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**THE RELATIONSHIP BETWEEN SOCIAL MEDIA USE  
AND ADOLESCENT MENTAL HEALTH:  
A SYSTEMATIC REVIEW<sup>1</sup>**

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In recent years, teenage and young adult use of social media has expanded dramatically, and this has led to a major rise in mental health and wellbeing difficulties among adolescents and young adults. Although social media has been blamed for the increase in mental health and wellness difficulties among teenagers and young adults, it continues to be contentious. This review tries to synthesize the available information about the link between (1) intensive and problematic social media usage, (2) active and passive use, and (3) social comparison and adolescents' and young adults' mental health and wellbeing. The literature review is carried out and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The systematic search for publications is undertaken in six databases between 2017 and 2022. The inclusion of articles is been restricted to the relationship between the following types of social media use: (1) intense and problematic use, (2) active and passive use, and (3) social comparison and the mental health

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and wellbeing of adolescents and young adults, with a sample age range of 10 to 24 years and peer-reviewed publication in English. The search brings up 13 papers, with 11 cross-sectional studies, 1 longitudinal research, and 1 experimental study included. Intense social media usage is still not adversely related with adolescents' mental health and wellbeing, however problematic social media use was negatively connected with adolescents' mental health and wellbeing. The confounding variable in the negative link between active social media usage and teenagers' mental health was time spent on social media. On the association between passive social media usage and mental health in adolescents and young adults, the moderating impacts of initial mood and optimism and the mediation effect of social media-induced envy are found. With the mediators of social comparison tendency and upward social comparison, as well as the moderator of social comparison outcomes and self-efficacy, social comparison is a crucial mechanism of passive social media use and adolescent welfare and mental health. The link between social media usage and the mental health and well-being of teenagers and young adults is complicated. These correlations are influenced by person-specific effects, environmental impacts, and confounding factors.

*Keywords:* Social Media; teenagers; mental well-being; depression; systematic review.

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## ВЗАИМОСВЯЗЬ МЕЖДУ ИСПОЛЬЗОВАНИЕМ СОЦИАЛЬНЫХ СЕТЕЙ И ПСИХИЧЕСКИМ ЗДОРОВЬЕМ ПОДРОСТКОВ: СИСТЕМАТИЧЕСКИЙ ОБЗОР

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В последние годы использование социальных сетей подростками и молодыми людьми значительно расширилось, и это привело к значительному росту проблем с психическим здоровьем и благополучием среди подростков и молодых взрослых. Несмотря на то что социальные сети обвиняют в росте проблем с психическим здоровьем среди подростков и молодых взрослых, они по-прежнему вызывают споры. В этом обзоре предпринята попытка обобщить имеющуюся информацию о связи между (1) интенсивным и проблемным использованием социальных сетей, (2) активным и пассивным использованием и (3) социальным сравнением и психическим здоровьем и благополучием подростков и молодых людей. Обзор литературы проводится и публикуется в соответствии с рекомендациями по предпочтительным статьям отчетности для систематических обзоров и мета-анализа (PRISMA). Систематический поиск публикаций осуществляется в шести базах данных в период с 2017 по 2022 год. Включение статей ограничено взаимосвязью между следующими типами использования социальных сетей: (1) интенсивным и проблемным использованием, (2) активным и пассивным использованием и (3) социальным сравнением и психическим здоровьем и благополучием подростков и молодых людей в возрасте от 10 до 24 лет и рецензируемая публикация на английском языке. Поиск выявил 13 статей, в том числе 11 поперечных исследований, 1 лонгитюдное исследование и 1 экспериментальное исследование. Интенсивное

использование социальных сетей по-прежнему не оказывает негативного влияния на психическое здоровье и благополучие подростков, однако проблемное использование социальных сетей негативно сказывается на психическом здоровье и благополучии подростков. Основной переменной в отрицательной связи между активным использованием социальных сетей и психическим здоровьем подростков было время, проведенное в социальных сетях. Что касается связи между пассивным использованием социальных сетей и психическим здоровьем подростков и молодых людей, то обнаружено сдерживающее воздействие первоначального настроения и оптимизма и опосредующий эффект зависти, вызванной социальными сетями. Благодаря тому, что социальное сравнение является посредником между тенденцией к социальному сравнению и восходящим социальным сравнением, а также модератором результатов социального сравнения и самоэффективности, социальное сравнение является важнейшим механизмом пассивного использования социальных сетей, а также обеспечения благополучия подростков и их психического здоровья. Связь между использованием социальных сетей и психическим здоровьем и благополучием подростков и молодых людей весьма сложна. На эти взаимосвязи влияют индивидуальные особенности человека, воздействие окружающей среды и другие сопутствующие факторы.

*Ключевые слова:* социальные сети; подростки; психическое благополучие; депрессия; систематический обзор.

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## Introduction

### *Social media use in adolescent and young adult*

In recent decades, with the advent of mobile technology devices and the proliferation of social media platforms, the use of social media worldwide has permeated our society [55]. Different internet-based networks known as “social media” enable users to interact with one another verbally and visually (e. g., WhatsApp, Facebook\*\*<sup>1</sup> or Instagram\*\*) [70]. In research, social media is often referred to as an umbrella term to describe a multitude of online platforms [3]. These include blogs, forums, social networks, photo and video-sharing websites, etc. [3]. Until 2022 of July, an estimated 59 % of the global population is using social media; Approximately 2 hours and 29 minutes are daily averages for social media usage across all platforms [40]. Especially adolescents and young adults, they represent a unique group of social media users, as they are a generation that has grown up in a highly digital society [44]. In the UK, 91 % of adolescents aged 13–15 use social media, 97 % of adolescents aged 16–17 use social media [20], 95% of adolescents in the USA say they ever use social media apps, majorities say they use TikTok, Instagram\*\* and Snapchat [91].

It is significant to be aware that the developmental stage of adolescents (ages 10 to 19) represents a period of profound psychological, social development and biological [15]. Adolescence is a sensitive period for social self-development because of substantial natural changes in the social brain, self-awareness and social interaction [63]. Thus, this makes them more attentive to how they are perceived by their peers and the wider community [59], and it heightens the sensitivity of adolescents to the interactive, communicative and self-descriptive nature of social media [24]. However, there are some complexities in the relationship between social media use and young people’s mental health and wellness. Three key social media behaviors dominate their determination [38]. These include intense

and problematic SMU [4], active use and passive SMU [1] and social comparison on social media [11].

Intense and problematic SMU are considered to be regarding the high frequency of SMU. However, the two concepts are not the same, Intense SMU is defined as a high frequency of SMU, while problematic SMU is defined as addiction-like behaviors. The exact extent of the frequency of use is unknown [29; 76].

Active SMU refers to social media use that involves direct communication, while passive SMU is consumption of social media content without direct interaction [28; 73].

Social comparison is the process of comparing oneself to others to gain a better evaluation [19]. Social comparison is the process of comparing oneself to another [73].

### *Mental health and well-being with SMU in adolescents and young adult*

#### *Intense and problematic SMU*

An early study showed that intense SMU might cause adolescents to fall behind in their schoolwork, which may cause lower school wellbeing [80]. In addition, intense social media users may spend less time interacting with friends or family face-to-face, which may negatively impact their social wellbeing [89]. Although studies have shown that intense SMU in adolescents is correlated with lower wellbeing [39], the effect of these associations is often tiny [88]. The weak association is that intense SMU may be standard behavior in adolescents and young adults [5], as social media has taken a prominent position in their daily social life [90].

However, many studies suggest that problematic SMU has a greater likelihood of depressive symptoms [37], higher anxiety [67], lower self-esteem [95], social isolation [14] and disordered eating [43]. In addition, a recent study also pointed out that problematic SMU is most common among adolescents with moderate or low academic achievement, low health literacy and low level of parental supervision [66]. It is speculated that the loss of self-discipline and preoccupation with SMU may impair their ability to regulate their daily responsibilities [49]. A study suggest that a lack of face-to-face social activities may contribute to the correlation

<sup>1</sup> Here and further, two asterisks \*\* mark organizations banned in the territory of the Russian Federation.

between problematic SMU and negative mental health [93]. Meanwhile, the greater problematic SMU is related to more perceived online social support [62]. The relationship between intense social media use and mental health is potentially bidirectional, with some adolescents with mental health issues using it more intensively and sensitively to find emotional and social support and less to engage in offline activities [68; 65; 30].

#### *Active and passive SMU*

[28] proposed the hypothesis that active SMU is positively associated with wellbeing, as it induces support and positive feedback which can subsequently increase wellbeing. A cross-sectional study supports this hypothesis; active use of Facebook\*\* was associated with higher self-esteem through greater social support [46]. Passive social media use leads to lower life satisfaction due to social comparison [8] and depressive symptoms or negative mood [33]. Furthermore, it also relates to anxiety symptoms [72], lower self-esteem [18], and negative body image issues [82]. Moreover, evidence shows that those who use social media more actively show better wellbeing outcomes compared to those who use it more passively [57]. Others have argued that active SMU may lead to a decrease in others' wellbeing. For example, actively using social media for cyber-bullying or spreading moral outrage can damage the wellbeing of others [74]. [51] suggested that passive SMU cannot only lead to jealousy but also inspire and create a positive impact on wellbeing, such as seeing inspirational stories on social media. Despite the prominence of the active and passive SMU hypotheses in the literature, a recent number of studies have been concerned with the active-passive dichotomy in social media research, such as [86] considered the lack of a validated instrument to measure active and passive SMU.

#### *Social comparison on social media*

It is worth noting that this comparative behavior is in the young population [54]. Recent studies pointed out that social comparison and envy are key mechanisms in the negative association between SMU and some (but not all) wellbeing indicators among young adults and adolescents [11, 74, 73] Furthermore,

other studies also showed that comparison with others on social media has a psychological impact on social media users, such as positively correlated with depression, self-esteem [17], and mental and subjective wellbeing [81].

Nevertheless, individuals have higher tendencies to engage in upward social comparison rather than downward social comparison, and more likely to choose the comparator who is similar to themselves [34] Social media encourages upward social comparison, allowing individuals to portray a rosy picture of their lives [27], for instance, social media allow for asynchronous communication, provide ample time to write an intelligent comment, or enable their photos to be filtered to enhance the visual appeal of carefully selected photos [73] Therefore, upward comparisons on social media are considered more frequent and harmful [73]; they are particularly likely to elicit jealousy and suffering caused by the fortune of others, which can be detrimental to wellbeing [94].

Although upward social comparison has been considered to be correlated with envy and leads negative impact wellbeing of social media users, recent studies indicated upward social comparison and envy could also have positive outcomes, such as inspiration [51; 75]. This is explained by whether social comparison looks at assimilation (move towards the comparator) or contrast (move away from the comparator) [83] The more assimilative upward comparisons are seen as beneficial emotions (benign envy), benign envy is a feeling of motivation and a tendency to self-improvement, indicated by a desire to have the same advantages as the comparator, while the more contrast upward comparison as harmful emotions (malicious envy), malicious envy is a feeling of resentment and inferiority, which results in a desire for the comparator to lose its advantages [53; 56].

Despite the majority of studies so far have hypothesized that social comparisons on social media are particularly harmful because it triggers contrasting upward comparisons and elicits malicious envy [94], the downward contrast of social comparisons on social media does not lead to a negative impact on subjective wellbeing [32] In addition, an assimilated upward comparison induces a feeling of motivation and a tendency to self-improvement, which can have a positive

impact on subjective wellbeing [0]. However, these positive or non-negative consequences are more likely to be the exception rather than the rule, as foundations in social media are more likely to elicit negative rather than positive emotional responses, as upward contrasting social comparisons occur more frequently on social media [34; 96].

*The regulating effect of Passive SMU and social comparison*

A substantial body of studies suggested that social comparison can mediate and/or moderate the effects of passive SMU on wellbeing [18; 73; 52] This theory is supported by several types of research that demonstrate how upward social comparison modulates the detrimental effects of passive SMU on wellbeing [47; 92], due to upward comparisons can lead to envy, especially malicious envy that is harmful to wellbeing.

As the reason for inclined public self-presentations on social media, [69] the users striving for an idealized and flattering self-image, when passively browsing social media, seeing these positively inclined excerpts of others' lives, upward social comparisons with superior targets can be particularly possible [0]. However, the effect of upward comparisons is further amplified by users do not have sufficient clues to gauge the veracity of these positive self-presentations on social media [87]. As a consequence of these characteristics, social media increases the frequency of social comparisons, in which upward social comparisons can cause envy, depression, or negative emotional evaluations of the good fortune of others, which are particularly harmful to wellbeing [25].

*Justification of the study*

In light of the increasing incidence of mental health disorders among adolescents and young adults, SMU has become a primary contributing factor [42]. It is important to examine the link between SMU and adolescents' and young adults' mental health and wellbeing to benefit parents, educators, policymakers, researchers and other stakeholders.

Even though there is abundant literature on the relationship between SMU and mental health and wellbeing, these studies only focused

on one aspect of SMU, such as problematic SMU [67] or passive SMU [0]. Only a few studies investigated multiple SMU [38]. However, some SMU are interrelated; for example, passive SMU and mental health may determine by social comparisons [18]. Therefore it is necessary to examine these influential SMU simultaneously through systematic review and to explore and analyze these in dept.

*Conclusion*

Overall, intense and problematic SMU, active and passive SMU and social comparison on social media were related to adolescents' and young adults' mental health and wellbeing. These relationships were positive, negative, or minor effects.

SMU is associated with lower wellbeing in adolescents and young adults, but the relationship is small. Problematic SMU is linked to depressed mood, anxiety and lower self-esteem, possibly due to decreased offline social activities and inadequate social support. The association between SMU and mental health is potentially bi-directional, as adolescents with mental disorders use social media more frequently and sensitively. In terms of active and passive SMU, it is found that active SMU positively affects well-being as this has the potential for social support. However, it also has negative effects, such as receiving nasty comments, which can lead to bad emotions. Passive SMU was found to be negatively associated with wellbeing, as passive SMU is thought to increase the likelihood of upward comparison with others and malicious envy, but it's also possible to produce positive outcomes such as motivation. In addition, there was controversy regarding the dichotomy between active and passive SMU, such as the lack of validated measurement instruments for active and passive use.

Social comparison is an important mechanism between SMUs and indicators of wellbeing. Upward comparisons trigger envy, which can be benign or malicious. Downward comparisons have no negative impact on wellbeing, while upward assimilation comparisons have a positive impact. Adolescents and young adults are more likely to engage in comparative behavior, with social comparison being a key factor in the relationship between passive SMU and wellbeing. Upward

social comparison on social media can trigger feelings of envy and affect users' wellbeing.

#### *Research questions and objectives*

This systematic review aims to synthesize the existing evidence regarding the association between social media use (intense and problematic use, active and passive use and social comparison) and adolescents' and young adults' mental health and wellbeing.

The main research question we focus in this study is:

1. What are the association and relationships between social media use (intense and problematic use, active and passive use and social comparison) and adolescents' and young adults' mental health and wellbeing?

2. What is the clarity of conceptual basis and hypothesis regarding social media to surface the way for further research?

Following objectives, we achieve in this study:

- To review the relevant literature regarding social media use (1) intense and problematic use, (2) active and passive use and (3) social comparison and the mental health and wellbeing of adolescents and young adults.

- To investigate the association between social media use (1) intense and problematic use, (2) active and passive use and (3) social comparison and the mental health and wellbeing of adolescents and young adults.

- To investigate the effects of social comparison on the relationship between passive social media use and the mental health and wellbeing of adolescents and young adults.

- To pave the way for further research and practice that promote the clarity of conceptual basis and hypothesis on social media use on adolescent and young adults' mental health and wellbeing.

#### *Study design*

The systematic review was implemented and reported in compliance with Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines to retrieve research relevant to the search topic [9], including search strategy, search selection, quality appraisal for eligibility criteria.

The methodological principles of this study were developed according to the techniques of systematic review, including the search for transparent and rigorous methods to identify; quality appraises and synthesizes studies [50; 77]. A systematic review is designed to provide a reliable description of the 'best current evidence (see Figure 1) relevant to a particular question [48]. Systematic reviews are a precious resource for academics and practitioners; well-conducted systematic reviews provide an effective way to evaluate large amounts of information for different areas of research [10; 60].

Despite the emphasis on rigorous selection and assessment methods, the methodological quality of the data synthesis is also crucial [41]. 'Synthesis' is described in systematic reviews as the process of extracting data from individual studies and interpreting and representing these data in a collective form [31]. In the majority of cases, the end product of a systematic review is the presentation of a statistical (quantitative) or narrative (qualitative) summary of the results [79]. [35] proposed a four-element specific approach to narrative synthesis (1) developing a theory of why, How and for whom the intervention works; (2) conducting an initial synthesis of the included research findings; (3) exploring relationships in the data; and (4) assessing the robustness of the synthesis. [0] further validated this approach invoked how a rigorous narrative synthesis approach can add meaning to quantitative results. This framework was employed to decrease bias and increase the review's transparency. For this study, narrative synthesis is adapted to answer the research questions.

#### *Search strategy*

The search strategy reviewed in this system is based on the SPIDER framework (see Table 1). SPIDER framework defines key elements of review questions to identify relevant qualitative and mixed methods studies [21].

The 'design' (D) and 'type of research' (R) elements are not included in the 'SPIDER' search terms. As the review questions are not specific to research methods, and as possible to capture articles that may not contain these elements (i.e. be as inclusive as possible).

Boolean operators are used to combining in the search to produce more targeted and productive results, and keywords and MeSH terms (see Table 2) are used to index articles.



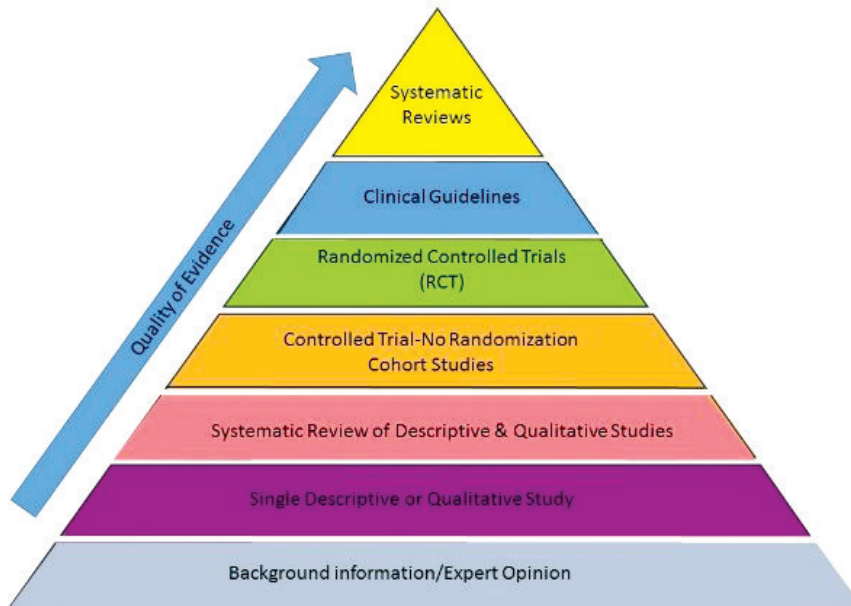


Fig. 1. Hierarchy of evidence pyramid

Table 1

**SPIDER Search tool**

S — Sample	Adolescents and young adults (age range: 10–24)
PI — the phenomenon of interest	SMU impact on adolescents and young adults’ mental health and wellbeing
D — design	Focus groups, interviews, Observations, questionnaires, experimental study
E — evaluation	Wellbeing and mental health
R — type of study	Quantitative, qualitative, and mixed method studies

Table 2

**Alternative Search Terms Used in Database Searches**

	<b>Population</b>	<b>The phenomenon of interest</b>	<b>Evaluation</b>
Alternative search terms	“adolescent*” OR “teen*” OR “juvenile” OR “pupil” OR “student” OR “child*” OR “youth*” OR “young” OR “high school student*” OR “secondary school student*” OR “young adult” OR “AYA”	“Social network*” OR “social* network” OR “social support” OR “social adj2 network*” OR “social media” OR “online communities” OR “SNS” OR “social capital” OR “online friend*” OR “Net Generation” OR “web2.0” OR “tweet” OR “Facebook*” OR “WeChat” OR “Instagram*” OR “Twitter Tumblr” OR “Snapchat” OR “MSN” OR “YouTube” OR “WhatsApp” OR “Pinterest” OR “Bebo” OR “Myspace” OR “Flickr” OR “Google+” OR “Vine” OR “Kik Messenger” OR “Hi5” OR “social network analysis”	“Mental Health” OR “Mental Disorders” OR “Mood Disorders” OR “Depression” OR “affective disorder*” OR “Affective Symptoms” OR “Depressive Disorder” OR “anxiety” OR “anxiety disorders” OR “Stress” OR “psychological distress*” OR “depressive symptoms” OR “well being” OR “wellbeing” OR “psychological wellbeing” OR “app*” OR “self esteem” OR “sad*” OR “life satisfaction” OR “quality of life” OR “life quality*” OR “mood” OR “addiction” OR “lonely” OR “loneliness”

Note: \* is used for variants of words formed with different suffixes. \* Adj2 is used to retrieve records containing a term between two words. The phonetic marker is used when two words are to be placed together. To differentiate words with American and British spelling variations, question marks are used, it is also used because it finds words with or without extra characters present.

This study employs systematic search techniques to retrieve research relevant to the search topic [9]. The search topic is defined as social comparison, active/passive use and intensity/problem use of social media impact adolescents and young adults' mental health and wellbeing. Searches are conducted at Sunderland University Library to discover the key database for psychology and health. There are the following six bibliographic databases; PsycARTICLES, Psychology and Behavioral Sciences Collection, Science Direct, Web of Science, PubMed, and MEDLINE (EBSCO). To further refine the search, the reference list of relevant articles is also screened.

The search strategy is outlined as follows:

(1) “adolescents\*” OR “teen\*” OR “juvenile” OR “pupil” OR “student” OR “child\*” OR

(3) “Mental Health” OR “Mental Disorders” OR “Mood Disorders” OR “Depression” OR “affective disorder\*” OR “Affective Symptoms” OR “Depressive Disorder” OR “anxiety” OR “anxiety disorders” OR “Stress” OR “psychological distress\*” OR “depressive symptoms” OR “well being” OR “wellbeing” OR “psychological well-being” OR “app\*” OR “self esteem” OR “sad\*” OR “life satisfaction” OR “quality of life” OR “life quality\*” OR “mood” OR “addiction” OR “lonely” OR “loneliness”.

(4) 1) AND 2) AND 3)

#### *Inclusion criteria and Exclusion criteria*

The included studies (see table 3) relates to the SMU (1) intense or problematic (2) active or passive (3) social comparison and mental health and well-being. According to the WHO

Table 3

#### List of eligibility criteria

Inclusion	Exclusion
Original peer-reviewed articles. Adolescent and young adult aged 10 to 24.	Systematic or literature reviews regarding social media use for adolescent and young adults.
Studies relevant to social media platforms that mainly used for social interaction such as instant messaging (e. g. WhatsApp), Facebook** and image sharing applications (e. g. Instagram**, Tiktok).	Conference abstracts, notes, editorials, letters, opinion pieces, protocols, books and individual studies.
Studies focused on the relationship between the social media use (intense or problematic, active or passive, social comparison) and mental health and wellbeing. Written in English.	Studies measured Exposure to other internet activities (e. g. video games)
Published between 2017 and 2022. Articles are available in full text	

“youth\*” OR “young” OR “secondary school student \*” OR “high school student \*” OR “young adult” OR “AYA”.

(2) “Social network\*” OR “social\* network” OR “Vine” OR “Kik Messenger” OR “online communities” OR “Twitter Tumblr” OR “Bebo” OR “Myspace” OR “Flickr” OR “Google+” OR “social network analysis” OR “Hi5” OR “social adj2 network\*” OR “social media” OR “Pinterest” OR “WhatsApp” OR “YouTube” OR “Instagram\*\*” OR “Facebook\*\*” OR “WeChat” OR “MSN” OR “social support” OR “social capital” OR “Net Generation” OR “SNS” OR “web2.0” OR “online friend\*” OR “tweet” OR “Snapchat”.

(2022), the adolescent group is defined as 10–19 years old, and the United Nations defines youth as an adult aged 15 to 24 years old, or extend to 30 or 40 years old in some certain cases (United Nations, 2013), the population of interest are adolescents and young adults restricted between aged 10–24, as this age range is vulnerable and susceptible to social media [22]. The involved studies are published from 2017 to 2022, as since 2017, mental health issues have started to grow noticeably in the groups of adolescents and young adults who use social media (NHS Digital, 2018).

*Study selection and Search outcome*

The searched literature is screened to identify its relevance, with inclusion and exclusion criteria used to make decisions about the impact of SMU on mental health.

The record retrieved 1631 papers from the six databases by the search the keywords, including six articles from manual searches of the reference list. Firstly, using Zotero software to eliminate duplicates and manually screen, the number of articles decreased to 1386. Then the titles and abstracts of these articles are screened for relevance to the field of this study; 1326 of those studies were further excluded for the following reasons,

- Studies are not associated with SMU n: 505.
- Studies are not related to mental health and well-being consequences n: 349.
- Studies are not focused on the SMU (social comparison, active use and passive use and intense use problematic use) n: 341.
- Studies are not targeted at the young population n: 71.

The involved 60 articles fully read in the relevant field of this study.

47 articles were excluded with reasons:

- Age range over 24 years n: 15.
- Studies are focused on the covid-19 pandemic period n: 20.
- Studies are relevant to social media content n: 9.
- Thesis n: 2.
- Book n: 1.

At the end of implemented inclusion and exclusion criteria, 13 are eligible in this review. It includes 11 cross-section studies, one longitudinal cohort study, and one experimental study.

*Data extraction and synthesis*

In systematic reviews, data extraction is the procedure of acquiring key features of studies in a structured and standardized form based on information from journal articles. It is an essential prerequisite for assessing the risk of bias in individual studies and for synthesizing their results [26]. Study classification (year of publication), design of the study (number of respondents, age group or mean age, and surveys are used to measure social comparison, intense and problematic SMU, and active and passive SMU), outcome variables (questionnaire used

to measure each outcome and measure of association), and the study's limitations are all extracted for each study that was determined to be eligible (see Report 1: Summary of included studies). The extraction of data is done by a reviewer, with a tutor to supervise and examine, as this is an academic degree review and therefore requires independent work.

A narrative synthesis is adopted to synthesize the evidence regarding the relationships between SMU (intense and problematic use, active and passive use and social comparison) and adolescents' and young adults' mental health and wellbeing.

*Quality assessment*

Assessing the quality of the included studies is an integral part of a systematic review; the quality can be seen as having three components — quality of reporting, internal validity (risk of bias), external validity (variability/applicability) [6]. The quality of included studies is based on whether they are well-designed and conducted to provide reliable results [0]. It is essential to assess the study's quality accurately. Therefore, critical appraisal standardized tools should be used.

The 11 included cross-sectional studies and one longitudinal cohort study are appraised using the NHLBI assessment tool, which is explicitly developed to appraise this type of design (NIH, 2009). According to the scoring system [64] devised for the NHLBI assessment tool, study reliability is considered "excellent" if the rating is at least 70 %, "fair" if it was 50 % or above, and "poor" if it was less than 50 % for the 12 included publications. As outlined above, three were rated as good, and nine were rated as fair. One experimental investigation is evaluated using the JBI critical analysis criteria for quasi-experimental [23].

**Result**

*Characteristics of the Included Studies*

The review includes 13 studies, two of these studies were from the Middle East, North America and European regions (n: 2) 11 studies are conducted in China (n: 3), Italy (n: 2), Finland (n: 1), Netherlands (n: 2), England(n: 1), Turkey(n: 1),

and Iceland(n:1) All included articles are published between January 2017 and March 2022.

The sample size of includes studies ranged from 154 to 190,089. Two of the studies are carried out with participants aged 13–18 from middle and high schools. Seven studies are middle school students, ages 11 to 15, and four are conducted the data from the university, with the participants aged between 17-24.

Four of the studies are focused on the association between intense and problematic SMU and the wellbeing of adolescents and young adults. Four studies are explored the correlation between active and passive SMU and adolescents' and young adults' mental health and wellbeing. Five studies mainly are investigated the social comparison in the association between SMU and wellbeing and mental health in adolescents and young adults.

#### *The designs of the Included Studies*

The 13 articles included were collected through self-reported data, with one four-wave longitudinal cohort study from 2015 to 2019, 11 cross-sectional studies based on schools, and one experimental study.

*Source of Information Regarding the effect (social comparison, active and passive SMU and intense and problematic SMU) and adolescent and/or young adults' mental health and well-being*

All the included 13 studies are quantitative. Four studies are examined the relationship between intense and problematic SMU and adolescent wellbeing and mental health. Two of the four studies further investigated moderating effects, including social media activity, personal factors, and the prevalence of intense SMU at the country level. Another two articles directly are investigated the negative consequences of intense and problematic SMU. The negative influences are seen as low social wellbeing, irritability, stress and low mood.

Four studies are investigated the relationship between active and/or passive SMU and adolescents and young adults' mental health and wellbeing. One examined the relationship between active and passive SMU and anxiety and depressive symptoms in adolescents. Two of the four studies are looked at the relationship between passive SMU and adolescents and young adults' wellbeing

as well as the moderators of initial mood and optimism. One has investigated whether the relationship between passive SMU and adolescents' well-being is mediated by SM-induced envy.

Five studies are investigated the role of social comparison in the relationship between SMU and adolescents' well-being and further explored whether social comparison on social media and adolescents' and young adults' mental health and wellbeing are influenced by social comparison tendency, envy, comparison outcomes, and self-efficacy.

Five studies have explored the relationship between passive SMU and social comparison and pointed to upward social comparison as an important mediator in the relationship between passive SMU and mental health and well-being.

After the analysis, the results of these studies are presented according to four themes identified from the included literature.

(1) The association between intense and problematic SMU and mental health and well-being among adolescents and young adults.

(2) The association between active and passive SMU and well-being and mental health among adolescents and young adults.

(3) Social comparison tendency and upward social comparison

(4) The passive SMU related to social comparison on social media.

#### **Theme 1:** *The association between intense and problematic SMU and mental health and well-being in adolescents*

A longitudinal study in the Netherlands are examined the association between intense SMU and adolescents' wellbeing at the levels of within-person (Intra-individual changes) and between-person (differences between individuals). On the one hand, it is found that at the within-person level, there is no average correlation between intense SMU and life satisfaction; the relationship varied from negative to positive even after controlling for unobserved problematic SMU. It is resulted that some adolescents with intense SMU increase their life satisfaction, and others with intense SMU might decrease their life satisfaction [16]. On the other hand, [16] is found intense SMU negatively associated with adolescents' wellbeing

at the between-person level. However, the negative association is disappeared after being controlled for unobserved problematic SMU. Another similar finding by [36] is found that intense SMU might be positively associated with adolescents' mental and social wellbeing as long as intense SMU did not become problematic SMU.

However, a study conducted in 29 countries is showed that intense SMU impacts adolescents' wellbeing is determined by the prevalence of intense SMU in the countries [2]. In countries with a high prevalence of intense SMU, the association between intense SMU and psychological complaints was weak or absent, even positive associations with family support and life satisfaction [2]. Nonetheless, the result of problematic SMUs is consistent across these 29 countries, with problematic social media users reporting lower life satisfaction and more frequent psychological complaints than the users without problematic SMUs. Although the intensity of negative impact are varied across countries, it did not depend on the national prevalence of problematic SMU [2].

Correspondingly, a study with 190,089 participants across 46 countries are found a negative association between problematic SMU and adolescents' psychological and social wellbeing. The result are showed that adolescents with problematic SMU reported more frequent psychological complaints than non-problem users [36]. In addition to this result, a study of 3408 adolescents in Finland is found that adolescents with problematic SMU are three times more likely to experience irritability, stress, loneliness and low mood than moderate social media users [66].

In summary, the relationship between intense SMU and adolescents' wellbeing is variable at the within-person level, ranging from positive to negative effects. While the negative relationship between intense SMU and adolescents' wellbeing disappeared at the between-person level when controlled for problematic SMU. Additionally, the country's prevalence of intense SMU is moderated the relationship between intense SMU and adolescents' wellbeing. However, the results consistently show that problematic SMU was negatively associated with adolescents' mental health and wellbeing.

**Theme 2:** *The association between active and passive SMU and well-being and mental health among adolescents and young adults*

The study with 8873 adolescent participants are found that active and passive SMU are linked with anxiety and depression [0]. However, when time spent on social media is controlled, passive SMU still correlated with anxiety and depression, but active SMU has not predict anxiety and depression [0]. In comparison, an experimental study is conducted in Italy revealed no general effect of the passive use of Facebook\*\* on young adults' moods [78]. However, the initial mood is moderated the relationship between passive Facebook\*\* use and young adults' wellbeing [78]. When participants with relatively low initial mood are used Facebook\*\* passively, it is helped them feel even worse. In contrast, when participants with average or high initial mood used Facebook\*\* passively, it has no discernible impact [78]. In addition, another study with 1208 young adults found optimism are moderated the relationship between passive SMU and wellbeing. The participants with low levels of optimism are showed more negative outcomes than those with high levels of optimism [47]. Whereas a study in the southern part of the Netherlands is found that social media-induced envy has a small negative effect on the relationship between passive SMU (browsing) and adolescents' wellbeing [75]. The study is resulted that 25 % of adolescents with SM-induced envy experienced adverse effects from social media browsing. In comparison, 75 % of adolescents with SM-induced envy has not experienced the harmful effects of social media browsing on their well-being, even positively [75].

Active SMU and adolescents' mental health are negatively impacted by time spent on social media, while passive SMU is not. Personal initial mood and optimism moderate the relationship between passive SMU and adolescents' wellbeing.

**Theme 3:** *The association between Social comparison and well-being and mental health among adolescents and young adults*

An across-sectional study in China are examined the envy factor in the relationship between upward social comparison and depressive symptoms in adolescents and young adults [45].

It is found that upward social comparison correlated with envy and depressive symptoms in adolescents and young adults [45]. However, after controlling for gender, age and envy factors, the direct effect of upward social comparison and depressive symptoms are decreased substantially but are still significant [45]. Similarly, a study in Italian with 250 young adults is showed that participants with social comparison tendencies lead to low self-esteem and much time spent on Facebook\*\* [13]. Simultaneously, envy positively is predicted depressive symptoms, while upward social comparison positively predicted envy, and envy partially mediated the association between upward social comparison and depressive symptoms [45]. While [45] also found self-efficacy (confidence or belief in their ability to perform certain actions to achieve a particular outcome) moderated social comparison on social media and depressive symptoms in adolescents and young adults upward. Self-efficacy negative related to social comparison, but low self-efficacy positively related to envy and upward social comparison.

A study conducted in England [56] is examined the effect of network homophily (perceived similarity to the network) on the upward social comparison of Instagram in adolescents. It is showed that network homophily was a mediator of the association between social comparison on Instagram and benign envy but negatively related to malicious envy [56]. Similarly, a study in Turkey is examined the psychological mechanism of upward social comparison and depression among young adults. It is found that upward Facebook\*\* comparison generated upward-assimilative emotions (inspiration, optimism, and admiration) that is related to fewer depression symptoms, and upward-contrastive emotions (envy, resentment, and depression/shame) are related to more depression symptoms [85].

Adolescents and young adults are negatively affected by upward social comparison, with envy, network homophily, upward-assimilative, and upward-contrastive emotions mediating the relationship. Self-efficacy also moderates the association. Social comparison is associated with low esteem and Facebook\*\* usage in young adults.

**Theme 4:** *The association between passive SMU and social comparison on social media among adolescents and young adults*

Five studies are found that passive SMU positively related to the comparison with others on social media. [92] and [47] have found that passive SMU was positively related to upward social comparison and indicated that passive SMU impacted subjective well-being by upward comparison with others on social media. This study has further indicated that upward social comparison was a significant mediator between the association of passive SMU and low well-being in adolescents and young adults. In addition, [85] has found that passive use of Facebook\*\* is associated with the frequency of upward Facebook\*\* comparison.

A study has examined initial personal mood of the moderating effect association between passive SMU and mood in adolescents and found that participants in this study with low initial mood might tend to engage in upward social comparison when browsing others' profiles and experienced a decrease in mood [78]. Consistently, another study has found that the high intensity of passive SMU related to a higher level of upward social comparison and resulted in a lower level of life satisfaction in adolescents and young adults [16].

These findings are suggested that upward social comparison played a significant role in the relationship between passive SMU and the well-being of adolescents and young adults. It is also found that upward social comparison has positively associated with passive SMU and negatively related to adolescents' well-being; thus, passive SMU is negatively associated with well-being through upward social comparison on social media

## Discussion

The benefits of SMU are numerous, and the negative impact of social media on the mental health and well-being of youth in this particular developmental period is increasingly evident. A significant body of studies has emerged, but there is controversy regarding SMU and the well-being and mental health of adolescents and young adults. Therefore,

this review provides information on the relationship between three types of influential SMU (1) intense and problematic use, (2) active and passive use, (3) social comparison and adolescents and young adults' mental health or/and well-being.

Further research is necessary to clarify the strength of the causal relationship between SMU and adolescents' and young adults' mental health and well-being. To better comprehend the link between these variables, additional longitudinal and experimental studies are needed [85]. In addition, the cross-sectional data were more likely to reflect between-person (or group-level) associations rather than within-person associations. It is significant from the within-person level (or individual level) to examine the association between SMU and the well-being and mental health of adolescents and young adults. The between-person associations do not necessarily reflect within-person dynamics [12; 22; 58], for example, between-person associations revealed whether adolescents with highly SMU reported lower levels of well-being than those who reported lower social media use. Conceptually, the observed between-person relationship between higher SMU and lower well-being is not causal, as changes in SMU are not associated with well-being among adolescents and young adults. The within-person (or group-level) associations reflect the processes that occur in individuals and indicate whether changes in SMU intensity are relative to a person's average level [16]. However, longitudinal data enable testing of between-person and within-person associations, but many longitudinal studies do not make this distinction [22]. The active/passive dichotomy is seen as incomplete and simplified. Researchers who pursue this path can further modify and extend the model to refine psychological mechanisms and develop improved self-report measures or experimental paradigms for active versus passive SMU. For example, it can amplify the most likely sources of effect heterogeneity, such as the processing of information sent and received by users, the types of social interactions they engage in, and the personality, developmental and socio-economic characteristics of senders and receivers [52].

## Conclusion

There is a growing body of research on the connection between teen social media use and mental health and wellness. The issue is characterized by its emphasis on the link between social media use and negative elements of mental health and wellbeing, whereas studies focused on the possibly positive aspects of social media usage are rare. The majority of current research on the topic is cross-sectional in design and statistically oriented. The study's findings add to the growing body of evidence linking problematic social media usage with depression, anxiety, and stress in adolescents and young adults. The study's findings, which essentially include (1) intensive and problematic usage, (2) active and passive use, and (3) social comparison, are nuanced and relate to the interaction between adolescent and young adult mental health and well-being. The comprehensive analysis of this study suggests that these correlations are influenced by confounding factors, environmental impacts, and person-specific effects.

The study suggests that the confounding variable in the negative link between active social media usage and teenagers' mental health was time spent on social media. There is a need for further research on causes of depression and anxiety and it is still unclear the amount of social media use which affects the general people. The importance of these findings may be seen in how much simpler it will be to carry out future studies on social media and mental health. Research focused on more specific social media features, individual variances, and potential intermediate variables, as well as more longitudinal research, are needed as the field of study develops. The information from this study may also be helpful for social science research and for medical professionals. Additionally, if other links with another construct were explored using the study's findings, this may strengthen the conclusions and help lower rates of anxiety, despair, and suicide.

## References

1. Active and passive social media use and symptoms of anxiety and depressed mood among Icelandic adolescents / I. E. Thorisdottir et al. // *Cyberpsychology, Behavior, and Social Networking*. 2019. Vol. 22. № 8. P. 535–542. DOI: 10.1089/cyber.2019.0079
2. Adolescents' intense and problematic social media use and their well-being in 29 countries / M. Boer et al. // *Journal of Adolescent Health*. 2020. № 6S (66). P. S89 – S99. DOI: 10.1016/j.jadohealth.2020.02.014
3. **Aichner T., Jacob F.** Measuring the degree of corporate social media use // *International Journal of Market Research*. 2015. Vol. 57. № 2. P. 257–276. DOI: 10.2501/ijmr-2015-018
4. **Anderson E. L., Steen E., Stavropoulos V.** Internet use and problematic Internet use: a systematic review of longitudinal research trends in adolescence and emergent adulthood // *International Journal of Adolescence and Youth*. 2017. Vol. 22. № 4. P. 430–454. DOI: 10.1080/02673843.2016.1227716
5. **Anderson M., Jiang J.** Teens' social media habits and experiences // Pew Research Center: Internet, Science & Tech. 2018. URL: <https://www.pewresearch.org/internet/2018/11/28/teens-social-media-habits-and-experiences/> (date of access: 12.08.2022).
6. A proposed framework for developing quality assessment tools / P. Whiting et al. // *Systematic Reviews*. 2017. № 1 (6). P. 204. DOI: 10.1186/s13643-017-0604-6
7. **Aromataris E., Munn Z.** JBI manual for evidence synthesis. Refined site. 2020. URL: <https://synthesismanual.jbi.global>.
8. Association between passive social media use and well-being among adolescents and young adults: a systematic review / L. Y. Lin et al. // *JAMA Pediatrics*. 2021. № 2 (175). P. 192–201. DOI: 10.1001/jamapediatrics.2020.5303
9. A systematic approach to searching: an efficient and complete method to develop literature searches / W. M. Bramer et al. // *Journal of the Medical Library Association*. 2018. № 4 (106). P. 531–541. DOI: 10.5195/jmla.2018.283
10. **Baker K. A., Weeks S. M.** An overview of systematic review // *Journal of Perianesthesia Nursing*. 2014. № 6 (29). P. 454–458. DOI: 10.1016/j.jopan.2014.07.002
11. **Bayer J. B., Triệu P., Ellison N. B.** Social media elements, ecologies, and effects // *Annual Review of Psychology*. 2020. № 1 (71). P. 471–497. DOI: 10.1146/annurev-psych-010419-050944
12. **Beers L. S., Tu K. M., Kandalaf M. R.** An examination of the associations between social media use and mental health outcomes in adults // *Issues in Mental Health Nursing*. 2020. № 11 (41). P. 961–967. DOI: 10.1080/01612840.2020.1730491
13. **Bergagna E., Tartaglia S.** Self-esteem, social comparison, and Facebook\*\* use // *Europe's Journal of Psychology*. 2018. № 4 (14). P. 831–845. DOI: 10.5964/ejop.v14i4.1592
14. **Best P., Manktelow R., Taylor B.** Online communication, social media and adolescent wellbeing: a systematic narrative review // *Children and Youth Services Review*. 2014. № 41. P. 27–36. DOI: 10.1016/j.childyouth.2014.03.001
15. **Blakemore S.-J., Mills K. L.** Is adolescence a sensitive period for sociocultural processing? // *Annual Review of Psychology*. 2014. № 1 (65). P. 187–207. DOI: 10.1146/annurev-psych-010213-115202
16. **Boer M., Stevens G. W. J. M., Finkenauer C., van den Eijnden R. J. J. M.** The complex association between social media use intensity and adolescent wellbeing: a longitudinal investigation of five factors that May affect the association // *Computers in Human Behavior*. 2022. № 128. P. 107084. DOI: 10.1016/j.chb.2021.107084
17. **Brandenberg G., Ozimek P., Bierhoff H.-W., Janker C.** The relation between use intensity of private and professional SNS, social comparison, self-esteem, and depressive tendencies in the light of self-regulation // *Behaviour Information Technology*. 2018. № 6 (38). P. 578–591. DOI: 10.1080/0144929X.2018.1545049
18. **Burnell K., George M. J., Underwood M. K.** Browsing different Instagram profiles and associations with psychological well-being // *Frontiers in Human Dynamics*. 2020. № 2. P. 585518. DOI: 10.3389/fhumd.2020.585518
19. **Buunk A. P., Gibbons F. X.** Social comparison: the end of a theory and the emergence of a field // *Organizational Behavior and Human Decision Processes*. 2007. № 1 (102). P. 3–21. DOI: 10.1016/j.obhdp.2006.09.007
20. Children and parents: media use and attitudes report // Ofcom. 2022. URL: [https://www.ofcom.org.uk/\\_data/assets/pdf\\_file/0024/234609/childrens-media-use-and-attitudes-report-2022.pdf](https://www.ofcom.org.uk/_data/assets/pdf_file/0024/234609/childrens-media-use-and-attitudes-report-2022.pdf) (date of access: 12.08.2022).
21. **Cooke A., Smith D., Booth A.** Beyond PICO: the SPIDER tool for qualitative evidence synthesis // *Qualitative Health Research*. 2012. № 10 (22). P. 1435–1443. DOI: 10.1177/1049732312452938



22. Does time spent using social media impact mental health? An eight year longitudinal study / S. M. Coyne et al. // *Computers in Human Behavior*. 2019. № 104. P. 106160. DOI: 10.1016/j.chb.2017z.2019.106160
23. Critical appraisal tools // Joanna Briggs Institute. 2020. URL: <https://jbi.global/critical-appraisal-tools>
24. **Crone E. A., Konijn E. A.** Media use and brain development during adolescence // *Nature Communications*. 2018. Vol. 9. № 1. P. 588. DOI: 10.1038/s41467-018-03126-x
25. **Crusius J., Gonzalez M. F., Lange J., Cohen-Charash Y.** Envy: an adversarial review and comparison of two competing views // *Emotion Review*. № 12 (12). 2019. P. 3–21. DOI: 10.1177/1754073919873131
26. Data extraction methods for systematic review (semi)automation: a living systematic review / L. Schmidt et al. // *F1000Research*. 2021. № 10. P. 401. DOI: 10.12688/f1000research.51117.21
27. Do others' self-presentation on social media influence individual's subjective well-being? A moderated mediation model / X. Fan et al. // *Telematics and Informatics*. 2019. № 6 (41). P. 86–102. DOI: 10.1016/j.tele.2019.04.001
28. Do social network sites enhance or undermine subjective well-being? A critical review / P. Verduyn et al. // *Social Issues and Policy Review*. 2017. Vol. 11. № 1. P. 274–302. DOI: 10.1111/sipr.12033
29. **Eijnden van den R. J. J. M., Lemmens J. S., Valkenburg P. M.** The social media disorder scale // *Computers in Human Behavior*. 2016. № 61. P. 478–487. DOI: 10.1016/j.chb.2016.03.038
30. **Elhai J. D., Levine J. C., Hall B. J.** The relationship between anxiety symptom severity and problematic smartphone use: a review of the literature and conceptual frameworks // *Journal of Anxiety Disorders*. 2019. № 62. P. 45–52. DOI: 10.1016/j.janxdis.2018.11.005
31. Evaluating meta-ethnography: a synthesis of qualitative research on lay experiences of diabetes and diabetes care / R. Campbell et al. // *Social Science & Medicine*. 2003. № 4 (56). P. 671–684. DOI: 10.1016/S0277-9536(02)00064-3
32. **Feltman C. E., Szymanski D. M.** Instagram\*\* use and self-objectification: the roles of internalization, comparison, appearance commentary, and feminism // *Sex Roles*. 2017. № 5–6 (78). P. 311–324. DOI: 10.1007/s11199-017-0796-1
33. **Frisson E., Eggermont S.** Exploring the relationships between different types of Facebook\*\* use, perceived online social support, and adolescents' depressed mood // *Social Science Computer Review*. 2015. № 2 (34). P. 153–171. DOI: 10.1177/0894439314567449
34. **Gerber J. P., Wheeler L., Suls J.** A social comparison theory meta-analysis 60+ years on // *Psychological Bulletin*. 2018. № 2 (144). P. 177–197. DOI: 10.1037/bul0000127
35. Guidance on the conduct of narrative synthesis in systematic reviews a product from the ESRC methods programme / J. Popay et al. London: PublisherInstitute for Health Research, 2006. 92 p.
36. International perspectives on social media use among adolescents: Implications for mental and social well-being and substance use / M. Boniel-Nissim et al. // *Computers in Human Behavior*. 2021. № 129. P. 107144. DOI: 10.1016/j.chb.2021.107144
37. **Ivie E. J., Pettitt A., Moses L. J., Allen N. B.** A meta-analysis of the association between adolescent social media use and depressive symptoms // *Journal of Affective Disorders*. 2020. № 275. P. 165–174. DOI: 10.1016/j.jad.2020.06.014
38. **Keles B., McCrae N., Grealish A.** A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents // *International Journal of Adolescence and Youth*. 2020. № 1 (25). P. 79–93. DOI: 10.1080/02673843.2019.1590851
39. **Kelly Y., Zilanawala A., Booker C., Sacker A.** Social media use and adolescent mental health: findings from the UK Millennium cohort study // *EClinicalMedicine*. 2019. Vol. 6. P. 59–68. DOI: 10.1016/j.eclinm.2018.12.005
40. **Kemp S.** The global state of digital in July 2022 // *DataReportal*. Global Digital Insights. 2022. URL: <https://datareportal.com/reports/digital-2022-july-global-statshot> (date of access: 12.08.2022).
41. **Killick C., Taylor B. J.** Professional decision making on elder abuse: systematic narrative review // *Journal of Elder Abuse and Neglect*. 2009. № 3 (21). P. 211–238. URL: <https://pure.ulster.ac.uk/en/publications/professional-decision-making-on-elder-abuse-systematic-narrative--3> (date of access: 16.08.2022).
42. **Kim H. H.** The impact of online social networking on adolescent psychological well-being (WB): a population-level analysis of Korean school-aged children // *International Journal of Adolescence and Youth*. 2017. № 3 (22). P. 364–376. DOI: 10.1080/02673843.2016.1197135
43. **Kircaburun K., Griffiths M. D., Billieux J.** Childhood emotional maltreatment and problematic social media use among adolescents: The the mediating role of body image dissatisfaction // *International Journal of Mental Health and Addiction*. 2020. № 18. P. 1536–1547. DOI: 10.1007/s11469-019-0054-6

44. **Lasota M.** Growing up in a digital world: benefits and risks // UNICEF Global Development Commons. 2018. URL: <https://gdc.unicef.org/resource/growing-digital-world-benefits-and-risks> (date of access: 12.08.2022).
45. **Li Y.** Upward social comparison and depression in social network settings // *Internet Research*. 2019. № 1 (29). P. 46–59. DOI: 10.1108/intr-09-2017-0358
46. **Lin S., Liu D., Niu G., Longobardi C.** Active social network sites use and loneliness: the mediating role of social support and self-esteem // *Current Psychology*. 2020. № 4 (41). DOI: 10.1007/s12144-020-00658-8
47. **Liu Q., Niu G., Fan C., Zhou Z.** Passive use of social network site and its relationships with self-esteem and self-concept clarity: a moderated mediation analysis // *Acta Psychologica Sinica*. 2017. № 1 (49). P. 60. DOI: 10.3724/sp.j.1041.2017.00060
48. **MacDonald G.** Using systematic reviews to improve social care. London: Social Care Institute for Excellence, 2003. 33 p. URL: <https://www.semanticscholar.org/paper/Using-Systematic-Reviews-to-Improve-Social-Care-MacDonald/6d8514ee6a876588a8d54ba14a4a33aacd88d4a6> (date of access: 16.08. 2022).
49. **Marino C., Gini G., Vieno A., Spada M. M.** The associations between problematic Facebook\*\* use, psychological distress and well-being among adolescents and young adults: a systematic review and meta-analysis // *Journal of Affective Disorders*. 2018. № 226. P. 274–281. DOI: 10.1016/j.jad.2017.10.007
50. **McFadden P., Taylor B. J., Campbell A., McQuilkin J.** Systematically identifying relevant research / *Research on Social Work Practice*. 2012. № 6 (22). P. 626–636. DOI: 10.1177/1049731512453209
51. **Meier A., Gilbert A., Börner S., Possler D.** Instagram\*\* inspiration: how upward comparison on social network sites can contribute to well-being // *Journal of Communication*. 2020. № 5 (70). P. 721–743. DOI: 10.1093/joc/jqaa025
52. **Meier A., Johnson B. K.** Social comparison and envy on social media: a critical review // *Current Opinion in Psychology*. 2022. № 45. P. 101302. DOI: 10.1016/j.copsyc.2022.101302
53. **Meier A., Schäfer S.** The positive side of social comparison on social network sites: how envy can drive inspiration on Instagram\*\* // *Cyberpsychology, Behavior, and Social Networking*. 2018. № 7 (21). P. 411–417. DOI: 10.1089/cyber.2017.0708
54. **Myers T. A., Crowther J. H.** Social comparison as a predictor of body dissatisfaction: a meta-analytic review // *Journal of Abnormal Psychology*. 2009. № № 4 (118). P. 683–698. DOI: 10.1037/a0016763
55. **Nesi J.** The impact of social media on youth mental health: challenges and opportunities // *North Carolina Medical Journal*. 2020. Vol. 81. № 2. P. 116–121. DOI: 10.18043/ncm.81.2.116
56. **Noon E. J., Meier A.** Inspired by friends: adolescents' network homophily moderates the relationship between social comparison, envy, and inspiration on Instagram\*\* // *Cyberpsychology, Behavior, and Social Networking*. 2019. № 12 (22). P. 787–793. DOI: 10.1089/cyber.2019.0412
57. **Nowland R., Necka E. A., Cacioppo J. T.** Loneliness and social Internet use: pathways to reconnection in a digital world? // *Perspectives on Psychological Science*. 2018. № 2 (13). P. 174569161771305. DOI: 10.1177/1745691617713052
58. **Orben A., Dienlin T., Przybylski A. K.** Social media's enduring effect on adolescent life satisfaction // *Proceedings of the National Academy of Sciences*. 2019. № 21 (116). P. 201902058. DOI: 10.1073/pnas.1902058116
59. **Orben A., Przybylski A. K., Blakemore S.-J., Kievit R. A.** Windows of developmental sensitivity to social media // *Nature Communications*. 2022. № 1 (13). P. 1649. DOI: 10.1038/s41467-022-29296-3
60. **Owens J. K.** Systematic reviews: brief overview of methods, limitations, and resources // *Nurse Author & Editor*. 2021. № 3–4 (31). P. 69–72. DOI: 10.1111/nae.2.28
61. **Park S. Y., Baek Y. M.** Two faces of social comparison on Facebook\*\*: the interplay between social comparison orientation, emotions, and psychological well-being // *Computers in Human Behavior*. 2018. № 79. P. 83–93. DOI: 10.1016/j.chb.2017.10.028
62. **Personality traits, interpersonal relationships, online social support, and Facebook addiction / J.-H. Tang et al.** // *Telematics and Informatics*. 2016. № 1 (33). P. 102–108. DOI: 10.1016/j.tele.2015.06.003
63. **Pfeifer J. H., Allen N. B.** Puberty initiates cascading relationships between neurodevelopmental, social, and internalizing processes across adolescence // *Biological Psychiatry*. 2020. № 2 (89). DOI: 10.1016/j.biopsych.2020.09.002
64. **Prevalence and risk factors for diabetes mellitus in Nigeria: a systematic review and meta-analysis / A. E. Uloko et al.** // *Diabetes Therapy*. 2018. № 3 (9). P. 1307–1316. DOI: 10.1007/s13300-018-0441-1
65. **Primack B. A., Escobar-Viera C. G.** Social media as it interfaces with psychosocial development and mental illness in transitional age youth // *Child and Adolescent Psychiatric Clinics of North America*. 2017. № 2 (26). P. 217–233. DOI: 10.1016/j.chc.2016.12.007

66. Problematic social media use and health among adolescents / L. Paakkari et al. // *International Journal of Environmental Research and Public Health*. 2021. № 4 (18). P. 1885. DOI: 10.3390/ijerph18041885
67. Problematic social media use: results from a large-scale nationally representative adolescent sample / F. Banyai et al. // *PLoS One*. 2017. № 1 (12). e0169839. DOI: 10.1371/journal.pone.0169839
68. **Radovic A., Gmelin T., Stein B. D., Miller E.** Depressed adolescents' positive and negative use of social media // *Journal of Adolescence*. 2017. № 55 (55). P. 5–15. DOI: 10.1016/j.adolescence.2016.12.002
69. **Reinecke L., Trepte S.** Authenticity and well-being on social network sites: a two-wave longitudinal study on the effects of online authenticity and the positivity bias in SNS communication // *Computers in Human Behavior*. 2014. № 30. P. 95–102. DOI: 10.1016/j.chb.2013.07.030
70. Roles of cyberbullying, sleep, and physical activity in mediating the effects of social media use on mental health and wellbeing among young people in England: a secondary analysis of longitudinal data / R. M. Viner et al. // *The Lancet Child & Adolescent Health*. 2019. № 3 (10). P. 685–696. DOI: 10.1016/s2352-4642(19)30186-5
71. **Sharifians N., Zaheed A. B., Zahodne L. B.** The role of envy in linking active and passive social media use to memory functioning // *Psychology of Popular Media Culture*. 2021/2022. № 1 (11). P. 80–89. DOI: 10.1037/ppm0000318
72. **Shaw A. M., Timpano K. R., Tran T. B., Joormann J.** Correlates of Facebook\*\* usage patterns: The relationship between passive Facebook\*\* use, social anxiety symptoms, and brooding. // *Computers in Human Behavior*. 2015. № 48. P. 575–580. DOI: 10.1016/j.chb.2015.02.003
73. Social comparison on social networking sites / P. Verduyn et al. // *Current Opinion in Psychology*. 2020. Vol. 36. P. 32–37. DOI: 10.1016/j.copsyc.2020.04.002
74. Social media and well-being: pitfalls, progress, and next steps / E. Kross et al. // *Trends in Cognitive Sciences*. 2021. № 1 (25). P. 55–66. DOI: 10.1016/j.tics.2020.10.005
75. Social media browsing and adolescent well-being: challenging the “passive social media use hypothesis” / P. Valkenburg et al. // *Europe PMC Journal of Computer-Mediated Communication*. 2022. № 1 (27). DOI: 10.1093/jcmc/zmab0152021
76. Social media use intensity, social media use problems, and mental health among adolescents: investigating directionality and mediating processes / M. Boer et al. // *Computers in Human Behavior*. 2021. № 116. P. 106645. DOI: 10.1016/j.chb.2020.106645
77. Systematic review of the application of the plan-do-study-act method to improve quality in healthcare / M. J. Taylor et al. // *BMJ Quality & Safety*. 2014. Vol. 23. № 4. P. 290–298. DOI: 10.1136/bmjqs-2013-001862
78. **Tartaglia S., Bergagna E.** Social networking sites passive use and its effects on sad-happy mood // *Psihologija*. 2022. № 2 (55). P. 137–147. URL: <http://www.doiserbia.nb.rs/Article.aspx?ID=0048-57052100008T#.Yww0j3bMK3A> (date of access: 29.08.2022)].
79. Testing methodological guidance on the conduct of narrative synthesis in systematic reviews / M. Rodgers et al. // *Evaluation*. 2009. № 15 (15). P. 49–73. DOI: 10.1177/1356389008097871
80. The dark side of Internet use: two longitudinal studies of excessive Internet use, depressive symptoms, school burnout and engagement among finnish early and late adolescents / K. Salmela-Aro et al. // *Journal of Youth and Adolescence*. 2016. № 2 (46). P. 343–357. DOI: 10.1007/s10964-016-0494-2
81. The impact of Internet and social media use on well-being: a longitudinal analysis of adolescents across nine years / C. Schemer et al. // *Journal of Computer-Mediated Communication*. 2021. № 1 (26). P. 1–21. DOI: 10.1093/jcmc/zmaa014
82. The relationship between Instagram use and indicators of mental health: a systematic review / L. Faelens et al. // *Computers in Human Behavior Reports*. 2021. № 4. P. 100121. DOI: 10.1016/j.chbr.2021.100121
83. **Chadee D.** *Theories in Social Psychology* / edited by D. Chadee. John Wiley & Sons, 2022. 320 p. URL: <https://books.google.co.uk/books?hl=zh-CN&lr=&id=y8Z6EAAAQBAJ&oi=fnd&pg=PA165&dq=assimilation+contrast+social+comparison&ots=wdWX3lhh1S&sig=yf-j5kRD9DmKx8NZQH-9d2Zc4wjQ#v=onepage&q=assimilation%20contrast%20social%20comparison&f=false> (date of access: 19.08. 2022).
84. **Torgerson D. J., Torgerson C. J.** *Designing randomised trials in health, education and the social sciences: an introduction*. Springer, 2008. 209 p. URL: <https://books.google.co.uk/books?lr=&id=3leHDAAAQBAJ&oi=fnd&pg=PP1&dq=Torgerson+D> (date of access: 24.08. 2022).
85. **Tosun L. P., Kaşdarma E.** Passive Facebook\*\* use and depression: a study of the roles of upward comparisons, emotions, and friendship type // *Journal of Media Psychology*. 2019. № 2 (32). P. 1–11. DOI: 10.1027/1864-1105/a000269

86. **Trifiro B. M., Gerson J.** Social media usage patterns: research note regarding the lack of universal validated measures for active and passive use // *Social Media + Society*. 2019. № 2 (5). P. 205630511984874. DOI: 10.1177/2056305119848743
87. **Trub L., Rosenthal L.** Instagram\*\* #Instasad?: exploring associations among Instagram\*\* use, depressive symptoms, negative social comparison, and strangers followed // *Cyberpsychology, Behavior, and Social Networking*. 2012. № 5 (18). P. 247–252. DOI: 10.1089/cyber.2014.0560
88. **Twenge J. M., Martin G. N., Campbell W. K.** Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology // *Emotion*. 2018. № 6 (18). P. 765–780. DOI: 10.1037/emo0000403
89. **Underwood M. K., Ehrenreich S. E.** The power and the pain of adolescents' digital communication: Cyber victimization and the perils of lurking // *American Psychologist*. 2017. № 2 (72). P. 144–158. DOI: 10.1037/a0040429
90. **Vannucci A., McCauley Ohannessian C.** Social media use subgroups differentially predict psychosocial well-being during early adolescence // *Journal of Youth and Adolescence*. 2019. № 8 (48). P. 1469–1493. DOI: 10.1007/s10964-019-01060-9
91. **Vogels E. A., Gelles-Watnick R., Massarat N.** Teens, social media and technology // Pew Research Center: Internet, Science & Tech. 2022. URL: <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/> (date of access: 12.08.2022).
92. **Wang J.-L., Wang H.-Z., Gaskin J., Hawk S.** The mediating roles of upward social comparison and self-esteem and the moderating role of social comparison orientation in the association between social networking site usage and subjective well-being // *Frontiers in Psychology*. 2017. № 8. P. 771. DOI: 10.3389/fpsyg.2017.00771
93. **Wartberg L., Kriston L., Thomasius R.** Internet gaming disorder and problematic social media use in a representative sample of German adolescents: Prevalence estimates, comorbid depressive symptoms and related psychosocial aspects // *Computers in Human Behavior*. 2020. № 103. P. 31–36. DOI: 10.1016/j.chb.2019.09.014
94. **Wenninger H., Cheung C. M. K., Chmielinski M.** Understanding envy and users' responses to envy in the context of social networking sites: a literature review // *International Journal of Information Management*. 2021. № 4 (58). P. 102303. DOI: 10.1016/j.ijinfomgt.2020.102303
95. **Woods H. C., Scott H.** #Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem // *Journal of Adolescence*. 2016. № 51 (51). P. 41–49. DOI: 10.1016/j.adolescence.2016.05.008
96. **Yoon S., Kleinman M., Mertz J., Brannick M.** Is social network site usage related to depression? A meta-analysis of Facebook\*\* — depression relations relations // *Journal of Affective Disorders*. 2019. № 248. P. 65–72. DOI: 10.1016/j.jad.2019.01.026