

Supplementary file S1

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Click here to enter text.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	Click here to enter text.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	Click here to enter text.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	Click here to enter text.
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	Click here to enter text.
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	Click here to enter text.
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	Click here to enter text.
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Click here to enter text.
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Click here to enter text.
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	Click here to enter text.
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Click here to enter text.

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	Click here to enter text.
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Click here to enter text.
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	Click here to enter text.
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Click here to enter text.
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	Click here to enter text.
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	Click here to enter text.
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Click here to enter text.
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	Click here to enter text.
Limitations	20	Discuss the limitations of the scoping review process.	Click here to enter text.
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	Click here to enter text.
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	Click here to enter text.

JB I = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JB I guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).



Supplementary file S2

Search History: CINAHL – 26 May 2023 -> 1,320

Friday, May 26, 2023 2:19:20 PM

#	Query	Limiters/Expanders	Last Run Via	Results
S13	S3 AND S6 AND S9 AND S12	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	1,320
S12	S10 OR S11	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	95,620
S11	AB (addiction or substance abuse or drug abuse) OR AB (alcoholism or alcohol dependence or alcohol abuse or alcoholic or alcohol addiction) OR AB alcohol use OR AB alcohol consumption OR AB (alcohol and other drugs) OR AB (substance use or substance abuse or drug use or drug abuse or dependence or addiction) OR AB drinking alcohol	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	85,911
S10	TI (addiction or substance abuse or drug abuse) OR TI (alcoholism or alcohol dependence or alcohol abuse or alcoholic or alcohol addiction) OR TI alcohol use OR TI alcohol consumption OR TI (alcohol and other drugs) OR TI (substance use or substance abuse or drug use or drug abuse or dependence or addiction) OR TI drinking alcohol	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	32,210
S9	S7 OR S8	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	766,028

S8	AB (interventions or strategies or best practices) OR AB (prevention or reduction or minimize) OR AB prevention programs OR AB (reduce or decrease or minimize or prevent)	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	732,419
S7	TI (interventions or strategies or best practices) OR TI (prevention or reduction or minimize) OR TI prevention programs OR TI (reduce or decrease or minimize or prevent)	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	137,082
S6	S4 OR S5	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	92,238
S5	AB app NOT AB amyloid precursor protein OR AB app based intervention OR AB app based digital OR AB virtual OR AB (web-based interventions' or 'e-health' or 'internet-based interventions) OR AB computer-based intervention OR AB digital technology OR AB (digital media or social media or the internet or online) OR AB (mobile phones or smart phones or cell phones) OR AB multimedia OR AB (text messages or text messaging service or text messaging or sms)	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	86,382
S4	TI app NOT TI amyloid precursor protein OR TI app based intervention OR TI app based digital OR TI virtual OR TI (web-based interventions' or 'e-health' or 'internet-based interventions) OR TI computer-based intervention OR TI digital technology OR TI (digital media or social media or the internet or online) OR TI (mobile phones or smart phones or cell phones) OR TI multimedia OR TI (text messages or text messaging service or text messaging or sms)	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	28,382

S3	S1 OR S2	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	493,266
S2	AB (adolescents or teenagers or young adults or teen or youth) OR AB (pupils or students) OR AB youngster OR AB young people OR AB (young men or young males or boys or male youth and male teenagers or male adolescents) OR AB (young women or young females or teenage girl or adolescent girls) OR AB (secondary school or high school or secondary education or junior high or middle school) OR AB young population	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	436,424
S1	TI (adolescents or teenagers or young adults or teen or youth) OR TI (pupils or students) OR TI youngster OR TI young people OR TI (young men or young males or boys or male youth and male teenagers or male adolescents) OR TI (young women or young females or teenage girl or adolescent girls) OR TI (secondary school or high school or secondary education or junior high or middle school) OR TI young population	Limiters - Peer Reviewed; Human Expanders - Apply related words; Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL	288,613

Supplementary file S3

Search history: PsychInfo - 27 May 2023 -> 2,009

Datenbank:

APA PsycInfo <1806 to May Week 4 2023>

#	Abfrage	Ergebnisse aus 27 Mai 2023
1	adolescen*.ab. or adolescen*.ti. or juvenil*.ab. or juvenil*.ti. or pupil*.ab. or pupil*.ti. or teen*.ab. or teen*.ti. or youth*.ab. or youth*.ti. or youngster*.ab. or youngster*.ti. or young people.ab. or young people.ti. or young individual*.ab. or young individual*.ti. or young adult*.ab. or young adult*.ti. or young population*.ab. or young population*.ti. or young man.ab. or young man.ti. or young men.ab. or young men.ti. or young woman.ab. or young woman.ti. or young women.ab. or young women.ti. or secondary school.ab. or ssecondary school.ti. or high school.ab. or high school.ti. or student.ab. or student.ti. or adolescent.mh. or adolescents.mh. or adolescence.mh. or teens.mh. or teen.mh. or teenagers.mh. or teenager.mh. or youths.mh. or youth.mh.	842,955
2	limit 1 to human	789,986
3	limit 2 to (peer reviewed journal and human)	607,949
4	(app.ab. or app.ti. or app-based.ab. or app-based.ti. or computer*.ab. or computer*.ti. or digital*.ab. or digital*.ti. or internet*.ab. or internet*.ti. or mobile phone*.ab. or mobile phone*.ti. or multimedia.ab. or multimedia.ti. or online*.ab. or online*.ti. or social media.ab. or social media.ti. or virtual*.ab. or virtual*.ti. or web.ab. or web.ti. or text message.ab. or text message.ti. or multi media.ab. or multi media.ti.) not amyloid precursor protein.ab. not amyloid precursor protein.ti.	340,566
5	limit 4 to (peer reviewed journal and human)	236,792
6	intervent*.ab. or intervent*.ti. or prevent*.ab. or prevent*.ti. or reduct*.ab. or reduct*.ti. or reduce*.ab. or reduce*.ti. or consumption reduction.ab. or consumption reduction.ti.	984,810
7	limit 6 to (peer reviewed journal and human)	669,938
8	addict*.ab. or addict*.ti. or alcohol*.ab. or alcohol*.ti. or AOD.ab. or AOD.ti. or SUD.ab. or SUD.ti. or alcohol abuse.mh. or alcohol drinking.mh. or substance abuse.mh. or SUD.mh.	192,818
9	limit 8 to (peer reviewed journal and human)	139,216
10	3 and 5 and 7 and 9	2,009

Supplementary file S4

Search history: PubMed - 26 May 2023 -> 4,040

Search number, Query, Sort By, Filters, Search Details, Results, Time

"5,((((#4) AND (#1)) AND (#2)) AND (#3)) AND (#4),,Humans,""(""addict*""[Title/Abstract] OR ""alcohol*""[Title/Abstract] OR ""AOD""[Title/Abstract] OR ""SUD""[Title/Abstract] OR ""substance use disorder""[Title/Abstract] OR ""alcoholism""[MeSH Terms] OR ""alcohol drinking""[MeSH Terms] OR ""substance related disorders""[MeSH Terms] OR ""substance related disorders""[MeSH Terms]) AND ""humans""[MeSH Terms] AND ((""adolescen*""[Title/Abstract] OR ""juvenil*""[Title/Abstract] OR ""pupil*""[Title/Abstract] OR ""teen*""[Title/Abstract] OR ""youth*""[Title/Abstract] OR ""youngster*""[Title/Abstract] OR ""young people""[Title/Abstract] OR ""young individual*""[Title/Abstract] OR ""young adult*""[Title/Abstract] OR ""young population""[Title/Abstract] OR ""young man""[Title/Abstract] OR ""young men""[Title/Abstract] OR ""young woman""[Title/Abstract] OR ""young women""[Title/Abstract] OR ""secondary school""[Title/Abstract] OR ""high school""[Title/Abstract] OR ""student*""[Title/Abstract] OR ""adolescent""[MeSH Terms] OR ""adolescent""[MeSH Terms] OR ""adolescent""[MeSH Terms] OR ""adolescent""[MeSH Terms] OR ""adolescent""[MeSH Terms] OR ""adolescent""[MeSH Terms]) AND ""humans""[MeSH Terms]) AND ((""app""[Title/Abstract] NOT ""amyloid precursor protein""[Title/Abstract]) OR ""computer""[Title/Abstract] OR ""digital*""[Title/Abstract] OR ""internet*""[Title/Abstract] OR ""mobile phone*""[Title/Abstract] OR ""multimedia""[Title/Abstract] OR ""multi media""[Title/Abstract] OR ""online*""[Title/Abstract] OR ""social media""[Title/Abstract] OR ""virtual*""[Title/Abstract] OR ""web""[Title/Abstract] OR ""text message""[Title/Abstract]) AND ""humans""[MeSH Terms]) AND ((""intervent*""[Title/Abstract] OR ""prevent*""[Title/Abstract] OR ""reduct*""[Title/Abstract] OR ""reduce*""[Title/Abstract] OR ""consumption reduction""[Title/Abstract]) AND ""humans""[MeSH Terms]) AND ((""addict*""[Title/Abstract] OR ""alcohol*""[Title/Abstract] OR ""AOD""[Title/Abstract] OR ""SUD""[Title/Abstract] OR ""substance use disorder""[Title/Abstract] OR ""alcoholism""[MeSH Terms] OR ""alcohol drinking""[MeSH Terms] OR ""substance related disorders""[MeSH Terms] OR ""substance related disorders""[MeSH Terms] OR ""substance related disorders""[MeSH Terms]) AND ""humans""[MeSH Terms])) AND (humans[Filter])""",4,040",07:32:33"

"4,""((((((((addict*[Title/Abstract]) OR (alcohol*[Title/Abstract])) OR (AOD[Title/Abstract])) OR (SUD[Title/Abstract])) OR (substance use disorder[Title/Abstract])) OR (alcohol abuse[MeSH Terms])) OR (alcohol drinking[MeSH Terms]))) OR (addiction, substance[MeSH Terms])) OR (substance use disorder[MeSH Terms])) OR (substance use disorders[MeSH Terms])""",Humans,""(""addict*""[Title/Abstract] OR ""alcohol*""[Title/Abstract] OR ""AOD""[Title/Abstract] OR ""SUD""[Title/Abstract] OR ""substance use disorder""[Title/Abstract] OR ""alcoholism""[MeSH Terms] OR ""alcohol drinking""[MeSH Terms])"

Terms] OR """"substance related disorders""""[MeSH Terms] OR """"substance related disorders""""[MeSH Terms] OR """"substance related disorders""""[MeSH Terms]) AND (humans[Filter])""", ""470,705""",07:31:14"

"3,((((intervent*[Title/Abstract]) OR (prevent*[Title/Abstract])) OR (reduct*[Title/Abstract])) OR (reduce*[Title/Abstract])) OR (consumption reduction[Title/Abstract]),,Humans, ""("""intervent*""""[Title/Abstract] OR """"prevent*""""[Title/Abstract] OR """"reduct*""""[Title/Abstract] OR """"reduce*""""[Title/Abstract] OR """"consumption reduction""""[Title/Abstract]) AND (humans[Filter])""", ""3,634,072""",07:28:27"

"2,((((((((((app[Title/Abstract]) NOT (amyloid precursor protein[Title/Abstract])) OR (computer[Title/Abstract])) OR (digital*[Title/Abstract])) OR (internet*[Title/Abstract])) OR (mobile phone*[Title/Abstract])) OR (multimedia[Title/Abstract])) OR (multi media[Title/Abstract])) OR (online*[Title/Abstract])) OR (social media[Title/Abstract])) OR (virtual*[Title/Abstract])) OR (web[Title/Abstract])) OR (text message[Title/Abstract]),,Humans, ""("""app""""[Title/Abstract] NOT """"amyloid precursor protein""""[Title/Abstract] OR """"computer""""[Title/Abstract] OR """"digital*""""[Title/Abstract] OR """"internet*""""[Title/Abstract] OR """"mobile phone*""""[Title/Abstract] OR """"multimedia""""[Title/Abstract] OR """"multi media""""[Title/Abstract] OR """"online*""""[Title/Abstract] OR """"social media""""[Title/Abstract] OR """"virtual*""""[Title/Abstract] OR """"web""""[Title/Abstract] OR """"text message""""[Title/Abstract]) AND (humans[Filter])""", ""637,848""",07:27:38"

"1,((((((((((((((((adolescen*[Title/Abstract]) OR (juvenil*[Title/Abstract])) OR (pupil*[Title/Abstract])) OR (teen*[Title/Abstract])) OR (youth*[Title/Abstract])) OR (youngster*[Title/Abstract])) OR (young people[Title/Abstract])) OR (young individual*[Title/Abstract])) OR (young adult*[Title/Abstract])) OR (young population[Title/Abstract])) OR (young man[Title/Abstract])) OR (young men[Title/Abstract])) OR (young woman[Title/Abstract])) OR (young women[Title/Abstract])) OR (secondary school[Title/Abstract])) OR (high school[Title/Abstract])) OR (student*[Title/Abstract])) OR (adolescence[MeSH Terms])) OR (adolescent[MeSH Terms])) OR (adolescents[MeSH Terms])) OR (teen[MeSH Terms])) OR (teens[MeSH Terms])) OR (teenager[MeSH Terms])) OR (teenagers[MeSH Terms])) OR (youth[MeSH Terms])) OR (youths[MeSH Terms]),,Humans, ""("""adolescen*""""[Title/Abstract] OR """"juvenil*""""[Title/Abstract] OR """"pupil*""""[Title/Abstract] OR """"teen*""""[Title/Abstract] OR """"youth*""""[Title/Abstract] OR """"youngster*""""[Title/Abstract] OR """"young people""""[Title/Abstract] OR """"young individual*""""[Title/Abstract] OR """"young adult*""""[Title/Abstract] OR """"young population""""[Title/Abstract] OR """"young man""""[Title/Abstract] OR """"young men""""[Title/Abstract] OR """"young woman""""[Title/Abstract] OR """"young women""""[Title/Abstract] OR """"secondary school""""[Title/Abstract] OR """"high school""""[Title/Abstract] OR """"student*""""[Title/Abstract] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms] OR """"adolescent""""[MeSH Terms]) AND (humans[Filter])""", ""2,578,933""",06:15:33"

Supplementary file S5

Search history: Web of Science – 27 May 2023 -> 113

Database: Web of Science Core Collection

Entitlements:

- WOS.IC: 1993 to 2023
- WOS.CCR: 1985 to 2023
- WOS.SCI: 1900 to 2023
- WOS.AHCI: 1975 to 2023
- WOS.BHCI: 2005 to 2023
- WOS.BSCI: 2005 to 2023
- WOS.ESCI: 2005 to 2023
- WOS.ISTP: 1990 to 2023
- WOS.SSCI: 1900 to 2023
- WOS.ISSHP: 1990 to 2023

Searches:

1: (((((((((((((((((((((((((((((((((AB=(adolescents)) OR AB=(juvenile)) OR AB=(pupil)) OR AB=(teen)) OR AB=(youths)) OR AB=(youngster)) OR AB=(young people)) OR AB=(young individual)) OR AB=(young adult)) OR AB=(young population)) OR AB=(young man)) OR AB=(young men)) OR AB=(young woman)) OR AB=(young women)) OR AB=("secondary school")) OR AB=("high school")) OR AB=(student)) OR TI=(adolescents)) OR TI=(juvenile)) OR TI=(pupil)) OR TI=(teen)) OR TI=(youths)) OR TI=(youngster)) OR TI=(young people)) OR TI=(young individual)) OR TI=(young adult)) OR TI=(young population)) OR TI=(young man)) OR TI=(young men)) OR TI=(young woman)) AND TI=(young women)) OR TI=("secondary school")) OR TI=("high school")

Date Run: Sat May 27 2023 13:50:13 GMT+0200 (Mitteleuropäische Sommerzeit) Results: 67558

2: (((((((((((((((((((((((((((((((((AB=(app)) OR AB=(computer)) OR AB=(digital)) OR AB=(internet)) OR AB=(mobile phone)) OR AB=(multimedia)) OR AB=("multi media")) OR AB=(online)) OR AB=("social media")) OR AB=(virtual)) OR AB=(web)) OR AB=("text message")) NOT AB=("amyloid precursor protein")) OR TI=(app)) OR TI=(computer)) OR TI=(digital)) OR TI=(internet)) OR TI=(mobile phone)) OR TI=(multimedia)) OR TI=("multi media")) OR TI=(online)) OR TI=("social media")) OR TI=(virtual)) OR TI=(web)) OR TI=("text message")) NOT TI=("amyloid precursor protein")

Date Run: Sat May 27 2023 13:59:31 GMT+0200 (Mitteleuropäische Sommerzeit)
Results: 3188550

3: (((((((((AB=(intervention)) OR AB=(prevention)) OR AB=(reduction)) OR AB=(reduce)) OR AB=("consumption reduction")) OR TI=(intervention)) OR TI=(prevention)) OR TI=(reduction)) OR TI=(reduce)) OR TI=("consumption reduction")

Date Run: Sat May 27 2023 14:02:08 GMT+0200 (Mitteleuropäische Sommerzeit) Results: 8733561

4: (((((((((AB=(addiction)) OR AB=(alcohol)) OR AB=(AOD)) OR AB=(SUD)) OR AB=("substance use disorder")) OR TI=(addiction)) OR TI=(alcohol)) OR TI=(AOD)) OR TI=(SUD)) OR TI=("substance use disorder")

Date Run: Sat May 27 2023 14:12:54 GMT+0200 (Mitteleuropäische Sommerzeit) Results: 589888

5: #4 AND #3 AND #2 AND #1
GMT+0200 (Mittleeuropäische Sommerzeit)

Date Run: Sat May 27 2023 14:13:21
Results: 113

Supplementary file S6_Characteristics of included studies

				Sample size*		Follow-up
Intervention		Publication	Country	Baseline	Latest follow-up	Latest (months)
A Adolescents						
1	Alc-Check	Haug et al., 2013	UK	364	280	3
2	Alcohol Alert / Alerta Alcohol	Jander et al., 2016	NL	2649	824	4
		Martinez-Montilla et al., 2020	US	1247	612	4
		Vargas-Martinez et al., 2019	US	1247	612	4
3	Click City®: Alcohol	Gordon et al., 2017	US	2855	2609	0.25
4	Climate Schools	Newton et al., 2022a	US	2190	1038	84
		Vogl et al., 2009	US	1466	1016	12
5	eCHUG (electronic version of Check-up to go)	Doumas et al., 2019	US	125	105	6
		Doumas et al., 2020a	US	311	283	1
		Doumas et al., 2020b	US	135	123	1
		Doumas et al., 2021	US	311	247	6
6	HSD (Healthy School and Drugs)	Koning et al., 2011	US	3490	2937	34
7	kiR (keepin’ it REAL)	Shin et al., 2018	US	1464	n.r.	1
8	MobileCoach Alcohol	Haug et al., 2017b	US	1041	966	6
		Haug et al., 2020	US	633	136	0
		Haug et al., 2023	US	954	274	0
9	PALMSS (peer alcohol knowledge, low-risk drinking, media-influence, social drinking, self-efficacy)	Hongthong et al., 2016	UK	150	150	6
10	Smart Choices 4 Teens	Byrnes et al., 2019	US	411 dyades	315 teens, 364 parents	12
11	SPORT	Mathews et al., 2007	US	217	217	0
12	VR FestLab (virtual reality FestLab)	Guldager et al., 2022	US	378	214	1.5
13	WDYD (What do you drink?)	Voogt et al., 2013	US	609	329	6
14	No name	Ho et al., 2021	US	7792	6700	3
15	No name	Knight et al., 2018	US	2096 (US) & 588 (CZ)	1545 (US) & 532 (CZ)	12
16	No name	Russell et al., 2017	US	762	762	0
17	No name	Schinke et al., 2009b	US	202 pairs	199 pairs	2
18	C2Q-Teen (Craving to Quit-Teen)	Pbert et al., 2020	US	146	146 (ggf imputations)	6
19	QuitSTART smoking app	Pbert et al., 2020	US	146	146 (ggf imputations)	6
20	No name	Kong et al., 2017	US	15	12	1
21	No name	Mason et al., 2015	US	72	22	6
22	No name	Shi et al., 2013	UK	179	122	0

23	Invite Only VR (virtual reality)	Weser et al., 2021	US	287	201	6
24	smokeSCREEN	Bteddini et al., 2023	US	82 (quant)	60 (quant)	4.25
25	xkpts.com ((reader: “perquèpetes.com”, translation: “why joints?”))	Ariza et al., 2013	US	4848	3191	15
26	P4T (POP4Teens) vs JTT (JustThinkTwice)	Marsch et al., 2021	AU	405	283	6
27	Elm City Story (PlayForward)	Montanaro et al., 2015	NZ	166 in intervention group	144	6
28	REAL media	Greene et al., 2020	US	639	n.r. (639 intent-to- treat)	3
29	<i>No name</i>	Fang & Schinke, 2013	US	108	93 pairs	24
30	E-MOVO (Dutch for Electronic Monitoring and Health Promotion)	Crutzen et al., 2008	US	35104	33644	2
31	Health4Life	Champion et al., 2023	NL	6640	5015	24
32	Climate Schools	Champion et al., 2016	FR	1103	880	0
		Newton et al., 2022b	US	6386	5343	12
33	<i>No name</i>	Gryczynski et al., 2021	US	350	277	6
34	<i>No name</i>	Knight et al., 2019	US	869	710	12
35	Healthy School and Drugs	Malmberg et al., 2014	US	3542	2340	32
36	¿Qu é pasa si te pasas? (What happens if you go to far?)	Fuentes et al., 2023	CH	359	356	0
37	ready4life	Haug et al., 2022	US	1351	962	6
38	SmartCoach	Paz Castro et al., 2022	US	1473	1232	18
39	RealTeen	Schwinn et al., 2019	US	788	727	36
		Schwinn et al., 2010	US	236	215	6
40	Vamos	Schwinn et al., 2021	US	644	572	36
41	<i>No name (family interaction)</i>	Schinke et al., 2009a	US	916 pairs	828 pairs	24
		Schinke et al., 2011	US	546 pairs	546 pairs	0
42	<i>No name</i>	Schwinn et al., 2015	IN	236	200	3
43	E-health4Uth	Bannink et al., 2014	UK	1702	1256	4
44	Your Decision Counts TM	Evers et al., 2012	US	1590	n.r. (last observation carried forward)	14
45	WISEteens	Arnaud et al., 2016	US	1449	211	3
46	Girls and Stress	Schinke et al., 2005	US	91	91	0.5
47	<i>No name</i>	Williams et al., 2005	US	193	123	0
48	Pure Rush	Stapinski et al., 2018	US	281	281	0
49	Climate Schools Psychostimulant & Cannabis Modlue	Vogl et al., 2014	DE	1734	973	10
50	Refuse to Use	Duncan et al., 2020	US	65	65	0
51	Climate Schools: Ecstasy and Emerging Drugs Module	Champion et al., 2018	AU	1126	692	24

B Emerging adults

1	Alcohol 101 Plus™	Carey et al., 2011 (study 2)	NL	677	460	12
2	Alcohol 101	Barnett et al., 2007	ES	225	212	12
		Braitman et al., 2016	ES	353	115	1
		Carey et al., 2009	US	198	198	12
3	Alcohol Edu® for Sanctions	Carey et al., 2011 (study 1)	AU	677	460	12
4	Alcohol Edu® for College	Croom et al., 2009	AU	3216	1917	1.5
		Hustad et al., 2010 (A)	US	82	80	1

		Paschall et al., 2014	US	2400	n.r.	5
5	Alcohol-Wise	Croom et al., 2015 (study 1)	US	3022	2007	1.6
		Croom et al., 2015 (study 2)	US	2723	2027	1.6
		Gilbertson et al., 2017	NL	126	64	6
		Strohman et al., 2016	US	58	58	1
6	alcooquizz.ch (1)	Bertholet et al., 2015	CH	737	737	6
		Bertholet et al., 2016	CH	737	734	6
		Bertholet et al., 2018	CH	737	626	47
7	BASICS (Brief Alcohol Screening and Intervention for College Students)	Lee et al., 2014	TH	783	729	0.25
		Linowski et al., 2016	US	791	346	12
		Murphy et al., 2010, (study 1)	US	74	69	1
		Murphy et al., 2010 (study 2)	DK	133	118	1
		Patrick et al., 2014	NL	271	263	0
		Patrick et al., 2021	CN	891	735	0
		Saitz et al., 2007	US & CZ	2194	1398	1
8	BASICS (Brief Alcohol Screening and Intervention for College Students) - PNF component	LaBrie et al., 2013	US	1663	1646	12
		Larimer et al., 2021	US	1181 (USA), 2230 (Sweden)	835 (USA) & 1192 (Sweden)	12
		Moreira et al., 2012	US	2611	1050	12
		Neighbors et al., 2004	US	252	207	6
		Neighbors et al., 2006	US	214	185	2
		Neighbors et al., 2010	US	818	665	24
9	Campus GANDR (Gamified Alcohol Norm Discovery & Readjustment)	Boyle et al., 2017	CH	273	250 / 252	0.5
10	CDCU (College Drinker's Check-up)	Carey et al., 2017	US	326	251	6
		Hester et al., 2012 (study 1)	US	144	130	12
		Hester et al., 2012 (study 2)	ES	82	81	1
11	CIAN (Call it a Night®)	Fucito et al., 2017	US	42	38	3
12	College Alc	Bersamin et al., 2007	US	622	370	3
13	D_ARIANNA ((Digital-Alcohol Risk Alertness Notifying Network for Adolescents and Young Adults))	Carrà et al., 2016	US	590	507	0.5
14	DrAFT-CS (Drinking Assessment and Feedback Tool for College Students)	Wagener et al., 2012	US	152	142	2.5
		Weaver et al., 2014	NL	176	157	1
15	ECALC (expectancy challenge alcohol literacy curriculum)	Dunn et al., 2020 (B) 2019?	AU	134	110	1
16	eCHUG (electronic version of Check-up to go)	Alfonso et al., 2012	AU	173	173	3
		Braitman et al., 2022	AU	545	528	3
		Doumas et al., 2009	US	76	67	8
		Hustad et al., 2010 (B)	US	82	80	1
		Thompson et al., 2018	NL	245	143	5
		Tahaney & Palfay, 2017	MX	113	111	1
		Walters et al., 2007	CH	106	n.r. (106 imputed)	4
17	eentjeteveel	Fraeyman et al., 2012	CH	34	34	0
18	eSBI (electronic screening and brief intervention)	Kypri et al., 2013	US	1789	1415	5
		Kypri et al., 2014	CA	3422	2850 (5 outcomes); 2761 (6 outcomes)	5
		Kypri et al., 2008	US & PR	576	360	12

19	ETUCARE	Theurel et al., 2022	US	103	58	1
20	FIT (functional imagery training)	Shuai et al., 2022	US	76	52	0.5
21	M-PASS (Michigan Prevention and Alcohol Safety for Students)	Bingham et al., 2011	US	1137	742	3
22	MyStudentBody:Alcohol	Chiauzzi et al., 2005	NL	265	215	3
23	myPlaybook	Fearnow-Kenney et al., 2016	US	1356	1356	0
		Zamboanga et al., 2019	SE, DE, BE, CZ	2449	2449	4
24	PantherTRAC	Suffoletto et al., 2016	US	224	224	0
25	PartyWise	Schwarz et al., 2022	US	520	449	9
26	Ray's Night Out	Hides et al., 2018	AU	197	183	6
		Pocuca et al., 2016	AU	9	9	0
27	THRIVE (Tertiary Health Research Intervention via Email)	Kypri et al., 2009	US	2050	1578	6
		Leeman et al., 2016	AU	208	164	6
60	Unitcheck	Bewick et al., 2013		1478	644	8.5
		Marley et al., 2016		21	21	0
29	WDYD (What do you drink?)	Voogt et al., 2014a	US	820	658	6
30	Y1-CAP (Year 1 College Alcohol Profile)	Shell et al., 2019	US	3364 (1st) & 3111 (2nd)	3364 (1st) & 3111 (2nd)	24
31	No name	Bernstein et al., 2018	US	200	195	0
32	No name	Bonar et al., 2022	US	955	908	12
33	No name	Braitman et al., 2020	US	537	140	9
34	No name	Boyle et al., 2021	US	230	223	1
35	No name	Bryant et al., 2013	US	191	191	1.5
36	No name	Buckner et al., 2019	US	147	122	1
37	No name	Butler et al., 2009	US	84	84	1
38	No name	Carey et al., 2020	US	121	121	6
39	No name	Collins et al., 2014	US	724	537	12
40	No name	Doumas et al., 2011	US	135	83	1
41	No name	Ellis et al., 2017	CH	103	103	0
42	No name	Gex et al., 2023	CH	66	55	3
43	No name	Glowacki et al., 2020	CH	279	279	0
44	No name	Hagger et al., 2012	US	709	238	1
45	No name	Hendershot et al., 2010	US	200	179	1
46	No name	Kazemi et al., 2020 (study 1)	US	141	102	1.5
47	No name	Kazemi et al., 2020 (study 2)	US	238	171	1.5
48	No name	LaBrie et al., 2019	US	235	227	0.75
49	No name	Larimer et al., 2023	US	1137	1011	12
50	No name	Leary et al., 2022	US	147	124	1.25
51	No name	Leavens et al., 2020	US	268	156	1
52	No name	Lewis et al., 2007	US & SE	245	209	5
53	No name	Ma, 2022	UK	107	107	0
54	No name	Mason et al., 2014	US	18	18	1
55	No name	McGeary et al., 2014	US	41	41	0
56	No name	Neighbors et al., 2009	US	295	282	0.25
57	No name	Norman et al., 2018	US	2951	892	6
58	No name	Palfai et al., 2011	US	119	119	1
59	No name	Palfai et al., 2014a	US	1336	705	5

60	No name	Pilling et al., 2007	US	227	227	0
61	No name	Ridout & Cambell, 2014	US	95	95	3
62	No name	Riordan et al., 2023	US	783	704	8
63	No name	Savage et al., 2015	IT	231	75% at 22 week follow-up	5
64	No name	Schuckit et al., 2016	US	430	290	12
65	No name	Smallman et al., 2023	US	107	73	1
66	No name	Spijkerman et al., 2010	US	575	278	3
67	No name	Tello et al., 2018	US	126	122	0
68	No name	Thombs et al., 2007	US	Ca. 384	Ca. 384	?
69	No name	Walters et al., 2009	US	279	241	6
70	No name	Whitt et al., 2019	US	183	183	0
71	No name	Yang & Nan, 2019	CA	519	519	0
72	Mobile Coach Tobacco & Mobile Coach Tobacco +	Haug et al., 2017a	US	1471	1116	6
73	BASICS (Brief Alcohol Screening and Intervention for College Students - adaption for marijuana)	Lee et al., 2010	US	341	322	6
74	CAAT (Cannabis Approach Avoidance Training)	Karoly et al., 2019	BEL	41	37	0
75	eCHUG (electronic version of Check-up to go)marijuana	Elliott et al., 2014	NZ	317	317	1
		Palfai et al., 2014b	NZ	123	103	6
76	No name	Buckner et al., 2020	AU & NZ	63	63	0.5
77	No name	Walukevich-Dienst et al., 2019	FR	204	177	1
78	iHeLP	Braciszewski et al., 2018	AU	33	25	12
79	d-SBI (Digital screening and brief intervention for alcohol misuse)	Sharma et al., 2023	US	37	24	3
80	U@Uni:LifeGuide	Cameron et al., 2015	US	2621	1495	6
81	CAAT (Cannabis Approach Avoidance Training)	Jacobus et al., 2018	US	80	80	0
82	MiSARA (substance abuse research assistant)	Coughlin et al., 2021	US	39	39	1
83	myPlaybook	Rulison et al., 2022 (study 1)	US	3859	2193	1
		Rulison et al., 2022 (study 2)	US	2837	2145	1
		Rulison et al., 2022 (study 3)	AU	2193	2193	0
84	Meine Zeit ohne - Die Challenge	Pietsch et al., 2023	AU	4591	2861	0
85	Project Fitness	Moore et al., 2012	AU	200	200	0

* n.r. = not reported

Supplementary file S7_ Substances, settings & inclusion criteria

Project / intervention		Publication	Target sub-stance*	Inclusion criteria		Setting	Mean age***
				Consumption patterns**	Other criteria		
A Adolescents							
1	Alc-Check	Haug et al., 2013	ALC	all		Vocational school	17.3
2	Alcohol Alert / Alerta Alcohol	Jander et al., 2016	ALC	all		School	16.3
		Martinez-Montilla et al., 2020	ALC	all		School	16.32
		Vargas-Martinez et al., 2019	ALC	all		School	16.8
3	Click City®: Alcohol	Gordon et al., 2017	ALC	all		School	n.r.
4	Climate Schools	Newton et al., 2022a	ALC	all		School	13.3
		Vogl et al., 2009	ALC	all		School	13
5	eCHUG (electronic version of Check-up to go)	Doumas et al., 2019	ALC	all		School	17.14
		Doumas et al., 2020a	ALC	all		School	17.15
		Doumas et al., 2020b	ALC	con		School	17.15
		Doumas et al., 2021	ALC	all		School	17.13
6	HSD (Healthy School and Drugs)	Koning et al., 2011	ALC	all	No manifest heavy weekly drinking at baseline	School	12.6
7	kiR (keepin' it REAL)	Shin et al., 2018	ALC	all		School	13.76
8	MobileCoach Alcohol	Haug et al., 2017b	ALC	all		School	16.1
		Haug et al., 2020	ALC	hcon		School	16.8
		Haug et al., 2023	ALC	all		School	16.1
9	PALMSS (peer alcohol knowledge, low-risk drinking, media-influence, social drinking, self-efficacy)	Hongthong et al., 2016	ALC	con	Low-risk consumers (AUDIT 1-7)	School	16.57

10	Smart Choices 4 Teens	Byrnes et al., 2019	ALC	all		Family	16.4
11	SPORT	Mathews et al., 2007	ALC	all		School	n.r.
12	VR FestLab (virtual reality FestLab)	Guldager et al., 2022	ALC	all		School	15.7
13	WDYD (What do you drink?)	Voogt et al., 2013	ALC	hcon	Low educational background	School	17.3
14	No name	Ho et al., 2021	ALC	all		School	13.3
15	No name	Knight et al., 2018	ALC	all	Patients presenting for routine care	Primary care	USA: 15.8; CZ: 15.0
16	No name	Russell et al., 2017	ALC	all		General Population	n.r. (14-17)
17	No name	Schinke et al., 2009b	ALC	all	Girl and mother-dyades	Family	12.2
18	C2Q-Teen (Craving to Quit-Teen)	Pbert et al., 2020	TOB	con	Interest in quitting	School	16.9
19	QuitSTART smoking app	Pbert et al., 2020	TOB	con	Interest in quitting	School	16.9
20	No name	Kong et al., 2017	TOB	con		General population (recruitment via high schools)	16.47
21	No name	Mason et al., 2015	TOB	con		General population	16.4
22	No name	Shi et al., 2013	TOB	con		School	17.6
23	Invite Only VR (virtual reality)	Weser et al., 2021	eTOB	all		School	12.45
24	smokeSCREEN	Bteddini et al., 2023	eTOB	all		General population	13.86
25	xkpts.com (reader: "perquēpetes.com", translation: "why joints?")	Ariza et al., 2013	CAN	all		School	14.44
26	P4T (POP4Teens) vs JTT (JustThinkTwice)	Marsch et al., 2021	Prescription opioids	all		General population	15.8
27	Elm City Story (PlayForward)	Montanaro et al., 2015	DU	all		General population	12.95

28	REAL media	Greene et al., 2020	DU	all		Community organisations	14.71
29	<i>No name</i>	Fang & Schinke, 2013	DU	all	Asian-american adolescent girls & mothers	Family	13.1
30	E-MOVO (Dutch for Electronic Monitoring and Health Promotion)	Crutzen et al., 2008	ALC, TOB	all		School	n.r.
31	Health4Life	Champion et al., 2023	ALC, TOB	all		School	n.r.
32	Climate Schools	Champion et al., 2016	ALC, CAN	all		School	13.25
		Newton et al., 2022b	ALC, CAN	all		School	13.5
33	<i>No name</i>	Gryczynski et al., 2021	ALC, CAN	hcon	No other drugs consumed; school-based health care patients	School	16.3
34	<i>No name</i>	Knight et al., 2019	ALC, CAN	con	Patients who presented for annual preventive health visits; not medically or emotionally instable at baseline;	Primary care	16.4
35	Healthy School and Drugs	Malmberg et al., 2014	ALC, TOB, CAN	con		School	13.01
36	¿Qu é pasa si te pasas? (What happens if you go to far?)	Fuentes et al., 2023	ALC, TOB, CAN	con		School	15
37	ready4life	Haug et al., 2022	ALC, TOB, CAN	con	Apprentices	Vocational school	17.3
38	SmartCoach	Paz Castro et al., 2022	ALC, TOB, CAN	con		School	15.4
39	RealTeen	Schwinn et al., 2019	ALC, TOB, eTOB, CAN, MET, ECT, cocaine, inhalants, poly DU	con	Girls only	General population	15.91
		Schwinn et al., 2010	ALC, TOB, CAN, MET, ECT, cocaine, inhalants, poly DU	con	Girls only	General Population	14
40	Vamos	Schwinn et al., 2021	ALC, TOB, CAN, poly DU	con	Hispanic youths only	General population	14.1
41	<i>No name (family interaction)</i>	Schinke et al., 2009a	ALC, TOB, CAN, PD	con	Girl and mother-dyades	Family	12.76

42	No name	Schinke et al., 2011	ALC, TOB, CAN, PD	con	Black & hispanic girl and mother-dyades	Family	12.75
		Schwinn et al., 2015	ALC, TOB, CAN, DU	con	Identification as lgbtq	General population	16.08
43	E-health4Uth	Bannink et al., 2014	ALC, TOB, CAN, DU	con		School	15.9
44	Your Decision Counts TM	Evers et al., 2012	ALC, TOB, CAN, polyDU	con		School	n.r.
45	WISEteens	Arnaud et al., 2016	ALC, polyDU	hcon		General population	16.8
46	Girls and Stress	Schinke et al., 2005	ALC, TOB, CAN, crack, heroine, DU	all	Girls only	School	n.r.
47	No name	Williams et al., 2005	ALC, TOB, CAN, inhalants	all		School	n.r.
48	Pure Rush	Stapinski et al., 2018	CAN, MET, hallucinogenes	all		School	14.3
49	Climate Schools Psychostimulant & Cannabis Module	Vogl et al., 2014	CAN, psychostimulants	all		School	15.44
50	Refuse to Use	Duncan et al., 2020	CAN, DU	all	Multi-cultural population (non-Hispanic Caucasian, African-American, Hispanic)	School	15.2
51	Climate Schools: Ecstasy and Emerging Drugs Module	Champion et al., 2018	Ecstasy & emerging drugs	all		School	14.9
B Emerging adults							
1	Alcohol 101 Plus™	Carey et al., 2011	ALC	con		University	19
2	Alcohol 101	Barnett et al., 2007	ALC	con		University	18.8
		Braitman et al., 2016	ALC	all		University	n.r.
3	Alcohol Edu® for Sanctions	Carey et al., 2009	ALC	con		University	19.17
		Carey et al., 2011	ALC	con		University	19
4	Alcohol Edu® for College	Croom et al., 2009	ALC	all		University	n.r. (freshmen)
		Hustad et al., 2010 (A)	ALC	all		University	18.1
		Paschall et al., 2014	ALC	all		University	18.7

5	Alcohol-Wise	Croom et al., 2015 (study 1)	ALC	all		University	n.r.
		Croom et al., 2015 (study 2)	ALC	all		University	n.r.
		Gilbertson et al., 2017	ALC	all		University	n.r.
		Strohman et al., 2016	ALC	all		University	20
		Bertholet et al., 2015	ALC	hcon	Participants from C-SURF project	General population	20.75
6	alcooquizz.ch (1)	Bertholet et al., 2016	ALC	hcon	Participants from C-SURF project	General population	20.8
		Bertholet et al., 2018	ALC	hcon	Participants from C-SURF project	General population	20.8
		Lee et al., 2014	ALC	hcon	Intention to go on spring-break trip & drink heavily	University	20.5
7	BASICS (Brief Alcohol Screening and Intervention for College Students)	Linowski et al., 2016	ALC	hcon		University	n.r.
		Murphy et al., 2010, (study 1)	ALC	hcon		University	21.2
		Murphy et al., 2010 (study 2)	ALC	hcon		University	18.6
		Patrick et al., 2014	ALC	all	Intention to go on spring-break trip	University	n.r.
		Patrick et al., 2021	ALC	all		University	18.1
8	BASICS (Brief Alcohol Screening and Intervention for College Students) - PNF component	Saltz et al., 2007	ALC	hcon		University	n.r.
		LaBrie et al., 2013	ALC	hcon	Caucasian or asian origin only included	University	19.92
		Larimer et al., 2021	ALC	all		University	17.58 (USA), 17.83 (SE)
		Moreira et al., 2012	ALC	all		University	n.r.
		Neighbors et al., 2004	ALC	hcon		University	18.5
9	Campus GANDR (Gamified Alcohol Norm Discovery & Readjustment)	Neighbors et al., 2006	ALC	hcon		University	19.67
		Neighbors et al., 2010	ALC	hcon		University	n.r.
		Boyle et al., 2017	ALC	all	Psychology students	University	n.r.
10		Carey et al., 2017	ALC	hcon	Living off-campus	University	20.97

	CDCU (College Drinker's Check-up)	Hester et al., 2012 (study 1) Hester et al., 2012 (study 2) Fucito et al., 2017	ALC	hcon		University	n.r. n.r. 20,71 / 20,33 18 20.6
11	CIAN (Call it a Night®)		ALC	hcon		University	
12	College Alc	Bersamin et al., 2007	ALC	all		University	18
13	D_ARIANNA (Digital-Alcohol Risk Alertness Notifying Network for Adolescents and Young Adults)	Carrà et al., 2016	ALC	hcon		General population	20.6
14	DrAFT-CS (Drinking Assessment and Feedback Tool for College Students)	Wagener et al., 2012 Weaver et al., 2014	ALC ALC	hcon con		University University	20.28 n.r.
15	ECALC (expectancy challenge alcohol literacy curriculum)	Dunn et al., 2020	ALC	hcon		University	19.42
16	eCHUG (electronic version of Check-up to go)	Alfonso et al., 2012 Braitman et al., 2022 Dumas et al., 2011 Hustad et al., 2010 Thompson et al., 2018 Tahaney & Palfay, 2017 Walters et al., 2007 Fraeyman et al., 2012	ALC ALC ALC ALC ALC ALC ALC ALC ALC	hcon hcon hcon all all hcon hcon all		University University University University University University University University University	18.77 19.9 19.7 18.1 17.8 18.99 19.8 19
17	eentjeteveel				Maori students	University	20.2
18	eSBI (electronic screening and brief intervention)	Kypri et al., 2013 Kypri et al., 2014 Kypri et al., 2008	ALC ALC ALC	all con hcon	Ethnicity other than Maori Patient in University health care center	University University University	20.3 20.1
19	ETUCARE	Theurel et al., 2022	ALC	all		University	20.19
20	FIT (functional imagery training)	Shuai et al., 2022	ALC	hcon		General population	20.63
21	M-PASS (Michigan Prevention and Alcohol Safety for Students)	Bingham et al., 2011	ALC	con	International students	University	18-20
22	MyStudentBody:Alcohol	Chiauzzi et al., 2005	ALC	hcon		University	19.9
23	myPlaybook	Fearnow-Kenney et al., 2016 Zamboanga et al., 2019	ALC ALC	con con	Athletes Athletes	University General population	18.43 18.8

24	PantherTRAC	Suffoletto et al., 2016	ALC	hcon		University	n.r.
25	PartyWise	Schwarz et al., 2022	ALC	all	Females using highly effective birthcontrol	General population	18
26	Ray's Night Out	Hides et al., 2018	ALC	con		General population	20.4
27	THRIVE (Tertiary Health Research Intervention via Email)	Pocuca et al., 2016	ALC	hcon		University	20.67
60	Unitcheck	Kypri et al., 2009	ALC	hcon		University	19.7
		Leeman et al., 2016	ALC	hcon		University	19.85
		Bewick et al., 2013	ALC	con		University	20.8
		Marley et al., 2016	ALC	hcon		University	19.33
29	WDYD (What do you drink?)	Voogt et al., 2014a	ALC	hcon		University	20.8
30	Y1-CAP (Year 1 College Alcohol Profile)	Shell et al., 2019	ALC	all		University	n.r.
31	No name	Bernstein et al., 2018	ALC	con	21st birthday approaching	University	21
32	No name	Bonar et al., 2022	ALC	hcon		General population	20.4
33	No name	Braitman et al., 2020	ALC	con		University	19.65
34	No name	Boyle et al., 2021	ALC	con		University	18.05
35	No name	Bryant et al., 2013	ALC	all		University	18.7
36	No name	Buckner et al., 2019	ALC	con	Intention to consume at Mardi Gras	University	20.08
37	No name	Butler et al., 2009	ALC	hcon		University	19,7/ 20,6/ 20,38
38	No name	Carey et al., 2020	ALC	hcon		University	18
39	No name	Collins et al., 2014	ALC	hcon		University	20.78
40	No name	Doumas et al., 2009	ALC	hcon		University	19.24
41	No name	Ellis et al., 2017	ALC	con		University	n.r.
42	No name	Gex et al., 2023	ALC	hcon		University	19.95
43	No name	Glowacki et al., 2020	ALC	all		University	19.4
44	No name	Hagger et al., 2012	ALC	all		University	20.11

45	No name	Hendershot et al., 2010	ALC	all	Northeastern Asian descent (Chinese, Korean or Japanese heritage)	University	20.2
46	No name	Kazemi et al., 2020 (study 1)	ALC	hcon		University	19.04
47	No name	Kazemi et al., 2020 (study 2)	ALC	con		University	19.86
48	No name	LaBrie et al., 2019	ALC	hcon		University	n.r.
49	No name	Larimer et al., 2023	ALC	hcon		University	20.13
50	No name	Leary et al., 2022	ALC	con		University	18.09
51	No name	Leavens et al., 2020	ALC	hcon		University	18.09
52	No name	Lewis et al., 2007	ALC	hcon		University	18.53
53	No name	Ma, 2022	ALC	all		University	19.06
54	No name	Mason et al., 2014	ALC	hcon		University	19.2
55	No name	McGeary et al., 2014	ALC	hcon	Males only	University	18.98
56	No name	Neighbors et al., 2009	ALC	con	Approaching 21st birthday	University	21
57	No name	Norman et al., 2018	ALC	all		University	18.76
58	No name	Paifai et al., 2011	ALC	hcon		University	18.6
59	No name	Paifai et al., 2014a	ALC	all		University	18.21
60	No name	Pilling et al., 2007	ALC	all		University	19.05
61	No name	Ridout & Cambell, 2014	ALC	hcon		University	19.05
62	No name	Riordan et al., 2023	ALC	all		University	18.06
63	No name	Savage et al., 2015	ALC	con		University	18.51
64	No name	Schuckit et al., 2016	ALC	hcon		University	18.00
65	No name	Smallman et al., 2023	ALC	con		University	18.97
66	No name	Spijkerman et al., 2010	ALC	hcon		General population	18.1
67	No name	Tello et al., 2018	ALC	all		University	19.84
68	No name	Thombs et al., 2007	ALC	all		University	n.r.
69	No name	Walters et al., 2009	ALC	hcon		University	19.8
70	No name	Whitt et al., 2019	ALC	con		University	21
71	No name	Yang & Nan, 2019	ALC	con		University	19.77

72	Mobile Coach Tobacco & Mobile Coach Tobacco + BASICS (Brief Alcohol Screening and Intervention for College Students - adaption for marijuana)	Haug et al., 2017a	TOB	con		Vocational school	18.6
73	CAAT (Cannabis Approach Avoidance Training)	Lee et al., 2010	CAN	con		University	18.03
74	eCHUG (electronic version of Check-up to go)marijuana	Karoly et al., 2019	CAN	con		General population	18.83
75	<i>No name</i>	Elliott et al., 2014	CAN	all	Psychology students	University	19.34
76	<i>No name</i>	Palfai et al., 2014b	CAN	con	In student health services	University	19.33-20.33
77	<i>No name</i>	Buckner et al., 2020	CAN	con		University	19.1
78	iHeLP	Walukovich-Dienst et al., 2019	CAN	hcon		University	19.83
79	d-SBI (Digital screening and brief intervention for alcohol misuse)	Bradiszewski et al., 2018	substance of choice	hcon	No more than 2 years removed from foster care; moderate or sever risk of alc, smoking, substance involvement (ASSIST); not in treatment;	General population	18.91
80	U@Uni:LifeGuide	Sharma et al., 2023	CAN, 'illicit drugs'	hcon		University	20.5
81	CAAT (Cannabis Approach Avoidance Training)	Cameron et al., 2015	ALC, TOB	all		University	18.73
82	MISARA (substance abuse research assistant)	Jacobus et al., 2018	ALC, CAN	con		General population	19
83	myPlaybook	Coughlin et al., 2021	ALC, CAN	hcon	Past month binge drinking OR cannabis use	General population	20.7
		Rulison et al., 2022 (study 1)	ALC, TOB, CAN, performance enhancing drugs/dietary supplements, prescription/over-the-counter drugs	all	Athletes	University	n.r.
		Rulison et al., 2022 (study 2)	ALC, CAN	all	Athletes	University	n.r.
		Rulison et al., 2022 (study 3)	ALC, CAN	all	Athletes	University	n.r.

84	Meine Zeit ohne - Die Challenge	Pietsch et al., 2023	ALC, TOB, eTOB, CAN	all	Vocational school	19.2
85	Project Fitness	Moore et al., 2012	ALC, TOB, CAN & various health behaviours	all	University	19.44

* Target substance; ALC = alcohol, TOB = tobacco (smoking), eTOB = vaping, CAN = cannabis (incl. marijuana), ECT = ecstasy, MET = methamphetamine, HAL = hallucinogenes, NPD = new psychoactive drugs, OTC = over-the-counter drugs, PD = prescription drugs, DU = 'drug use' (various/unspecified)

** Consumption patterns: all = consumers & non-consumers, con = consumers (abstinent persons excluded), hcon = heavy consumers or mandate students

*** n.r. = not reported

Supplementary file S8_Mode of delivery, components and underlying theory of digital interventions

Project / intervention		Publication	Theoretical bases of e-intervention*	Mode of delivery*	Components													Additional non-digital components
					Information/education (text, audio, video)	Non-interactive video	Interactive video	Virtual reality 3D (hmd)	Avatar / interactive video	Chatroom / discussion with peers	Chatroom / discussion with experts	Personal message / feedback	Chatbot	Quiz	Contest	Games	Exercise/training/tasks	
A Adolescents																		
1	Alc-Check	Haug et al., 2013	PNF	web, tm	X						X							
2	Alcohol Alert / Alerta Alcohol	Jander et al., 2016	I-Change model	web												X		
		Martinez-Montilla et al., 2020	I-Change model	web												X		
		Vargas-Martinez et al., 2019	I-Change model	web												X		
3	Click City®: Alcohol	Gordon et al., 2017	Health cognition models; cognitive theories of Ajzen & Fishbein; Slovic's risk perception & decision; Fillmore's relation of behavioral disinhibition and alc consumption;	web	X						X				X			
4	Climate Schools	Newton et al., 2022a	hp, skill development & social influence	web	X		X											Combined in CAP
		Vogl et al., 2009	hp, SCT	web	X		X											Teacher-delivered classroom interactive activity
5	eCHUG (electronic version of Check-up to go)	Doumas et al., 2019	PNF, hp	web								X						
		Doumas et al., 2020a	PNF, hp	web								X						
		Doumas et al., 2020b	PNF, hp	web								X						
		Doumas et al., 2021	PNF, info, hp	web								X						Members of research team present to instruct & assist
6	HSD (Healthy School and Drugs)	Koning et al., 2011	SCT, theory of planned behaviour	web													X	1 arm: parent intervention non-digital (1 arm combined with student intervention)
7	kiR (keepin' it REAL)	Shin et al., 2018	SCT, narrative engagement theory	web		X												

76	<i>No name</i>	Sharma et al., 2023	PNF, 'encouragement' / advice / provision of personal strategies	web or app	X	X
77	<i>No name</i>	Buckner et al., 2020	PNF, PFI-NAC: encouragement, including strategies to manage negative effects	web	X	X
78	iHeLP	Walukevich-Dienst et al., 2019	PNF, info	web	X	X
79	d-SBI (Digital screening and brief intervention for alcohol misuse)	Braczewski et al., 2018	PNF, MI, info, TTM, hp, FRAMES approach	tm, mp, pc	X	X
80	U@Uni:LifeGuide	Cameron et al., 2015	self-affirmation manipulation, theory of planned behaviour and implementation intention task	web		
81	CAAT (Cannabis Approach Avoidance Training)	Jacobus et al., 2018	Cognitive bias modification	pc		X
82	MISARA (substance abuse research assistant)	Coughlin et al., 2021	PNF, MI, reciprocity strategy	app	X	X
83	myPlaybook	Rulison et al., 2022 (study 1)	PNF, theory of reasoned action & health belief model	web	X	X
		Rulison et al., 2022 (study 2)	PNF, theory of reasoned action & health belief model	web	X	X
		Rulison et al., 2022 (study 3)	PNF, hp, theory of reasoned action & health belief model	web	X	X
84	Meine Zeit ohne - Die Challenge	Pietsch et al., 2023	MI, voluntary abstinence paradigm	app	X	X
85	Project Fitness	Moore et al., 2012	Behavior Image Model (BIM)	pc	X	X

* PNF = personal (normative) feedback, MI = motivational interviewing, info = information / education / health literacy, TTM = transtheoretical model/readiness to change, hp = harm prevention / personal behavioural strategies, SCT = social cognitive theory

**web = web-based, pc =(personal) computer, CD = CD rom, app = application (phone or web), fb = facebook, hmd = head mounted display (VR 3D), tm = text message,

Supplementary file S9_Evidence assessment

Project / intervention	Publication	Study design*	Latest follow-up (in months)	Outcome measures										Intervention components					
				Consumption	Binge/heavy drinking	Substance-related problems	Intention to consume	Motivation / readiness to change	Perception of peer consumption	Norms & attitudes	Consumption effects	Knowledge	Protective behavioural strategies	Self-efficacy	Other	Single component intervention	Multi Evaluation	combined	separate

A Adolescents																		
1	Alc-Check	Haug et al., 2013	p-p	3	X	X	X	X									X	
2	Alcohol Alert / Alerta Alcohol	Jander et al., 2016	RCT	4	X			X									X	
		Martinez-Montilla et al., 2020	RCT	4	X												X	
		Vargas-Martinez et al., 2019	RCT	4	X												X	
3	Click City®: Alcohol	Gordon et al., 2017	RCT	0.25			X		X						health-related quality of life		X	
4	Climate Schools	Newton et al., 2022a	RCT	84	X	X											X	
		Vogl et al., 2009	RCT	12	X	X					X	X					X	
5	eCHUG (electronic version of Check-up to go)	Doumas et al., 2019	RCT	6		X				X							X	
		Doumas et al., 2020a	RCT	1	X				X		X		X				X	
		Doumas et al., 2020b	p-p	1	X	X											X	
		Doumas et al., 2021	RCT	6	X	X										X		
6	HSD (Healthy School and Drugs)	Koning et al., 2011	RCT	34	X	X											X	
7	kIR (keepin' it REAL)	Shin et al., 2018	RCT	1	X									X			X	
8	MobileCoach Alcohol	Haug et al., 2017b	RCT	6	X	X			X								X	

9	PALMSS (peer alcohol knowledge, low-risk drinking, media-influence, social drinking, self-efficacy)	Haug et al., 2020	RCT	0	X	X				smoking	X
		Haug et al., 2023	RCT	0	X	X					X
		Hongthong et al., 2016	RCT	6					X	advertising exposure, family drinking	X
10	Smart Choices 4 Teens	Byrnes et al., 2019	RCT	12	X	X	X	X		family communication regarding teen alc use & parent drinking	X
11	SPORT	Mathews et al., 2007	RCT	0			X			images of those who use alcohol, beliefs about linkage between alcohol & other health promoting behaviours	X
12	VR FestLab (virtual reality FestLab)	Guidager et al., 2022	RCT	1.5		X		X	X	Susceptibility to peer pressure, sensation-seeking, communication skills, social support willingness	X
13	WDYD (What do you drink?)	Voogt et al., 2013	RCT	6	X	X					X
14	No name	Ho et al., 2021	RCT	3	X			X		Behavioural control	X
15	No name	Knight et al., 2018	p-p	12	X	X					X
16	No name	Russell et al., 2017	RCT	0				X			X
17	No name	Schinke et al., 2009b	RCT	2	X		X			Parental monitoring, rules & communication	X
18	C2Q-Teen (Craving to Quit-Teen)	Pbert et al., 2020	RCT	6	X						X
19	QuitSTART smoking app	Pbert et al., 2020	RCT	6	X						X
20	No name	Kong et al., 2017	p-p	1	X						X
21	No name	Mason et al., 2015	RCT	6	X		X	X	X	Risk behaviour, peer social support, family smoking context	X

38	SmartCoach	Paz Castro et al., 2022	RCT	18	X	X		Well-being, Social skills	X
39	RealTeen	Schwinn et al., 2019	RCT	36	X		X	Media literacy, anxious & depressive mood, body image, perceived stress, self-esteem	X
40	Vamos	Schwinn et al., 2021	RCT	6	X		X	Social skills, stress management, body esteem, self-esteem	X
41	No name (family interaction)	Schinke et al., 2009a	RCT	36	X		X	Literacy, mood	
42	No name	Schinke et al., 2011	RCT	24	X		X	Self-perception, depression, family	X
43	E-health4Uth	Schwinn et al., 2015	RCT	0	X		X	communication, closeness, rules, monitoring	X
44	Your Decision Counts TM	Bannink et al., 2014	RCT	3	X		X	Perceived stress	X
45	WISEteens	Evers et al., 2012	RCT	4	X		X	Well-being, health-related quality of life	X
46	Girls and Stress	Arnaud et al., 2016	RCT	14	X		X		
		Schinke et al., 2005	RCT	3	X		X		X
			RCT	0.5				likely response to stress, capacity to handle stress, awareness of unhealthy ways to reduce stress, role of cigarettes, alcohol or drugs as responses to stress, satisfaction with current appearance & weight, concern about what friends think of them	X
47	No name	Williams et al., 2005	RCT	0	X		X		X
48	Pure Rush	Stapinski et al., 2018	RCT	0			X		X

	Murphy et al., 2010, (study 1)	RCT	1	X	X				Subjective change in drinking & normative & self-ideal discrepancies	X	
	Murphy et al., 2010 (study 2)	RCT	1	X	X				Subjective change in drinking & normative & self-ideal discrepancies	X	
	Patrick et al., 2014	RCT	0	X	X	X	X	X	Sexual behavior	X	
	Patrick et al., 2021	RCT	0	X	X	X	X		Utilization of health services		Bridging strategies
	Saitz et al., 2007	RCT	1	X	X	X	X	X	Help-seeking & family history & age of consumption onset	X	
8	LaBrie et al., 2013	RCT	12	X	X	X	X			X	
	Larimer et al., 2021	RCT	12	X	X	X	X			X	
	Moreira et al., 2012	RCT	12	X	X	X	X	X		X	
	Neighbors et al., 2004	RCT	6	X	X	X	X	X		X	
	Neighbors et al., 2006	RCT	2	X	X	X	X	X		X	
	Neighbors et al., 2010	RCT	24	X	X	X	X	X		X	
9	Campus GANDR (Gamified Alcohol Norm Discovery & Readjustment)	RCT	0.5	X	X	X	X	X			X
10	Carey et al., 2017	RCT	6	X	X	X	X				X
	Hester et al., 2012 (study 1)	RCT	12	X	X	X	X		Family history of alc. Problems		X
	Hester et al., 2012 (study 2)	RCT	1	X	X	X	X		Family history of alc. Problems		X
	Fucito et al., 2017	RCT	3	X	X	X	X	X	Sleep characteristics		X
11	CIAN (Call it a Night®)	RCT	3	X	X	X	X				
12	College Alc	RCT	3	X	X	X	X				
13	D_ARIANNA (Digital-Alcohol Risk Alertness Notifying Network for	p-p	0.5		X	X	X	X			X

Adolescents and Young Adults))

[illegible]

Students - adaption for marijuana)

74	CAAT (Cannabis Approach Avoidance Training)	Karoly et al., 2019	RCT	0	X					fMRI: Cannabis cue reactivity	X	
75	eCHUG (electronic version of Check-up to go)marijuana	Elliott et al., 2014	RCT	1	X	X				Social desirability & AUD symptoms	X	
76	No name	Palfai et al., 2014b	RCT	6	X	X	X	X		General health behavior	X	
77	No name	Buckner et al., 2020	RCT	0.5	X					Social anxiety & pos. & neg. affects	X	X
78	iHeLP	Walukevich-Dienst et al., 2019	RCT	1	X	X						
79	d-SBI (Digital screening and brief intervention for alcohol misuse)	Braczewski et al., 2018	RCT	12	X	X				Depressive symptoms	X	
80	U@Uni:LifeGuide	Sharma et al., 2023	RCT	3	X						X	
81	CAAT (Cannabis Approach Avoidance Training)	Cameron et al., 2015 Jacobus et al., 2018	RCT	6 0	X X	X X	X X	X X	Marijuana	Hair sample Approach bias, withdrawal & craving, stress & reward related symptoms (depression, anxiety)	X X	
82	MISARA (substance abuse research assistant)	Coughlin et al., 2021	p-p	1	X	X	X	X		Confidence of change, risk behaviour: past month driving under alc or cannabis, consequences of use, perceived risk, reasons for use, & stress, mood, loneliness, free time, fun, sensation seeking, hopefulness	X	
83	myPlaybook	Rulison et al., 2022 (study 1) Rulison et al., 2022 (study 2)	Fractional factorial design Fractional factorial design	1 1	X X	X X	X X	X X				MOST MOST

		Rulison et al., 2022 (study 3)	Fractional factorial design	0	X	X	X	X	X	X	MOST
84	Meine Zeit ohne - Die Challenge	Pietsch et al., 2023	RCT	0	X	X					Physical activity, mental health
85	Project Fitness	Moore et al., 2012	RCT	0			X	X	X		Prototype images & willingness & behavior coupling

* RCT = randomized designs with control groups, p-p = pre-post designs, qual = qualitative methods

Supplementary file S10_Evidence assessment: Comparison groups

Project / intervention	Publication	Study design*	No. Study arms	Comparison groups					
				Assessment only	Non-digital intervention		Digital interventions		
					Intervention Personally delivered	Other non-digital intervention	A	B	C

A Adolescents								
1	Alc-Check	Haug et al., 2013	p-p	1				
2	Alcohol Alert / Alerta Alcohol	Jander et al., 2016	RCT	2	X			
		Martinez-Montilla et al., 2020	RCT	2	X			
		Vargas-Martinez et al., 2019	RCT	2	X			
3	Click City®: Alcohol	Gordon et al., 2017	RCT	2		Standard alc prevention curriculum		
4	Climate Schools	Newton et al., 2022a	RCT	4		Prevention (selective for high-risk students) & health education as usual	CAP: climate & Prevention	
		Vogl et al., 2009	RCT	2		Usual classes		
5	eCHUG (electronic version of Check-up to go)	Doumas et al., 2019	RCT	2	X			
		Doumas et al., 2020a	RCT	2	X			
		Doumas et al., 2020b	p-p	1				

6	HSD (Healthy School and Drugs)	Doumas et al., 2021 Koning et al., 2011	RCT RCT	2 4	 X	Regular curriculum	Arm 1: student intervention	Arm 2: combined student-parent intervention	Arm 3: parent intervention
7	kiR (keepin' it REAL)	Shin et al., 2018	RCT	2			Rural vs urban version		
8	MobileCoach Alcohol	Haug et al., 2017b Haug et al., 2020	RCT RCT	2 2	X X				
9	PALMSS (peer alcohol knowledge, low-risk drinking, media-influence, social drinking, self-efficacy)	Haug et al., 2023 Hongthong et al., 2016	RCT RCT	1 2		Alcohol education as usual			
10	Smart Choices 4 Teens	Byrnes et al., 2019	RCT	2	X				
11	SPORT	Mathews et al., 2007	RCT	2			General health information		
12	VR FestLab (virtual reality FestLab)	Guldager et al., 2022	RCT	2			Other VR game (Oculus Quest - First Steps)		
13	WDYD (What do you drink?)	Voogt et al., 2013	RCT	2	X				
14	No name	Ho et al., 2021	RCT	2		Conventional health education via leaflet			
15	No name	Knight et al., 2018	p-p	1					
16	No name	Russell et al., 2017	RCT	4			Pos or neg message with or without epilogue (2x2 design)		
17	No name	Schinke et al., 2009b	RCT	2	X				

18	C2Q-Teen (Craving to Quit-Teen)	Pbert et al., 2020	RCT	3		Written cessation materials	C2Q-Teen (Craving to Quit-Teen)	QuitSTART smoking appl. (without mindfulness component)
19	QuitSTART smoking app	Pbert et al., 2020	RCT	3		Written cessation materials	C2Q-Teen (Craving to Quit-Teen)	QuitSTART smoking appl. (without mindfulness component)
20	<i>No name</i>	Kong et al., 2017	p-p	1				
21	<i>No name</i>	Mason et al., 2015	RCT	2			Attention control condition (30 health-based texts)	
22	<i>No name</i>	Shi et al., 2013	RCT	2		Self-help pamphlet		
23	Invite Only VR (virtual reality)	Weser et al., 2021	RCT	2		Education as usual?		
24	smokeSCREEN	Bteddini et al., 2023	sequential mixed methods design	3		CATCH My Breath	Educational materials	
25	xkpts.com (reader: "perquèpetes.com", translation: "why joints?")	Ariza et al., 2013	quasi-experimental	2	X			
26	P4T (POP4Teens) vs JTT (JustThinkTwice)	Marsch et al., 2021	RCT	2			active controls: JustThinkTwice website	
27	Elm City Story (PlayForward)	Montanaro et al., 2015	RCT	2			Attention-control games	
28	REAL media	Greene et al., 2020	RCT	2	X			
29	<i>No name</i>	Fang & Schinke, 2013	RCT	2	X			

30	E-MOVO (Dutch for Electronic Monitoring and Health Promotion)	Crutzen et al., 2008	p-p	1		
31	Health4Life	Champion et al., 2023	RCT	2		Usual health education
32	Climate Schools	Champion et al., 2016	RCT	2		Lessons as usual, incl. Drug education
		Newton et al., 2022b	RCT	2		Health education as usual
33	<i>No name</i>	Gryczynski et al., 2021	RCT	3	X	
34	<i>No name</i>	Knight et al., 2019	RCT	2		Care as usual
35	Healthy School and Drugs	Malmberg et al., 2014	RCT	3	X	Regular curriculum
36	¿Qu é pasa si te pasas? (What happens if you go to far?)	Fuentes et al., 2023	p-p	1		
37	ready4life	Haug et al., 2022	RCT	2	X	
38	SmartCoach	Paz Castro et al., 2022	RCT	2	X	
39	RealTeen	Schwinn et al., 2019	RCT	2	X	
		Schwinn et al., 2010	RCT	2	X	
40	Vamos	Schwinn et al., 2021	RCT	2	X	
41	<i>No name (family interaction)</i>	Schinke et al., 2009a	RCT	2	X	
		Schinke et al., 2011	RCT	2	X	
42	<i>No name</i>	Schwinn et al., 2015	RCT	2	X	
43	E-health4Uth	Bannink et al., 2014	RCT	3	X	E-health intervention & nurse consultation

44	Your Decision Counts TM	Evers et al., 2012	RCT	2		X	
45	WISEteens	Arnaud et al., 2016	RCT	2		X	
46	Girls and Stress	Schinke et al., 2005	RCT	2			Conventional group prevention program "Keep a clear mind"
47	No name	Williams et al., 2005	RCT	2		X	
48	Pure Rush	Stapinski et al., 2018	RCT	2			Standard education
49	Climate Schools Psychostimulant & Cannabis Module	Vogl et al., 2014	RCT	2			Drug education as usual
50	Refuse to Use	Duncan et al., 2020	p-p	1			
51	Climate Schools: Ecstasy and Emerging Drugs Module	Champion et al., 2018	RCT	2			Lessons as usual, incl. Drug education
B Emerging adults							
1	Alcohol 101 Plus™	Carey et al., 2011 (study 2)	RCT	4		X	Alcohol Edu for Sanctions®)
2	Alcohol 101	Barnett et al., 2007	RCT	4	Brief MI with & without booster		Alcohol 101 with & without booster
		Braitman et al., 2016	RCT	2			Alcohol 101 with vs without booster
		Carey et al., 2009	RCT	2			Brief Motivational Interview
3	Alcohol Edu® for Sanctions	Carey et al., 2011 (study 1)	RCT	4		X	Alcohol 101 Plus™
4	Alcohol Edu® for College	Groom et al., 2009	RCT	2		X	
		Hustad et al., 2010 (A)	RCT	3		X	eCHUG

5	Alcohol-Wise	Paschall et al., 2014	RCT	2	X				
		Croom et al., 2015 (study 1)	RCT	2	X				
		Croom et al., 2015 (study 2)	RCT	2	X				
		Gilbertson et al., 2017	p-p	1					
		Strohman et al., 2016	RCT	2	X				
6	alcooquizz.ch (1)	Bertholet et al., 2015	RCT	2	X				
		Bertholet et al., 2016	RCT	2	X				
		Bertholet et al., 2018	RCT	2	X				
		Lee et al., 2014	RCT	5	X	X	Intervention in-person with friend	WebBASICS with friend	
		Linowski et al., 2016	RCT	2	X			ALCOHOL 101 Plus	
7	BASICS (Brief Alcohol Screening and Intervention for College Students)	Murphy et al., 2010, (study 1)	RCT	2	X			eCHUG	
		Murphy et al., 2010 (study 2)	RCT	2	X				
		Patrick et al., 2014	RCT	5	X			Sequential multiple assignment Minimal vs more extensive intervention	
		Patrick et al., 2021	RCT	3	X			WebBASICS	8 specific reference groups
		Saitz et al., 2007	RCT	10	X				
8	BASICS (Brief Alcohol Screening and Intervention for College Students) - PNF component	LaBrie et al., 2013	RCT	2	X				
		Larimer et al., 2021	RCT	3	X			Delayed control group	
		Moreira et al., 2012	RCT		X				

15	ECALC (expectancy challenge alcohol literacy curriculum)	Dunn et al., 2020 (B) 2019?	Outcome comparison study; random assignment	2		BMI & PNF (BASICS session)
16	eCHUG (electronic version of Check-up to go)	Alfonso et al., 2012	RCT	3		BASICS (individual)) & CHOICES (group)
		Braitman et al., 2022	RCT	3		Additional booster with normative feedback Additional booster with normative feedback & personal behavioural strategies
17	eentjeteveel	Doumas et al., 2011	RCT	2		Education
		Hustad et al., 2010 (B)	RCT	3	X	Alcohol EDU
		Thompson et al., 2018	RCT	2	X	
		Tahaney & Palfay, 2017	RCT	3	X	Web-based intervention without text messages
18	eSBI (electronic screening and brief intervention)	Walters et al., 2007	RCT	2	X	
		Fraeyman et al., 2012	qual	1		
18	eSBI (electronic screening and brief intervention)	Kypri et al., 2013	RCT	2	X	
		Kypri et al., 2014	RCT	2	X	
		Kypri et al., 2008	RCT	3		Multi-dose intervention information pamphlet

19	ETUCARE	Theurel et al., 2022	Non-randomized controlled trial	2	X		
20	FIT (functional imagery training)	Shuai et al., 2022	RCT	2			Standard risk information
21	M-PASS (Michigan Prevention and Alcohol Safety for Students)	Bingham et al., 2011	Paired intervention-control design	2	X		
22	MyStudentBody:Alcohol	Chiauzzi et al., 2005	RCT	2			Acohol and You (educational content)
23	myPlaybook	Fearnow-Kenney et al., 2016	RCT	2	X		
24	PantherTRAC	Zamboanga et al., 2019	RCT	2		X	
25	PartyWise	Suffoletto et al., 2016	p-p	1			
26	Ray's Night Out	Schwarz et al., 2022	RCT	2			Attention control
		Hides et al., 2018	RCT	2		X	
		Pocuca et al., 2016	Mixed methods	1			
27	THRIVE (Tertiary Health Research Intervention via Email)	Kypri et al., 2009	RCT	2	X		
		Leeman et al., 2016	RCT	4	X		THRIVE with indirect PBS only
							THRIVE with direct PBS only
							THRIVE with direct and indirect PBS
60	Unitcheck	Bewick et al., 2013	RCT	2	X		
		Marley et al., 2016	qual	1			
29	WDYD (What do you drink?)	Voogt et al., 2014a	RCT	2	X		

44	No name	Hagger et al., 2012	RCT	4	X	Implementation intention condition	Mental simulation condition	Implementation intention & mental simulation condition
45	No name	Hendershot et al., 2010	RCT	2		Attention control feedback		
46	No name	Kazemi et al., 2020 (study 1)	RCT	2		In-person BMI		
47	No name	Kazemi et al., 2020 (study 2)	RCT	2	X			
48	No name	LaBrie et al., 2019	RCT	4		Arms 1: gamified PNF only	Arms 2-3: gamified PNF + Visual Copresence & Gamified PNF + Maximum Copresence	Arm 4: standard PNF
49	No name	Larimer et al., 2023	RCT	5		Arm 1: non-alcohol-related feedback	Arms 2-4: descriptive PNF, injunctive PNF, descriptive & injunctive PNF	Arm 5: multicomponent personalized feedback
50	No name	Leary et al., 2022	RCT	3	X	Arm 1: positive messages about people who do not consume	Arm 2: negative messages about people who consume	
51	No name	Leavens et al., 2020	RCT	3	X	Arm 1: typical feedback on PBS	Arm 2: on descriptive normative feedback on PBS	
52	No name	Lewis et al., 2007	RCT	3	X	Gender-specific feedback	Gender-neutral feedback	
53	No name	Ma, 2022	RCT	2		Delivery via tablet	Delivery via hmd	

54	No name	Mason et al., 2014	RCT	2	X	Attention control
55	No name	McGeary et al., 2014	RCT	2		
56	No name	Neighbors et al., 2009	RCT	2	X	
57	No name	Norman et al., 2018	RCT	8		2 (self-affirmation) x 2 (TPB messages) x 2 (implementation intention)
58	No name	Palfai et al., 2011	RCT	4 (2x2 design)		Alcohol feedback vs. no alcohol feedback Motivational Assessment vs. No Motivational Assessment
59	No name	Palfai et al., 2014a	RCT			Feedback about other health-related behaviour
60	No name	Pilling et al., 2007	RCT	4		3 different types of persuasive messages Neutral' message to discourage heavy drinking)
61	No name	Ridout & Cambell, 2014	RCT	2	X	
62	No name	Riordan et al., 2023	RCT	3	X	web-based interventions Web-based interventions + ecological momentary interventions
63	No name	Savage et al., 2015	RCT	3	X	SOTA (state of the art)
64	No name	Schuckit et al., 2016	RCT	3	X	intervention SOTA (state-of-the-art) condition: information without emphasis on level of risk

65	No name	Smallman et al., 2023	RCT	3		Sham (negative event with detailed description)	Negative event only
66	No name	Spijkerman et al., 2010	RCT	3	X	Normative feedback additionally	
67	No name	Tello et al., 2018	RCT	2		Neutral images for alcohol	
68	No name	Thombs et al., 2007	RCT	2		BAC readings only	
69	No name	Walters et al., 2009	RCT	4	X	MI	Feedback only
70	No name	Whitt et al., 2019	RCT	2	X		MI with feedback
71	No name	Yang & Nan, 2019	RCT	2		Arm 1: descriptive norms	Arm 2: Injunctive norms
72	Mobile Coach Tobacco & Mobile Coach Tobacco +	Haug et al., 2017a	RCT	2	X		
73	BASICS (Brief Alcohol Screening and Intervention for College Students - adaption for marijuana)	Lee et al., 2010	RCT	2	X		
74	CAAT (Cannabis Approach Avoidance Training)	Karoly et al., 2019	RCT	2		CAAT-sham training	
75	eCHUG (electronic version of Check-up to go)marijuana	Elliott et al., 2014	RCT	4	brief & extended	Brief intervention	Extended intervention
76	No name	Palfai et al., 2014b	RCT	4		Feedback about other health-related behaviour	Onsite vs off-site
77	No name	Buckner et al., 2020 Walukevich-Dienst et al., 2019	RCT	2	X	PNF (personal normative feedback only)	

78	iHeLP	Braczewski et al., 2018	RCT	2		Contact control
79	d-SBI (Digital screening and brief intervention for alcohol misuse)	Sharma et al., 2023	RCT	2		Brief education
80	U@Uni:LifeGuide	Cameron et al., 2015	RCT	2	X	
81	CAAT (Cannabis Approach Avoidance Training)	Jacobus et al., 2018	RCT	2		CAAT-sham training ; same as intervention, but without contingency
82	MISARA (substance abuse research assistant)	Coughlin et al., 2021	p-p	1		
83	myPlaybook	Rulison et al., 2022 (study 1)	Fractional factorial design	16 conditions		6 different modules
		Rulison et al., 2022 (study 2)	Fractional factorial design	8 conditions		4 different modules
		Rulison et al., 2022 (study 3)	Fractional factorial design	8 conditions		5 different modules
84	Meine Zeit ohne - Die Challenge	Pietsch et al., 2023	RCT	2	X	
85	Project Fitness	Moore et al., 2012	RCT	2		Standard care

* RCT = randomized designs with control groups, p-p = pre-post designs, qual = qualitative methods