

Social Media Addiction and Therapeutic Techniques, Screening Tools, and Interventions: A Scoping Review

Hershel Meyerowitz, Jessica Daniel-Smit, Ryan Evan du Toit, Werner de Klerk

School of Psychosocial Health, Community Psychosocial Research (COMPRES), North-West University, Potchefstroom, South Africa

Email: Hershel.Meyerowitz@nwu.ac.za

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Abstract

One of the consequences of excessive social media usage is social media addiction. Consequently, the next critical area of interest would be identifying how social media addiction is being addressed or approached. Therefore, the purpose of this scoping review was to identify the available literature on therapeutic techniques, screening tools, or interventions for social media addiction. The final pool of literature included for analysis comprised 18 articles (published between 2010 and 2023), of which nine references represented therapeutic interventions and the other nine references represented scales and/or screening tools for social media addiction. Based on the findings, the research team recommends the following: 1) Interventions and therapeutic techniques should instead focus on incorporating reward systems, self-management, and other factors that keep individuals away from social media (e.g., academic obligations); 2) Interventions should not exclusively focus on abstinence or avoidance of social media use, but rather on monitoring and regulating the duration of social media engagement; 3) Considering that the majority of the samples in the nine scales evaluated included adolescents and university students, it would be beneficial to validate these scales for use with older populations. Regarding the testing of the reliability and validity of these scales within various contexts, such assessments are consistently recommended. Furthermore, based on some feedback provided by the original authors of the scales or screening tools, future research should also prioritize validating these scales within clinical settings. Additionally, the assessment of test-retest reliability should be conducted to ensure consistency over time.

Keywords

Social Media Addiction, Therapeutic Techniques, Screening Tools,

1. Introduction

In today's digital age, it is not surprising that social media use has been increasing substantially over the years (Dixon, 2022; Poushter et al., 2018; Rice et al., 2016; Sun & Zhang, 2021). As of April 2023, approximately 59.9% of the global population, which is equivalent to approximately 4.8 billion individuals, was using social media (Petrosyan, 2023), and projections indicate that this number is expected to reach around 6 billion by 2027 (Dixon, 2023a). Even though these platforms were originally developed for, and specifically targeted at, younger generations, they are now being used by all ages for various activities (Dixon, 2023b).

Social media has become a significant part of most people's daily lives (Kanwar & Taprial, 2017; Zahrai et al., 2022). It has changed the way in which they socialize, network, and communicate with one another (Rice et al., 2016). New platforms are constantly being developed, while older platforms are continuously changing in order to remain relevant (Kanwar & Taprial, 2017). These platforms provide attractive features such as direct and easy access to like-minded individuals, as well as family and friends; they provide a platform for sharing personal and social experiences, building networks with global communities, and so much more (Friedman, 2014; Griffiths et al., 2014; Kanwar & Taprial, 2017; Ramani & Diwanji, 2022). But what happens when using these social media platforms becomes excessive and/or maladaptive?

Social Media Addiction

One of the consequences of excessive social media usage is social media addiction, which has become a topic of interest for several researchers (Aksoy, 2018; Dailey et al., 2020; Hawi & Samaha, 2016; Hou et al., 2019; Kirik et al., 2015; Monacis et al., 2017; Sun & Zhang, 2021). According to Griffiths et al. (2014), addictive behavior has six components: salience, mood modification, tolerance, withdrawal, conflict, and relapse. It is further indicated that if an individual's social media-related behaviors meet the above-mentioned components, the behavior can be defined as an addiction (Griffiths et al., 2014). For the purposes of this article, social media addiction, problematic social media use, and social media use disorder are treated as equivalent constructs and can be considered different variations of one construct.

An individual addicted to social media is described by Hou et al. (2019) as someone: 1) Whose social media usage becomes excessive and compulsive; 2) Who spends an unreasonable amount of time thinking about social media; 3) Who experiences an uncontrollable need to use social media. Furthermore, symptoms of social media addiction can appear in the form of cognitive, physical, and emotional responses, and can result in personal, social, and psychological prob-

lems (Hou et al., 2019). For instance, excessive use of social media has been associated with decreased levels of job performance (Khan et al., 2021; Yu et al., 2018), poor academic performance (Massod et al., 2020), as well as certain mental health issues such as depression, anxiety, and loneliness (Huang, 2020; Sun & Zhang, 2021).

Taking the above-mentioned into consideration, it is clear that social media addiction is a growing issue of concern. Consequently, the next critical area of interest would be identifying how social media addiction is being addressed or approached. Therefore, the purpose of this scoping review was to identify the available literature on therapeutic techniques, screening tools, or interventions for social media addiction. Conducting a scoping review will not only identify the scope of available literature on the therapeutic techniques, screening tools, or interventions for social media addiction, but it will also assist in identifying knowledge gaps on this topic (Arksey & O'Malley, 2005; Munn et al., 2018; Pollock et al., 2022). Thus, by identifying the scope of literature on the topic, this review study will provide recommendations for future research and potentially result in more research studies being conducted.

2. Methodology

The researchers undertook a scoping review to systematically retrieve and determine the extent of available literature for this investigation. The researchers followed the five stages to conduct a scoping review as proposed by Arksey & O'Malley (2005): 1) *Identification of a research question*; 2) *Identification of relevant literature*; 3) *Selection of literature*; 4) *Mapping the data*; 5) *Collation, summarizing, and reporting the results*. This scoping review was approved by the Health Research Ethics Committee (HREC), Faculty of Health Sciences, North-West University, South Africa (NWU-00035-23-A1).

2.1. Research Question

In accordance with the guidelines by Arksey & O'Malley (2005), to reduce the risk of excluding relevant literature, researchers should keep the review question as broad as possible. Therefore, the guiding research question in this scoping review was: *What literature is available on therapeutic techniques, screening tools, or interventions for social media addiction?*

2.2. Identifying Relevant Literature

A bibliographic database, *EDS Search*, was utilized to identify and search for relevant literature. The EDS search via the North-West University Library Information System allowed access to 76 academic databases, from which 32 were accessed to identify relevant literature. Furthermore, to expand the scope of the available literature, additional searches were manually conducted on Google Scholar and by manually searching the reference lists of the initially included literature (Arksey & O'Malley, 2005). All searches were conducted in June and com-

pleted in July 2023. The final search terms included: TITLE (“social media”) AND ALL (“addiction”) AND ALL (“therapeutic techniques” OR interventions OR “screening tools” OR questionnaires OR surveys). Database-specific field codes were used where needed. Parentheses ensured that studies focused on social media addiction and included either an intervention concept or a screening/assessment concept.

Searches were limited to full-text peer-reviewed journal articles published in English from 2010 to 2023. The initial database search yielded $n = 1061$ articles. After setting the limiters and removing exact duplicates, the search yielded $n = 447$ articles for screening and selection. An additional $n = 25$ articles were identified for possible inclusion through other databases, totaling $n = 472$ articles for title and abstract screening. The excluded literature $n = 428$ did not fit the aim of the current review, with $n = 44$ being included for full-text screening. The final pool of literature included for analysis was $n = 18$ (also see **Figure 1**).

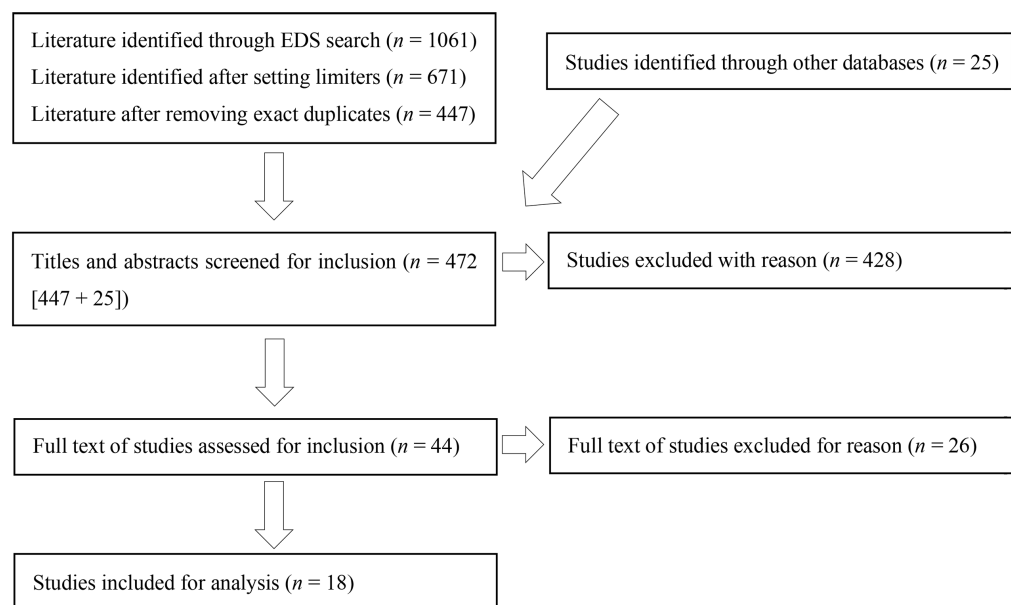


Figure 1. Flow diagram for search and inclusion.

2.3. Selection of Literature

In accordance with Arksey & O'Malley (2005), the researchers identified clear inclusion and exclusion criteria to eliminate any literature that did not address the research question. Inclusion and exclusion criteria such as eligible populations, study designs, intervention types, and whether platform-specific studies were included were guided by the research question and research aim. This ensured that literature that did not address the research question/aim was eliminated and that only relevant literature was included.

The research team started with an initial evaluation of the title and abstract against the inclusion criteria. Furthermore, to ensure that all relevant literature was initially included, the initial evaluation was followed by the retrieval of the

full-text articles to screen and select the full-text articles against the inclusion criteria. The researchers conducting the review consisted of four members (HM, JD-S, REdT, and WdK). Three reviewers (HM, JD-S, REdT) conducted the title and abstract screening and the full-text screening. During each step of the review process, the three reviewers (HM, JD-S, REdT) worked independently throughout title and abstract screening, full-text screening, data extraction, and data analysis, and continuously held in-depth discussions throughout the review process to ensure that relevant literature was selected to address the review question and that they agreed on the findings from the analysis phase.

WdK acted as the independent reviewer, ensuring overall quality assurance during the screening and selection process and verifying that the data extraction and findings were accurate and appropriate.

2.4. Mapping the Data

Furthermore, the researchers provided a descriptive summary of the available literature without critically evaluating it (Pham et al., 2014). During this stage, the focus was on compiling a data extraction table to *map* the key data of the included literature (Arksey & O'Malley, 2005). The data mapping was divided into two main tables, with Table 1 including literature related to social media addiction therapeutic techniques and interventions available, and Table 2 including literature on the scales available to assess social media addiction. Table 3 includes additional information on the validity scores for the scales included and discussed in this scoping review study.

Table 1. Therapy and interventions.

Author(s) and Year	Population	Participants	Intervention/Therapy	Context	Measures	Outcomes
Dogan et al. (2019)	Doctorate Support Group (DSG) Facebook community group (international group).	200 postgraduate students.	Web-based intervention systems for (Facebook) social media addiction.	An online survey was administered on the Facebook DSG group. The data from the survey were analyzed to determine which intervention features of Facebook addiction were most and least important.	A 48-item online survey was developed based on the Bergen Facebook Addiction Scale as well as web-based intervention features.	Five intervention features that could be used in the management or intervention of Facebook addiction in postgraduate education were reported.
Galla et al. (2021)	Northeastern United States.	Study 1 sample size = 331. Study 2 sample size = 1296.	Compared the impact of different messages on adolescents' motivation to control social media use.	Study 1 and Study 2 randomly divided the participants for each study into three groups. Group 1 received values-alignment messages, group 2 received traditional messages on reducing SMU, and group 3 was the no-treatment control group. After the experiment, in which the groups performed their activities and then completed a battery of self-reported and behavioral willingness measures (only study 1 included behavioral willingness), they completed a follow-up survey.	- Baseline measurement on SMU. - Follow-up survey on SMU.	The immediate outcomes indicated that participants who received values-alignment messages (group 1) had stronger motivation to reduce SMU and greater interest in new self-control strategies compared to groups 2 and 3. The 3-month follow-up outcomes indicated that group 1 participants had greater awareness of addictive social media design features compared to groups 2 and 3.

Hou et al. (2019)	Peking University, China.	Sample size = 38. Experimental group = 21. Control group = 17.	Two-stage CBT-based self-help intervention.	In the first stage of the intervention (week one), participants received cognitive restructuring. During stage two (week two), participants were asked to keep a daily journal on specific questions regarding their thoughts, emotions, and behaviors towards social media use.	• Study 1: BSMAS and a survey containing the measures for SMA, self-esteem, mental health, and academic performance. • Study 2: Survey consisting of BSMAS, daily social media use time, self-esteem, sleep quality, and mental health. • Group feedback on the effectiveness of the intervention.	• Effectively reduced social media addiction in the experimental group. • Daily reflections helped reduce SMU. • Intervention also improved emotional state and increased the level of learning engagement.
Kumkronglek et al. (2023)	Chiang Mai, Thailand.	Sample size = 45. Experimental group = 24. Control group = 21.	A 10-session life skills enhancement program aimed at improving life skills and risk behaviors related to social media addiction in early adolescence.	Developed a 10-week life skills enhancement program based on CBT and occupational therapy group processes. Focused on three skills: cognitive, emotional, interpersonal and social skills.	• General information questionnaire. • The social media addiction screening scale (SMASS). • A life skills test. • Life skills enhancement program.	• Pre-test scores indicated no statistically significant difference in pre-test scores between the control and experimental groups for S-MASS. • Statistically significant differences in the post-test between the control group and the experimental group were found. Therefore, S-MASS scores decreased significantly after participation in the program.
Manwong et al. (2018)	Seventh and eighth grade high school students in Ubon Ratchathani province in the lower part of northeast Thailand.	The sample consisted of 244 participants (12 - 15 years of age). Experimental group = 124 participants. Control group = 120 participants.	Group activity-based motivational enhancement therapy (GA-MET) program on social media addictive behaviors.	Developed an eight-week group activity-based motivational enhancement therapy (GA-MET) program. At the onset of the intervention, a baseline assessment was conducted using a self-report assessment within both groups, and child behaviors were reported by class teachers. The treatment group was exposed to an 8-week GA-MET program. At the conclusion of the intervention, in week 8, both groups completed the self-report assessment. A follow-up assessment was completed 4 weeks later.	The self-reporting questionnaire included: • Social Media Addiction Test—S-MAT (Social media addiction behaviors). • Average duration of social media use on weekdays and weekends (hours/day). • Thai version of the Rosenberg Self-Esteem Scale (self-esteem). • Thai version of the Center for Epidemiologic Studies Depression Scale (Depression). • Covariates were measured in a self-administered questionnaire. Additionally, the teacher-report Thai Strengths and Difficulties Questionnaire was used by teachers to report on learners' behaviors.	• The GA-MET program effectively decreased the duration of SM usage over weekdays and weekends, as well as depression and emotional behaviors in the treatment group (specifically the not addicted and almost addicted subgroups).

Marmer & Nurwianti (2020)	Undergraduate students of Universitas Indonesia.	Five female undergraduate students.	Program includes four group sessions of Acceptance and Commitment Therapy (ACT).	Participants completed a pre-, post-, and follow-up questionnaire. They then completed four weekly group ACT sessions of between two to three hours per session. Each session covered specific topics in ACT.	• Hopkins Symptom Checklist—25. • Bergen Social Media Addiction Scale (BSMAS). • Acceptance and Action Questionnaire (AAQ11).	• No significant changes in psychological distress or SMA were observed immediately post-intervention, but psychological flexibility increased. • On follow-up, some participants displayed lower addiction severity scores and some displayed lower SMU. • All five participants displayed lowered psychological distress and increased psychological flexibility at follow-up.
Stanley et al. (2022)	Undergraduate students enrolled at a large Mid-Atlantic university.	32 participants.	One-week contingency management for smartphone and social media use.	Enrolled students completed an online intake survey (including a battery of health-related questionnaires). Participants experienced contingency management for seven days, which included receiving daily monetary compensation (in the form of online vouchers) when meeting smartphone and social media reduction contingencies. On the final day, participants completed another online survey (which included the same battery of health-related questionnaires). Three weeks post-intervention, a follow-up online survey was completed to collect data on current smartphone and social media use.	• Intake online survey (including demographic questionnaire, phone-use measure, and a battery of health-related questionnaires). • Participants were asked to upload their phone usage daily during the 7-day intervention. • On day 7, participants completed an online survey which included the battery of health-related questionnaires. Follow-up online survey three weeks post-intervention.	• Smartphone and social media use decreased daily with contingency management relative to baseline use. • Smartphone and social media use can be manipulated experimentally. • Contingency management may be a useful tool in interventions for smartphone and social media use.
Stieger & Lewetz (2018)	German participants.	152 participants.	An ecological momentary intervention approach was used. Participants had to abstain from using social media (except for calls, texts, and emails).	The experimental design comprised a 4-day baseline phase (i.e., using social media as always), a 7-day intervention phase (i.e., not using social media for communication at all; the only exception: telephone calls, SMS, and e-mail), and a 4-day postintervention phase (i.e., again using social media as usual). Three randomly produced reminders were administered each day (default setting: between 9 a.m. and 9 p.m.). After each reminder was sent out through the app, participants had 30 minutes to respond to this reminder by completing the questions. If a participant did not respond, the reminder was automatically deleted, and the participant had to wait for the next one. Besides this time-based sampling, also	• Daily questionnaire. • End-of-the-day questionnaire. • Internet-based post-test questionnaire. • In the longitudinal part of the study, boredom was measured ("How bored are you right now?"; Visual Analogue Scale [VAS]: 0 = not at all, 100 = very bored), and craving. We assessed positive and negative affect in the situation (i.e., state aspect) by shortening the 10-item International Positive and Negative Affect Schedule-Short Form	• During the intervention, social media usage frequency as well as social media usage duration were almost null. Almost half of the participants never relapsed (41 percent), 17 percent relapsed once, 13 percent relapsed twice, and 29 percent relapsed more than twice, although the maximum number of relapses was small. Compared to the baseline, social media usage was substantially smaller. • In the postintervention phase, social media usage did not differ from the baseline. Participants in the intervention phase felt significantly more social pressure from their social

				used an end-of-the-day questionnaire. The reminder for this questionnaire was sent out once a day at 9 p.m. (unless adjusted), and participants were given 60 minutes to respond to this reminder. After the longitudinal part of the study, an Internet-based post-test questionnaire was administered.				(I-PANAS-SF) down to six items to lower participant burden. • End-of-the-day questionnaire. Three questions were asked: “How often were you on a social networking site (e.g., WhatsApp) today?”; “How long did you use social networking sites altogether today (in minutes)?” (text field using an input option); and “How strong was the feeling of social pressure (e.g., through friends) today to be on social networking sites?” • Internet-based post-test questionnaire. • In the final questionnaire, sociodemographic characteristics were assessed, as well as further concepts that are not part of this study (e.g., general social media intensity usage, Big Five, narcissism, self-esteem, and social media addiction). • Adapted questionnaire for internet addiction to measure SMA. • Participants kept daily diaries. • The Satisfaction with Life Scale and the Minnesota Satisfaction Questionnaire were administered at three points during the intervention. • Post-intervention semi-structured interviews were held. • Follow-up surveys were conducted.	network to be on social media compared to the baseline. Social pressure fell to a normal baseline level in the postintervention phase when participants started to use social media as they had previously. Being social media abstinent led to lower levels of positive affect in the intervention phase and higher levels in the postintervention phase, constituting a rebound effect, but this effect was not significant. Being abstinent led to significantly elevated boredom during everyday life in the intervention phase, but again, the effect diminished in the postintervention phase as expected. Feelings of craving were significantly higher in the intervention phase (compared to the baseline) and, interestingly, a small effect remained in the postintervention phase. This means that although participants could use social media without limitations, participants still described slightly higher feelings of craving compared to the baseline. • Improved life satisfaction. • Abstinence (intervention) during working hours improved the daily evaluation of work. • Individuals who reported high levels of SMA were more susceptible to the intervention. • Qualitative results indicated improved productivity, increased autonomy, closer offline relationships, and decreased fear of missing out (FOMO) as the intervention session continued.
Zhou et al. (2020)	China.	Experimental group = 33. Control group = 32.	CBT two-week short-term abstinence intervention.	Participants had to choose any 4 days in a week to abstain for 2.5 hours from social media. Half of the participants had to abstain during work hours and half during off hours. This was reversed after 1 week.					

Table 2. Scales.

Author(s) and Year	Scale	Population and Sample Size	Demographic Details	Cronbach	Items	Theoretical Framework	Responses and Scoring
Andreassen et al. (2016)	Bergen Social Media	23,533 participants.	Mean age 35.8 (<i>SD</i> = 13.3), ranging from	.88	6 items	Based on Griffiths' theory of the six core	5-point Likert Scale ranging from “very rarely”

	Addiction Scale (BSMAS) (<i>Adaptation of the Bergen Facebook Addiction Scale</i>).		16 to 88 years. 15,299 (65%) of the sample were female, whereas 8234 (35%) of the sample were male.			components of addiction (as described in the literature).	(1) to “very often” (5). Scores range between a minimum of 6 and a maximum of 30.
Andreassen et al. (2012)	Bergen Facebook Addiction Scale (BFAS).	423 college students.	Mean age was 22 (<i>SD</i> = 4) and included 227 females. Subsample (<i>n</i> = 153) used for test-retest of the BFAS. Mean age 21.3 (<i>SD</i> = 4.1). Subsample included 118 females and 35 males.	.83 Test-retest reliability (3 weeks) .82	18 initial items. Six items with the highest corrected item-total correlation were retained for the final scale.	Based on Griffiths’ theory of the six core components of addiction (as described in the literature).	5-point Likert scale ranging from “very rarely” (1) to “very often” (5). Scores range between a minimum of 6 and a maximum of 30. Higher scores indicate greater Facebook addiction.
Austerman et al. (2021)	Social Media Disorder Scale for Parents (SMDS-P).	961 parent-child dyads (a total of 1922 participants) in Germany.	Focus was on parents of children between 10 and 17 years of age.	.85	9 items	DSM-5 criteria for Internet Gaming Disorder.	Dichotomous response: no and yes. No = 0 and Yes = 1; scores above 4 were indicative of a child displaying problematic usage behavior (maximum score = 9).
Chanpen et al. (2023)	Social-Media Addiction Screening Scale (S-MASS).	5068 participants.	Mean age 19.93 (<i>SD</i> = 9.96), ranging from 13 to 75 years.	.90	16 items—three factors	Based on the ICD-11, three key features of behavioral addiction and items were based on the nine DSM-5 criteria for Internet Gaming Disorder.	4-point Likert scale ranging from “definitely not true” (0) to “definitely true” (3). Summing up, participants’ responses for a score between 0 and 48. The higher the score, the more likely the participant is addicted to social media.
Liu & Ma (2018)	Chinese social media addiction scale.	619 college students.	Sample 1 (EFA) — 318 (males = 59; females = 259) aged 18–25 years, <i>M</i> = 20.43 <i>SD</i> = 1.538. Sample 2 (CFA)— 301 (males = 219; females = 82) aged 16–28 years, <i>M</i> = 26.92, <i>SD</i> = 1.334)	.937	Sample 1 = 58 items Sample 2 = 58 items	Internet Addiction Test Facebook Addiction Scale Internet Gaming Disorder Scale	5-point Likert Scale ranging from “strongly disagree” (1) to “strongly agree” (5).
Paschke et al. (2021)	Social Media Use Disorder Scale for Adolescents (SOMEDIS-A).	931 parent-child dyads in Germany.	Adolescent sample = 931; males = 468 and females = 463, age range between 10 - 17 (<i>M</i> = 13.67; <i>SD</i> = 2.19). Parent sample = 931; males = 466 and females = 465, age range between 28 - 75 (<i>M</i> = 47.13; <i>SD</i> = 7.62).	.91	10 items	ICD-11 criteria for Gaming Disorder.	5-point Likert Scale (for items 1 - 9) ranging from “strongly disagree” to “strongly agree”. For item 10, the response options are “not at all”, “only on single days”, “during longer periods”, and “almost daily”.

Sahin (2018)	Social Media Addiction Scale-Student Form (SMA-SF).	998 secondary and high school learners, as well as university students.	12-22 ($M = 17.26$; $SD = 3.09$) 566 (56.7%) were female and 432 (43.3%) were male. First round (EFA) = 476 participants. Second round (CFA) = 298 participants. Third round (test-retest reliability) = 224 participants.	.93	29 items	Various literature and experts.	5-point Likert scale ranging from “definitely not appropriate” (1) to “quite appropriate” (5). The highest score calculated is 145, whereas the lowest score is 29. Higher scores indicate that the person perceives themselves as a social media addict.
Tutgun-Ünal & Deniz (2015)	Social Media Addiction Scale (SMAS).	775 university students in Istanbul.	478 (61.7%) were female and 297 (38.3%) were male. Mean age = 21.6 ($SD = 2.59$), age range 17 to 45.	.967	41 items	Four factors were indicated by means of EFA. Thereafter, the content of the items (for each factor) was considered for the naming of each factor: occupation, mood modification, relapse, and conflict.	5-Point Likert Scale ranging from “never” to “always”. Scores range between a minimum of 41 and a maximum of 205. Thus, scores from 41 to 73 = “no addiction”; from 74 to 106 = “less addicted”; from 107 to 139 = “moderately addicted”; 140 to 172 = “highly addicted”; and from 173 to 205 = “very highly addicted.”
Van den Bijnden et al. (2016)	Social Media Disorder (SMD) Scale.	2198 Dutch adolescents. Group 1 = 724. Group 2 = 873 (238 were also part of group 1). Group 3 = 601.	Group 1: aged 10-17 ($M = 14.36$, $SD = 2.11$) (girls 54%) Group 2: aged 10-17 ($M = 14.28$, $SD = 2.15$) (girls 48%) Group 3: aged 10-17 ($M = 14.05$, $SD = 2.18$) (girls: 50%)	Provided for the 27-item scale: Group 1: .90 Group 3: .92 9-item scale: .81	27-item scale & 9-item scale (both were validated).	Scales were based on the nine DSM-5 criteria for Internet Gaming Disorder.	Dichotomous responses are no and yes. All yes-answers were summed (range 0 - 27).

Table 3. Validity scores for scales.

Author(s) and Year	Scale		Df	Chi ²	Chi ² (df)	AGFI	SRMR	GFI	CFI	TLI	RMSEA	% CI
Andreassen et al. (2012)	Bergen Facebook Addiction Scale (BFAS)	One-factor solution	*	*	1.84	*	*	*	.99	*	0.05	90%
Austermann et al. (2021)	Social Media Disorder Scale for Parents (SMDS-P)	One-factor solution	27	40.83	*	*	0.044	*	0.995	0.993	0.033	95%
Chanpen et al. (2023)	Social-Media Addiction Screening Scale (S-MASS)	Three-factor model	62	120.77	*	*	0.01	*	0.99	*	0.01	*
Liu and Ma (2018)	Chinese Social Media Addiction Scale	Six-factor model	335	676.979	2.02 < 3	0.935	*	*	0.929	*	0.042	*
Paschke et al. (2021)	Social Media Use Disorder in Adolescents (SOMEDIS-A)	Two-factor model	23	129.04	4.96	*	0.058	*	0.993	0.990	0.092	*
Sahin (2018)	Social Media Addiction Scale-Student Form	Four-factor model	*	1576.92	4.25	0.88	0.04	0.90	0.98	*	0.05	*
Van den Bijnden et al. (2016)	Social Media Disorder Scale 27 Item	Nine-factor model	Group 1: 288 Group 2: 288	Group 1: 672.424 Group 2: 570.681	*	*	*	*	Group 1: 0.963 Group 2: 0.973	*	Group 1: 0.043 Group 2: 0.040	Group 1: 90% Group 2: 90%

Social Media Disorder Scale 9 Item	Group 1:	Group 1:					Group 1:	Group 1:	Group 1:
	27	24.846	*	*	*	*	1.000	0.000	90%
	Group 2:	Group 2:					Group 2:	Group 2:	Group 2:
	27	62.852					0.997	0.041	90%

Note. Andreassen et al. (2016) discuss the Bergen Social Media Addiction Scale (BSMAS), which is an adaptation of the Bergen Facebook Addiction Scale (BFAS) (Andreassen et al., 2012). The adaptation was minor and involved replacing the word Facebook with “social media only” and defining “social media” as “Facebook, Twitter, Instagram, and the like” in the instructions to participants. The article by Andreassen et al. (2016) therefore focuses on the BFAS’s validity to support the validity of the BSMAS.

2.5. Data Analysis

The guidelines provided by Kyngäs (2020) were applied during data analysis of this scoping review study. Kyngäs (2020) identifies three phases that should be followed during content analysis: 1) *Reducing the data*; 2) *Grouping the data*; 3) *Forming categories that answer the review/research question*. Firstly, the researchers familiarize themselves with the data by reading through the relevant literature several times (Kyngäs, 2020). Any data that is related to the review/research question was given an open code (Kyngäs, 2020). The researchers then compared all the open codes and grouped together similar codes to form sub-concepts (Kyngäs, 2020). Sub-concepts were then grouped together to form concepts (Kyngäs, 2020). Finally, concepts were grouped into main categories (Kyngäs, 2020).

3. Findings

3.1. Category 1: Therapeutic Techniques and Interventions

Interventions Used for Reduced Social Media Addiction and Usage

Interventions Targeting Social Media Addiction

Zhou et al. (2020) used a two-week short-term CBT-based abstinence intervention. Marmer & Nurwianti (2020) conducted weekly, 2 to 3-hour group therapy sessions for four weeks. The sessions used acceptance and commitment therapy to address psychological distress and social media addiction in college students. Manwong et al. (2018) used an eight-week facilitator-led group activities-based (GA) motivational enhancement therapy (MET) (GA-MET) program. Hou et al. (2019) developed a two-step cognitive behavioral approach intervention program. Kumkronglek et al. (2023) developed a 10-week life skills development program based on cognitive and behavioral therapy, as well as group or occupational therapy, where participants attended one sixty-minute session per week that focused on increasing life skills in adolescents. Dogan et al. (2019) adapted features from a mobile phone addiction intervention for a web-based intervention system to assist in the management of SNS addiction, specifically Facebook addiction, in higher education settings.

Interventions Targeting General Social Media Use Reduction

Stieger & Lewetz (2018) conducted a one-week abstinence intervention in which participants were instructed not to use social media. Galla et al. (2021) used a values-alignment messaging approach to increase motivation towards reducing SMU in adolescents. Stanley et al. (2022) used a one-week contingency manage-

ment intervention.

Outcomes of Social Media Addiction and Usage Interventions

Interventions Targeting Social Media Addiction

Zhou et al. (2020) found that life satisfaction improved with short-term abstinence from problematic social media use. They also found that the level of addiction influences the response rate at which this intervention is effective on users. Users with higher SMA respond more quickly compared to users with lower SMA. Their intervention allowed users to form rational SMU behaviors rather than quit social media (Zhou et al., 2020). Qualitative analysis of their findings on the abstinence intervention revealed positive influences such as active behaviors (hobbies or exercising) that also lead to affirmative feelings, being less distracted, and increased self-efficacy, efficiency, and productivity. Negative influences included passive behavior, where participants would spend time aimlessly. They would also resort to external matters to avoid accessing social media. Negative feelings of FOMO and perceived inconvenience were present during abstinence (Zhou et al., 2020).

Marmer & Nurwianti's (2020) four-week ACT program indicated no substantial changes in SMA post-intervention; however, on follow-up, participants displayed lowered addiction severity scores and decreased SMU. Psychological distress only decreased on follow-up, while psychological flexibility increased post-intervention and on follow-up. Manwong et al. (2018) found that the GA-MET program did not decrease SMA but did decrease the average duration of social media usage on weekdays and weekends. It also decreased emotional behaviors and depression. Kumkronglek et al. (2023) found that their life skills enhancement program was statistically significant in reducing risk behaviors of social media addiction in adolescents.

Dogan et al. (2019) found that there were five web-based intervention features that can be used in web-based interventions for Facebook addiction. These five intervention features were automatic notifications, automatic limitations, automatic reward, manual limitation, and manual monitoring, and can assist in managing or intervening with Facebook addiction. Hou et al. (2019) found that the cognitive behavioral intervention was effective in decreasing SMA, that daily reflections were helpful in reducing SMU, and that the intervention led to an improved emotional state and increased learning engagement.

Interventions Targeting General Social Media Use Reduction

During the one-week abstinence intervention, participants experienced substantially increased social pressure from their community to engage with their social media. This pressure decreased back to baseline levels postintervention (Stieger & Lewetz, 2018). Social media abstinence led to decreased positive affect during the intervention; however, after the intervention, positive affect increased. One week of abstinence had no significant effect on negative affect. Everyday boredom levels substantially increased during the intervention phase and decreased after the intervention subsided. Craving levels considerably increased during the inter-

vention phase (Stieger & Lewetz, 2018).

Galla et al. (2021) found that a values-alignment message increased adolescents' motivation to control SMU immediately after the intervention compared to receiving traditional messages sharing the benefits of decreasing their SMU. Stanley et al. (2022) found that a one-week contingency management intervention revealed decreased smartphone and SMU in some participants during the intervention. Post-intervention changes in SMU, however, were minimal.

3.2. Category 2: Scales

The Bergen Facebook Addiction Scale (BFAS) and the Bergen Social Media Addiction Scale (BSMAS)

Andreassen et al. (2012) developed the BFAS based on the six core elements of addiction described by Griffiths (2005). The BFAS originally consisted of 18 items, which were divided into 3 items per core element of addiction, e.g., salience, mood modification, tolerance, withdrawal, conflict, and relapse, scored on a 5-point Likert-type scale between 1—*very rarely* and 5—*very often*. Within each core element of addiction, the 6 items with the highest corrected item-total correlation were included in the final scale (Andreassen et al., 2012). The confirmatory factor analysis (CFA) indicated a one-factor analysis across loadings of the six core elements. Furthermore, a subsample of the original sample completed the scale again after three weeks, where the test-retest correlation coefficient was .82. Categorization of problematic Facebook use was not examined at the time of the development of the BFAS. However, total scores will range between 6 and 30. Additionally, the higher the score, the greater the indication of Facebook addiction. The BFAS has also been further translated or adapted to several applicable contexts (for example, see (Da Veiga et al., 2018; Mahmood et al., 2020; Pontes et al., 2016; Soraci et al., 2020)). The authors (Andreassen et al., 2012) concluded that the scale has acceptable psychometric properties and that it can be used in epidemiological and clinical contexts. They further recommend that future studies focus on determining appropriate cutoff scores relating to Facebook addiction.

The BSMAS was adapted from the BFAS during a large-scale cross-sectional study conducted by Andreassen et al. (2016). The BSMAS consists of 6 items reflecting the six core elements of addiction (Griffiths, 2005). The scoring ranges from 6 to 30, and with the introduction of the BSMAS, it yielded an internal consistency of $\alpha = .88$. Upon inception and adaptation from the BFAS, the original adaptation study for the BSMAS (conducted by (Andreassen et al., 2016)) did not focus on confirming validity. However, several researchers have focused on measuring the psychometric properties of the BSMAS within different contexts and/or for different language groups (for example, see (Dadiotis et al., 2021; Lin et al., 2017; Monacis et al., 2017; Shin, 2022)).

Social Media Disorder Scale for Parents (SMDS-P)

The SMDS-P (Austermann et al., 2021) was developed for parents to evaluate the social media addiction of adolescents. The SMDS-P was developed based on

the SMD Scale of Van den Eijnden et al. (2016) discussed below. The SMDS-P uses 9 items on a forced-choice scale, yes or no, and the CFA indicates a one-factor model. The purpose of this scale is to give parents the chance to rate their adolescent's social media usage and/or problematic social media usage (PMSU). The authors (Austermann et al., 2021) indicated that they were the first to assess the psychometric properties of a parental scale focused on adolescent PSMU. They further concluded that the scale showed promising psychometric properties, and that the internal consistency ($\alpha = .85$) of the scale was almost exactly the same as the original SMDS ($\alpha = .84$). Other similarities highlighted between the parental scale and the original SMDS included: 1) both indicated a one-factorial model, and 2) identical cutoff scores. They concluded that the scale should be validated for the clinical setting.

Social-Media Addiction Screening Scale (S-MASS)

The S-MASS (Chanpen et al., 2023) was developed as a self-report questionnaire that can be used to screen for social media addiction. The scale consists of 16 items (three-factor model) based on the three key elements of behavioral addiction as found in the ICD-11. The items are derived from the 9 criteria for Internet Gaming Disorder (IGD). The S-MASS utilizes a four-point Likert Scale ranging between 0—*definitely not true* and 3—*definitely true*. The summated score ranges from 0 to 48, with a higher score indicating a greater likelihood of social media addiction. Furthermore, a CFA was conducted to test the proposed three-factor model, and it was concluded to be a good model fit. Chanpen et al. (2023) concluded that the scale was a reliable and valid screening tool for social media addiction (SMA). However, they indicated that future researchers should focus on further validation studies, specifically focusing on criterion validity (e.g., predictive and concurrent validity). Additionally, it is recommended that future researchers also consider assessing whether the scale is sensitive to change after SMA interventions.

Chinese Social Media Addiction Scale

After reviewing the literature on existing measures addressing behavioral and social media addiction, the Chinese Social Media Addiction Scale (Liu & Ma, 2018) was developed considering the seven classic dimensions related to behavioral addiction. These included compulsive use, withdrawal, negative consequences, mood alteration, salience, tolerance, and relapse. Furthermore, Liu & Ma (2018) also considered two extra dimensions: preference for online social interactions and continued use. However, during the validation study, it seemed that a six-factor model was more appropriate. The final six dimensions that explained total variance to 63.83% are preference for online social interaction, mood alteration, negative consequences and continued use, compulsive use and withdrawal, salience, and relapse. The CFA also indicated that a six-factor model was a good fit in relation to the data.

Furthermore, items were compiled from other measures such as the Internet Addiction Test, Facebook Addiction Scale, and Internet Gaming Disorder Scale.

Respondents score each item on a 5-point Likert scale ranging from 1—*strongly disagree* to 5—*strongly agree*. The authors (Liu & Ma, 2018) concluded that, overall, this scale was appropriate for assessing broad SMA in China and that it has adequate psychometric properties. Additionally, this scale can be used in clinical and non-clinical settings. However, Liu & Ma (2018) indicated that future research should focus on: 1) Assessing test-retest reliability; 2) Assessing whether it is applicable for other population groups such as young adolescents; 3) Whether the scale can be used when assessing for other SM platform addictions (e.g., Facebook).

Social Media Use Disorder Scale for Adolescents (SOMEDIS-A)

This self-rating screening tool (Paschke et al., 2021) was adapted from the Gaming Disorder Scale for Adolescents (GADIS-A) to measure social media use disorder (SMUD) among adolescents. It is based on the ICD-11 criteria for Gaming Disorder (GD), and during the validation study, it was indicated that a two-factor model (cognitive-behavioral symptoms and negative consequences) seems to be the best fit. Furthermore, the scale included 10 items that respondents had to complete. Items 1 to 9 (focused on SMUD symptoms) utilized a 5-point Likert Scale ranging from 0—*strongly disagree* to 4—*strongly agree*. Item 10 (focused on frequency and duration of use) was measured based on four responses, not at all, only on single days, for longer periods, or nearly daily. Overall, the internal reliability for the scale in relation to the population included in the validation study was considered good (Cronbach's $\alpha = .82$). It was also concluded that this scale can distinguish between adolescents who struggle with SMUD and those who do not. Paschke et al. (2021) concluded that this was the first screening tool that measured SMUD in relation to the ICD-11 criteria for GD. Furthermore, it showed appropriate psychometric properties, specifically internal reliability and criterion validity. They recommend that future researchers should focus on clinical validation studies.

Social Media Addiction Scale—Short Form (SMAS-SF)

The SMAS-SF (Sahin, 2018) was conceptually developed by including literature on addiction and social media use in conjunction with opinions of field experts. The scale originally consisted of a pool of 41 items that are scored on a Likert scale ranging from 1—*definitely not appropriate* to 5—*appropriate*. The final form includes 29 items with 4 sub-dimensions, e.g., virtual tolerance, virtual communication, virtual problems, and virtual information. Sahin (2018) indicated that the scale showed good psychometric properties and can be used to identify SMA within students (specifically Turkish students between the ages of 12 and 22 years). Furthermore, Sahin (2018) concluded that the psychometric properties of the scale should be assessed in other studies focused on different population groups and/or other age groups.

Social Media Addiction Scale (SMAS)

The SMAS was developed specifically to identify SMA within university students (Tutgun-Ünal & Deniz, 2015). During this development and validation

study, it seemed that a four-factor model explained 59% of the variance. These four factors were identified as: occupation, mood modification, relapse, and conflict. The factor structure for this scale was identified by means of an Exploratory Factor Analysis (EFA); however, a CFA was not conducted to assess the model fit. It was also indicated that the content of the items that had high loadings for a specific factor was assessed, after which, based on the content of the items, each factor was named. E.g., items 13, 14, 15, 16, and 17 showed high factor loadings for the second factor, after reviewing the content of these items, it was identified to be related to *mood modification*. The scale includes 41 items that are scored on a Likert scale ranging from *always* to *never*. Essentially, the higher one scores (maximum 205) when calculating the results, the more likely the person is to be addicted to social media.

The Social Media Disorder Scale 27-item and 9-item (SMDS)

The SMD Scale (Van den Eijnden et al., 2016) was developed and validated as a 27-item and 9-item scale (related to the SMDS-P above). This scale was developed based on the DSM-5 criteria for IGD. The 27-item scale includes 3 items per criterion, e.g., preoccupation, tolerance, withdrawal, persistence, displacement, problems, deception, escape, and conflict. The 9-item scale includes 1 item per criterion. The calculation of both scales is done by summing all yes answers. The scale was developed with the purpose of including clear cutoff points that distinguish between “disordered” and “high-engaging non-disordered social media” users (Van den Eijnden et al., 2016: p. 478). The authors (Van den Eijnden et al., 2016) concluded that both the 27-item and 9-item scales showed good psychometric properties. They recommend that future research should focus on identifying whether the nine criteria for IGD can be used as the core features for SMD. Additionally, focus can be placed on whether the items included in the 9-item SMDS are indeed suitable for diagnosing SMD in clinical and non-clinical sample groups.

4. Discussion

This scoping review focused on identifying, synthesizing, and describing some of the available therapeutic techniques, screening tools (scales), and interventions being used for assessing and/or treating SMA. In total, 18 literature sources were identified by the research team, of which nine (9) references represented therapeutic interventions and the other nine (9) references represented scales and/or screening tools for SMA.

The therapeutic interventions were mainly aimed at either reducing SM usage or altering behaviors related to SMA. Interventions aimed purely at abstaining from SMU lead to increased boredom, social pressure to use social media, and increased cravings to use social media (Stieger & Lewetz, 2018). However, when abstinence interventions are used along with other interventions, such as CBT-based short-term abstinence intervention, there seem to be both positive and negative influences on SMU. In addition, instead of pure abstinence, developing bal-

anced SMU habits may have higher feasibility in reducing SMU (Zhou et al., 2020).

Marmer & Nurwianti (2020) indicated that an intervention focused on reducing participants' experiential avoidance helps them gain control over their compulsion to use social media as a form of avoiding distress. Whereas Manwong et al. (2018) indicated that SMA interventions should not focus solely on abstinence but on monitoring time spent on social media instead. Manwong et al. (2018) stated that it is not possible to stop individuals from using technology; this makes social media addiction different from other addictions. Their results suggest that other interventions, such as monitoring social media usage, should be used instead of only utilizing absolute abstinence. They further indicated that the GA-MET program may be more appropriate for the prevention of SMA instead of treating SMA.

The life skills enhancement program developed by Kumkronglek et al. (2023) has demonstrated the capability to notably diminish adolescents' risky behaviors related to social media usage, making it a potential intervention for addressing social media addiction issues among teenagers. Cognitive-behavioral techniques and cognitive restructuring interventions assist in reducing SMA (Hou et al., 2019). These self-help interventions and engaging in daily reflections can be effective in reducing SMA. Other benefits include improved emotional state and increased level of learning engagement (Hou et al., 2019). The initial results of an intervention that exposed the experimental participants to value-alignment messages showed the participants displayed increased motivation to reduce their SMU and a heightened inclination towards adopting new self-control strategies (Galla et al., 2021). However, the follow-up outcomes weeks after the intervention did not display any significant behavioral changes in SMU; only at the three-month follow-up did the experimental participants report increased awareness of social media design features that were addictive (Galla et al., 2021).

With regard to the scales and/or screening tools identified and described almost all of them were developed because excessive social media use can result in *addiction*, thus justifying the need for valid and reliable assessment tools for *social media addiction*. Almost all the scales included in this scoping review study indicated that the specific tool was psychometrically reliable and valid for assessing SMA (Andreassen, 2012; Chanpen et al., 2023). Furthermore, each scale also showed good internal consistency reliability (Pallant, 2016), with not a single Cronbach's Alpha value below .80. Thus, this indicates that all nine scales were assessing the underlying construct consistently, which in this case would have been some form of SMA (Pallant, 2016). When assessing the reliability and validity of each scale, it seems the majority included adolescents and university students as the sample population (Andreassen et al., 2012; Liu & Ma, 2018; Sahin, 2018; Tutgun-Ünal & Deniz, 2015; Van den Eijnden et al., 2016). Furthermore, two of the nine studies included parent-child dyads (Austermann et al., 2021; Paschke et al., 2021), whereas the other two had no age limit (Andreassen et al., 2016; Chanpen et al., 2023).

5. Future Directions

This scoping review study did have some limitations. Firstly, only English litera-

ture published between 2010 and 2023 was included. Therefore, it is possible that other therapeutic techniques, interventions, or screening tools (or scales) developed and validated before 2010 could have been excluded. Secondly, scoping reviews focus on basic identification and descriptions of the available literature; thus, the literature was not critically evaluated. Future studies should focus on possibly critically evaluating the included literature. That way, possible limitations and/or strengths of the SMA scales or interventions can be discussed.

Given that the purpose of this study was also to provide recommendations for future research based on the gaps identified, the research team recommends the following: 1) Interventions and therapeutic techniques should focus on incorporating reward systems, self-management, and other factors that keep individuals away from social media (e.g., academic obligations); 2) Interventions should not focus on abstinence or avoidance of social media use, but instead focus on monitoring and controlling time spent using social media; 3) As the majority of the samples of the nine scales evaluated included adolescents and university students, it would be beneficial to validate the scales for evaluation of older individuals.

Regarding the scales, testing the reliability and validity of these scales within various contexts is always recommended. However, based on some of the feedback indicated by the original scale/screening tool authors themselves, future researchers can focus on validating the scales within clinical settings. Furthermore, test-retest reliability should also be assessed.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Aksoy, M. E. (2018). A Qualitative Study on the Reasons for Social Media Addiction. *European Journal of Educational Research*, 7, 861-865.
<https://doi.org/10.12973/eu-jer.7.4.861>
- Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E. et al. (2016). The Relationship between Addictive Use of Social Media and Video Games and Symptoms of Psychiatric Disorders: A Large-Scale Cross-Sectional Study. *Psychology of Addictive Behaviors*, 30, 252-262.
<https://doi.org/10.1037/adb0000160>
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook Addiction Scale. *Psychological Reports*, 110, 501-517.
<https://doi.org/10.2466/02.09.18.pr0.110.2.501-517>
- Arksey, H., & O'Malley, L. (2005). Scoping Studies: Towards a Methodological Framework. *International Journal of Social Research Methodology*, 8, 19-32.
<https://doi.org/10.1080/1364557032000119616>

- Austermann, M. I., Thomasius, R., & Paschke, K. (2021). Assessing Problematic Social Media Use in Adolescents by Parental Ratings: Development and Validation of the Social Media Disorder Scale for Parents (SMDS-P). *Journal of Clinical Medicine*, 10, Article 617. <https://doi.org/10.3390/jcm10040617>
- Chanpen, S., Pornnoppadol, C., Vasupanrajit, A., & Ayudhya, Q. D. N. (2023). An Assessment of the Validity and Reliability of the Social-Media Addiction Screening Scale (SMASS). *Siriraj Medical Journal*, 75, 167-180. <https://doi.org/10.33192/smj.v75i3.261044>
- da Veiga, G. F., Sotero, L., Pontes, H. M., Cunha, D., Portugal, A., & Relvas, A. P. (2018). Emerging Adults and Facebook Use: The Validation of the Bergen Facebook Addiction Scale (BFAS). *International Journal of Mental Health and Addiction*, 17, 279-294. <https://doi.org/10.1007/s11469-018-0018-2>
- Dadiotis, A., Bacopoulou, F., Kokka, I., Vlachakis, D., Chrousos, G. P., Darviri, C. et al. (2021). Validation of the Greek Version of the Bergen Social Media Addiction Scale in Undergraduate Students. *EMBnet.Journal*, 26, e975. <https://doi.org/10.14806/ej.26.1.975>
- Dailey, S. L., Howard, K., Roming, S. M. P., Ceballos, N., & Grimes, T. (2020). A Biopsychosocial Approach to Understanding Social Media Addiction. *Human Behavior and Emerging Technologies*, 2, 158-167. <https://doi.org/10.1002/hbe2.182>
- Dixon, S. (2022). *Social Media-Statistics & Facts*. Statista. <https://www.statista.com/topics/1164/social-networks/>
- Dixon, S. (2023a). *Number of Social Media Users Worldwide from 2017 to 2030*. Statista. <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>
- Dixon, S. (2023b). *Social Media-Statistics & Facts*. Statista. <https://www.statista.com/topics/1164/social-networks/#topicOverview>
- Dogan, H., Norman, H., Alrobai, A., Jiang, N., Nordin, N., & Adnan, A. (2019). A Web-Based Intervention for Social Media Addiction Disorder Management in Higher Education: Quantitative Survey Study. *Journal of Medical Internet Research*, 21, e14834. <https://doi.org/10.2196/14834>
- Friedman, L. (2014). *5 Benefits of Using Social Media*. <https://www.linkedin.com/pulse/20140422162738-44670464-5-benefits-of-using-social-media/>
- Galla, B. M., Choukas-Bradley, S., Fiore, H. M., & Esposito, M. V. (2021). Values-Alignment Messaging Boosts Adolescents' Motivation to Control Social Media Use. *Child Development*, 92, 1717-1734. <https://doi.org/10.1111/cdev.13553>
- Griffiths, M. D. (2005). A 'Components' Model of Addiction within a Biopsychosocial Framework. *Journal of Substance Use*, 10, 191-197. <https://doi.org/10.1080/14659890500114359>
- Griffiths, M. D., Kuss, D. J., & Demetrovics, Z. (2014). Social Networking Addiction. In *Behavioral Addictions* (pp. 119-141). Elsevier. <https://doi.org/10.1016/b978-0-12-407724-9.00006-9>
- Hawi, N. S., & Samaha, M. (2016). The Relations among Social Media Addiction, Self-Esteem, and Life Satisfaction in University Students. *Social Science Computer Review*, 35, 576-586. <https://doi.org/10.1177/0894439316660340>
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social Media Addiction: Its Impact, Mediation, and Intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 13, Article 4. <https://doi.org/10.5817/cp2019-1-4>
- Huang, C. (2020). A Meta-Analysis of the Problematic Social Media Use and Mental

- Health. *International Journal of Social Psychiatry*, 68, 12-33.
<https://doi.org/10.1177/0020764020978434>
- Kanwar, P., & Taprial, V. (2017). *Understanding Social Media* (2nd ed.). Bookboon.
- Khan, N. A., Khan, A. N., & Moin, M. F. (2021). Self-Regulation and Social Media Addiction: A Multi-Wave Data Analysis in China. *Technology in Society*, 64, Article 101527.
<https://doi.org/10.1016/j.techsoc.2021.101527>
- Kirik, A. M., Arslan, A., Çetinkaya, A., & Gül, M. (2015). A Quantitative Research on the Level of Social Media Addiction among Young People in Turkey. *International Journal of Science Culture and Sports*, 3, 108-122.
- Kumkronglek, J., Sirisatayawong, P., & Chupradit, S. (2023). Effects of a Life Skills Enhancement Program on the Life Skills and Risk Behaviors of Social Media Addiction in Early Adolescence. *Clinical Practice & Epidemiology in Mental Health*, 19, e174501792301110.
<https://doi.org/10.2174/17450179-v19-e230113-2022-26>
- Kyngäs, H. (2020). Inductive Content Analysis. In H. Kyngäs, K. Mikkonen, & M. Kääriäinen (Eds.), *The Application of Content Analysis in Nursing Science Research* (pp. 13-21). Springer International Publishing. https://doi.org/10.1007/978-3-030-30199-6_2
- Lin, C. -Y., Broström, A., Nilsen, P., Griffiths, M. D., & Pakpour, A. H. (2017). Psychometric Validation of the Persian Bergen Social Media Addiction Scale Using Classic Test Theory and Rasch Models. *Journal of Behavioral Addictions*, 6, 620-629.
<https://doi.org/10.1556/2006.6.2017.071>
- Liu, C., & Ma, J. (2018). Development and Validation of the Chinese Social Media Addiction Scale. *Personality and Individual Differences*, 134, 55-59.
<https://doi.org/10.1016/j.paid.2018.05.046>
- Mahmood, Q. K., Jafree, S. R., & Sohail, M. M. (2020). Pakistani Youth and Social Media Addiction: The Validation of Bergen Facebook Addiction Scale (BFAS). *International Journal of Mental Health and Addiction*, 20, 581-594.
<https://doi.org/10.1007/s11469-020-00391-0>
- Manwong, M., Lohsoonthorn, V., Booranasuksakul, T., & Chaikoolvatana, A. (2018). Effects of a Group Activity-Based Motivational Enhancement Therapy Program on Social Media Addictive Behaviors among Junior High School Students in Thailand: A Cluster Randomized Trial. *Psychology Research and Behavior Management*, 11, 329-339.
<https://doi.org/10.2147/prbm.s168869>
- Marmer, L. W., & Nurwianti, F. (2020). Group Acceptance and Commitment Therapy to Reduce Psychological Distress among College Students with Social Media Addiction. *Advances in Social Science, Education and Humanities Research*, 494, 132-143.
- Masood, A., Luqman, A., Feng, Y., & Ali, A. (2020). Adverse Consequences of Excessive Social Networking Site Use on Academic Performance: Explaining Underlying Mechanism from Stress Perspective. *Computers in Human Behavior*, 113, Article 106476.
<https://doi.org/10.1016/j.chb.2020.106476>
- Monacis, L., de Palo, V., Griffiths, M. D., & Sinatra, M. (2017). Social Networking Addiction, Attachment Style, and Validation of the Italian Version of the Bergen Social Media Addiction Scale. *Journal of Behavioral Addictions*, 6, 178-186.
<https://doi.org/10.1556/2006.6.2017.023>
- Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic Review or Scoping Review? Guidance for Authors When Choosing between a Systematic or Scoping Review Approach. *BMC Medical Research Methodology*, 18, Article No. 143. <https://doi.org/10.1186/s12874-018-0611-x>
- Pallant, J. (2016). *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using IBM Statistics* (6th ed.). Open University Press.

- Paschke, K., Austermann, M. I., & Thomasius, R. (2021). ICD-11-Based Assessment of Social Media Use Disorder in Adolescents: Development and Validation of the Social Media Use Disorder Scale for Adolescents. *Frontiers in Psychiatry, 12*, Article ID: 661483. <https://doi.org/10.3389/fpsy.2021.661483>
- Petrosyan, A. (2023). *Number of Internet and Social Media Users World-Wide as of April 2023 (in Billions)*. <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A Scoping Review of Scoping Reviews: Advancing the Approach and Enhancing the Consistency. *Research Synthesis Methods, 5*, 371-385. <https://doi.org/10.1002/jrsm.1123>
- Pollock, D., Peters, M. D. J., Khalil, H., McInerney, P., Alexander, L., Tricco, A. C. et al. (2022). Recommendations for the Extraction, Analysis, and Presentation of Results in Scoping Reviews. *JBMEvidence Synthesis, 21*, 520-532. <https://doi.org/10.11124/jbies-22-00123>
- Pontes, H. M., Andreassen, C. S., & Griffiths, M. D. (2016). Portuguese Validation of the Bergen Facebook Addiction Scale: An Empirical Study. *International Journal of Mental Health and Addiction, 14*, 1062-1073. <https://doi.org/10.1007/s11469-016-9694-y>
- Poushter, J., Bishop, C., & Chwe, H. (2018). *Social Media Use Continues to Rise in Developing Countries by Plateaus across Developed Ones*. Pew Research Center. <https://www.pewresearch.org/global/2018/06/19/social-media-use-continues-to-rise-in-developing-countries-but-plateaus-across-developed-ones/>
- Ramani, Z., & Diwanji, H. (2022). A Review on Impact of Social Media Addiction. *Multi-disciplinary International Research Journal of Gujarat Technological University, 4*, 34-42.
- Rice, E. S., Haynes, E., Royce, P., & Thompson, S. C. (2016). Social Media and Digital Technology Use among Indigenous Young People in Australia: A Literature Review. *International Journal for Equity in Health, 15*, Article 81. <https://doi.org/10.1186/s12939-016-0366-0>
- Sahin, C. (2018). Social Media Addiction Scale-Student Form: The Reliability and Validity Study. *Turkish Online Journal of Educational Technology-TOJET, 17*, 169-182.
- Shin, N. Y. (2022). Psychometric Properties of the Bergen Social Media Addiction Scale in Korean Young Adults. *Psychiatry Investigation, 19*, 356-361. <https://doi.org/10.30773/pi.2021.0294>
- Soraci, P., Ferrari, A., Barberis, N., Luvarà, G., Urso, A., Del Fante, E. et al. (2020). Psychometric Analysis and Validation of the Italian Bergen Facebook Addiction Scale. *International Journal of Mental Health and Addiction, 21*, 451-467. <https://doi.org/10.1007/s11469-020-00346-5>
- Stanley, T. B., Correia, C. J., & Irons, J. G. (2022). Contingency Management for Smartphone and Social Media Use: A Feasibility Study. *Addiction Research & Theory, 30*, 323-329. <https://doi.org/10.1080/16066359.2022.2038140>
- Stieger, S., & Lewetz, D. (2018). A Week without Using Social Media: Results from an Ecological Momentary Intervention Study Using Smartphones. *Cyberpsychology, Behavior, and Social Networking, 21*, 618-624. <https://doi.org/10.1089/cyber.2018.0070>
- Sun, Y., & Zhang, Y. (2021). A Review of Theories and Models Applied in Studies of Social Media Addiction and Implications for Future Research. *Addictive Behaviors, 114*, Article 106699. <https://doi.org/10.1016/j.addbeh.2020.106699>
- Tutgun-Ünal, A., & Deniz, L. (2015). Development of the Social Media Addiction Scale. *AJIT-e Online Academic Journal of Information Technology, 6*, 51-70. <https://doi.org/10.5824/1309-1581.2015.4.004.x>

- Van den Eijnden, R. J. J. M., Lemmens, J. S., & Valkenburg, P. M. (2016). The Social Media Disorder Scale. *Computers in Human Behavior*, 61, 478-487. <https://doi.org/10.1016/j.chb.2016.03.038>
- Yu, L., Cao, X., Liu, Z., & Wang, J. (2018). Excessive Social Media Use at Work: Exploring the Effects of Social Media Overload on Job Performance. *Information Technology & People*, 31, 1091-1112. <https://doi.org/10.1108/itp-10-2016-0237>
- Zahrai, K., Veer, E., Ballantine, P. W., de Vries, H. P., & Prayag, G. (2022). Either You Control Social Media or Social Media Controls You: Understanding the Impact of Self-Control on Excessive Social Media Use from the Dual-System Perspective. *Journal of Consumer Affairs*, 56, 806-848. <https://doi.org/10.1111/joca.12449>
- Zhou, X., Rau, P. P., Yang, C., & Zhou, X. (2020). Cognitive Behavioral Therapy-Based Short-Term Abstinence Intervention for Problematic Social Media Use: Improved Well-Being and Underlying Mechanisms. *Psychiatric Quarterly*, 92, 761-779. <https://doi.org/10.1007/s11126-020-09852-0>