

SUPPLEMENTARY MATERIAL APPENDIX 2**Search strategy across databases**

Table 1: Information sources and records retrieval

| Database searched | Date when records were searched | Years of records searched | Number of records retrieved | Records after duplicates removal |
|---------------------|---------------------------------|---------------------------|-----------------------------|----------------------------------|
| ACM Digital Library | 2 November 2023 | 2013-2023 | 55 | 55 |
| APA PsycINFO | 2 November 2023 | 2013-2023 | 360 | 360 |
| CENTRAL | 2 November 2023 | 2013-2023 | 164 | 137 |
| CINAHL Plus | 2 November 2023 | 2013-2023 | 360 | 238 |
| Dimensions | 2 November 2023 | 2013-2023 | 157 | 98 |
| Embase | 2 November 2023 | 2013-2023 | 369 | 157 |
| Google Scholar | 2 November 2023 | 2013-2023 | 200 | 168 |
| IEEE Xplore Library | 31 October 2023 | 2013-2023 | 6 | 5 |
| MEDLINE | 2 November 2023 | 2013-2023 | 1,140 | 740 |
| Scopus | 31 October 2023 | 2013-2023 | 1,073 | 385 |
| Web of Science | 31 October 2023 | 2013-2023 | 1,021 | 585 |
| WHO GIM | To be completed | 2013-2023 | N/A | N/A |
| Total | | | 4,905 | 2,928 |

Search strategy for Association of Computing Machinery (ACM) Digital Library

("just-in-time adaptive intervention" OR "ecological momentary intervention" OR "intelligent real time therapy" OR "dynamic tailoring" OR "ambulatory") AND ("mobile" OR "phone" OR "wearable" OR "sensor") AND ("adolescent" OR "young adult" OR "student" OR "teenager" OR "youth") AND ("health" OR "medicine" OR "medical" OR "clinical" OR "wellness" OR "well being" OR "disease" OR "disorder" OR "self-management" OR "self-monitoring")

Filters manually applied: Full Text and E-Publication Date of 1 January 2023 to December 31 2023

Search strategy for American Psychological Association (APA) PsycINFO

("just-in-time adaptive intervention" OR "ecological momentary intervention*" OR "ecological momentary assessment*" OR "experience sampling" OR "electronic diar*" OR "ambulatory monitor*" OR "ambulatory assess*" OR "context aware" OR "context sens*" OR "context tailor*" OR "real time context*" OR "real time intervention" OR "real time therapy" OR "real time tailor*" OR "dynamic tailor*").mp OR (exp "ecological momentary assessment") OR (exp "experience sampling")) AND (("digital health resource*" OR "digital health intervention*" OR "digital intervention*" OR "mhealth" OR "telemedicine" OR "cell* phone" OR "mobile application*" OR "app" OR "mobile health" OR "mobile device*" OR "mobile technolog*" OR "mobile intervention" OR "smartphone*" OR "smart device" OR "connected device" OR "wearable*" OR "sensor trigger*" OR "geographic information system*" OR "gis" OR "geofenc*" OR "persuasive technolog*" OR "sensor technolog*" OR "biofeedback" OR "digital treatment*").mp OR (exp "digital health resources") OR (exp "mhealth") OR (exp "cellular phones") OR (exp "mobile applications") OR (exp "smartphones") OR (exp "wearable devices") OR (exp "biofeedback") OR (exp "digital treatments")) AND (("adolescenc*" OR "young adult*" OR "emerging adult*" OR "student*" OR "teen*" OR "young people" OR "youth").mp OR (exp "early adolescence") OR (exp "late*

adolescence") OR (exp "young adulthood") OR (exp "students")) AND (("risk factor*" OR "prevent*" OR "treat*" OR "health*" OR "health care" OR "behavior*" OR "therap*" OR "wellness" OR "well being" OR "self care" OR "self manag*" OR "self monitor*" OR "function*" OR "disorder").mp OR (exp "health behavior") OR (exp "self care") OR (exp "adolescent health") OR (exp "adolescent development") OR (exp "adolescent behavior") OR (exp "risk factors") OR (exp "patient care") OR (exp "health promotion"))

Filters manually applied: Publication Date of 1 January 2013 to 31 December 2023

Search strategy for Cochrane Central Register of Controlled Trials (CENTRAL)

("just-in-time" NEXT "adaptive" NEXT intervention*) OR ("ecological" NEXT "momentary" NEXT intervention*) OR ("ecological" NEXT "momentary" NEXT assessment) OR ("experience" NEXT sampling) OR ("electronic" NEXT diar*) OR ("ambulatory" NEXT monitor*) OR ("ambulatory" NEXT assessment) OR ("context" NEXT aware) OR ("context" NEXT sens*) OR ("context" NEXT tailor*) OR ("real" NEXT "time" NEXT context*) OR ("real" NEXT "time" NEXT intervention) OR ("real" NEXT "time" NEXT therapy) OR ("real" NEXT "time" NEXT tailor*) OR ("dynamic" NEXT tailor*) AND (("digital" NEXT "health" NEXT intervention*) OR ("digital" NEXT intervention*) OR (cell* NEXT phone) OR ("mobile" NEXT application) OR ("app*") OR ("mobile" NEXT health) OR ("mobile" NEXT device*) OR ("mobile" NEXT technolog*) OR (mhealth) OR ("mobile" NEXT intervention*) OR (smartphone*) OR ("smart" NEXT device*) OR ("connected" NEXT device*) OR ("wearable" NEXT "electronic" NEXT device*) OR (wearable*) OR (sensor*) OR ("geographic" NEXT "information" NEXT system) OR (gis) OR (geofenc*) OR ("persuasive" NEXT technolog*) AND ((adolescen*) OR ("young" NEXT adult*) OR ("emerging" NEXT adult*) OR (student*) OR (teen*) OR ("young" NEXT people) OR (youth)) AND ((health*) OR ("risk" NEXT factor*) OR (prevent*) OR (treat*) OR (behavior*) OR (therap*) OR (wellness) OR ("well" NEXT being) OR ("self" NEXT manag*) OR ("self" NEXT monitor*) OR (function*) OR (disorder*))

Filters manually applied: Title Abstract Keyword

Search strategy for Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus

("just-in-time adaptive intervention*" OR "ecological momentary intervention*" OR "ecological momentary assessment" OR "experience sampling" OR "electronic diar*" OR (MM "monitoring, physiologic+") OR (MM "blood pressure monitoring, ambulatory") OR (MM "electrocardiography, ambulatory") OR "ambulatory monitor*" OR "ambulatory assess*" OR "context aware" OR "context sens*" OR "context tailor*" OR "real time context*" OR "real time intervention" OR "real time therapy" OR "real time tailor*" OR "dynamic tailor*") AND ((MM "digital health+") OR "digital health intervention*" OR "digital intervention*" OR (MM "telehealth+") OR "telemedicine" OR ("MM cellular phone+") OR "cell* phone" OR (MM "mobile applications") OR "app" OR "mobile health" OR "mobile device*" OR "mobile technolog*" OR "mhealth" OR "mobile intervention" OR (MM "smartphone") OR "smartphone*" OR "smart device" OR "connected device" OR (MM "computers, hand-held+") OR (MM "wearable sensors+") OR "wearable*" OR "sensor trigger*" OR (MM "geographic information systems+") OR "gis" OR "geofenc*" OR "persuasive technolog*" OR "sensor technolog*" OR (MM "biofeedback") OR "biofeedback") AND ((MM "adolescent+") OR "adolescen*" OR (MM "young adult") OR "young adult*" OR "emerging adult*" OR (MM "students+") OR "student*" OR "teen*" OR "young people" OR "youth") AND ((MM "adolescent health") OR (MM "risk factors+" OR "risk factor*" OR "prevent*" OR "treat*" OR

(MM "patient centered care") OR "health*" OR (MM "health behavior+") OR (MM "health care delivery+" OR "health care" OR (MM "health promotion+") OR "behavior*" OR "therap*" OR "wellness" OR "well being" OR (MM "self care+") OR "self manag*" OR "self monitor*" OR "function*" OR "disorder") AND ((medline[Filter]) AND (2013/1/1:2023/12/31[pdat]))

Search strategy for Excerpta Medica Database (Embase)

((*just-in-time adaptive intervention**.ti,ab,kw OR *ecological momentary intervention**.ti,ab,kw OR *ecological momentary assessment**.ti,ab,kw OR *experience sampling**.ti,ab,kw OR *electronic diar**.ti,ab,kw OR *ambulatory monitor**.ti,ab,kw OR *ambulatory assess**.ti,ab,kw OR *context aware**.ti,ab,kw OR *context sens**.ti,ab,kw OR *context tailor**.ti,ab,kw OR *real time context**.ti,ab,kw OR *real time intervention**.ti,ab,kw OR *real time therapy**.ti,ab,kw OR *real time tailor**.ti,ab,kw OR *dynamic tailor**.ti,ab,kw OR *ambulatory monitoring*/exp/mj OR *ecological momentary assessment*/exp/mj OR *experience sampling*/exp/mj) AND (*digital intervention**.ti,ab,kw OR *telemedicine**.ti,ab,kw OR *cell* phone**.ti,ab,kw OR *mobile application**.ti,ab,kw OR *app**.ti,ab,kw OR *mobile health**.ti,ab,kw OR *mobile device**.ti,ab,kw OR *mobile technolog**.ti,ab,kw OR *mobile intervention**.ti,ab,kw OR *smartphone**.ti,ab,kw OR *smart device**.ti,ab,kw OR *connected device**.ti,ab,kw OR *wearable**.ti,ab,kw OR *sensor trigger**.ti,ab,kw OR *geographic information system**.ti,ab,kw OR *gis**.ti,ab,kw OR *geofenc**.ti,ab,kw OR *persuasive technolog**.ti,ab,kw OR *sensor technolog**.ti,ab,kw OR *biofeedback**.ti,ab,kw OR *digital treat**.ti,ab,kw OR *digital health intervention**.ti,ab,kw OR *mhealth*/exp/mj OR *mobile phone*/exp/mj OR *mobile application*/exp/mj OR *smartphone*/exp/mj OR *wearable computer*/exp/mj OR *biofeedback software (device)*/exp/mj OR *smart device*/exp/mj) AND (*adolescen**.ti,ab,kw OR *young adult**.ti,ab,kw OR *emerging adult**.ti,ab,kw OR *student**.ti,ab,kw OR *teen**.ti,ab,kw OR *young people**.ti,ab,kw OR *youth**.ti,ab,kw OR *adolescent*/exp/mj OR *adolescence*/exp/mj OR *young adult*/exp/mj OR *students*/exp/mj) AND (*risk factor**.ti,ab,kw OR *prevent**.ti,ab,kw OR *treat**.ti,ab,kw OR *health**.ti,ab,kw OR *health care**.ti,ab,kw OR *behavior**.ti,ab,kw OR *therapy**.ti,ab,kw OR *wellness**.ti,ab,kw OR *well being**.ti,ab,kw OR *self care**.ti,ab,kw OR *self manage**.ti,ab,kw OR *self monitor**.ti,ab,kw OR *function**.ti,ab,kw OR *disorder**.ti,ab,kw OR *health behavior*/exp/mj OR *self care*/exp/mj OR *adolescent health*/exp/mj OR *adolescent development*/exp/mj OR *adolescent behavior*/exp/mj OR *risk factor*/exp/mj OR *patient care*/exp/mj OR *health promotion*/exp/mj) AND (2013:py OR 2014:py OR 2015:py OR 2016:py OR 2017:py OR 2018:py OR 2019:py OR 2020:py OR 2021:py OR 2022:py OR 2023:py)

Search strategy for Dimensions

((*just-in-time adaptive intervention*) OR *ecological momentary intervention*) OR *ecological momentary assessment*) OR *experience sampling*) OR *electronic diary*) OR *ambulatory assessment*) OR *context aware*) OR *context sensing*) OR *real time context*) OR *real time intervention*) OR *real time therapy*) OR *real time tailor*) OR *intelligent real time therapy*) OR *dynamic tailoring*) OR *electronic diary*) OR *e-diary*) OR *ambulatory monitoring*) OR *persuasive technology*) AND (*digital health intervention*) OR *digital intervention*) OR *cell phone*) OR *cellular phone*) OR *mobile application*) OR *app*) OR *mobile health*) OR *mobile device*) OR *mobile phone*) OR *mobile technology*) OR *mhealth*) OR *mobile intervention*) OR *smartphone*) OR *smart device*) OR *connected device*) OR *wearable*) OR *sensor*) OR *geographic information systems*) OR *gis*) OR *geofencing*) OR *persuasive technology*) OR *biofeedback*) AND (*adolescent*) OR *young adult*) OR *emerging adult*) OR *student*) OR *teenager*) OR *young people*) OR *youth*) AND (*health*)

OR "risk factor" OR "prevention" OR "preventive" OR "preventative" OR "detect" OR "treat" OR "healthcare" OR "medicine" OR "behavior" OR "therapy" OR "wellness" OR "well being" OR "self manage" OR "self monitor" OR "functioning" OR "disorder" OR "disease") AND (2013 OR 2014 OR 2015 OR 2016 OR 2017 OR 2018 OR 2019 OR 2020 OR 2021 OR 2022 OR 2023)

Filters manually applied: Free text in title and abstract

Search strategy for Google Scholar

("just-in-time adaptive intervention" OR "ecological momentary intervention" OR "intelligent real time therapy" OR "e-diary") AND ("adolescent" OR "teenager" OR "youth") AND ("health" OR "behavior" OR "risk factor" OR "well being" OR "wellness")

First 200 results were exported.

Search strategy for Institute of Electrical and Electronics Engineers (IEEE) Xplore Digital Library

("just-in-time adaptive intervention" OR "ecological momentary intervention" OR "ecological momentary assessment" OR "experience sampling" OR "electronic diary" OR "dynamic tailor" OR "ambulatory monitor" OR "ambulatory assessment" OR "context aware" OR "context sensing" OR "context tailor" OR "real time context" OR "real time intervention" OR "real time therapy" OR "real time tailor") AND ("digital health intervention" OR "digital intervention" OR "cell phone" OR "cellular phone" OR "mobile application" OR "app" OR "mobile health" OR "mobile device" OR "mobile phone" OR "mobile technology" OR "mhealth" OR "mobile intervention" OR "smartphone" OR "smart device" OR "connected device" OR "wearable" OR "sensor" OR "geographic information systems" OR "gis" OR "geofencing" OR "persuasive technology" OR "biofeedback") AND ("adolescent" OR "young adult" OR "emerging adult" OR "student" OR "teenager" OR "young people" OR "youth") AND ("health" OR "risk" OR "prevention" OR "preventive" OR "preventative" OR "detect" OR "treat" OR "patient management" OR "healthcare" OR "medicine" OR "behavior" OR "therapy" OR "wellness" OR "well being" OR "self manage" OR "self monitor" OR "functioning" OR "disorder")

Filters manually applied: Publication date of 1 January 2013 to 31 December 2023

Search strategy for Medical Literature Analysis and Retrieval System Online (MEDLINE)

("just-in-time adaptive intervention"[tiab] OR "ecological momentary intervention"[tiab] OR "ecological momentary assessment"[mh] OR "ecological momentary assessment"[tiab] OR "experience sampling"[tiab] OR "electronic diar"[tiab] OR "monitoring, physiologic"[mh] OR "monitoring, ambulatory"[mh] OR "ambulatory monitor"[tiab] OR "ambulatory assessment"[tiab] OR "context aware"[tiab] OR "context sens"[tiab] OR "context tailor"[tiab] OR "intelligent real time"[tiab] OR "real time context"[tiab] OR "real time intervention"[tiab] OR "real time therapy"[tiab] OR "real time tailor"[tiab] OR "dynamic tailor"[tiab]) AND ("digital health intervention"[tiab] OR "digital intervention"[tiab] OR "telemedicine"[mh] OR "telemedicine"[tiab] OR "cell phone"[mh] OR "cell* phone"[tiab] OR "mobile applications"[mh] OR "app"[tiab] OR "mobile health"[tiab] OR "mobile device"[tiab] OR "mobile technolog"[tiab] OR "mhealth"[tiab] OR "mobile intervention"[tiab] OR "smartphone"[mh] OR

"smartphone"[tiab] OR "smart device"[tiab] OR "connected device"[tiab] OR "computers, handheld"[mh] OR "wearable electronic devices"[mh] OR "wearable"[tiab] OR "sensor trigger"[tiab] OR "geographic information systems"[mh] OR "gis"[tiab] OR "geofenc"[tiab] OR "persuasive technolog"[tiab] OR "sensor technolog"[tiab] OR "biofeedback"[tiab]) AND ("adolescent"[mh] OR "adolescenc"[tiab] OR "young adult"[mh] OR "young adult"[tiab] OR "emerging adult"[tiab] OR "students"[mh] OR "student"[tiab] OR "teen"[tiab] OR "young people"[tiab] OR "youth"[tiab]) AND ("adolescent health"[mh] OR "risk factors"[mh] OR "risk"[tiab] OR "prevent"[tiab] OR "treat"[tiab] OR "patient care management"[mh] OR "health"[tiab] OR "health behavior"[mh] OR "delivery of health care"[mh] OR "healthcare"[tiab] OR "health promotion"[mh] OR "behavioral medicine"[mh] OR "behavior control"[mh] OR "behavior"[tiab] OR "therap"[tiab] OR "wellness"[tiab] OR "well being"[tiab] OR "self management"[mh] OR "self manag"[tiab] OR "self monitor"[tiab] OR "function"[tiab] OR "disorder"[tiab])

Filters manually applied: Publication date of 1 January 2013 to 31 December 2023

Search strategy for Scopus

TITLE-ABS-KEY ("just-in-time adaptive intervention" OR "ecological momentary intervention" OR "ecological momentary assessment" OR "experience sampling" OR "electronic diar" OR "ambulatory monitor" OR "ambulatory assessment" OR "context aware" OR "context sens" OR "context tailor" OR "real time context" OR "real time intervention" OR "real time therapy" OR "real time tailor" OR "dynamic tailor") AND ("digital health intervention" OR "digital intervention" OR "cell* phone" OR "mobile application" OR "mobile health" OR "mobile device" OR "mobile technolog" OR "mhealth" OR "mobile intervention" OR "smartphone" OR "smart device" OR "connected device" OR "wearable electronic device" OR "wearable" OR "sensor" OR "geographic information system" OR "gis" OR "geofenc" OR "persuasive technolog") AND ("adolescenc" OR "young adult" OR "emerging adult" OR "student" OR "teen" OR "young people" OR "youth") AND ("health" OR "risk factor" OR "prevent" OR "treat" OR "behavior" OR "therapy" OR "wellness" OR "well being" OR "self manag" OR "self monitor" OR "function" OR "disorder") AND (PUBYEAR > 2012 AND PUBYEAR < 2024)

Search strategy for Web of Science

("just-in-time adaptive intervention" OR "ecological momentary intervention" OR "ecological momentary assessment" OR "experience sampling" OR "electronic diar" OR "ambulatory monitor" OR "ambulatory assessment" OR "context aware" OR "context sens" OR "context tailor" OR "real time context" OR "real time intervention" OR "real time therapy" OR "real time tailor" OR "dynamic tailor") AND ("digital health intervention" OR "digital intervention" OR "cell* phone" OR "mobile application" OR "app" OR "mobile health" OR "mobile device" OR "mobile technolog" OR "mhealth" OR "mobile intervention" OR "smartphone" OR "smart device" OR "connected device" OR "wearable electronic device" OR "wearable" OR "sensor" OR "geographic information system" OR "gis" OR "geofenc" OR "persuasive technolog") AND ("adolescenc" OR "young adult" OR "emerging adult" OR "student" OR "teen" OR "young people" OR "youth") AND ("health" OR "risk factor" OR "prevent" OR "treat" OR "behavior" OR "therapy" OR "wellness" OR "well being" OR "self manag" OR "self monitor" OR "function" OR "disorder")

Filters manually applied: Publication date of 1 January 2013 to 31 December 2023

Search strategy for World Health Organization Global Index Medicus (WHO GIM)

("just-in-time adaptive intervention*" [tiab] OR "ecological momentary intervention*" [tiab] OR "ecological momentary assessment" [mh] OR "ecological momentary assessment" [tiab] OR "experience sampling" [tiab] OR "electronic diar*" [tiab] OR "monitoring, physiologic" [mh] OR "monitoring, ambulatory" [mh] OR "ambulatory monitor*" [tiab] OR "ambulatory assessment" [tiab] OR "context aware" [tiab] OR "context sens*" [tiab] OR "context tailor*" [tiab] OR "intelligent real time" [tiab] OR "real time context*" [tiab] OR "real time intervention" [tiab] OR "real time therapy" [tiab] OR "real time tailor*" [tiab] OR "dynamic tailor*" [tiab]) AND ("digital health intervention*" [tiab] OR "digital intervention*" [tiab] OR "telemedicine" [mh] OR "telemedicine" [tiab] OR "cell phone" [mh] OR "cell* phone" [tiab] OR "mobile applications" [mh] OR "app" [tiab] OR "mobile health" [tiab] OR "mobile device*" [tiab] OR "mobile technolog*" [tiab] OR "mhealth" [tiab] OR "mobile intervention" [tiab] OR "smartphone" [mh] OR "smartphone*" [tiab] OR "smart device" [tiab] OR "connected device" [tiab] OR "computers, handheld" [mh] OR "wearable electronic devices" [mh] OR "wearable*" [tiab] OR "sensor trigger*" [tiab] OR "geographic information systems" [mh] OR "gis" [tiab] OR "geofenc*" [tiab] OR "persuasive technolog*" [tiab] OR "sensor technolog*" [tiab] OR "biofeedback" [tiab]) AND ("adolescent" [mh] OR "adolescen*" [tiab] OR "young adult" [mh] OR "young adult*" [tiab] OR "emerging adult*" [tiab] OR "students" [mh] OR "student*" [tiab] OR "teen*" [tiab] OR "young people" [tiab] OR "youth" [tiab]) AND ("adolescent health" [mh] OR "risk factors" [mh] OR "risk*" [tiab] OR "prevent*" [tiab] OR "treat*" [tiab] OR "patient care management" [mh] OR "health*" [tiab] OR "health behavior" [mh] OR "delivery of health care" [mh] OR "healthcare" [tiab] OR "health promotion" [mh] OR "behavioral medicine" [mh] OR "behavior control" [mh] OR "behavior*" [tiab] OR "therap*" [tiab] OR "wellness" [tiab] OR "well being" [tiab] OR "self management" [mh] OR "self manag*" [tiab] OR "self monitor*" [tiab] OR "function*" [tiab] OR "disorder" [tiab])

Filters to be manually applied: Publication date of 1 January 2013 to 31 December 2023