

Table 2. Characteristics of studies that measured the actual acceptability of online and mobile phone-delivered interventions for SMI.

Project, location, diagnosis, and intervention	Author(s) & year	Study design	Recruitment setting	Intervention duration and module/ session numbers	Sample size (n)	Mean (SD) age, years	Sex (% male)
HORIZONS Australia Clinician confirmed: FEP or mood disorder with psychotic features Online interactive psychosocial interventions & moderated social networking.	Alvarez-Jimenez et al [47] 2013	Uncontrolled pilot study	Early Psychosis Prevention and Intervention Centre (EPPIC, Melbourne)	4 weeks 7 modules	20	20.3 (2.7)	50
	Gleeson et al [48] 2013	Qualitative analysis of uncontrolled pilot study	Early Psychosis Prevention and Intervention Centre (EPPIC, Melbourne)	4 weeks 7 modules	20	20.3 (2.7)	50
	Lederman, Wadley, Gleeson, Bendall, & Alvarez-Jimenez [49] 2014	Qualitative analysis of uncontrolled pilot study	Early Psychosis Prevention and Intervention Centre (EPPIC, Melbourne)	4 weeks 7 modules	20	20.3 (2.7)	50
Mental.Net Finland Clinician confirmed: Schizophrenia spectrum psychosis Online nurse-	Kuosmanen et al [50] 2009	Randomized Controlled Trial (RCT): 3 conditions: IT-based education (IT); conventional education (CE); standard care (SC)	9 acute inpatient wards in 2 psychiatric hospitals	'About' a month 5 sessions	Total: 311 IT: 100 CE: 106 SC: 105	IT: 37.3 (12.4) CE: 39.1 (12.6) SC: 37.9 (12.8)	IT: 61 CE: 61 SC: 55

supported patient education	Hätönen, Suhonen, Warro, Pitkänen, & Välimäki [51] 2010	Qualitative analysis of RCT: 3 conditions: IT-based education; conventional education; standard care	9 acute inpatient wards in 2 psychiatric hospitals	'About' a month 5 sessions	Total: 16 IT: 6 CE: 6 SC: 4	35.7 (11.92)	68.75
	Kuosmanen, Jakobsson, Hyttinen, Koivunen, & Välimäki ^b [52] 2010	Uncontrolled pilot study	2 local service user mental health associations	Not applicable (NA) (usability testing)	21	Not reported (NR)	48
	Pitkänen et al [53] 2012	Further analysis of RCT: 3 conditions: IT-based education; conventional education; standard care	9 acute inpatient wards in 2 psychiatric hospitals	'About' a month 5 sessions	Total: 311 IT: 100 CE: 106 SC: 105	IT: 37.3 (12.4) CE: 39.1 (12.6) SC 37.9 (12.8)	IT: 61 CE: 61 SC: 51
	Anttila, Välimäki, Hätönen, Luukkaala, Kaila [54] 2012	Further analysis of RCT: 3 conditions: IT-based education; conventional education;	9 acute inpatient wards in 2 psychiatric hospitals	'About' a month 6 sessions	100	37.2 (12.2)	62.4

		standard care (Reports on the IT education group)					
	Laine, Anttila, & Välimäki ^b [55] 2015	Phase 1: Qualitative needs assessment; Phase 2: Preliminary evaluation feedback	Psychiatric rehabilitation unit for adolescents in 1 hospital	N/A (felt needs and initial thoughts)	Phase 1: 6 Phase 2: 2	NR	50
Beating Bipolar UK	Barnes et al ^{a,b} [56] 2011	Focus groups	Participants from another part of the study	N/A (focus groups)	8	NR	NR
Clinician confirmed: Bipolar disorder Online interactive psychoeducation plus moderated discussion forum	Smith et al [57] 2011	RCT: 2 conditions: Beating Bipolar plus TAU; TAU only	Primary care practices & community mental health teams. Case files from the Mental Health Research Network Cymru (Wales). Members of the Manic Depression Fellowship in Wales through local group coordinators	4 months 8 modules	Total: 50 Beating Bipolar: 24 TAU: 26	Beating Bipolar: 42.7 (11.4) TAU: 44.7 (9.9)	Beating Bipolar: 45.8 TAU: 30.8
	Poole, Simpson, & Smith [58]	Qualitative analysis of RCT:	Primary care practices & community	4 months 8 modules	Total: 20	NR	High users: 57.14

	2012	2 conditions: Beating Bipolar plus TAU; TAU only	mental health teams. Case files from the Mental Health Research Network Cymru (Wales). Members of the Manic Depression Fellowship in Wales through local group coordinators		High users: 14 Low users: 6		Low users: 83.33
Health Steps for Bipolar Disorder Australia Confirmed by clinical questionnaire: Bipolar disorder Online psychoeducation plus CBT & mood monitoring	Barnes, Hadzi- Pavlovic, Wilhelm, & Mitchell [59] 2015	RCT: 2 conditions: Health Steps for Bipolar Disorder; Attention control (AC)	Online recruitment	12 months 20 sessions	Total: 233 Health Steps: 113 AC: 120	Health Steps: 40.9 AC: 37.6	Health Steps: 26.5 AC: 29.2
FOCUS US Clinician confirmed: Schizophrenia or schizoaffective disorder Mobile (smartphone) assessment prompts & various evidence- based interventions to target psychotic	Ben-Zeev et al ^b [40] 2013	Pilot usability testing	NR	N/A (usability testing)	12	45	67
	Ben-Zeev et al [60] 2014	Pre-post single- group field trial	Community- based treatment programs	1 month 3 prompts daily	33	45.9 (8.78)	61

symptoms							
Personal control in Rehabilitation (PCR) the Netherlands Clinician confirmed: FEP or schizophrenia Online patient information, self-management, psychoeducation, and digital contact with other patients and caregivers	de Leeuw, van Splunteren, & Boerema ^b [61] 2012	Uncontrolled pilot study	NR	NR	Main study: 60 Subsequent focus group: 19	NR	Main study: NR Focus group: 73.68
PRISM US Clinician confirmed: Bipolar disorder In-person psychoeducation followed by mobile symptom monitoring plus coping strategies feedback	Depp et al [62] 2010	Uncontrolled pilot study	NR	2 weeks 4 assessment prompts daily	10	41 (13.7)	NR
	Depp et al [63] 2015	RCT: 2 conditions: PRISM; paper-and-pencil mood charting	Advertisements & posters online & in community residential & drop-in settings, self-help support groups, & outpatient psychiatric clinics	10 weeks 2 survey prompts daily	PRISM: 41 Paper-and-pencil: 41	PRISM: 46.9 (11.8) Paper-and-pencil: 48.1 (12.9)	PRISM: 46.3 Paper-and-pencil: 36.6
MATS US Clinician	Depp et al [62] 2010	Uncontrolled pilot study	NR	12 weeks 3 assessment	8	NR	NR

confirmed: Schizophrenia or schizoaffective disorder Mobile symptom monitoring plus CBT techniques				prompts daily			
	Granholm, Ben- Zeev, Link, Bradshaw, & Holden [64] 2012	Uncontrolled pilot study	Outpatient residential & community settings in the Veterans Affairs San Diego Healthcare System & the San Diego County Mental Health System	12 weeks 12 messages sent each day	Total: 55 Completers: 42 Non completers 13	Completers: 48.7 (9.1) Noncomplet ers: 48.9 (7.9)	Completers: 69 Noncomplet ers: NR
MHEN Canada Clinician confirmed: Personality disorder or psychotic disorder Mobile and online personal health records, mood monitoring, prompts and reminders, health journals, and secure messaging with mental health professionals	Forchuk, Donelle, Ethridge, & Warner ^a [65], L Warner, MSc, written communication, June 2015; 2015	Secondary analysis of mixed-methods delayed- implementation study	Health care providers from 4 community mental health agencies	18 months	Total: 258 Psychotic disorder: 234 Personality disorder: 24	Overall sample (incl. other diagnoses): 37.6 (13.8)	Overall sample (incl. other diagnoses): 60.7
Coping with Voices US	Gottlieb, Romeo, Penn, Mueser, &	Open pilot study	4 community mental health clinics	10 sessions	21	40.1 (13.63)	62

Clinician confirmed: Psychotic disorder Online logs, exercises, and games based on CBT principles & coping techniques	Chiko [66] 2013						
Sweden Clinician confirmed: Bipolar disorder Type II Online CBT with psychoeducation, emotion regulation, sleep quality, cognitive restructuring, long-term goals, & relapse prevention	Holländare, Eriksson, Lövgren, Humble, & Boersma [67] 2015	Uncontrolled pilot study	Letters sent to service users on a psychiatry database held by Region örebro County	6 weeks 6 modules	4	48.75 (14.29)	25
DHFS US Clinician confirmed: Schizophrenia or bipolar disorder Digital sensor to confirm tablet ingestion, wearable sensor, mobile self-reported information, & personalized weekly report	Kane et al [68] 2013	Pilot observation study	Referrals & advertisements at the Zucker Hillside Hospital & Massachusetts Hospital	4 weeks	28 Schizophrenia group: 16 Bipolar disorder group: 12	42.8 (12.7)	64.3

Czech Republic Clinician confirmed: Bipolar disorder Online psychoeducation	Latalova et al [69] 2014	Uncontrolled pilot study	Service users hospitalized in a psychiatric department or attending a day hospital program	12 modules	12	NR	NR
MoodSwings (MS) & MoodSwings Plus (MS-Plus) Australia Confirmed through clinical interview: Bipolar disorder Online psychoeducation, discussion forums (MS), and CBT (MS-Plus)	Lauder et al ^b [70] 2013	Uncontrolled pilot study	Referrals from service providers & online	5 core modules; 3 booster modules	12	41.92 (11.16)	16.7
	Lauder et al [71] 2015	RCT: 2 conditions: MS; MS-Plus	Clinician referral, online, & advertising via conferences & consumer & professional forums	12 months 5 core modules; 3 booster modules	Total: 130 MS: 59 MS-Plus: 71	MS: 41.35 (9.85) MS-Plus: 39.87 (11.26)	MS: 24 MS-Plus: 27
Unites States Self-reported: Bipolar disorder Online social rhythm therapy, mood charting, and activity planning	Lieberman et al [72] 2011	Uncontrolled pilot study	Online advertisements	90 days	64	43 (12.5)	12.7
FIMM US Clinician confirmed: Bipolar disorder In-person psychoeducation followed by online or mobile mood monitoring	Miklowitz et al [73] 2012	2 uncontrolled pilot studies	Outpatient mood disorders program of the Warneford Hospital & Oxford Health Foundation NHS Trust	120 days Weekly ratings	Total: 19 Pilot 1: 14 Pilot 2: 5	37.2 (11.7)	31.6

and graphical reports							
ORBIT Australia Self-reported: Late stage bipolar disorder Online strategies and exercises from acceptance and commitment therapy and mindfulness-based cognitive therapy	Murray et al [74] 2015	Uncontrolled pilot study	CREST.BD (international research & knowledge exchange network) website, Facebook, & Twitter pages	3 weeks 4 modules	26	46.6 (12.9)	25 (note: sex not obtained for 10 participants due to technical error)
Bipolar Education Program (BEP) Australia Clinician confirmed: Bipolar disorder Online psychoeducation, mood charts, and support from 'informed supporters' via email	Nicholas et al [75] 2010	Qualitative analysis of RCT: 3 conditions: BEP; BEP plus informed supporters (BEP + IS); Attention control (AC)	Black Dog Institute Mood Disorders clinic, the Black Dog Institute website, community mental health organizations, general practitioners & psychiatrists, & the print media	8 weeks 8 modules	BEP: 16 BEP + IS: 9 AC: 14	NR	44
	Proudfoot et al [76] 2012	RCT: 3 conditions: BEP; BEP + IS; Attention control (AC)	Black Dog Institute Mood Disorders clinic, the Black Dog Institute website, community mental health	8 weeks 8 modules	BEP: 139 BEP + IS: 134 AC: 134	NR	BEP: 33.1 BEP + IS: 26.9 Attention control:

			organizations, general practitioners & psychiatrists, & the print media				30.6
The Netherlands Clinician confirmed: Schizophrenia or axis 2 diagnosis with psychotic symptoms In-person psychoeducation plus mobile text message goal prompts	Pijnenborg et al [77] 2010	Controlled trial: Group 1: A-B-A design (direct intervention - DI); Group 2: A-A-B-A design (waiting list - WL)	Referred by psychologists, psychiatrists, or nursing staff when impaired goal-directed behavior was observed	7 weeks	62 DI: 33 WL: 29	DI: 28.3 (8.0) WL: 25.7 (7.5)	DI: 77 WL: 86
DBT Coach US Clinician confirmed: Borderline personality disorder with comorbid substance use disorder Mobile dialectical behavior therapy	Rizvi, Dimeff, Skutch, Carroll, & Linehan ^b [31] 2011	Uncontrolled pilot study	3 outpatient DBT programs in the Pacific Northwest	10–14 days	22	33.86 (10.27)	18.2
SOAR US Clinician confirmed: Schizophrenia or schizoaffective disorder In-person	Rotondi et al ^b [78,79] 2005, 2010	RCT: 2 conditions: Telehealth website; Usual care	Referred by staff at inpatient & outpatient psychiatric rehabilitation centers & psychiatric care units	N/A	Total: 31 Telehealth: 16 Usual care: 15	38 (11)	Telehealth: 38 Usual care: 27

psychoeducation followed by online psychoeducation, therapy groups, and questions via email	Rotondi, Eack, Hanusa, Spring, & Haas [80] 2015	Usability testing of SOAR compared with other websites	6 community mental health outpatient psychiatric rehabilitation centers	N/A (usability testing)	38	42.7 (6.62)	50
	MyRecoveryPlan US Self-reported: Bipolar disorder Online psychoeducation	Simon et al [81] 2010	Randomized controlled pilot study: 2 conditions: Program plus peer coaching; Program only	Email announcement to local Depression & Bipolar Support Alliance (DBSA) chapters, DBSA website, sponsored advertisement on Google, invitations from participants to peers, & cards in mental health clinics	Program available for 4–9 months (depending on sign-up time)	Total: 118 Coaching group: 64 Program only: 54	NR
Living with Bipolar (LWB) UK Confirmed by clinical questionnaire: Bipolar disorder Online psychoeducation and CBT	Todd, Jones, & Lobban [82] 2012	Focus groups	Advertisement presented at self-help groups in the North West of England & Internet discussion forums	N/A (focus groups)	12	42 (8.85)	58.33
	Todd, Jones, Hart, & Lobban. [83] 2014	RCT: 2 conditions: LWB plus TAU; Waiting list	Voluntary sector organizations & online advertisements	6 months	Total: 122 LWB: 61	LWB: 42 (10.35) WL: 45 (11.97)	LWB: 26 WL: 30

		control (WL)			WL: 61		
WEGWEIS the Netherlands Clinician confirmed: Schizophrenia or related psychotic disorder	van der Krieke, Emerencia, Aiello, & Sytema ^b [84] 2012	Pilot usability testing	4 mental health care organizations referred by clinicians & other study participants	N/A (usability testing)	15	42	NR
Online routine outcome monitoring and personalized advice	van der Krieke et al ^b [85] 2013	RCT: 2 conditions: WEGWEIS; TAU	2 outpatient teams for psychosis: early intervention for psychosis team & a rehabilitation team	6 weeks	Total: 250 WEGWEIS: 124 TAU: 126	WEGWEIS: 37 (12.35) TAU: 40 (12.7)	WEGWEIS: 67 TAU: 36
US Clinician confirmed: Bipolar disorder Mobile assessment & semi-individualized automatic feedback	Wenze, Armeij, & Miller [86] 2014	Uncontrolled pilot study	Private psychiatric hospital: inpatient, partial hospital, and outpatient settings	2 weeks	14	40.86 (12.5)	28.57

^a Study also included participants with different diagnoses; results for these participants are not reported in this review.

^b Study included data from caregivers and/or clinicians; results from these participants are not reported in this review.