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Appendix B – Database Sources

Table 1. Study Characteristics – Database Sources

Measurement Tool	Acronym	Source #	Authors (Year)	Study Setting	Total Sample Size	Sample Age Group(s)	Race	SES - Index	Study Paradigm	Risk of Bias	Notes
Addiction Profile Index Internet Addiction Form	APIINT	1	Ogel, Karadag, Satgan & Koc (2015)	Unknown	154	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High	
Adolescent Health Promotion Short Form	AHP-SF	2	Chen, Lai & Gaete (2014)	School	814	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Adolescent Preoccupation with Screens Scale	APSS	3	Hunter et al. (2017)	Online	1952	School Age Adolescence	Unknown	Diverse SES - Common Index	Survey (local)	Low	
Battery Use Screenshot	BUS	4	Gower & Moreno (2018)	Online	1156	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
Behavioral Addiction Measure Video Gaming	BAM-VG	5	Sanders & Williams (2016)	Online	506	Young Adults	Unknown	Diverse SES - Common Index	Survey (local)	Low	Target Population: People who play video games regularly
Bergen Facebook Addiction Scale	BFAS	6	Pontes, Andreassen & Griffiths (2016)	School & Online	495	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Bergen Social Media Addiction Scale	BSMAS	7a	Lin, Broström, Nilsen, Griffiths & Pakpour (2017)	School	2676	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		8	Monacis, de Palo, Griffiths, & Sinatra (2017)	School	734	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Chen Internet Addiction Scale - Revised	CIAS-R	9a	Mak et al. (2014)	School	860	Adolescence Young Adults	100% East Asian	Not Specified	Survey (local)	Moderate	
Chinese Social Media Addiction Scale		10	Liu & Ma (2018)	School	619	Adolescence Young Adults	100% East Asian	Not Specified	Survey (local)	Moderate	Target Population: Chinese Youth
Clinical Video game Addiction Test 2.0	C-VAT 2.0	11	van Rooij, Schoenmakers & van de Mheen (2015)	Clinic	32	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Compulsive Internet Use Scale	CIUS	12a	Dhir, Chen & Nieminen (2015a)	School	425	Adolescence Young Adults	100% East Asian	Diverse SES - Author's Scale	Survey (local)	Low	
		13	Dhir, Chen & Nieminen (2015b)	School	3693	School Age Adolescence Young Adults	100% South Asian	Diverse SES - Author's Scale	Survey (local)	Low	
		14	Dhir, Chen & Nieminen (2016)	School	2383	School Age Adolescence Young Adults	100% South Asian	High/Middle SES - Author's Scale	Survey (local)	High	
		15	Guertler et al. (2014a)	In-Home	8132	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		16	Guertler et al. (2014b)	Clinic & In-Home	292	Adolescence Young Adults	91% White	Not Specified	Survey (local) & Interview	Low	

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		17b	Jeromin, Rief & Barke (2016)	Online	894	Young Adults	Unknown	Not Specified	Survey (local)	Low	Target Population: Internet Gamers
		18b	Siciliano, Bastiani, Mezzasalma, Thanki, Curzio & Molinaro (2015)	School	21205	Adolescence Young Adults	Unknown	Not Specified	Secondary Data Analysis, National Survey	Low	
		19	Yong, Inoue & Kawakami (2017)	Online	623	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		20	Wartberg, Petersen, Kammerl, Rosenkranz & Thomasius (2014)	Unknown	1723	Adolescence	Unknown	Not Specified	Survey (local) & Interview	Low	
Content-based Media Exposure Scale	C-ME	21	den Hamer, Konijn, Plaisier, Keijer, Krabbendam & Bushman (2017)	School	2164	School Age Adolescence Young Adults	Unknown	Diverse SES - Author's Scale	Survey (local)	Low	
Diagnostic Classification Test for Internet Addiction	DCT-IA	22	Tu, Gao, Wang & Cai (2017)	Unknown	1558	School Age Adolescence Young Adults	Unknown	Not Specified	Unknown/Unclear	Moderate	
Excessive Internet Use Scale	EIU	23	Škařupová, Ólafsson & Blinka (2015)	Online	18709	Adolescence	Unknown	Not Specified	Secondary Data Analysis, National Survey	Low	
Food, Health, and Choices Questionnaire	FHC-Q	24	Gray, Koch, Contento, Bandelli, Ang & Noia (2016)	School	221	School Age	69% Hispanic 27% Black	Low SES - Author's Scale	Survey (local)	Low	
Game Addiction Identification Test	GAIT	25	Vadlin, Aslund, Rehn & Nilsson (2015)	Online & Unknown (Paper survey)	1877	Adolescence	Unknown	Diverse SES - Common Index	Survey (local)	Low	
Game Addiction Scale	GAS	26	Gaetan, Bonnet, Brejard & Cury (2014)	Online & School	465	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		27	Lemos, Cardoso & Sougey (2016)	School	384	Young Adults	Unknown	Not Specified	Survey (local)	Low	Target Population: Gamers
		28	Brunborg, Hanss, Mentzoni, & Pallesen (2015)	In-Home & Online	3037	Adolescence Young Adults	Unknown	Not Specified	National Survey	Low	
		29	Sahin, Gumus & Dincel (2016)	Online	370	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Generalized Problematic Internet Use Scale 2	GPIU2	30	Assunção & Matos (2017)	School	761	Adolescence Young Adults	Unknown	Diverse SES - Common Index	Survey (local)	Low	
		31	Pontes, Caplan & Griffiths (2016)	Online	622	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		32a	Laconi, Kaliszewska-Czeremska, Tricard, Chabrol & Kuss (2018)	School & Online	563	Young Adults	Unknown	Not Specified	Survey (local)	Moderate	

Measure	Abbrev.	#	Authors	Setting	N	Age	Ethnicity	SES	Survey Type	Quality	Notes
Healthy Computing Questionnaire for Children	HCQC	33	Hatfield, Parsons, Ciccarelli (2016)	School	440	School Age	Unknown	Not Specified	Survey (local)	High	
Healthy Living for Kids Survey	HLKS	34	Quelly (2018)	School	88	School Age	66% White 12% Hispanic 9% Mixed Race	Not Specified	Survey (local)	High	
Implicit Association Test		35	Roh, Bhang, Choi, Kweon, Lee & Potenza (2018)	Clinic & Hospital Based Research Centre	78	School Age Adolescence	100% East Asian	Not Specified	Survey (local)	Low	Target Population: Treatment-seeking children with Internet addiction and/or smart-phone overuse
Internet Abusive Use Questionnaire	IAUQ	36	Calvo-Francés (2016)	Online	908	Adolescence Young Adults	Unknown	Not Specified	National Survey	Low	
Internet Addiction Diagnostic Questionnaire	IADQ	37a	Boysan, Kuss, Barut, Ayköse, Güleç & Özdemir (2015)	School	455	Young Adults	Unknown	High/Middle SES - Author's Scale	Survey (local)	High	
Internet Addiction Scale	IAS	41	Cho et al. (2014)	School	1192	Adolescence	Unknown	Diverse SES - Author's Scale	Survey (local)	Moderate	
Internet Addiction Test	IAT	9b	Mak et al. (2014)	School	860	Adolescence Young Adults	100% East Asian	Not Specified	Survey (local)	Moderate	
		12b	Dhir, Chen & Nieminen (2015a)	School	425	Adolescence Young Adults	100% East Asian	Diverse SES - Author's Scale	Survey (local)	Low	
		32b	Laconi, Kaliszewska-Czeremska, Tricard, Chabrol & Kuss (2018)	School & Online	563	Young Adults	Unknown	Not Specified	Survey (local)	High	
		37b	Boysan, Kuss, Barut, Ayköse, Güleç & Özdemir (2015)	School	455	Young Adults	Unknown	High/Middle SES - Author's Scale	Survey (local)	High	
		38	Ahmad, Alzayyat, Al-Gamal (2015)	School	587	Adolescence Young Adults	Unknown	Diverse SES - Author's Scale	Survey (local)	Low	
		39b	Baggio, Iglesias, Berchtold & Suris (2017)	School & Online	3067	Adolescence	Unknown	High/Middle SES - Author's Scale	National Survey	Low	
		40a	Chin & Leung (2018)	School	1072	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		42	Dhir, Chen & Nieminen (2015c)	School	1914	School Age Adolescence Young Adults	100% South Asian	Not Specified	Survey (local)	Moderate	
		43	Fernández-Villa, Molina, García-Martín, Llorca,Delgado-Rodríguez & Martín (2015)	Online	981	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		44	Fioravanti & Casale (2015)	School	840	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		45	Lai et al. (2015)	School	2535	School Age	62% East Asian	Not Specified	National Survey	High	

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Measure	Abbrev	#	Authors (year)	Setting	N	Age	Ethnicity	SES	Method	Quality	Notes
						Adolescence Young Adults	38% Southeast Asian				
		46	Hawi, Blachnio & Przepiorka (2015)	Online	1297	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High	
		47	Kaya, Delen & Young (2016)	School	990	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		48	Monacis, de Palo, Griffiths, & Sinatra (2016)	School, Gaming halls	687	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		49	Pontes, Patrão & Griffiths (2014)	School & Online	593	Adolescence Young Adults	94% White	Not Specified	Survey (local)	Low	
		50	Tsimtsiou, Haidich, Kokkali, Dardavesis, Young & Arvanitidou (2014)	School	151	Young Adults	Unknown	Not Specified	Survey (local)	High	
		51	Waqas et al. (2018)	School	522	Adolescence Young Adults	100% South Asian	Not Specified	Survey (local)	Low	
	IAT-A	52	Teo & Kam (2014)	School & Online	325	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
	s-IAT-sex	53	Wéry, Burnay & Billieux (2015)	Online	401	Young Adults	Unknown	Not Specified	Survey (local)	Low	
Internet Addiction Test - Short Version	s-IAT	54	Tran et al. (2017)	Online	589	Adolescence Young Adults	100% Southeast Asian	Diverse SES - Author's Scale	Survey (local)	Low	
Internet Disorder Scale	IDS-15	55	Pontes & Griffiths (2017)	Online	1094	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Internet Gaming Disorder Questionnaire	IGDQ	17a	Jeromin, Rief & Barke (2016)	Online	894	Young Adults	Unknown	Not Specified	Survey (local)	Low	
Internet Gaming Disorder Scale	IGDS	56c	Evren, Dalbudakb, Topcu, Kutlu, Evren & Pontes (2018)	Online	1250	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		57	Lemmens, Valkenburg & Gentile (2015)	Online	2444	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		58	Wartberg, Zieglmeier & Kammerl (2019)	In-Home	985	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
Internet Gaming Disorder Scale - Short Form	IGDS9-SF	7b	Lin, Broström, Nilsen, Griffiths & Pakpour (2017)	School	2676	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		56a	Evren, Dalbudakb, Topcu, Kutlu, Evren & Pontes (2018)	Online	1250	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		59	Pontes & Griffiths (2015)	Online	1060	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	Target Population: Gamers
		60	Wu, Lin, Årestedt, Griffiths, Broström & Pakpour (2017)	School	2363	School Age Adolescence Young Adults	100% Middle Eastern	Not Specified	Survey (local)	Low	
		61	Schivinski, Brzozowska-Woś, Buchanan, Griffiths & Pontes (2018)	Online	3222	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	

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Scale	Abbrev.	#	Author (year)	Setting	N	Age Group	Ethnicity	SES	Survey Type	Rating
		62	Pontes & Griffiths (2016)	School & Online	495	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low
		63	Pontes, Macur & Griffiths (2016)	School	1071	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low
Internet Gaming Disorder Test 10	IGDT-10	65a	Király, Sleczka, Pontes, Urbán, Griffiths & Demetrovics (2017)	Online	4887	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Moderate
		64	Hawi & Samaha (2017)	School	375	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Moderate
Internet Gaming Disorder Test 20	IGD-20	66	Pontes, Kiraly, Demetrovics & Griffiths (2014)	Online	1003	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low
		67	Fuster, Carbonell, Pontes & Griffiths (2016)	Online	1074	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High
Internet Gratification Scale for Adolescents		68	Dihr, Chen & Nieminen (2017)	School	1914	School Age Adolescence Young Adults	100% South Asian	Diverse SES - Unknown	Survey (local)	Low
Internet Motive Questionnaire for Adolescents	IMQ-A	69	Bischof-Kastner, Kuntsche & Wolstein (2014)	In-Home & School	101	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low
Korean Scale for Internet Addiction	K-Scale	70	Mak et al. (2017)	School	589	Adolescence Young Adults	100% East Asian	Not Specified	Survey (local)	Moderate
Korean Smartphone Addiction Proneness Scale		71	Kim, Lee, Lee, Nam & Chung (2014)	Unknown	795	School Age Adolescence Young Adults	Unknown	Not Specified	National Survey	Low
Media and Technology Usage and Attitudes Scale	MTUAS	72b	Cocoradă, Ioan Maican, Cazan & Maican (2018)	School	717	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low
Mobile Phone Addiction Craving Scale		74a	De-Sola, Talledo, Rubio, & de Fonseca (2017)	Online	1126	Adolescence Young Adults	Unknown	Not Specified	National Survey	Low
Mobile Phone Dependence Questionnaire	MPDQ	40b	Chin & Leung (2018)	School	1072	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low
		75	Leung (2017)	School	733	School Age Adolescence	100% East Asian	Diverse SES - Unknown	Survey (local) & Focus Group	Moderate
Mobile Phone Involvement Questionnaire		76b	Lin, Griffiths & Pakpour (2018)	School	3216	Adolescence Young Adults	Unknown	High/Middle SES	Survey (local)	Low
Mobile Phone Problem Use Scale	MPPUS	74b	De-Sola, Talledo, Rubio, & de Fonseca (2017)	Online	1126	Adolescence Young Adults	Unknown	Not Specified	National Survey	Low
		77a	Andrews, Ellis, Shaw & Piwek (2015)	In-Home	23	Young Adults	Unknown	Not Specified	Survey (local)	Low
		78a	Lopez-Fernandez, Honrubia-Serrano, Freixa-Blanxart & Gibson (2014)	School	1529	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Moderate
Mobile Phone Problem Use Scale - Short Form	MPPUS-10	79	Foerster, Roser, Schoeni & Röösli (2015)	School	412	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low
Online Cognition Scale	OCS	80	Blachnio, Przepiórka & Hawi (2015)	Online	626	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low

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Instrument	Acronym	#	Authors (Year)	Setting	N	Age Group	Ethnicity	SES	Method	Bias	Notes
						Young Adults					
		81	Komnenić, Filipović & Vukosavljević-Gvozden (2015)	Online	254	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High	
Online Gaming Addiction Scale	OGAS	82	Başol & Bedir Kaya (2018)	Unknown	327	Adolescence	Unknown	Not Specified	Survey (local)	Low	Target Population: People who play MMORPGs (Massively Multiplayer Online Role Playing Games)
Out-Of-School Nutrition and Physical Activity - Observational Practice Assessment Tool	OSNAP-OPAT	83	Lee et al. (2014)	After-school program	884	School Age	Unknown	Not Specified	Naturalistic Observation	High	
Parents Role in Establishing healthy Physical Activity and Sedentary behaviour habits questionnaire	PREPS	84	Carson, Hesketh, Rhodes, Rinaldi, Rodgers & Spence (2017)	Clinic & In-Home	118	Infancy Preschool Age	58% White 15% East Asian	Diverse SES	Survey (local)	Low	Target Population: Parents with ambulatory toddlers
Persian Nomophobia Questionnaire	NMP-Q	76a	Lin, Griffiths & Pakpour (2018)	School	3216	Adolescence Young Adults	Unknown	High/Middle SES	Survey (local)	Low	
Problem Videogame Playing Scale	PVP	85	Tejeiro, Espada, Gonzálvez & Christiansen (2016)	School	909	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		78b	Lopez-Fernandez, Honrubia-Serrano, Baguley & Griffiths (2014)	Unknown	2356	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Problematic and Risky Internet Use Screening Scale	PRIUSS	87	Moreno, Arseniev-Koehler & Selkie (2016)	School	1079	Adolescence Young Adults	82% White 8% East Asian 5% Black	Not Specified	Survey (local)	Low	
Problematic Facebook Use Scale	PFUS	88	Marino, Vieno, Altoè & Spada (2017)	School	1460	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	Target Population: Facebook Users
Problematic Internet Entertainment Use Scale for Adolescents	PIEUSA	78c	Lopez-Fernandez, Honrubia-Serrano, Gibson & Griffiths (2014)	School	1097	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Problematic Internet Use Questionnaire	PIUQ	90	El Asam, Samara & Terry (2019)	School	1814	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
Problematic Internet Use Questionnaire - Short Form	PIUQ-SF	91	Li, Diez & Zhao (2019)	School	235	Adolescence Young Adults	69% Black 27% Hispanic	Not Specified - Common Index	Survey (local)	High	
Problematic Internet Use Scale	PIUS	92	Boubeta, Salgado, Folgar, Gallego & Mallou (2015)	School	1709	School Age Adolescence	100% Hispanic	Not Specified	Survey (local)	High	

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Problematic Mobile Phone Use Questionnaire Revised	PMPU-Q-R	93	Kuss, Harkin, Kanjo & Billieux (2018)	Online & Focus Groups	512	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Moderate	
Problematic Online Gaming Questionnaire	POGQ	65b	Király, Sleczka, Pontes, Urbán, Griffiths & Demetrovics (2017)	Online	4887	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Moderate	
		94	Smohai et al. (2017)	School & Online	1964	Adolescence	Unknown	Not Specified	Survey (local)	Low	Target Population: Individuals with problematic online gaming
Problematic Social Networking Services Use Scale	PSUS	95	Lou, Liu & Liu (2017)	School	1030	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High	
Psycho-Social Aspects of Facebook Use	PSAFU	96	Bodroža & Jovanovic (2016)	Online	804	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	High	
Radio-Frequency Identification	RFID	97	Alahmadi (2015)	In-Home	7	School Age	Unknown	Not Specified	Naturalistic Observation	High	
Risk of Addiction to Social Networks Scale	CrARS	98	Vilca & Vallejos (2015)	School	205	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Sedentary Behaviour Questionnaires		99	Busschaert, De Bourdeaudhuij, Van Holle, Chastin, Cardon & De Cocker (2015)	In-Home & School	221	Adolescence Young Adults	Unknown	Diverse SES - Author's Scale	Survey (local) & Experience Sampling (EMA)	High	
Short Problematic Internet Use Test	SPIUT	18a	Siciliano, Bastiani, Mezzasalma, Thanki, Curzio & Molinaro (2015)	School	21205	Adolescence Young Adults	Unknown	Not Specified	Secondary Data Analysis, National Survey	Low	
Short Social Media Disorder Scale		100b	van den Eijnden, Lemmens & Valkenburg (2016)	Online	2198	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
Smartphone Addiction Inventory	SPAI	101	Khoury, de Freitas, Roque, Rodrigues Albuquerque, de Castro Lourenço das Neves & Garcia (2017)	School	415	Young Adults	Unknown	Not Specified	Survey (local)	High	
		102	Pavia, Cavani, Di Blasi & Giordano (2016)	School	485	Young Adults	100% White	Not Specified	Survey (local)	Low	
		103	Simó-Sanz, Ballestar-Tarín & Martínez-Sabater (2018)	Online	2958	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		104	Wang, Sigerson, Jiang & Cheng (2018)	School	463	Young Adults	100% East Asian	Not Specified	Survey (local)	Low	
Smartphone Addiction Scale	SAS	105	Demirci, Orhan, Demirdas, Akpinar & Sert (2014)	School	301	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		106a	Sfendla, Laita, Nejjar, Souirti, Touhami & Senhaji (2018)	Online	750	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Smartphone Addiction Scale - Short Version	SAS-SV	72a	Cocoradă, Ioan Maica, Cazan & Maican (2018)	School	717	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	

Scale	Abbr.	ID	Author	Setting	N	Age Group	Race/Ethnicity	SES	Method	Risk	Notes
		106b	Sfendla, Laita, Nejjar, Souirti, Touhami & Senhaji (2018)	Online	750	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
		107	Luk et al. (2018)	In-Home	3211	Young Adults	100% East Asian	Diverse SES - Author's Scale	Survey (local)	Low	
		108	Tateno, Kim, Teo, Skokauskas, Guerrero & Kato (2019)	School	573	Young Adults	Unknown	Not Specified	Survey (local)	Low	Target Population: Japanese Speaking Individuals
Social Media Disorder Scale	SMD	100a	van den Eijnden, Lemmens & Valkenburg (2016)	Online	2198	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low	
		109	Savci, Ercengiz & Aysan (2018)	Unknown	553	Adolescence	Unknown	Not Specified	Survey (local)	Low	
Social Networking Activity Intensity Scale	SNAIS	110	Li et al. (2016)	School	1088	School Age Adolescence	100% East Asian	Not Specified	Survey (local)	Low	
Structured Clinical Interview for Internet Gaming Disorder	SCI-IGD	111	Koo, Han, Park & Kwon (2017)	Clinic & Community Setting	236	School Age Adolescence	100% East Asian	Diverse SES - Author's Scale	Survey (local) & Clinical Interview	Low	
Student Laptop Use and Musculoskeletal Posture	SLUMP	112	D'Silva, Cote, Murphy & Barakat-Haddad (2018a)	School	33	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		113	D'Silva, Cote, Murphy & Barakat-Haddad (2018b)	School & Online	179	Young Adults	Unknown	Not Specified	Survey (local)	Low	
Study of Cognition, Adolescents and Mobile Phones	SCAMP	114	Mireku et al. (2018)	School	350	School Age	63% White 12% Mixed Race	Diverse SES	Survey (local)	Moderate	
Technology-Related Psychological Consequences Questionnaire		115	Emelin, Tkhostova & Rasskazova (2014)	Unknown	132	Adolescence Young Adults	Unknown	Not Specified	Survey (local)	Low	
Third-Person Effect Questionnaire & Media Exposure List		73	Hayee & Kamal (2014)	School	328	Adolescence Young Adults	100% South Asian	Not Specified	Survey (local) & Focus Groups	High	
		39a	Baggio, Iglesias, Berchtold & Suris (2017)	School & Online	3067	Adolescence	Unknown	High/Middle SES - Author's Scale	National Survey	Low	
		77b	Andrews, Ellis, Shaw & Piwek (2015)	In-Home	23	Young Adults	Unknown	Not Specified	Survey (local)	Low	
		116	Etaher & Weir (2016)	School	128	School Age Adolescence	Unknown	Not Specified	Survey (local)	Moderate	
		117	Cristia & Seidl (2015)	Online	453	Infancy Preschool Age	Unknown	High/Middle SES - Common Index	Survey (local)	Low	
Unnamed		118	Fikkers, Piotrowski & Valkenburg (2017)	Online	238	School Age Adolescence	Unknown	Not Specified	Survey (local) & Online Diaries	Low	
		119	Holstein et al. (2014)	School	2100	School Age Adolescence	Unknown	Diverse SES - Author's Scale	Survey (local)	Low	
		120	Salgado, Boubeta, Tobío, Mallou, & Couto (2014)	School	2339	School Age Adolescence Young Adults	100% Hispanic	Not Specified	Survey (local)	Low	

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		121	Silva, Gunnell & Tremblay (2018)	School	1083	Adolescence Young Adults	100% Hispanic	Not Specified	Survey (local)	Low
		123a	Goedhart et al. (2018)	In-home & Online	587	School Age Adolescence Young Adults	69% Hispanic 27% Black	Not Specified	Survey (local)	Low
Videogame Addiction Scale for Children	VASC	122	Yılmaz, Griffiths & Kan (2017)	School	780	School Age	Unknown	High/Middle SES - Author's Scale	Survey (local)	Low
XMobiSense		123b	Goedhart et al. (2018)	In-home & Online	587	School Age Adolescence Young Adults	69% Hispanic 27% Black	Not Specified	Survey (local) & Experience Sampling (EMA)	Low
Young Diagnostic Questionnaire	YDQ	124	Wartberg et al. (2017)	School	4157	Adolescence	Unknown	Not Specified	Survey (local)	Low
		125	Wartberg, Kriston, Kegel & Thomasius (2016)	In-Home	1000	School Age Adolescence	Unknown	Not Specified	Survey (local)	Low
Young's Internet Addiction Test - Short Form	YIAT-SF	56b	Evren, Dalbudakb, Topcu, Kutlu, Evren & Pontes (2018)	Online	1250	Young Adults	Unknown	Not Specified	Survey (local)	Low
Youth Leisure-Time Sedentary Behaviour Questionnaire	YLSBQ	126	Cabanas-Sánchez, Martínez-Gómez, Esteban-Cornejo, Castro-Piñero, Conde-Caveda & Veiga (2017)	School	1401	School Age Adolescence Young Adults	Unknown	Not Specified	Survey (local) & Physiological Measure (accelerometer)	Low

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Table 2. Digital Media Use Measurement Tool Characteristics – Database Sources

Measurement Tool	Acronym	Source #	Measure-ment Type	Informant	Digital Media Device	Media Type	Usage Characteristics	Specific Applications/ Websites	Reliability	Validity	Author Identified Tool Strengths/Limitations	Notes
Addiction Profile Index Internet Addiction Form	APIINT	1	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Non-Educational Consumptive		Good	Good	Consists of multiple dimensions, including: frequency of internet use, addiction symptoms, impact of internet use on life, craving for internet use, and motivation to reduce internet use.	
Adolescent Health Promotion Short Form	AHP-SF	2	Survey	Self-Report	Television Multi-Screen Composite (Unspecified)	Video Game TV/ Video Streaming	Non-Educational Consumptive		Good	Good	Used multiple methods to establish the tool's validity and reliability, including: construct validity, convergent validity, discriminant validity, and internal consistency.	
Adolescent Preoccupation with Screens Scale	APSS	3	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game Social Media Communication (Texting/Video Chatting) TV/ Video Streaming Internet Browsing eBooks Virtual Reality/ Augmented Reality	Active Sedentary Online Offline Solitary Shared Productive Consumptive		Fair	Good		
Battery Use Screenshot	BUS	4	Automated Statistics	Passive Data Collection	Cellphone/ Smartphone	Mobile Phone Apps	Online Offline		Unknown/ Unclear	Unknown /Unclear		
Behavioral Addiction Measure Video Gaming	BAM-VG	5	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Non-Educational Consumptive	Facebook	Good	Good	Tested the BAM-VG in a more representative population than prior research including more females and non-problematic video gamers across a wider age range.	

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Name	Abbr.	No.	Type	Report	Device	Category	Activity	Platform	Reliability	Validity	Notes	Other
Bergen Facebook Addiction Scale	BFAS	6	Survey	Self-Report	Cellphone/ Smartphone Laptop Tablet Multi-Screen Composite (Unspecified)	Social Media	Sedentary Online	Facebook	Good	Good		Portuguese Version
Bergen Social Media Addiction Scale	BSMAS	7a	Survey	Self-Report	Unknown/ Unclear	Social Media	Online Shared (Online Only)		Good	Good		
		8	Survey	Self-Report	Unknown/ Unclear	Social Media	Online Non-Educational		Good	Good		Italian Version
Chen Internet Addiction Scale - Revised	CIAS-R	9a	Survey	Self-Report	Unknown/ Unclear	General Internet Use	Sedentary Online Non-Educational		Fair	Fair	The poor positive predictive value, but good negative predictive value of CIAS-R further suggest that the CIAS-R is more inclusive in detecting Internet addicted users than the IAT. Believed to be better at identifying those with problematic internet use rather than internet addiction.	
Chinese Social Media Addiction Scale		10	Survey	Self-Report	Unknown/ Unclear	Social Media	Online Non-Educational Consumptive	WeChat QQ Sina Weibo	Good	Good	Measures broad social media addiction compared to other measures. Addresses variables not addressed in the Facebook Addiction Scale. No cut offs for distinguishing addictive from non-addictive users.	Sample population was exclusively college students.
Clinical Video game Addiction Test 2.0	C-VAT 2.0	11	Survey	Clinician-Report	Multi-Screen Composite (Unspecified)	Video Game	Consumptive		Unknown/ Unclear	Unknown/Unclear		

Compulsive Internet Use Scale	CIUS	12a	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online		Good	Good	Brief measure. Measures the severity of the core elements of compulsive internet use. No statistically proven cut off scores for compulsive and non-compulsive internet use.
		13	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online		Unknown/ Unclear	Unknown /Unclear	Validated for use in private and public school settings.
		14	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Good	Good	More suitable for research and clinical applications compare to other measures in the field. Economically advantaged due to its short length and ease of use allowing the tool to be administered online.
		15	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Good	Good	
		16	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Fair	Good	Cut offs for Internet Addiction are not well validated. Strongly varying factor structures for the IAT are found in research. This study supported the six-factor structure.
		17b	Survey Automated Statistics	Self-Report Joint Parent-Report	Unknown/ Unclear	Video Game Internet Browsing	Non-Educational Consumptive		Fair	Good		German Version
		18b	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Non-Educational Consumptive		Good	Good	
		19	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Consumptive		Good	Good	

Name	Abbr.	#	Type	Report	Device	Activity	Context			Notes
		20	Survey	Self-Report Parent-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online	Good	Unknown /Unclear	
Content-based Media Exposure Scale	C-ME	21	Survey	Self-Report	Cellphone/ Smartphone	Video Game Internet Browsing TV/ Video Streaming	Online Offline Non-Educational Consumptive	Good	Good	Measures a wider array of antisocial and risk behaviour content in popular media than common media exposure measurements.
Diagnostic Classification Test for Internet Addiction	DCT-IA	22	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing Video Game	Online	Good	Good	Can simultaneously measure general diagnostic information and detailed symptom criteria-level information for internet addiction based on the DSM-V. All items were transformed to dichotomous (Yes/No) responses.
Excessive Internet Use Scale	EIU	23	Survey	Self-Report Parent-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Shared (Online Only) Non-Educational Consumptive	Good	Unknown /Unclear	Provides measurement of a broad range of potentially problematic internet use behaviours without asking about specific experiences or activities. Validated across Europe. Tested in 18 national surveys and in 15 languages. Only measures excessive internet use and does not take into account online activities.
Food, Health, and Choices Questionnaire	FHC-Q	24	Survey	Self-Report	Television Gaming Consoles	Video Game TV/ Video Streaming		Good	Poor	
Game Addiction Identification Test	GAIT	25	Survey	Self-Report Mother-Report Father-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Consumptive	Good	Good	First validated tool to measure gaming addiction symptoms in Swedish adolescents. High concordance between adolescent self-report and parent-report.

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Name	Abbr.	Ref	Method	Report	Device	Media Type	Usage		Reliability	Validity	Notes	Version
Game Addiction Scale	GAS	26	Survey	Self-Report	Unknown/ Unclear	Video Game	Consumptive		Unknown/ Unclear	Fair	Five-point Likert scale rather than a dichotomous tool, allowing greater sensitivity.	
		27	Survey	Self-Report	Unknown/ Unclear	Video Game	Online Offline Solitary Shared		Good	Good		Brazilian Version
		28	Survey	Self-Report	Unknown/ Unclear	Video Game			Unknown/ Unclear	Unknown /Unclear		
		29	Survey	Self-Report	Laptop Gaming Consoles	Video Game	Non-Educational		Good	Good		7 and 21-item adapted versions
Generalized Problematic Internet Use Scale 2	GPIU2	30	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Social Media	Sedentary Online Non-Educational Productive Consumptive	Facebook	Good	Good	Valid measure of generalized problematic internet use as determined by confirmatory factor analysis.	Portuguese version
		31	Survey	Self-Report	Cellphone/ Smartphone Laptop Desktop Tablet	Unknown/Unclear	Sedentary Online Solitary		Good	Good	Valid alternative measure of problematic internet use. Validated for use in the Portuguese cultural context.	Portuguese Version
		32a	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online Non-Educational		Good	Poor		
Healthy Computing Questionnaire for Children	HCQC	33	Survey	Self-Report	Laptop Desktop Tablet	Video Game Communication (Texting/Video Chatting) Internet Browsing General Computer Use	Online Offline Solitary Shared Educational		Good	Good		
Healthy Living for Kids Survey	HLKS	34	Survey	Self-Report	Laptop Television Gaming Consoles	Video Game TV/ Video Streaming	Sedentary Consumptive		Fair	Unknown /Unclear		
Implicit Association Test		34	Survey	Self-Report	Multi-Screen Composition (Unspecified)	Internet Browsing	Online Consumptive Productive		Poor	Good	Brief measure that is feasible to implement in a variety of settings.	
Internet Abusive Use Questionnaire	IAUQ	36	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Good	Good	Accessible to populations with average reading ability based on readability analyses.	
Internet Addiction Diagnostic Questionnaire	IADQ	37a	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Fair	Good		

Internet Addiction Scale	IAS	41	Survey	Self-Report	Unknown/ Unclear	Online Internet Gaming	Online Solitary Consumptive		Good	Good	Validated to assess internet addiction based on the diagnostic criteria in the DSM-V. Limited testing in clinical settings. Some factors consisted of only two question items.	Predominantly male sample population
Internet Addiction Test	IAT	38	Survey Automated Statistics	Self-Report	Unknown/ Unclear	Internet Browsing	Online Non-Educational Consumptive		Good	Good		
		37b	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Good	Good		Turkish Sample
		39b	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Poor	Poor		
		40a	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting) Internet Browsing	Online Offline		Good	Good	Determined that the IAT can be divided into a three-factor model: (1) withdrawal and social problems, (2) time management and performance, and (3) reality substitute.	
		12b	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online		Unknown/ Unclear	Unknown /Unclear	IAT received the highest number of psychometric validations within different demographics, cultures, and languages.	
		42	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online		Good	Good	Easy to administer and interpret. Applicable to a wide range of measurement settings. No agreement in the field on the clinical cut off points for the IAT. Some have proposed cut off scores, but these have not been empirically validated.	
		43	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online	Facebook Tuenti	Good	Good	Some items of this questionnaire may be outdated due to technological and/or lifestyle changes.	Spanish Version Factors of technology use and lifestyle have been

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									noted as being outdated
44	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online	Good	Good		Italian Version
32b	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online Non-Educational	Unknown/ Unclear	Unknown /Unclear		
45	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online	Good	Good		
46	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online	Good	Unknown /Unclear		Polish Version
9b	Survey	Self-Report	Unknown/ Unclear	General Internet Use	Sedentary Online Non-Educational	Good	Unknown /Unclear		
47	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Sedentary Online Non-Educational Consumptive	Good	Good		Turkish Version Sample population was exclusively university undergraduate students.
48	Survey	Self-Report	Unknown/ Unclear	Video Game Internet Gaming	Online Non-Educational Consumptive	Good	Good		Italian Version
49	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Unknown/Unclear	Online	Good	Good	Lack of consistent and tested cut-off scores. Items of the IAT do not appear to be developed using a rigorous psychometric process. Items are outdated in aspects of Internet use. No temporal dimension.	
50	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Non-Educational Consumptive	Good	Good	Culturally adapted and validated a Greek version of the IAT. Three factors: psychological/emotional	Greek Version Sample population was

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Scale	Abbr.	#	Type	Report	Composite	Media	Mode	Q1	Q2	Notes	Version/Sample
										conflict, time management, and neglected work.	exclusively medical school students.
		51	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online	Good	Good		
	IAT-A	52	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online	Good	Good	Could not reliably differentiate between addicts and non-addicts.	Adolescent version
	s-IAT-sex	53	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Consumptive	Good	Good		Short version adapted to online sexual activities. Sample population is exclusively male.
Internet Addiction Test - Short Version	s-IAT	54	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Unknown/Unclear	Online	Fair	Good	Validated the s-IAT in a Vietnamese population. Stable two-factor structure.	
Internet Disorder Scale	IDS-15	55	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Non-Educational	Good	Good	No cut-off scores to determine Internet addiction.	
Internet Gaming Disorder Questionnaire	IGDQ	17a	Survey	Self-Report	Unknown/Unclear	Video Game Internet Browsing	Non-Educational Consumptive	Good	Fair		German Version
Internet Gaming Disorder Scale	IGDS	56c	Survey	Self-Report	Unknown/Unclear	Video Game	Online Offline Consumptive	Good	Fair		
		57	Survey	Self-Report	Unknown/Unclear	Video Game	Online Offline Consumptive	Unknown/Unclear	Unknown/Unclear		
		58	Survey	Parent-Report	Multi-Screen Composite (Unspecified)	Video Game	Consumptive	Good	Fair	Moderate concordance between parent and adolescent ratings. Seems that both assessments are not interchangeable.	
Internet Gaming Disorder Scale - Short Form	IGDS-SF9	56a	Survey	Self-Report	Unknown/Unclear	Video Game	Online Offline Consumptive	Fair	Good	Findings support the usage of this tool as an early diagnostic tool for Internet Gaming Disorder. No history of time spent playing online games was	Turkish Version

Name	Abbr.	#	Type	Method	Screen	Media	Context 1	Context 2	Q1	Q2	Notes	Version
											measured. Not used to diagnose Internet Gaming Disorder.	
		7b	Survey	Self-Report	Unknown/ Unclear	Social Media	Online Shared (Online Only)		Good	Good	Based on the diagnostic criteria for Internet Gaming Disorder in the DSM-V. One-factor structure, invariant across gender.	Persian Version
		59	Survey	Self-Report	Unknown/ Unclear	Video Game	Online Consumptive	Online Gaming Platforms	Good	Good	Brief standardized and psychometrically sound measure for assessing Internet Gaming Disorder as outlined by the DSM-V. Clinical cut-offs need to be further tested to confirm their validity.	
		60	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Consumptive	Online Gaming Platforms	Good	Fair	May underestimate or overestimate participant's Internet Gaming Disorder level.	
		61	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Non-Educational Consumptive		Good	Good	Determined that the Polish version of the IGDS9-SF adequately assesses Internet Gaming Disorder in Polish gamers. Suitable measure for assessing Internet Gaming Disorder. However, two items (7 & 8) were psychometrically problematic and presented with the poorest diagnostic accuracy.	Predominantly male sample population.
		62	Survey	Self-Report	Unknown/ Unclear	Video Game Internet Gaming	Sedentary Online Offline Non-Educational Consumptive		Good	Good	Valid and reliable in Portuguese adolescent population.	Portuguese Version
		63	Survey	Self-Report	Unknown/ Unclear	Video Game	Online Offline Consumptive	Online Gaming Platforms	Good	Good		
Internet Gaming Disorder Test 2	IGD-2	64	Survey	Self-Report	Multi-Screen Composition (Unspecified)	Video Game	Online Offline Educational Consumptive		Good	Unknown /Unclear		Arabic Version

Internet Gaming Disorder Test 10	IGDT-10	65a	Survey	Self-Report	Laptop Desktop Gaming Consoles	Video Game	Non-Educational Consumptive		Fair	Good	First study to provide empirical information about the measurement performance of the nine Internet Gaming Disorder criteria using IRT analysis.	
Internet Gaming Disorder Test 20	IGD-20	66	Survey	Self-Report	Cellphone/ Smartphone Laptop Gaming Consoles	Video Game	Online Offline Non-Educational		Good	Good	Applicable to all gamers and genres.	
		67	Survey	Self-Report	Cellphone/ Smartphone Laptop Gaming Consoles	Video Game	Online Offline		Good	Good		Spanish Version
Internet Gratification Scale for Adolescents		68	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online Solitary Shared		Good	Good		
Internet Motive Questionnaire for Adolescents	IMQ-A	69	Survey	Self-Report	Cellphone/ Smartphone Laptop	Video Game Social Media Communication (Texting/Video Chatting) TV/ Video Streaming Internet Browsing	Online	Facebook Skype ICQ	Unknown/ Unclear	Fair	Valid and reliable measure to assess adolescent motives for internet use. Motives assessed focus on affective change. Other motives should also be considered such as wanting to play games.	
Korean Scale for Internet Addiction	K-Scale	70	Survey	Self-Report	Unknown/ Unclear	General Internet Use	Sedentary Online Non-Educational Consumptive		Fair	Good	Validated the K-Scale for use beyond Korean populations. Validated for use in Japanese populations.	Korean version adapted for a Japanese sample population
Korean Smartphone Addiction Proneness Scale		71	Survey	Self-Report	Cellphone/ Smartphone	General Mobile Phone Use	Sedentary Online Offline		Good	Good		Author Created
Media and Technology Usage and Attitudes Scale	MTUAS	72b	Survey	Self-Report	Cellphone/ Smartphone	Video Game Social Media Communication (Texting/Video Chatting) TV/ Video Streaming Internet Browsing	Online Offline	Facebook	Unknown/ Unclear	Unknown /Unclear	15 subscales that break down smartphone use into discrete types.	
Mobile Phone Addiction Craving Scale		74a	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear			Good	Good	Helpful and fast evaluation tool of cell phone craving in the general population.	

										Did not assess anticipatory thoughts or previous time stages, as other scales have observed.	
Mobile Phone Dependence Questionnaire	MPDQ	40b	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting) Internet Browsing	Online Offline		Unknown/ Unclear	Good	Assess three dimensions of mobile phone addiction: (1) compulsive text messaging, (2) compulsive making/receiving calls, and (3) distorted thinking about using mobile phones.	
		75	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting)	Shared (Online Only)		Poor	Fair		
Mobile Phone Involvement Questionnaire		76b	Survey	Self-Report	Cellphone/ Smartphone				Fair	Unknown /Unclear		
Mobile Phone Problem Use Scale	MPPUS	77a	Survey Automated Statistics	Self-Report	Cellphone/ Smartphone	Social Media Communication (Texting/Video Chatting) TV/ Video Streaming Internet Browsing eBooks			Good	Poor		
		78a	Survey	Self-Report	Cellphone/ Smartphone	General Mobile Phone Use	Sedentary		Good	Good	Greater reliability than the original MPPUS1.	Spanish version adapted for British adolescents
		74b	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear			Unknown/ Unclear	Unknown /Unclear		
Mobile Phone Problem Use Scale - Short Form	MPPUS-10	79	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting)		WhatsApp	Unknown/ Unclear	Fair	Study data is objective (collected from the Swiss network operators) minimizing recall bias.	
Online Cognition Scale	OCS	80	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing Other Online Activities	Online		Good	Fair	Valid measure of pathological internet use.	Polish version
		81	Survey	Self-Report	Unknown/ Unclear	Video Game	Online Non-Educational Consumptive		Good	Good		Modified version focused on online gaming.
Online Gaming Addiction Scale	OGAS	82	Survey	Self-Report	Unknown/ Unclear	Video Game Online Role-Playing Game	Online Non-Educational Consumptive		Good	Good	Differences in frequency of use based on day of the week was not assessed. Future research should measure frequency on weekdays and	

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											weekends due to adolescent routines during the school week.
Out-Of-School Nutrition and Physical Activity - Observational Practice Assessment Tool	OSNAP-OPAT	83	Ecological Momentary Assessment (EMA/ ESM) Survey	Passive Data Collection Teacher-Report	Multi-Screen Composite (Unspecified)	Unknown/Unclear	Educational		Poor	Fair	
Parents Role in Establishing healthy Physical Activity and Sedentary behaviour habits questionnaire	PREPS	84	Survey	Parent-Report	Multi-Screen Composite (Unspecified)	Video Game TV/ Video Streaming	Sedentary Educational		Good	Fair	
Persian Nomophobia Questionnaire	NMP-Q	76a	Survey	Self-Report	Cellphone/ Smartphone				Good	Good	
Problem Video Game Playing Scale	PVP	85	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Consumptive	Online Gaming Platforms	Poor	Fair	Reliability was low to moderate. This has been seen in other Spanish research. May indicate inadequacy in the wording of the Spanish version.
		78b	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Consumptive		Fair	Fair	
Problematic and Risky Internet Use Screening Scale	PRIUSS	87	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online Consumptive		Good	Poor	Validated short screener for problematic internet use. Did not evaluate all possible combinations of items and thresholds to create the PRIUSS-3. Instead, a set of 3 scales was selected methodically and purposefully and then evaluated.
Problematic Facebook Use Scale	PFUS	88	Survey	Self-Report	Unknown/ Unclear	Social Media	Sedentary Online Shared (Online Only) Consumptive	Facebook	Good	Fair	Five-factor structure that provides a good fit to the data. Tested across gender and multiple age groups. Invariance of the model supported across groups.

Note: PRIUSS row additional column: Predominantly female sample population.

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Name	Abbrev.	#	Type	Report	Device	Activity	Content	Platform			Notes	
											No cut offs for distinguishing problematic from non-problematic users.	
Problematic Internet Entertainment Use Scale for Adolescents	PIEUSA	78c	Survey	Self-Report	Unknown/ Unclear	Unknown/unclear	Online Non-Educational Consumptive		Good	Fair		
Problematic Internet Use Questionnaire	PIUQ	90	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Unknown/ Unclear	Good	Did not assess time spent online or the activities conducted online.	
Problematic Internet Use Questionnaire - Short Form	PIUQ-SF	91	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Poor	Good		
Problematic Internet Use Scale	PIUS	92	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Solitary		Good	Good	Scale was developed by a multidisciplinary team of experts using previous research in a variety of fields.	
Problematic Mobile Phone Use Questionnaire Revised	PMPU-Q-R	93	Survey	Self-Report Clinician-Report	Cellphone/ Smartphone	Unknown/Unclear	Productive Consumptive	Facebook Twitter Reddit	Good	Good	Used focus groups to collect feedback on the measurement tool. Highlighted the need to consider sociocultural context in regard to problematic or antisocial smartphone use.	
Problematic Online Gaming Questionnaire	POGQ	65b	Survey	Self-Report	Laptop Desktop Gaming Consoles	Video Game	Non-Educational Consumptive		Good	Fair		
		94	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game	Online Offline Shared (In-Person) Non-Educational Consumptive		Good	Good	Can be used regardless of whether participants are online or offline video gamers. However, this study did not consider offline gaming behaviour.	
Problematic Social Networking Services Use Scale	PSUS	95	Survey Structured Interviews	Self-Report	Unknown/ Unclear	Social Networking	Online Non-Educational Consumptive		Good	Good		
Psycho-Social Aspects of Facebook Use	PSAFU	96	Survey	Self-Report	Unknown/ Unclear	Social Media	Sedentary Online Solitary Shared Non-	Facebook	Good	Fair		Predominantly female sample population

Name	Abbr.	No.	Method	Data Collection	Device	Activity	Context	Platforms	Validity	Reliability	Comments	Notes
							Educational Productive Consumptive					
Radio-Frequency Identification	RFID	97	Automated Statistics	Passive Data Collection	Television	TV/ Video Streaming	Sedentary Offline Consumptive	.	Poor	Unknown /Unclear	First tool to measure TV viewing time directly with a wireless connection. No risk of response bias.	
Risk of Addiction to Social Networks Scale	CrARS	98	Survey	Self-Report	Unknown/ Unclear	Social Media	Online		Good	Good		
Sedentary Behaviour Questionnaires		99	Survey Automated Statistics	Self-Report Passive Data Collection	Cellphone/ Smartphone Laptop Television	Video Game Communication (Texting/Video Chatting) TV/ Video Streaming	Sedentary Online Offline		Fair	Good		Not a formal questionnaire. Rather, a composition of multiple questionnaires.
Short Problematic Internet Use Test	SPIUT	18a	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Non-Educational Consumptive		Good	Good	Although the measure was primarily designed to be inserted in the ESPAD questionnaire, it may be used as a stand-alone measure since it has been properly validated. Fails to measure time spent accessing adult entertainment or gambling resources. No clinical diagnosis standards for compulsive internet use.	Italian Version
Short Social Media Disorder Scale		100b	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Social Media	Sedentary Online Solitary Shared	Facebook YouTube Facebook Messenger WhatsApp Instagram Twitter	Good	Good	9-item scale presents similar validity to the 27-item version.	
Smartphone Addiction Inventory	SPAI	101	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Non-Educational Consumptive		Good	Good	Formatted a dichotomic version of the SPAI with internal consistency and a sensitivity comparable to the original version.	Portuguese version

		102	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Online Offline Non-Educational Consumptive		Good	Good	Strong concurrent validity: all correlations between the SPAI-I factors and the IAT total scores were significant and congruent. Four factors: compulsivity, daily life interference, craving, and sleep disorders.	Predominantly female sample population. Sample population was exclusively university undergraduate students.
		103	Survey	Self-Report	Cellphone/ Smartphone	General Mobile Phone Use	Non-Educational Consumptive		Good	Good	Adequately translated and adapted for use in Spain. Does not collect information on the type of mobile device used.	
		104	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear			Good	Good	Validated in a mainland Chinese sample.	Spanish Version
Smartphone Addiction Scale	SAS	105	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Online Offline Solitary Shared Productive Consumptive		Good	Good	Brief measure. Easy and accessible administration. Easily scored. The scale does not accurately capture the diagnostic criteria for Smartphone Addiction.	Turkish Version
		106a	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Sedentary		Good	Fair	Determined that the Arabic versions of the SAS and SAS-SV has strong psychometric properties. Some properties of the scale could not be assessed due to lack of comparable instruments and no clinical diagnosis for smartphone addiction.	Arabic Version Predominantly female sample population.
Smartphone Addiction Scale - Short Version	SAS-SV	72a	Survey	Self-Report	Cellphone/ Smartphone	Video Game Social Media Communication (Texting/Video Chatting) TV/ Video	Online Offline	Facebook	Good	Good		Predominantly female sample population

						Streaming Internet Browsing						
		107	Survey	Self-Report	Cellphone/ Smartphone	General Mobile Phone Use	Sedentary Non-Educational Consumptive		Good	Fair		Chinese Version
		106b	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Sedentary		Good	Good		Arabic Version
		108	Survey	Self-Report	Cellphone/ Smartphone	Unknown/Unclear	Online Offline	Facebook Twitter	Good	Unknown /Unclear	Scales had limited validity.	Sample population was exclusively college students.
		109	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Social Media	Online Non-Educational Consumptive		Good	Good	Successfully adapted the Turkish version of the SMDS to measure internet and social media addiction in adolescents.	Turkish Version
Social Media Disorder Scale	SMD	100a	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Social Media	Sedentary Online Solitary Shared	Facebook YouTube Facebook Messenger WhatsApp Instagram Twitter	Good	Good		
Social Networking Activity Intensity Scale	SNAIS	110	Survey	Self-Report	Multi-Screen Composition (Unspecified)	Social Media	Online		Good	Good	Two constructs emerged: (1) Social function, and (2) Entertainment	
Structured Clinical Interview for Internet Gaming Disorder	SCI-IGD	111	Survey Structured Interviews	Self-Report	Unknown/ Unclear	Video Game	Online Non-Educational Consumptive		Fair	Good	Psychometrically sound interview tool to assess IGD with greater precision than the brief screening questionnaire.	
		112	Survey	Self-Report	Laptop	Unknown/Unclear	Educational		Unknown/ Unclear	Unknown /Unclear	Many areas of measurement for laptop use including school, employment and recreation.	
Student Laptop Use and Musculoskeletal Posture	SLUMP	113	Survey	Self-Report	Laptop	Unknown/Unclear	Educational		Fair	Unknown /Unclear	First web-based instrument to evaluate biomechanical issues during laptop use. Wording of questions may have lacked clarity. Questions may not have been interpreted consistently.	More relevant to the measurement of biomechanical issues related to device usage. However,

											some items are applicable to digital media usage.
Study of Cognition, Adolescents and Mobile Phones	SCAMP	114	Survey	Self-Report	Cellphone/ Smartphone Laptop Gaming Consoles	Unknown/Unclear	Online Offline Non-Educational Unknown/Unclear		Unknown/ Unclear	Unknown /Unclear	First study to assess the validity of mobile phone data collected separately for weekdays and weekends. Results showed difference in agreement between these assessment periods.	
Technology-Related Psychological Consequences Questionnaire		115	Survey	Self-Report	Cellphone/ Smartphone Laptop	Communication (Texting/Video Chatting) Internet Browsing	Online Offline		Fair	Good	Revision of the instrument to measure aspects of technology-related psychological changes.	Revised Version
Third-Person Effect Questionnaire & Media Exposure List		73	Survey	Self-Report	Unknown/ Unclear	Unknown/Unclear			Unknown/ Unclear	Unknown /Unclear		
Unnamed		77b	Automated Statistics	Observation	Cellphone/ Smartphone	Social Media Communication (Texting/Video Chatting) TV/ Video Streaming Internet Browsing eBooks			Good	Good		Objective Measure of Smartphone Use
		39a	Survey	Self-Report	Unknown/ Unclear	Internet Browsing	Online		Fair	Fair	Used an ordinal scale for frequency of internet use. Author(s) propose the use of a quantitative measure. Differences in frequency of use based on day of the week was not assessed. Future research should measure frequency on weekdays and weekends due to adolescent routines during the school week.	Quantity-frequency measure of internet use
		116	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting) Social Media Internet Browsing	Online Offline Solitary Shared Educational	Facebook Messenger WhatsApp Snapchat ooVoo Omegle	Unknown/ Unclear	Poor		School-based survey of mobile usage

Supplemental material

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Measurement of Digital Media: A Scoping Review

Measure	Abbr.	ID	Type	Method	Device	Activity	Activity	Platform	Q1	Q2	Notes	Notes 2
								Chatroulette Skout 6rounds				
		117	Survey	Self-Report	Cellphone/ Smartphone Tablet	TV/ Video Streaming Online Apps and Games	Active Sedentary Productive Consumptive		Unknown/ Unclear	Unknown /Unclear	Collects general information. Would benefit from collecting more specific information such as types of activities, types of videos watched, etc.	
		118	Survey	Self-Report	Cellphone/ Smartphone Television	Video Game TV/ Video Streaming Internet Browsing			Good	Fair	Direct measure of violence exposure	
		119	Survey	Self-Report	Laptop Gaming Consoles	Video Game Communication (Texting/Video Chatting) Internet Browsing	Online Offline Educational Productive Consumptive		Fair	Poor		
		120	Survey	Self-Report	Unknown/ Unclear	Unknown/Unclear	Online Non-Educational Consumptive	Facebook	Good	Good		Screening scale of problematic Internet use.
		121	Survey	Self-Report	Unknown/ Unclear	Video Game TV/ Video Streaming General Computer Use	Sedentary Non-Educational		Fair	Fair	Indicators of screen time might not have captured all screen-based activities. Author(s) note that future researchers should ensure that the measure reflects screen-based devices used at that time due to the constantly changing technological environment.	Substudy of a comprehensive population survey titled "Brazilian Guide of Evaluation of Health-Related Physical Fitness and Life Habits"
		123a	Survey	Self-Report	Cellphone/ Smartphone	Communication (Texting/Video Chatting)		WhatsApp	Fair	Unknown /Unclear		
Videogame Addiction Scale for Children	VASC	122	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Video Game			Good	Good	Four-factor structure.	
XMobiSense		123b	Automated Statistics	Passive Data Collection	Cellphone/ Smartphone	Communication (Texting/Video Chatting)		WhatsApp	Unknown/ Unclear	Unknown /Unclear	Collects data on number and frequency of voice calls, in addition to laterality and hands-free usage.	

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Young Diagnostic Questionnaire	YDQ	124	Survey	Self-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online Consumptive	Fair	Good	Unidimensional measure that offers less information that other assessments.
		125	Survey	Mother-Report Father-Report	Multi-Screen Composite (Unspecified)	Internet Browsing	Online	Fair	Good	
Young's Internet Addiction Test - Short Form	YIAT-SF	56b	Survey	Self-Report	Unknown/ Unclear	Video Game	Online Offline Consumptive	Fair	Good	
Youth Leisure-Time Sedentary Behaviour Questionnaire	YLSBQ	126	Survey	Self-Report	Laptop Television Gaming Consoles Multi-Screen Composite (Unspecified)	Video Game TV/ Video Streaming Internet Browsing	Sedentary Online Offline Educational Productive Consumptive	Good	Fair	Moderate to good test-retest reliability. Moderate validity, similar or better than previous versions adapted to this population.