an increased need to use social media and that the

previously explained concept of FOMO risks exaggerating this consumption that can lead to addictive behaviour (Alonzo et al., 2021). This, among other things, is confirmed by Svedin et al. that shows that girls feel significantly worse after school closures than before. Boys, on the other hand, have expressed that it is more difficult to keep up with teaching. In addition, girls find it more difficult to talk about problems with friends and other adults during the pandemic (Svedin et al., 2021). In this way, this study shows that the real and physical contact cannot fully be replaced by digital detachments.

There are also concerns of how the distance-education will impact the youth with special needs and disadvantage preconditions. There is a risk that children, who need extra support at school due to lack of support from home and those with neuropsychiatric disabilities, will be without valuable assistance. This might further increase vulnerability of the youth resulting in an exacerbated increase in gaps in both mental and physical health resulting in increasing inequality gaps which might potentially increase mental illness (Pickett & Wilkinson, 2015).

Digital technology has also enabled young people to actually establish schooling during the pandemic. Despite physical distancing, it has still been possible to interact digitally with their friends. However, there is much to suggest that this is not enough, but this isolation and lock-in of our young people will have major consequences both for the individual as well as for society as a whole. The COVID-19 pandemic is an unforeseen event that changes everything and will change and increase the need for mental health care (O'Reilly et al, 2021). The fact that we are now facing further challenges with mental health of young people makes it even more important to act preventively and find ways to minimize the potential stress factors that are possible to minimize today.

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