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Article title: “Barriers to and facilitators of user engagement with web-based mental health intervention in young people: a systematic review”

Authors:

Thi Quynh Anh Ho; Long Khanh-Dao Le; Lidia Engel; Ngoc Le; Glenn Melvin; Ha N.D. Le*; Cathrine Mihalopoulos*

*: Joint senior authors

Corresponding author:

Thi Quynh Anh Ho – School of Health and Social Development, Deakin University, Melbourne, Victoria, Australia

tqho@deakin.edu.au

Supplementary material 2 – Study characteristics

First author, year	Participants	Health condition of users (baseline)	Study design	Method used to collect user feedback	Country of study
Anttila 2019	167 adolescents (15-19 years, 68.3% female); 10 teachers (program tutors for the adolescents)	-	Quantitative	Questionnaires (rating) Yes/no questions Open-ended questions	Thailand
Anttila 2020	46 adolescents (15-17 years, 74% female)	Depression or anxiety symptoms (with or without relevant diagnosis)	Mixed method	Questionnaires (rating) Open-ended questions (Interview/post-online survey)	Finland
Aspvall 2020	31 adolescents (8-18 years, 67.7% female); 6 therapists	Diagnosis of OCD (based on DSM-5 or ICD-10)	Quantitative	Open-ended feedback questions	Sweden UK Australia
Babiano-Espinosa 2021	25 children (8-17 years, 56% female); 25 parents	Diagnosis of OCD (based on DSM-5)	Quantitative	Questionnaires (rating)	Norway
Bailey 2021	15 young people (17-24 years, 60% female)	Having suicidal ideation	Qualitative	Semi-structured interview	Australia
Bannink 2014	1,087 adolescents (15.9 years, 42.87% female); nurses	-	Quantitative	Questionnaires (rating)	Netherlands
Banwell 2022	Children and young people (10-25 years, 75.3% female)	N/A	Quantitative	Questionnaires (rating)	UK
Bautista 2022	35 college students (19-24 years, 71.4% female); 5 coaches	Self-reported social anxiety (Mini-SPIN)	Quantitative	Questionnaires (rating)	US
Beames 2021	201 secondary school staffs and counselors	-	Quantitative	Survey	Australia
Benjet 2020	7,849 first year university students	-	Quantitative	Questionnaires (rating)	Mexico

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	(19.37 years, 54.73% female)				
BevanJones 2020	43 adolescents (13-23 years, 79% female); 31 parents/carers; 13 professionals	Current or past depression symptoms; or at elevated risk of depression	Mixed methods	Interview with young people/parents/cares Focus group with professionals Questionnaires (rating)	UK
Bohleber 2016	670 adolescents (16.5-18.4 years, 47.4% female)	-	Mixed methods	Survey (feedback) Semi structured interview	Switzerland
Bowman 2020	9 LGBT young adults (18-25 years); 6 service providers	-	Qualitative	Semi structured interview	Australia
Bradley 2012	13 adolescents (15-18 years, 69.23% female)	No previous mental illness diagnosis	Qualitative	Semi-structured interview	Canada
Bunnell 2017	1,997 adolescents (12-17 years, 49.4% female); their families	Disaster-affected	Quantitative	Interview	US
Calear 2013	1,477 adolescents (12-17 years, 55.92% female)	-	Quantitative RCT	Questionnaires	Australia
Chan 2016	19 university students (19-24 years, 52.63% female)	-	Qualitative	Focus group	Australia
Clark 2018	29 male adolescents (12-18 years)	-	Qualitative	Interview (individual and focus group)	Australia
Dai 2022	120 nursing students (Mean age 19.16 years, 79.63% female)	N/A	Quantitative	Questionnaires (rating)	China
Dobias 2022	1,194 teenagers (13-19 years; 35.09% female and 24.01% other)	N/A	Quantitative	Questionnaires (rating) Writing feedback	US
Ellis 2013	704 young men (16-24 years)	-	Mixed method	Questionnaires (rating) Focus group	Australia
Geirhos 2022	30 young people (12-21 years; 73% female)	Cystic fibrosis, juvenile idiopathic arthritis, or type-1 diabetes (self-reported)	Quantitative RCT	Feedback	Germany
Gericke 2021	9 university students (17-20 years, 66.67% female)	Self-reported moderate to moderately severe symptom of depression (based on PHQ-9)	Qualitative	Semi-structured interview	South Africa
González-García 2021	66 first year students (18-25 years, 86.36% female)	-	Quantitative	Survey	Spain

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Hämäläinen 2021	157 ninth-grade adolescents (15 years, 50% female)	-	Quantitative	Questionnaires (rating)	Finland
Iloabachie 2011	83 adolescents (14-21 years, 56% female); parents of those below 18 years	Reporting one core symptom of depression	Mixed method	Questionnaire (rating) Interview/Comments from the intervention	US
Kahl 2020	1,609 young people (16-25 years, 84% female)	-	Quantitative (longitudinal)	Questionnaires (rating)	Australia
Kanuri 2020	15 students (18-22 years, 13.3% female)	Generalized anxiety disorder	Mixed methods	Questionnaires (rating) Semi-structured focus group	India
Karim 2021	66 adolescents and young adults (14-26 years)	Self-reported current or prior symptoms of depression or anxiety	Mixed methods	Questionnaires (rating) Open-ended questions	US
Karyotaki 2022	100 college students (21.91 years $\pm$ 2.61, 81% female)	Mild to moderate depression and/or anxiety symptoms (self-reported PHQ-9 & GAD-7)	Quantitative RCT	Questionnaires	Netherlands
Kurki 2018	9 nurses	-	Qualitative	Interview	Finland
Lattie 2017	39 high school students (14-19 years, 74.4% female)	Self-reported symptom of depression (based on CES-D) or use of cigarettes or alcohol (based on YRBS)	Mixed methods	Questionnaire Interview	US
Leech 2020	161 young adults (18-24 years, 71.4% female)	-	Quantitative	Questionnaires (rating)	Australia
Lenhard 2016	8 adolescents (12-17 years, 50% female)	Diagnosis of OCD	Qualitative	Interview	Sweden
Lilja 2021	14 adolescents (13-18 years, 93% female); 14 parents	Mild to moderate anxiety problems	Mixed method	Interview	Sweden
Lillevoll 2014	775 high school students (15-20 years, 56.8% female)	-	Quantitative RCT	Questionnaires (rating)	Norway
Lindegaard 2022	15 refugee youth (15-26 years, 7% female)	Elevated depression and/or anxiety symptoms (self-reported HSCL-25)	Mixed method	Interview	Sweden
Mamdouh 2022	707 students (18-25 years, 60.5% female)	N/A	Quantitative	Questionnaires (yes/no, rating, qualitative)	Egypt

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Manicavasagar 2014	154 young people (12-18 years, 67.5% female)	-	Mixed method (RCT & qualitative)	Questionnaires (rating) Open-ended question	Australia
Marko 2010	83 adolescents (14-21 years, 57% female)	Self-reported one core symptom of depression	Quantitative	Survey (rating) & observation	US
Mawdsley 2022	43 young people (18-25 years, mostly female); 8 counsellors	N/A	Qualitative	Interview	UK
McDanal 2022	258 LGBT+ youths (11-17 years)	N/A	Mixed method	Questionnaires (rating) Open-ended questions	US
Nicolaou 2022	62 young women (13-25 years)	Showing early signs of an eating disorder or at-risk for developing an eating disorder (self-reported WCS)	Quantitative	Questionnaires (rating) Open-ended questions	Cyprus
Mar 2014	23 young people (18-24 years, 95.65% female)	Self-reported current or lifetime depression or anxiety, and having lifetime suicidal ideations	Qualitative	Interview	Canada
O'Bree 2021	70 young people (14-25 years, 47.14% female)	Social anxiety	Qualitative	Semi-structured interview	Australia
Pine 2020	98 teachers and health professionals	-	Qualitative	Open-ended questions	New Zealand
Păsărelu 2021	15 adolescents (12-16 years, 66.6% female)	Diagnosed with anxiety and or depressive disorders	Quantitative	Questionnaires (rating) Open-ended questions	Romania
Pretorius 2010	11 young people (16-20 years, 100% female)	Bulimia nervosa or atypical bulimia nervosa (based on DSM-IV)	Qualitative	Semi-structured interview	UK
Price 2015	2,000 adolescents (12-17 years, 51% female)	Exposed to a series of tornados	Quantitative	Observation	US
Punukollu 2020	31 pupils (11-14 years); 30 teachers	-	Qualitative	Focus group	Scotland
Richiello 2022	8 counsellors	N/A	Qualitative	Interview	UK
Rickwood 2019	2,280 young people (12-25 years, 77.76% female)	-	Quantitative	Questionnaires (rating)	Australia

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Sansom-Daly 2019	45 young people (15-25 years, 51.1% female); 19 caregivers	At the end of curative cancer treatment completion	Mixed method	Questionnaires (rating) Open-ended question	Australia
Santesteban-Echarri 2017	38 young people (15-26 years, 50% female)	Diagnosis of MDD (based on DSM-IV) and remission for MDD	Qualitative	Semi-structured interview Follow up focus group	Australia
Sawrikar 2022	248 young people (17-25 years, 41% female, 0.4% other)	N/A	Quantitative	Questionnaires (rating)	UK
Schleider 2020	694 youths (11-17 years (including six under 10 years), 78.1% female)	-	Quantitative	Questionnaires (rating)	Australia
Schmitt 2022	24 adolescents (12-17 years, 50% female); 24 parents	Showing increased anxiety and/or depression symptoms (self-reported RCADS-30)	Quantitative	Questionnaires (rating)	Spain
Shandley 2010	266 people (18-25 years, 66.17% female)	-	Quantitative	Online survey (rating, yes/no)	Australia
Smart 2021	13 adolescents (13-17 years, 76.92% female)	Primary diagnosis of anxiety disorder (based on DMS-IV)	Qualitative	Semi-structured interview	UK
Sobowale 2016	20 youths (15-21 years, 50% female); 20 parents	-	Qualitative	Focus group	Vietnam
Sweeney 2016	217 adolescents (13-18 years, 71.9% female)	-	Quantitative	Questionnaires (rating)	Australia
vanDalen 2022	14 adolescents (12-17 years, 28.6% female)	Self-reported visible difference due to any injury or condition	Mixed method	Interview	Netherlands
Watkins 2017	8 black men (18-24 years)	Never been diagnosed a mental condition	Qualitative	In-depth interview	US
Weineland 2020	14 primary care therapists	-	Qualitative	Semi-structured interview	Sweden
Wetterlin 2014	521 youth (17-24 years, 76.6% female)	-	Quantitative	Questionnaires (rating)	Canada
Windler 2019	96 adolescents and young adults (14-26 years, 75% female); 14 moderators	Depression or anxiety (self-reported)	Qualitative	Blog posts + comments (by moderators and users) Interview (with moderators)	US

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Woolderink 2015	13 adolescents (16-25 years, 92% female); 4 providers	Their parents had mental health problems or addictions	Qualitative	Semi-structured interview	Netherlands
Wuthrich 2021	15 adolescents (12-18 years, 73.3% female); 10 clinicians	Anxiety (based on the intake assessment)	Mixed method	Questionnaires (rating) and free response	Australia
Zeiler 2021	29 pupils (14-19 years, 62.1% female); 59 stakeholders (i.e., teachers, school psychologists and policy makers)	-	Mixed method	Semi-structured interview Focus group Questionnaires (rating)	Austria Spain

Note: MDD = Major depressive disorder; CES-D = The Center for Epidemiological Studies-Depression [1]; DSM-IV = The Diagnostic and Statistical Manual of Mental Disorder, Fourth Edition [2]; DSM-5 = The Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition [3]; GAD-7 = Generalized Anxiety Disorder 7-Item Scale [4]; HSCL-25 = Hopkins Symptom Checklist-25 [5]; ICD-10 = The International Classification of Diseases, Tenth Revision [6]; Mini-SPIN = Mini-Social Phobia Inventory [7]; N/A = Not applicable; OCD = Obsessive-compulsive disorder; PHQ-9 = Patient Health Questionnaire – 9 Item [8]; RCADS-30 = Revised Child's Anxiety and Depression Scale [9]; WCS = Weight Concern Scale [10]; YRBS = Youth Risk Behavior Survey [11].

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