**Table S1. Characteristics of included RCTs**

| **-Studies****-Country****-Study sponsorship** | **Total (n)** | **-Diagnosis****-Inclusion criteria** | **-Mean age ± SD (Range, years)** | **-Ethnicity****-% Male** | **Baseline severity score****(Rating scale)** | **-Treatment****-Outcomes** | **Allocation (n)** | **Intervention period (w)****F/U period (w)** | **Psychiatrist or therapist’s/Participant's location in telepsychiatry arm** | **Connection speed (kbit/sec)****Display/****Webcam equipment** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Chronic tic disorders (1 study, n=20)** |
| (Himle et al., 2012)USTourette Syndrome Association, Inc. | 20 | CTDs including TDAges 8-17, who met DSM-IV-TR criteria for TD or CTD and their parents. Additional eligibility criteria included(1) YGTSS Total Tic Severity Score > 14 for TD or > 10 for CTD;(2) intellectual functioning in the low-average range or above(3) no history of behavioral treatment for tics and(4) no self- reported recent (i.e., in the prior 4 weeks) changes in medication status or planned changes in medication status during the course of the study. | 11.6±2.7(8-17) | NR94.4 | 23.7 (YGTSS Total) 33.2 (PTQ) | Comprehensive Behavioral Intervention for Tics (CBIT)YGTSS, PTQ, CGI-I | Telepsychiatry (10)Face-to-Face (10) | 1016 | University-based Tic Disorder Specialty Clinic /Local clinic | 12827-inch Sony High-Definition monitor |
| **Depressive Disorder (N=8, 9 reports n=1,062)** |
| (Choi et al., 2014a)USAcademia | 121 | Depressed symptomsAge >50; non-Hispanic White, Black, or Hispanic; English speaking; and a score of ≥15 on the 24-item HAMD | 65.21±9.22(50-89) | Non-Hispanic White, Black, andHispanic22.3 | 24.55(HAMD 24) | PSTHAMD | Telepsychiatry (43)Face-to-Face (42)Telephone support call (36) | 624 | NR/Patient residence | NR15.6-inch LED display, 720p |
| (Choi et al., 2014b)USAcademia | 158 | MDDEnglish-speaking, non-Hispanic White, Black/African American, and Hispanic homebound (as defined in Medicare) adults aged 50 or older, who were served by a large home-delivered meal program and four other aging-service agencies in Central Texas. The inclusion criterion for depression was HAMD ≥ 15 (24-item Hamilton Rating Scale for Depression). | 64.8±9.18(50 years and older) | Non-Hispanic White,Black/African, AmericanHispanic homebound21.5 | 23.89(HAMD 24) | PSTHAMD/WHODAS II | Telepsychiatry (56)Face-to-Face (63)Telephone support call (39) | 636 | NR/Patient residence | NRLaptop, Skype |
| (Egede et al., 2015)/(Egede et al., 2016)USDepartment of Veterans Affairs | 241 | MDDVeterans (aged ≥58 years) meeting DSM-IV criteria for major depressive disorder | 63.9±5.1(58 years and older) | White, Black47.6 | 20.0 (GDS)26.8 (BDI) | Behavioural activation therapyGDS, BDI | Telepsychiatry (120)Face-to-Face(121) | 852 | NR | NR4” LCD colour screen (270k pixels), real-time motion display (18 frames per s), KMEA TV500SP |
| (Hungerbuehler et al., 2016)BrazilAcademia | 107 | Mild depressionIndividuals who lived in São Paulo and the surrounding areas, were between the ages of 18 and 55 years, had broadband Internet access at home, and showed symptoms of depression (PHQ-9 ≥ 5) were assessed for eligibility. | 35.64±8.33(18-55) | Brazilian29.0 | 7.05(HAMD)127.12(MHI)28.05(CSQ)70.54(WAI) | Psychiatric consultationsHAMDMHICSQWAI | Telepsychiatry(53)Face-to-Face(54) | 2648 | University medical center/ Patient residence | NRNR |
| (Luxton et al., 2016)USUS Army | 121 | Major or Minor depressive disorder(a) Met diagnostic criteria for minor depressive disorder or majordepressive disorder, as determined by the SCID-I/P(b) High-speed Internet access at home (384 kB/s minimum) (c) If taking psychoactive medications, has maintained a stable regimen for a minimum of 30 days prior to study entry (d) Informed consent read and signed | NR(19-65) | White, non-Hispanic;Black, non-Hispanic;Asian, non-Hispanic;Native American, non-Hispanic; Hispanic, any race; Other/unknown81.8 | 9.67（BHS）28.6（BDI-II） | Home-based telebehavioral health (HBTBH)BHSBDI-II | Telepsychiatry(62)Face-to-Face(59) | 812 | NR/ Patient residence | NRNR |
| (Moreno et al., 2012)USAcademia | 167 | MDDAn adult of Hispanic ethnicity, willing to be randomly assigned, to participate in the program for 6 months, to be followed up, and to have a diagnosis of major depression disorder based on the MINI.PHQ-9 screen to ascertain that the patient scored 10 or higher (indicating possible moderate depression). | 42.8±12.043.2±11.9(Range, NR) | Hispanic11.4 | 17.8(PHQ-9) | Psychiatric education, medication and general medical careMADRSPHQ-9QLESSDS | Telepsychiatry (80)Face-to-Face (87) | 24— | Community health center/Community health center | NRLogitechQuickCam Orbit AF |
| (Nelson et al., 2003)USAcademia | 28 | NR | 10.3±2.0(8-14) | Caucasian 71.4%, Hispanic 21.4%, African 7.1%71.4 | 13.96(CDI) | CBTCDI | Telepsychiatry (14)Face-to-Face(14) | 8— | University medical center/School health room | 128NR |
| (Ruskin et al., 2004)USAcademia | 119 | MDDPatients met the inclusion criteria if they scored 16 or higher on the Hamilton depression scale and met the DSM-IV (SCID) criteria for one of the following five diagnoses: major depressive disorder, dysthymic disorder, adjustment disorder with depressed mood, mood disorder due to a general medical condition, or depressive disorder not otherwise specified. | 49.7±12.8(NR) | African American, Caucasian, Hispanic, Asian88.24 | ≥16(HAMD 24) | Psychotropic medication, psychoeducation, brief supportive counsellingHAMD 24 | Telepsychiatry (59)Face-to-Face(60) | 26— | (1) Psychiatrists located in Baltimore saw patients located in clinics at Perry Point or Cambridge (2) vice versa | 384VTEL software |
| **Depressive Disorders****Included studies (Efficacy):**Studies=8 (9 reports), n=1,062, Mean 132.8 patients/Study**Country:**US (Study=7, n=955)Brazil (Study=1, n=107)**Sponsor:**Academia (Study=6, n=700)Department of Veterans Affairs (Study=1, n=241)US Army (Study=1, n=121) | **Mean age:**47.5±18.6 (range=10.3-65.2) years**% Male:**46.7%**Intervention period:**Mean=13.8 weeks (range 6−26)**F/U period:**Mean=34.4 weeks (range 12−52)**Treatment**PST (Study=2, n=279)Psychiatric education (Study=2, n=286)Behavioral activation therapy (Study=1, n=241)CBT (Study=1, n=28)Home-based tele-behavioral health (Study=1, n=121)Outpatient treatment (Study=1, n=107) |
| **Generalized Anxiety Disorder (1 study, n=115)** |
| (Watts et al., 2020)CanadaAcademia | 115 | GADPatients were to have a primary diagnosis of GAD, be aged between 18 and 75, and be fluent in French. In addition, participants had to agree not to receive any other psychotherapy during the course of treatment and to refrain from starting or ceasing anxiolytic or antidepressant medication. | Telepsychiatry 43±15Face-to-Face 40±16(Range, 18-75) | White, Non-Hispanic17.39 | 5.5 (GAD) | CBTWAI | Telepsychiatry (50)Face-to-Face (65) | 15— | NR/Local clinic | 1.544 Mbp/secTandberg MXP 95 codec videoconference system |
| **Obsessive Compulsive Disorder (1 study, n=22)** |
| (Comer et al., 2017a)USAcademia | 22 | OCDChild between ages of 4–8 years.Child meets diagnostic criteria for a principal diagnosis of OCD for at least 3 months in duration.Child and participating parent(s) speak English. Family home equipped with a computing device. | 6.65±1.3(Range, 4-8) | Caucasian/Non-Hispanic/LatinoHispanic/LatinoBiracial59.1 | Internet: 22.9Clinic: 23.2(CY-BOCS)Internet: 5.1Clinic: 4.9(OCD CSR)Internet: 4.9Clinic: 4.6(CGI-S)Internet: 48.0Clinic: 54.6(CGA) | CBTCY-BOCSOCD CSRCGI-SCGAS | Telepsychiatry(11)Face-to-Face(11) | 1426 | University medical center / Patient residence | NRNR |
| **PTSD (11 studies, 12 reports, n=1,289)** |
| (Acierno et al., 2016)USDepartment of Defense | 265 | PTSD Full criteria PTSD or sub- threshold PTSD as defined belowSubthreshold PTSD was defined as meeting PTSD Criteria A (traumatic event) and B (re-experiencing), and either C (avoidance) or D (hyperarousal). Veterans meeting either this subthreshold definition, or full criteria PTSD were eligible for participation. | 45.6±14.9(Range, NR) | White, Black, Hispanic, Others94.4 | 58.3 (PCL)25.3 (BDI) CAPS PTSD Dx N=179 (77.2%) | Behavioral Activation and Therapeutic Exposure (BA-TE)PCL-MBDI-Ⅱ | Telepsychiatry(131)Face-to-Face(134) | 152 | NR/Patient residence | NRNR |
| (Acierno et al., 2017)USDepartment of Veterans Affairs | 150 | PTSDPTSD eligibility and requirement that the criterion A event (i.e., the traumatic event) be combat-related.To enhance generalizability of study findings, (a) veterans from each of the major conflicts comprising the majority of those served by the VA were included (i.e., OIF/OEF/OND, Persian Gulf, & Vietnam), and (b) participants receiving psychotropic medication or case management services for PTSD, mental health treatment for other psychiatric disorders, or those who met criteria for substance abuse were not excluded from participation. | 41.8±14.5(Range, NR) | White, Black, Hispanic, Others96.2 | 59.2 (PCL M)27.7 (BDI) | Prolonged ExposurePCL-MBDI-Ⅱ | Telepsychiatry(74)Face-to-Face(76) | 1026 | VA medical center/Patient residence | NRNR |
| (Frueh et al., 2007)USAcademia | 38 | PTSDPatients met diagnostic criteria for PTSD, were non-psychotic and were not abusing alcohol or other substances. | Telepsychiatry 55±5Face-to-Face 56±5(Range, NR) | African American, Caucasian, American Indian/Alaskan NativeNR | 64.6 (PCL)24.4(BDI)2.11 (SDL-90-R-GSI)1.39 (Social activities inside home)1.37 (Social activities outside home)4.05 (Quality of social relationship)  | CBTPCL, BDI, SDL-90-R-GSI, Social activities inside home, Social activities outside home, Quality of social relationships | Telepsychiatry (17)Face-to-Face (21) | NR14 | NR | 384NR |
| (Haghnia et al., 2019)IranAcademia | 71 | PTSDVeterans injured in the so-called “8-year Imposed War” who suffered from PTSD, were aged between 45 and 60 years old, and were referred to Tabriz Fajr Psychiatric Hospital for treatment. | Telepsychiatry51±3Face-to-Face 49±3(45-60) | NR100 | NR | Standardized medical careAccess to health services, completion of therapy sessions, and patient satisfaction | Telepsychiatry（34）Face-to-Face(37) | NR12 | Local hospital/ Local hospital | NRNR |
| (Liu et al., 2020)USAcademia | 207 | PTSDInclusion criteria were adult (age ≥18) male and female patients who were competent to provide informed consent, had a primary diagnosis of PTSD, and were fluent in English. | 48.4±14.1(18 years and older) | HispanicCaucasianBlackOthers77.4 | Telepsychiatry70.4Face-to-Face72.5(CAPS)Telepsychiatry59.4Face-to-Face59.4(PCL–S)Telepsychiatry15.3Face-to-Face16.5 (PHQ–9) | Cognitive processing therapy (CPT)CAPSPCL-SPHQ-9 | Telepsychiatry (103)Face-to-Face (104) | NR24 | VA hospital/Community clinic | NRNR |
| (Maieritsch et al., 2016)USAcademia | 90 | PTSDAn OEF/OIF/OND veteran, English-speaking, a current diagnosis of PTSD on CAPS, a military-related traumatic event (i.e., combat, sexual assault, non-combat physical assault), on a stable psychotropic medication regimen for at least one month prior to baseline assessment, and willing to maintain that regimen over the course of the study. | 30.93±6.05(Range, NR) | NR93.3 | 80.0 (CAPS)60.4(PCL)29.2(BDI-II) | Cognitive processing therapyCAPSPCLBDI-ⅡWAI | Telepsychiatry (45)Face-to-Face (45) | 12― | VA hospital /VA hospital (distant from where they were recruited) | NRNR |
| (Morland et al., 2010)/(Greene et al., 2010)USDepartment of Veterans Affairs | 125 | PTSD(1) PTSD (current or lifetime) determined by CAPS (2) score of 20 or higher on the 10-itemtrait anger subscale of STAXI-2, indicating moderate to severe anger problems(3) stable medication regimen for a minimum of 2 months prior to study entry | Telepsychiatry54.8±9.3Face-to-Face54.7±9.7(Range, NR) | White (32.8%)Asian (27.2%)Pacific Islander (32.8%)Other (5.6%)100 | 55.8 (STAXI-2 Anger expression)27.9 (STAXI-2 Trait anger)109.6 (NAS-T)65.2 (PCL-M) | Anger ManagementSTAXI-2NAS-TPCL-M | Telepsychiatry (61)Face-to-Face (64) | 626 | Hospital | NRNR |
| (Morland et al., 2014)USDepartment of Defense | 125 | PTSD(1) a diagnosis of current PTSD, determined by CAPS was required, and (2) participants taking psychotropic medication were required to be on a stable medication regimen for a minimum of 45 days prior to study | 55.3±12.5(Range, NR) | Asian, Caucasian, Pacific Islander, Hispanic, Black, and Native American100 | 70.4 (CAPS) | CPTCAPS | Telepsychiatry (61)Face-to Face (64) | 1226 | Honolulu VA/VA clinic or Vet Center | NRTandberg 880 Model Health Care System |
| (Morland et al., 2015)USDepartment of Defense | 126 | PTSDDiagnosis of current PTSD established by CAPS and a stable psychotropic medication regimen for a minimum of 45 days prior to study entry for those taking such medications | 46.4±11.9(Range, NR) | Asian, Caucasian, Pacific Islander, Other (Hispanic/Black/Native American)0 | 67.1 (CAPS)57.6 (PCL) | CPTCAPS | Telepsychiatry (63)Face-to-Face (63) | 12 (once or twice a week for a total of 12)26 | NR | NRTandberg880 Model Health Care System |
| (Strachan et al., 2012)USDepartment of Defense | 40 | PTSDVeterans of OPERATION ENDURING/IRAQI FREEDOM (OIF/OEF) who met criteria for PTSD or subthreshold PTSD, defined as fulfillment of Criteria A (traumatic event) and B (reexperiencing), and either C (avoidance) or D (hyperarousal). | 30.4±7.6(Range, NR) | Caucasian 45.0%92.5 | 57.9 (PCL-M)23.2 (BDI-II)23.5 (BAI) | BA-TEBAI, BDI, CAPS, PTSD Checklist-Military | Telepsychiatry (22)Face-to-Face (18) | 8— | NR/Patient residence | NRNR |
| (Yuen et al., 2015)USDepartment of Veterans Affairs | 52 | PTSDVeterans and military personnel meeting DSM-IV-TR criteria for PTSD per the Clinical Administered PTSD Scale were eligible. | 43.98±15.18(Range, 20-75) | White, Black, Hispanic98.1 | 44.0 (PCL)28.4 (BDI)25.0 (BAI) | PECAPS, PCL, BAI, and BDI | Telepsychiatry (23)Face-to-Face (29) | 12— | NR/Patient residence | NRAK Summit, Skype, Jabber, Facetime, or analog videophone with a built-in camera and video screen |
| **Eating disorder (1 study, 2 reports n=128)** |
| (Mitchell et al., 2008)/(Ertelt et al., 2011)USAcademia | 128 | Bulimia nervosa or eating disorderAt least 18 years of ageDSM-IV criteria for bulimia nervosa (purging or non-purging subtype) or eating disorder-not otherwise specified | Telepsychiatry28.4±10.4Face-to-Face29.6±10.9(Range, 18 years and older) | 96.1% Caucasian1.6 | 19.1 (Telepsychiatry)21.9 (Face-to-Face),(Binge-eating episode frequency)Telepsychiatry28.5Face-to-Face31.3(Vomiting episode frequency) | CBTthe number of episodes | Telepsychiatry (62)Face-to Face (66) | 1648 | NR | NRNR |
| **Insomnia (1 study, n=65)** |
| (Arnedt et al., 2021)USAcademia | 65 | Insomnia Participants were recruited from November 2017 to June 2019 via advertisements, clinical referrals, and from patients pre-setting for treatment to sleep clinics. Individuals who were 18 years of age or older and met ICSD-3 criteria for chronic insomnia disorder were eligible to participate. | 43.7±17.4(Range, 18 years and older) | White/Caucasiannon-white/more than one race/unknown30.3 | Telepsychiatry: 17.5 Face-to-Face: 17.2(Insomnia Severity Index) | CBT(comparing face-to-face and telemedicine delivery (via the AASM SleepTMplatform)ISI | Telepsychiatry(33)Face-to-Face(32) | NR12 | Medical facility / Patient residence | NRNR |
| **Disruptive Behavior Disorders (1 study, n=40)** |
| (Comer et al., 2017b)USAcademia | 40 | DBD1. Child between ages of 3–5 years (inclusive)2. Independent evaluator assigned a principal diagnosis of DSM-IV ODD, CD, and/or DBD-NOS, based on the K-DBDS3. ECBI in clinical range (i.e., >132)4. Child and participating caregiver(s) speak English5. Family home equipped with a computing device (e.g., desktop computer, laptop) | 3.95±0.9(Range, 3-5) | Non-HispanicEthnic racial minority83.5 | Internet:157.6Clinic:160.0(ECBI intensity score)Internet:67.3Clinic:64.3(CBCL)Internet:4.1Clinic:3.7(CGI)Internet:55.3Clinic:57.3(CGAS)Internet: 21.1Clinic:22.2(ECBI problem score) | PCTTECBI intensity scoreCBCLCGICGASECBI problem score | Telepsychiatry(20)Face-to-Face(20) | NR24 | Clinic/Patient residence | NRNR |
| **Substance Abuse (1 study, n=85)** |
| (King et al., 2014)USAcademia | 85 | Substance abuse Patients were eligible for the study if they:1) were drug abstinent and counseling adherent for the previous 30 days; 2) stated that they had a functioning computer with Internet connection; 3) were interested in receiving standard individual counseling via web-based videoconferencing and agreed to register with eGetgoing within 8 weeks of study enrollment; and 4) agreed to randomized assignment to study condition. | 40.9±10.7(Range, NR) | NR44.1 | NR | eGetgoing / counselingUrinalysis testing | Telepsychiatry (50)Face-to-Face (35) | 12— | Medical center/Patient residence | NRNR |
| **Mild Dementia, Mild Cognitive Impairment, or Vascular Cognitive Impairment (2 studies, n=83)** |
| (Mosca et al., 2020)ItalyAcademia | 61 | MCI and VCI(1) MMSE score >24; (2) age between 65 and 80 years old; (3) school attendance >3 years; (4) right- handed according to the Edinburgh Scale; (5) Italian language as mother tongue; (6) normal or corrected visual and auditory acuity; (7) preserved physical mobility or manual dexterity. | 73.9 ± 4.0(65-80) | NR42.6 | 21.7(Montreal Cognitive Assessment) | RehabilitationDropout rate | Telepsychiatry(29)Face-to-Face(32) | NR48 | NR/Patient residence | NRNR |
| (Poon et al., 2005)Hong KongAcademia | 22 | Mild dementia or MCIPotential candidates were first screened by C-MMSE. Subjects who scored below the cut-off points (taking into account their educational level) for cognitive impairment were referred to a geriatrician for confirmation of diagnosis. | NR(Range, NR) | NRNR | 18.73 (C-MMSE)5.64 (C-RBMTT-profile)154.82 (HDS) | Cognitive interventionC-MMSE, C-RBMTT-profile, HDS | Telepsychiatry (11)Face-to-Face(11) | >6— | Shatin Hospital /Social center | 1.5 Mbp/secNR |
| **Two or more diagnoses included (4 studies, n=683)** |
| (De Las Cuevas et al., 2006)SpainAcademia | 140 | Not specified. (140 consecutive psychiatric outpatients recruited from the Mental Health Centre of San Sebastian de la Gomera, in the Canary Islands) | NR | NR33.6 | 90.7%(CGI-S "Markedly ill") | ConsultationsCGI-S, CGI-I, SCL-90R(GSI, PSDI and PST) | Telepsychiatry (70)Face-to-Face (70) | 24— | University hospital/Mental Healthcare Centre | 384 to 768Polycom 512 View Station and high-quality enhanced video |
| (O'Reilly et al., 2007)UKAcademia | 495 | Multiple diagnosisPatients were eligible if they were aged 18 to 65, from the Thunder Bay region (officially designated as an underserviced area for psychiatry), and referred by a family doctor to the psychiatric outpatient department of the local general hospital. | NR(18-65) | NR37.0 | 57.6(Global severity index of the BSI) | Usual careBSI, CSQ, GSI, MCS | Telepsychiatry (241)Face-to-Face (254) | 16— | Clinic/Regional hospital | 384Polycom 512 View Station and a Sony Trinitron 68.5-centimeter diagonal |
| (Shulman et al., 2017)USAcademia | 22 | MultipleThe study participants were recruited from active patients in the outpatient clinic who were between the ages of 18 and 65. Inclusion criteria required participants to have missed two scheduled clinic appointments due to no-show or cancellation with less than 24 hours’ notice over a two-month period at any point over the past six months. | Telepsychiatry 42±15Face-to-Face37±10(Range, 18-65) | CaucasianBlackAsianHispanic36,4 | 41(no-show rate) | psychotropic medication and talk therapyno-show rate | Telepsychiatry (11)Face-to-Face (11) | 26NR | Clinic/Patient residence | NRNR |
| (Stubbings et al., 2013)AustraliaAcademia | 26 | Mood or anxiety disordersA primary diagnosis of DSM-IV-TR Axis-I disorder, aged 18-65 years old, and living in Perth, Western Australia | 30±11(18-59)(Range, 18-65) | NR42.3 | 18.2 (DASS depression)14.0 (DASS anxiety)23.8 (DASS stress)3.34 (QLES) | CBTDASS (depression, anxiety, stress), QLES | Telepsychiatry (14)Face-to-Face (12) | 1218 | Clinics/Clinics | 100Mbps/secNR |
| **Chronic tic disorders:** Study=1, n=20**Depressive disorders:** Study=8 (9 reports), n=1,062**Mood and anxiety Disorders:** Study=1, n=115**OCD:** Study=1, n=22**PTSD:** Study=11 (12 reports), n=1,312**Eating disorder:** 1 study (2 reports) n=128**Insomnia:** Study=1, n=65**DBD:** Study=1, n=40**Opioid dependence and comprehensive substance abuse:** Study=1, n=85**Mild dementia or MCI:** Study=2, n=83**Two or more diagnoses included:** Study=4, n=683 | **Total study:** 32 RCTs (35 reports)**Mean duration (weeks):** 23.7±13.3**Total participants:** n= 3,592, **Participants per study:** Median=111 (range: 22-495)**Mean age:** 41.3±17.8**% Male:** 58.2±33.7**Country:** USA (Study=24, n=2,555), Italy (Study=1, n=61), Australia (Study=1, n=26), Brazil (Study=1, n=107), Canada (Study=1, n=115), Hong Kong (Study=1, n=22), Iran (Study=1, n=71), Spain (Study=1, n=140), UK (Study=1, n=149) |

**Abbreviations:**

ADHD=Attention-Deficit Hyperactivity Disorder, ADIS-C/P=Anxiety Disorders Interview Schedule for Children and Parents, ARSMA II=Acculturation Rating Scale for Mexican Americans, BAI= Beck Anxiety Inventory, BATD=Behavioral Activation Treatment for Depression, BATE=Behavioral Activation and Therapeutic Exposure, BDI=Beck Depression Inventory, BHS=Beck Hopelessness Scale, BN=Bulimia Nervosa, BSI=Brief Symptom Inventory, BTPS=Barriers to Treatment Participation Scale, Cansas=Camberwell Assessment of Needs Short Appraisal Schedule, CAPS=Clinician-Administered PTSD Scale, CBCL=Child Behavior Checklist, CBT=Cognitive Behavioral Therapy, CD=Conduct Disorder, CDI=Children’s Depression Inventory, CGAS= Children’s Global Assessment Scale, CGI-S/I=Clinical Global Impression-Severity and Improvement Scales, CIS-P=Columbia Impairment Scale, Parent-Report Version, C-MMSE=Cantonese version of Mini-Mental State Examination, CPOSS=Charleston Psychiatric Outpatient Satisfaction, CPT=Cognitive Processing Therapy, C-RBMT=Cantonese version of Rivermead Behavioural Memory test, CSQ-8=Client Satisfaction Questionnaire, CSR=Clinical Severity Ratings, CTD=Chronic Tic Disorder, CY-BOCS=Children’s Yale-Brown Obsessive-Compulsive Scale, DASS=Depression Anxiety and Stress Scale, DBD-NOS=Disruptive Behavior Disorder-Not Otherwise Specified, DSM-IV-TR=Diagnostic and Statistical Manual of Mental Disorders fourth edition text revision, ECBI=Eyberg Child Behavior Inventory, EPDS=Edinburgh Postnatal Depression Scale, FAS-PR=Family Accommodation Scale-Parent Report, FES=Family Empowerment Scale, GAD=Generalized Anxiety Disorder, GCCT-MSH=Georgia Court Competency Test–Mississippi State Hospital revision, GDS=Geriatric Depression Scale, GSI=Global Severity Index, HAMD=Hamilton Rating Scale for Depression, HDS=Hierarchic Dementia Scale, HoNOS=Health of the Nation Outcome Scales, HSCL=Hopkins Symptom Checklist, IASMHS=Inventory of Attitudes Toward Seeking Mental Health Services, ICER=Incremental Cost and Incremental Cost-Effectiveness Ratio, K-DBDS=Kiddie-Disruptive Behavior Disorder Schedule, MADRS=Montgomery-Åsberg Depression Rating Scale, MANSA= Manchester Short Assessment of Quality of Life, MCI=Mild Cognitive Impairment, MDD=Major Depressive Disorder, MHI=Mental Health Inventory, MINI= Mini-International Neuropsychiatric Interview, MMSE=Mini Mental State Examination, NAS-T=Novaco Anger Scale total score, NR=not reported, OCD=Obsessive-Compulsive Disorder, ODD=Oppositional Defiant Disorder, OEF/OIF/OND=Operation Enduring Freedom, Operation Iraq Freedom and Operation New Dawn, PCIT=Parent–Child Interaction Therapy, PCL-M=PTSD Checklist-Military Version, PE=Prolonged Exposure, PHQ-9=the nine-item Patient Health Questionnaire, PRCQ=Patient Reported Costs Questionnaire, PSS=Parental Stress Scale, PST=problem solving therapy, PTQ=Parent Tic Questionnaire, PTSD=Post Traumatic Stress Disorder, QALY=Quality-Adjusted Life-Years, QLES= Quality of Life Enjoyment and Satisfaction scale, RCT=randomized controlled trial, SCID=Structured Clinical Interview, SCID-I/P=Structured Clinical Interview for the DSM–IV Axis I Disorders (Research Version, Patient ed.), SDS=Sheehan’s Disability Scale, SF-36=Medical Outcomes Study Short Form, STAXI-2=State-Trait Anger Expression Inventory-2, TAI= Therapy Attitude Inventory, TAU=Treatment as Usual, TD=Tourette Disorder, TEI=Treatment Evaluation Inventory, TSQ=Telemedicine Satisfaction Questionnaire, VA= Veterans Affairs, VADRS=Vanderbilt ADHD Rating Scales, VAMC=Veterans Affairs Medical Center, VCI=Vascular Cognitive Impairment, WAI=Working Alliance Inventory, WHODAS=World Health Organization Disability Assessment Schedule, YGTSS= Yale Global Tic Severity Scale

**Table S2 (A). Summary of pooled results of secondary outcomes (dichotomous outcomes)**

| **Outcomes** | **# of Studies** | **# of participants** | **RR** | **95% CI** | ***p* value** | **Heterogeneity** | **NNTB/NNTH (95% CI)** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Lower limit** | **Upper limit** | ***p* value** | ***I2*** |
| **Chronic tic disorders** |
| All-cause discontinuation | N=1 | 20 | 0.333 | 0.041 | 2.686 | 0.302 | − | − | NA |
| Treatment response | N=1 | 17 | 1.688 | 0.734 | 3.881 | 0.218 | − | − | NA |
| **Depressive disorders** |  |  |  |  |  |  |  |  |  |
| All-cause discontinuation | N=6 | 874 | 1.030 | 0.800 | 1.325 | 0.819 | 0.656 | 0.0 | NA |
| Discontinuation due to lack of efficacy | N=1 | 107 | 1.019 | 0.065 | 15.87 | 0.989 | − | − | NA |
| Remission | N=1 | 119 | 1.114 | 0.696 | 1.782 | 0.653 | − | − | NA |
| Treatment response | N=2 | 343 | 1.116 | 0.821 | 1.518 | 0.483 | 0.895 | 0.0 | NA |
| Death | N=1 | 241 | 1.260 | 0.347 | 4.580 | 0.725 | − | − | NA |
| **Generalized anxiety disorder** |
| All-cause discontinuation | N=1 | 148 | 1.390 | 0.741 | 2.609 | 0.305 | − | − | NA |
| **Obsessive compulsive disorder** |
| All-cause discontinuation | N=1 | 22 | 0.500 | 0.053 | 4.745 | 0.546 | − | − | NA |
| Needed higher level of care | N=1 | 22 | 3.000 | 0.135 | 66.526 | 0.487 | − | − | NA |
| Scheduling difficulties | N=1 | 22 | 0.333 | 0.015 | 7.392 | 0.487 | − | − | NA |
| **Post-traumatic stress disorder** |
| All-cause discontinuation | N=10 | 1,237 | 0.956 | 0.776 | 1.179 | 0.675 | 0.212 | 25.2 | NA |
| Attendance | N=2 | 251 | 0.961 | 0.852 | 1.083 | 0.515 | 0.951 | 0.0 | NA |
| TEQ (Homework) | N=1 | 126 | 0.962 | 0.799 | 1.159 | 0.685 | − | − | NA |
| TEQ (Treatment Completion) | N=1 | 126 | 0.960 | 0.796 | 1.157 | 0.666 | − | − | NA |
| **Eating disorder** |
| All-cause discontinuation | N=1 | 128 | 0.909 | 0.681 | 1.213 | 0.516 | − | − | NA |
| Objective binge-eating episode | N=1 | 128 | 0.882 | 0.622 | 1.251 | 0.481 | − | − | NA |
| Objective binge-eating episode and purging | N=1 | 128 | 0.784 | 0.432 | 1.425 | 0.425 | − | − | NA |
| Purging | N=1 | 128 | 0.741 | 0.433 | 1.265 | 0.272 | − | − | NA |
| **Insomnia** |  |  |  |  |  |  |  |  |  |
| All-cause discontinuation | N=1 | 65 | 1.939 | 0.185 | 20.350 | 0.581 | − | − | NA |
| Remission | N=1 | 65 | 0.905 | 0.526 | 1.557 | 0.718 | − | − | NA |
| Treatment response | N=1 | 65 | 0.921 | 0.619 | 1.371 | 0.686 | − | − | NA |
| **Disruptive behavior disorders** |
| All-cause discontinuation | N=1 | 40 | 0.625 | 0.247 | 1.584 | 0.322 | − | − | NA |
| **Substance abuse** |
| **All-cause discontinuation a)** | N=**1** | **85** | **37.41** | **2.356** | **594.1** | **0.010** | − | − | **NNTH=2 (2, 3)** |
| **Mild dementia or mild cognitive impairments** |
| All-cause discontinuation | N=1 | **61** | **0.552** | **0.312** | **0.975** | **0.040** | − | − | **NNTB=4 (2, 26)** |
| **Two or more diagnoses included** |
| All-cause discontinuation | N=3 | 661 | 1.014 | 0.831 | 1.238 | 0.891 | 0.790 | 0.0 | NA |
| Any hospitalization in a psychiatric unit in year after initial assessment | N=1 | 470 | 0.915 | 0.473 | 1.772 | 0.793 | − | − | NA |
| CGI-I≦2 | N=1 | 140 | 1.057 | 0.885 | 1.261 | 0.542 | − | − | NA |
| CGI-S≦2 | N=1 | 140 | 1.068 | 0.837 | 1.363 | 0.595 | − | − | NA |
| DASS Depression Improved | N=1 | 16 | 1.556 | 0.787 | 3.076 | 0.204 | − | − | NA |
| DASS Depression Recovered | N=1 | 16 | 1.815 | 0.720 | 4.572 | 0.206 | − | − | NA |
| DASS Depression Unchanged | N=1 | 16 | 0.194 | 0.027 | 1.375 | 0.101 | − | − | NA |
| DASS Stress Improved | N=1 | 16 | 3.111 | 0.943 | 10.27 | 0.062 | − | − | NA |
| DASS Stress Recovered | N=1 | 16 | 2.722 | 0.802 | 9.241 | 0.108 | − | − | NA |
| DASS Stress Unchanged | N=1 | 16 | 0.156 | 0.023 | 1.047 | 0.056 | − | − | NA |
| Depression No Change | N=1 | 6 | 1.000 | 0.183 | 5.460 | 1.000 | − | − | NA |
| Depression Recovered | N=1 | 6 | 1.000 | 0.183 | 5.460 | 1.000 | − | − | NA |
| GAD No Change | N=1 | 4 | 0.667 | 0.044 | 10.05 | 0.770 | − | − | NA |
| GAD Recovered | N=1 | 4 | 1.200 | 0.398 | 3.616 | 0.746 | − | − | NA |
| GSI Moved from above to below cutoff score | N=1 | 130 | 1.131 | 0.801 | 1.599 | 0.484 | − | − | NA |
| GSI-not recovered | N=1 | 130 | 1.084 | 0.621 | 1.891 | 0.777 | − | − | NA |
| GSI-recovered | N=1 | 130 | 0.938 | 0.651 | 1.353 | 0.733 | − | − | NA |
| OCD No Change | N=1 | 12 | 0.833 | 0.309 | 2.245 | 0.718 | − | − | NA |
| OCD Recovered | N=1 | 12 | 1.333 | 0.230 | 7.743 | 0.749 | − | − | NA |
| PSDI-moved from above to below cutoff score | N=1 | 130 | 1.007 | 0.855 | 1.186 | 0.933 | − | − | NA |
| PSDI-not recovered | N=1 | 130 | 0.776 | 0.218 | 2.760 | 0.695 | − | − | NA |
| PSDI-recovered | N=1 | 130 | 0.925 | 0.717 | 1.193 | 0.546 | − | − | NA |
| PST-moved from above to below cutoff score | N=1 | 130 | 0.938 | 0.651 | 1.353 | 0.733 | − | − | NA |
| PST-not recovered | N=1 | 130 | 1.067 | 0.487 | 2.337 | 0.872 | − | − | NA |
| PST-recovered | N=1 | 130 | 1.058 | 0.664 | 1.685 | 0.813 | − | − | NA |
| QLES Deteriorated | N=1 | 17 | 0.300 | 0.014 | 6.471 | 0.442 | − | − | NA |
| QLES Improved | N=1 | 17 | 1.185 | 0.373 | 3.762 | 0.773 | − | − | NA |
| QLES Recovered | N=1 | 17 | 0.889 | 0.246 | 3.216 | 0.858 | − | − | NA |
| QLES Unchanged | N=1 | 17 | 1.111 | 0.449 | 2.751 | 0.820 | − | − | NA |
| Return to functional score on BSI | N=1 | 286 | 1.109 | 0.704 | 1.748 | 0.654 | − | − | NA |
| **All studies of all diagnoses** |
| All-cause discontinuation | N=27PTSD (10)Depressive disorders (6)Multi (3)DBD (1)Eating disorder (1) GAD (1)Insomnia (1)MCI (1)OCD (1)Substance abuse (1)Tic disorders (1) | 3,341 | 0.964 | 0.853 | 1.091 | 0.564 | 0.241 | 15.2 | NA |
| Remission | N=2Depressive disorders (1)Insomnia (1) | 184 | 0.023 | -0.304 | 0.350 | 0.889 | 0.576 | 0.0 | NA |
| Treatment response | N=4Depressive disorders (2) Insomnia (1)Tic Disorders (1) | 425 | 0.080 | -0.153 | 0.312 | 0.503 | 0.617 | 0.0 | NA |

**Notes:**

Significant results are in bold. RR values lower than 1.0 indicate that telepsychiatry has lower incidence than face-to-face.

1. Of the 50 patients assigned to videoconferencing, 26 dropped out of the study due to technical problems with the computer or internet connection. Excluding these patients, there were no dropouts among the 24 patients assigned to videoconferencing.

**Abbreviations:**

BSI=brief symptom inventory, CGI-S=clinical global impressions-severity, CI=confidence interval, DASS=depression anxiety and stress scale, GAD=generalized anxiety disorder, GSI=global severity index, NA=not applicable, NNTB=number needed to treat for an additional beneficial outcome, NNTH=number needed to treat for an additional harmful outcome, OCD=obsessive-compulsive disorder, PSDI=positive symptom distress index, PST=positive symptom total, QLES=quality of life enjoyment and satisfaction scale, RR=risk ratio, TEQ=treatment expectancy questionnaire

**Table S2 (B). Summary of pooled results of secondary outcomes (continuous outcomes)**

| **Outcomes** | **# of Studies** | **# of participants** | **SMD** | **95% CI** | ***p* value** | **Heterogeneity** |
| --- | --- | --- | --- | --- | --- | --- |
| **Lower limit** | **Upper limit** | ***p* value** | ***I2*** |
| **Chronic tic disorders** |
| Parent Tic Questionnaire | 1 | 16 | -0.277 | -1.269 | 0.715 | 0.584 | − | − |
| **Depressive disorders** |  |  |  |  |  |  |  |  |
| Anxiety Symptom Scale Score | 1 | 78 | 0.310 | -0.138 | 0.758 | 0.175 | − | − |
| CPOSS | 1 | 241 | -0.046 | -0.299 | 0.206 | 0.719 | − | − |
| CSQ | 2 | 172 | 0.175 | -0.125 | 0.475 | 0.252 | 0.833 | 0.0 |
| Hopelessness Scale Score | 1 | 78 | 0.190 | -0.256 | 0.636 | 0.403 | − | − |
| IASMHS | 1 | 78 | -0.052 | -0.497 | 0.393 | 0.819 | − | − |
| Kept appointment average visit | 1 | 119 | 0.040 | -0.316 | 0.396 | 0.826 | − | − |
| Patient satisfactionScale Score | 1 | 119 | 0.300 | -0.150 | 0.750 | 0.192 | − | − |
| PCL | 1 | 78 | 0.183 | -0.263 | 0.629 | 0.421 | − | − |
| **Psychiatrist satisfaction Scale Score** | **1** | **119** | **0.490** | **0.050** | **0.930** | **0.029** | − | − |
| **QoL Scale Score** | **1** | **144** | **-0.462** | **-0.793** | **-0.131** | **0.006** | − | − |
| QoL Scale Score, QWB, or SF-36 | 2 | 385 | -0.205 | -0.683 | 0.273 | 0.400 | **0.021** | **81.1** |
| SDP (Communication quality) | 1 | 241 | 0.129 | -0.124 | 0.382 | 0.318 | − | − |
| SDP (Group comfort) | 1 | 241 | 0.000 | -0.253 | 0.253 | 1.000 | − | − |
| **SDP (Likelihood of referring a friend)** | **1** | **241** | **0.276** | **0.022** | **0.530** | **0.033** | − | − |
| **SDP** **(Likelihood of return)** | **1** | **241** | **0.322** | **0.068** | **0.576** | **0.013** | − | − |
| **SDP (Overall satisfaction)** | **1** | **241** | **0.322** | **0.068** | **0.576** | **0.013** | − | − |
| SDP (Personal comfort) | 1 | 241 | -0.086 | -0.339 | 0.167 | 0.505 | − | − |
| SDP (Willingness to drive to same-room treatment) | 1 | 241 | 0.076 | -0.177 | 0.328 | 0.557 | − | − |
| SDP (Willingness to drive to telepsychiatry treatment) | 1 | 241 | -0.072 | -0.324 | 0.181 | 0.579 | − | − |
| **SDS or WHODAS** | **2** | **262** | **-0.398** | **-0.763** | **-0.034** | **0.032** | 0.139 | 54.4 |
| SF-36 (Emotional well-being) | 1 | 241 | 0.012 | -0.240 | 0.265 | 0.924 | − | − |
| SF-36 (Energy to fatigue) | 1 | 241 | 0.020 | -0.232 | 0.273 | 0.874 | − | − |
| SF-36 (General health) | 1 | 241 | 0.027 | -0.226 | 0.279 | 0.835 | − | − |
| SF-36 (Limits due to emotional problems) | 1 | 241 | -0.041 | -0.293 | 0.212 | 0.752 | − | − |
| SF-36 (Limits due to physical health) | 1 | 241 | -0.065 | -0.317 | 0.188 | 0.615 | − | − |
| SF-36 (Pain) | 1 | 241 | 0.063 | -0.190 | 0.315 | 0.627 | − | − |
| SF-36 (Physical function) | 1 | 241 | -0.003 | -0.256 | 0.249 | 0.979 | − | − |
| SF-36 (Social functioning) | 1 | 241 | 0.029 | -0.224 | 0.281 | 0.824 | − | − |
| Treatment credibility | 1 | 241 | -0.102 | -0.354 | 0.151 | 0.430 | − | − |
| WAI | 1 | 84 | -0.054 | -0.483 | 0.375 | 0.805 | − | − |
| **G****eneralized anxiety disorder** |
| **WAI-C** | **1** | **115** | **-0.458** | **-0.831** | **-0.084** | **0.016** | − | − |
| WAI-T | 1 | 115 | -0.070 | -0.439 | 0.299 | 0.709 | − | − |
| **Obsessive compulsive disorder** |
| CGAS | 1 | 19 | -0.534 | -1.450 | 0.382 | 0.253 | − | − |
| CGI-S | 1 | 19 | -0.235 | -1.139 | 0.668 | 0.610 | − | − |
| CSQ | 1 | 20 | 0.560 | -0.334 | 1.454 | 0.219 | − | − |
| Family accommodation scale | 1 | 19 | -0.484 | -1.398 | 0.430 | 0.299 | − | − |
| Mean # sessions/case that started on time | 1 | 20 | 0.043 | -0.833 | 0.920 | 0.923 | − | − |
| OCD CSR | 1 | 19 | -0.076 | -0.976 | 0.825 | 0.869 | − | − |
| WAI-C | 1 | 20 | 0.546 | -0.347 | 1.438 | 0.231 | − | − |
| WAI-T | 1 | 20 | 0.262 | -0.618 | 1.142 | 0.559 | − | − |
| **Post-traumatic stress disorder** |
| Access to psychiatrists | 1 | 60 | -0.388 | -0.899 | 0.122 | 0.136 | − | − |
| Anxiety Symptom Scale Score | 2 | 75 | -0.190 | -0.646 | 0.266 | 0.414 | 0.944 | 0.0 |
| Attendance scale score | **1** | **28** | **1.309** | **0.493** | **2.125** | **0.002** | − | − |
| CAPS | 5 | 444 | -0.080 | -0.266 | 0.107 | 0.401 | 0.889 | 0.0 |
| CAPS or PCL (CAPS preferred to PCL) | 10 | 948 | -0.023 | -0.150 | 0.105 | 0.728 | 0.911 | 0.0 |
| Completion of the therapy sessions | 1 | 60 | -0.173 | -0.680 | 0.334 | 0.502 | − | − |
| CPOSS | 4 | 384 | -0.025 | -0.251 | 0.200 | 0.827 | 0.306 | 17.0 |
| Depressive Symptom Scale Score | 7 | 610 | 0.041 | -0.118 | 0.200 | 0.616 | 0.923 | 0.0 |
| Follow-up treatment cost | 1 | 60 | 0.202 | -0.306 | 0.709 | 0.436 | − | − |
| GTAS (Leader-group) | 1 | 112 | 0.151 | -0.220 | 0.521 | 0.427 | − | − |
| GTAS (Leader-group) | 2 | 237 | 0.071 | -0.184 | 0.326 | 0.585 | 0.563 | 0.0 |
| GTAS (Leader-self) | 2 | 237 | 0.110 | -0.602 | 0.823 | 0.761 | **0.006** | **86.9** |
| GTAS (Group-Group) | 1 | 125 | -0.181 | -0.532 | 0.171 | 0.314 | − | − |
| GTAS (Self-group) | 1 | 112 | 0.153 | -0.218 | 0.524 | 0.418 | − | − |
| GTAS (Total) | 2 | 237 | 0.036 | -0.532 | 0.605 | 0.900 | **0.027** | **79.6** |
| Homework completion | 2 | 146 | 0.219 | -0.357 | 0.795 | 0.456 | 0.185 | 43.2 |
| NAS-T | 1 | 125 | -0.131 | -0.482 | 0.220 | 0.465 | − | − |
| Number of sessions | 1 | 125 | 0.123 | -0.228 | 0.474 | 0.492 | − | − |
| **Patient satisfaction scale score** | **1** | **60** | **-0.900** | **-1.431** | **-0.369** | **0.001** | − | − |
| Patient waiting time | 1 | 60 | 0.045 | -0.462 | 0.551 | 0.863 | − | − |
| PCL | 8 | 735 | -0.029 | -0.174 | 0.116 | 0.695 | 0.789 | 0.0 |
| Quality of social relationships | 1 | 13 | 0.463 | -0.668 | 1.595 | 0.422 | − | − |
| SCL-90 | 1 | 15 | 0.023 | -1.010 | 1.056 | 0.966 | − | − |
| SDP (Communication quality) | 1 | 20 | 0.702 | -0.206 | 1.609 | 0.130 | − | − |
| SDP (Group comfort) | 1 | 21 | 0.724 | -0.168 | 1.615 | 0.112 | − | − |
| SDP (Likelihood of referring a friend) | 1 | 21 | 0.384 | -0.488 | 1.256 | 0.389 | − | − |
| SDP (Likelihood of return) | 1 | 21 | 0.904 | -0.003 | 1.810 | 0.051 | − | − |
| SDP (Overall satisfaction) | 1 | 21 | 0.413 | -0.460 | 1.286 | 0.354 | − | − |
| **SDP (Personal comfort)** | **1** | **21** | **1.380** | **0.420** | **2.339** | **0.005** | − | − |
| SDP (Willingness to drive to same-room treatment) | 1 | 21 | 0.171 | -0.694 | 1.037 | 0.698 | − | − |
| SDP (Willingness to drive to telepsychiatry treatment) | 1 | 20 | -0.260 | -1.144 | 0.625 | 0.565 | − | − |
| Social activities inside home | 1 | 13 | -0.124 | -1.242 | 0.995 | 0.828 | − | − |
| Social activities outside home | 1 | 13 | -0.409 | -1.537 | 0.719 | 0.478 | − | − |
| Treatment credibility | 1 | 21 | -0.119 | -0.984 | 0.746 | 0.787 | − | − |
| **STAXI-2 Anger expression** | **1** | **125** | **-0.408** | **-0.762** | **-0.054** | **0.024** | − | − |
| **STAXI-2 Trait anger** | **1** | **125** | **-0.437** | **-0.792** | **-0.082** | **0.016** | − | − |
| Treatment Expectancy Questionnaire | 1 | 125 | -0.069 | -0.420 | 0.281 | 0.698 | − | − |
| Treatment Expectancy Questionnaire | 1 | 126 | 0.129 | -0.221 | 0.479 | 0.469 | − | − |
| WAI-C | 1 | 126 | 0.031 | -0.318 | 0.380 | 0.863 | − | − |
| WAI-T | 1 | 126 | 0.038 | -0.311 | 0.388 | 0.829 | − | − |
| **Eating disorder** |
| Depressive Symptom Scale Score | 1 | 128 | 0.092 | -0.254 | 0.439 | 0.601 | − | − |
| **EDE Eating concerns** | **1** | **128** | **0.606** | **0.252** | **0.961** | **0.001** | − | − |
| **EDE Shape concerns** | **1** | **128** | **0.426** | **0.076** | **0.777** | **0.017** | − | − |
| EDE Weight concerns | 1 | 128 | 0.296 | -0.053 | 0.644 | 0.097 | − | − |
| MCS | 1 | 128 | 0.029 | -0.317 | 0.376 | 0.868 | − | − |
| PCS | 1 | 128 | 0.080 | -0.267 | 0.427 | 0.651 | − | − |
| Rosenberg self-esteem | 1 | 128 | 0.100 | -0.247 | 0.447 | 0.572 | − | − |
| WAI-C (Bond) | 1 | 128 | 0.166 | -0.182 | 0.513 | 0.350 | − | − |
| **WAI-C (Goal)** | **1** | **128** | **0.376** | **0.027** | **0.726** | **0.035** | − | − |
| WAI-C (Tasks) | 1 | 128 | 0.287 | -0.061 | 0.636 | 0.106 | − | − |
| **Insomnia** |
| Anxiety Symptom Scale Score | 1 | 65 | -0.280 | -0.768 | 0.209 | 0.262 | − | − |
| Daily SE | 1 | 65 | -0.296 | -0.784 | 0.193 | 0.236 | − | − |
| Daily SL (min) | 1 | 65 | 0.079 | -0.408 | 0.565 | 0.751 | − | − |
| Daily TST | 1 | 65 | -0.342 | -0.832 | 0.147 | 0.171 | − | − |
| **Daily WASO** | **1** | **65** | **-0.625** | **-1.123** | **-0.127** | **0.014** | − | − |
| DBAS-16 | 1 | 65 | -0.283 | -0.772 | 0.205 | 0.256 | − | − |
| Depressive Symptom Scale Score | 1 | 65 | 0.076 | -0.410 | 0.563 | 0.758 | − | − |
| MCS | 1 | 65 | 0.213 | -0.275 | 0.701 | 0.392 | − | − |
| MFI General | 1 | 65 | 0.057 | -0.429 | 0.544 | 0.818 | − | − |
| PCS | 1 | 65 | -0.064 | -0.551 | 0.422 | 0.795 | − | − |
| WSAS | 1 | 65 | 0.453 | -0.040 | 0.945 | 0.071 | − | − |
| **Disruptive behavior disorders** |
| CBCL Externalizing | 1 | 40 | -0.197 | -0.819 | 0.424 | 0.534 | − | − |
| CGAS | 1 | 40 | -0.027 | -0.646 | 0.593 | 0.933 | − | − |
| **CGI-S** | **1** | **40** | **-0.761** | **-1.403** | **-0.119** | **0.020** | − | − |
| ECBI problem score | 1 | 40 | 0.210 | -0.412 | 0.831 | 0.508 | − | − |
| **Substance abuse** |
| Attendance scale score | 1 | 59 | 0.232 | -0.289 | 0.753 | 0.383 | − | − |
| CSQ | 1 | 56 | -0.444 | -0.987 | 0.098 | 0.108 | − | − |
| HAQ-II (Patients) | 1 | 54 | -0.345 | -0.892 | 0.201 | 0.216 | − | − |
| HAQ-II (Therapists) | 1 | 51 | 0.000 | -0.562 | 0.562 | 1.000 | − | − |
| **Mild dementia or mild cognitive impairments** |
| C-RBMT | 1 | 22 | -0.089 | -0.925 | 0.747 | 0.835 | − | − |
| Hierarchic Dementia Scale | 1 | 22 | 0.005 | -0.831 | 0.840 | 0.991 | − | − |
| **Two or more diagnoses included** |
| Anxiety Symptom Scale Score | 1 | 16 | -0.036 | -1.024 | 0.952 | 0.943 | − | − |
| CGI-S or GSI | 3 | 546 | 0.010 | -0.158 | 0.178 | 0.907 | 0.959 | 0.0 |
| CGI-S | 1 | 130 | 0.000  | -0.344  | 0.344  | 1.000  | − | − |
| CSQ | 1 | 254 | 0.051 | -0.195 | 0.297 | 0.683 | − | − |
| DASS Stress Subscale | 1 | 16 | -0.336 | -1.330 | 0.659 | 0.508 | − | − |
| DASS Total | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − |
| Depressive Symptom Scale Score | 1 | 16 | -0.618 | -1.629 | 0.392 | 0.230 | − | − |
| GSI | 2 | 416 | 0.013  | -0.179  | 0.205  | 0.893  | 0.778  | 0.0 |
| MCS | 1 | 286 | -0.074 | -0.306 | 0.158 | 0.531 | − | − |
| No show rate | 1 | 22 | 0.048 | -0.788 | 0.883 | 0.911 | − | − |
| Positive Symptom Distress Index | 1 | 130 | 0.187  | -0.157  | 0.532  | 0.286  | − | − |
| Positive Symptom Total | 1 | 130 | 0.093  | -0.251  | 0.437  | 0.598  | − | − |
| QLES | 1 | 17 | -0.579 | -1.551 | 0.393 | 0.243 | − | − |
| Treatment Credibility | 1 | 24 | -0.132 | -0.935 | 0.672 | 0.748 | − | − |
| WAI-C | 1 | 23 | -0.266 | -1.087 | 0.556 | 0.526 | − | − |
| WAI-T | 1 | 24 | 0.223 | -0.582 | 1.028 | 0.587 | − | − |
| **All studies on all diagnoses** |
| Anxiety Symptom Scale Score | N=5Depressive disorders (1)Insomnia (1)Multi (1)PTSD (2) | 234 | -0.038 | -0.297 | 0.220 | 0.770 | 0.450 | 0.0 |
| Attendance Scale Score | N=2PTSD (1)Substance abuse (1) | 87 | 0.723 | -0.328 | 1.774 | 0.178 | **0.029** | **79.0** |
| CGAS | N=2DBD (1)OCD (1) | 59 | -0.186 | -0.699 | 0.328 | 0.478 | 0.369 | 0.0 |
| CGI-S | N=3DBD (1)Multi (1)OCD (1) | 189 | -0.284 | -0.783 | 0.216 | 0.266 | 0.122 | 52.5 |
| CGI-S or GSI | N=5DBD (1)OCD (1)Multi (3) | 605 | -0.073 | -0.277 | 0.130 | 0.480 | 0.244 | 26.6 |
| CPOSS | N=5PTSD (4)Depressive disorders (1) | 625 | -0.032 | -0.189 | 0.125 | 0.693 | 0.458 | 0.0 |
| CSQ | N=5Depressive disorders (2)Multi (1)OCD (1)Substance abuse (1) | 502 | 0.062 | -0.154 | 0.278 | 0.572 | 0.273 | 22.1 |
| Depressive Symptom Scale Score | N=16PTSD (7)Depressive disorders (6)Eating disorder (1)Insomnia (1)Multi (1) | 1,380 | -0.105 | -0.265 | 0.055 | 0.199 | **0.011** | **50.3** |
| GSI | N=2Multi (2) | 416 | 0.013 | -0.179 | 0.205 | 0.893 | 0.778 | 0.0 |
| MCS | N=3Eating disorder (1)Insomnia (1)Multi (1) | 479 | -0.008 | -0.187 | 0.172 | 0.933 | 0.563 | 0.0 |
| Patient satisfaction Scale Score | N=2Depressive disorders (1)PTSD (1) | 179 | -0.291 | -1.467 | 0.884 | 0.627 | **0.001** | **91.2** |
| PCL | N=9PTSD (8)Depressive disorders (1) | 813 | -0.009 | -0.147 | 0.129 | 0.901 | 0.789 | 0.0 |
| PCS | N=2Eating disorder (1)Insomnia (1) | 193 | 0.031 | -0.251 | 0.314 | 0.828 | 0.636 | 0.0 |
| QLES, QoL Scale Score, QWB, or SF-36 | N=3Depressive disorders (2)Multi (1) | 402 | -0.254 | -0.665 | 0.157 | 0.226 | **0.0499** | **66.6** |
| SDP (Communication quality) | N=2Depressive disorders (1)PTSD (1) | 261 | 0.243 | -0.206 | 0.691 | 0.288 | 0.233 | 29.7 |
| SDP (Group comfort) | N=2Depressive disorders (1)PTSD (1) | 262 | 0.230 | -0.430 | 0.891 | 0.494 | 0.126 | 57.3 |
| **SDP** **(Likelihood of referring a friend)** | **N=2**Depressive disorders (1)PTSD (1) | **262** | **0.284** | **0.041** | **0.528** | **0.022** | 0.816 | 0.0 |
| SDP (Likelihood of return) | N=2Depressive disorders (1)PTSD (1) | 262 | 0.443 | -0.020 | 0.907 | 0.061 | 0.226 | 31.8 |
| **SDP (Overall satisfaction)** | **N=2**Depressive disorders (1)PTSD (1) | **262** | **0.329** | **0.085** | **0.573** | **0.008** | 0.844 | 0.0 |
| SDP (Personal comfort) | N=2Depressive disorders (1)PTSD (1) | 262 | 0.571 | -0.858 | 1.999 | 0.434 | **0.004** | **88.1** |
| SDP (Willingness to drive to same-room treatment) | N=2Depressive disorders (1)PTSD (1) | 262 | 0.083 | -0.159 | 0.326 | 0.501 | 0.835 | 0.0 |
| SDP (Willingness to drive to telepsychiatry treatment) | N=2Depressive disorders (1)PTSD (1) | 261 | -0.086 | -0.329 | 0.157 | 0.489 | 0.689 | 0.0 |
| Treatment credibility | N=3Depressive disorders (1)Multi (1)PTSD (1) | 286 | -0.105 | -0.338 | 0.127 | 0.373 | 0.997 | 0.0 |
| WAI-C | N=4GAD (1)Multi (1)OCD (1)PTSD (1) | 284 | -0.116 | -0.493 | 0.262 | 0.547 | 0.110 | 50.4 |
| WAI-T | N=4GAD (1)Multi (1)OCD (1)PTSD (1) | 285 | 0.026 | -0.207 | 0.259 | 0.826 | 0.856 | 0.0 |

**Notes:**

Significant results are in bold.

**Abbreviations:**

ATQ=automatic thoughts questionnaire,

BSI=Beck scale for suicide ideation,

CAPS=Clinician-Administered PTSD Scale, CBCL=child behavior checklist, CGAS=children’s global assessment scale, CGI-S=clinical global impressions-severity, CI=confidence interval, C-MMSE=Cantonese version of mini-mental state examination, CPOSS=Charleston psychiatric outpatient satisfaction scale, C-RBMT=Cantonese version of Rivermead behavioural memory test, CSQ=cognitive skills quotient, CY-BOCS=Children’s Yale-Brown obsessive-compulsive scale

DASS=depression anxiety and stress scale, DBAS-16=16-item Dysfunctional Beliefs and Attitudes About Sleep scale,

ECBI=Eyberg child behavior inventory, EDE=eating disorder examination

GSI=global severity index, GTAS=group therapy alliance scale,

HAQ=helping alliance questionnaire, HSQ-ASD=home situation questionnaire-ASD Version, HSQ-ASD DS=HSQ-ASD demand-specific, HSQ-ASD SI=HSQ-ASD social inflexibility

IASMHS=the inventory of attitudes toward seeking mental health services,

MCS=SF-12, mental health component scores, MFI General=general fatigue subscale of the multidimensional fatigue inventory,

NAS-T=Novaco anger scale total score

OCD-CSR=obsessive compulsive disorder clinical severity rating

P-CDI=parent–child dysfunctional interaction, PCL=PTSD check list, PCS=SF-12, physical component scores, PSI/SF=parental stress index/short form, PSI/SF DC=PSI/SF difficult child, PSI/SF PD=PSI/SF parental distress, PTQ=parent tic questionnaire, PTSD=post-traumatic stress disorder

QLES= quality of life enjoyment and satisfaction scale, QoL=quality of life, QWB=quality of well-being scale,

RBMT=Rivermead behavioural memory test

SCL-90=the 90-item Symptom Checklist, SDP=service delivery perception, SDS=Sheehan disability scale, SE=sleep efficiency, SF-36=The 36-item short form survey, SL=sleep latency, SMD=standardized mean difference, STAXI=state-trait anger expression inventory

TST=total sleep time

WAI=working alliance inventory-short version, WAI-C=WAI-clients’, WAI-T=WAI-therapists’, WASO=wake after sleep onset, WHODAS=world health organization disability, assessment schedule, WSAS=work and social adjustment scale,

YGTTS=Yale global tic severity scale

**Table S3. Subgroup analysis of primary outcome measure (change in the standard symptom scale scores used for each disease)**

| **Variables** | **Subgroup** | **# of Studies** | **# of participants** | **SMD** | **95% CI** | ***p* value** | **Heterogeneity** | **Between group** ***p* value** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lower limit** | **Upper limit** | ***p* value** | ***I2*** |
| **Depressive disorders** |  |
| Evaluation time point | **Last** | **6** | **561** | **-0.325** | **-0.640** | **-0.011** | **0.043** | **0.006**  | **69.7** | — |
| 4w | 1 | 91 | 0.105 | -0.306 | 0.517 | 0.615 | − | − | **0.039** |
| 8w | 2 | 115 | -0.096 | -1.061 | 0.870 | 0.846 | **0.026**  | **79.9** |
| 12w | 2 | 197 | 0.050 | -0.228 | 0.329 | 0.723 | 0.588  | 0.0 |
| 24-26w | 4 | 461 | -0.251 | -0.553 | 0.051 | 0.103 | **0.045**  | **62.6** |
| **36w** | **1** | **119** | **-0.388** | **-0.749** | **-0.027** | **0.035** | − | − |
| **52w** | **1** | **85** | **-0.717** | **-1.157** | **-0.278** | **0.001** | − | − |
| Publication year | 2000-2009 | 2 | 147 | -0.185 | -0.918 | 0.548 | 0.621 | 0.075  | 68.5 | 0.604 |
| **2010 or later** | **4** | **414** | **-0.399** | **-0.742** | **-0.056** | **0.023** | **0.029**  | **66.7** |
| Country | **Brazil** | **1** | **85** | **-0.717** | **-1.157** | **-0.278** | **0.001** | − | − | 0.094 |
| US | 5 | 476 | -0.246 | -0.581 | 0.090 | 0.151 | **0.013**  | **68.3** |
| **Post-traumatic stress disorder** |  |
| Evaluation time point | Last | 10 | 948 | -0.023 | -0.150 | 0.105 | 0.728 | 0.911 | 0.0 | — |
| 1w | 1 | 201 | -0.007 | -0.283 | 0.270 | 0.961 | − | − | 0.971 |
| 6w | 2 | 225 | -0.047 | -0.547 | 0.453 | 0.853 | 0.059 | 72.1 |
| 8w | 1 | 31 | -0.263 | -0.979 | 0.453 | 0.472 | − | − |
| 10w | 2 | 183 | 0.075 | -0.225 | 0.375 | 0.623 | 0.307 | 4.3 |
| 12w | 7 | 810 | 0.005 | -0.180 | 0.189 | 0.958 | 0.123 | 40.3 |
| 14w | 1 | 15 | 0.356 | -0.685 | 1.397 | 0.502 | − | − |
| 24-26w | 4 | 473 | -0.074 | -0.254 | 0.107 | 0.424 | 0.766 | 0.0 |
| 52w | 1 | 201 | -0.039 | -0.316 | 0.238 | 0.782 | − | − |
| Publication year | 2000-2009 | 1 | 15 | 0.356 | -0.685 | 1.397 | 0.502 | − | − | 0.472 |
| 2010 or later | 9 | 933 | -0.028 | -0.157 | 0.100 | 0.665 | 0.901 | 0.0 |
| Country | US | 10 | 948 | -0.023 | -0.150 | 0.105 | 0.728 | 0.911 | 0.0 | — |
| **Two or more diagnoses included** |  |
| Evaluation time point | Last | 3 | 432 | 0.001 | -0.188 | 0.190 | 0.993 | 0.516 | 0.0 | — |
| 12w | 1 | 23 | -0.559 | -1.399 | 0.282 | 0.193 | − | − | 0.400 |
| 16w | 1 | 286 | 0.032 | -0.200 | 0.264 | 0.788 | − | − |
| 18w | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − |
| 24-26w | 1 | 130 | 0.000 | -0.344 | 0.344 | 1.000 | − | − |
| Publication year | 2000-2009 | 2 | 416 | 0.022 | -0.170 | 0.214 | 0.824 | 0.881 | 0.0 | 0.254 |
| 2010 or later | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − |
| Country | Australia | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − | 0.516 |
| Canada | 1 | 286 | 0.032 | -0.200 | 0.264 | 0.788 | − | − |
| Spain | 1 | 130 | 0.000 | -0.344 | 0.344 | 1.000 | − | − |
| **All studies on all diagnoses**  |
| Evaluation time point | Last | 26 | 2,290 | -0.064 | -0.173 | 0.045 | 0.248 | 0.039 | 35.4 | — |
| 1w | 1 | 201 | -0.007 | -0.283 | 0.270 | 0.961 | − | − | 0.541 |
| 4w | 1 | 91 | 0.105 | -0.306 | 0.517 | 0.615 | − | − |
| 6w | 4 | 375 | 0.053 | -0.209 | 0.314 | 0.693 | 0.207 | 34.2 |
| 8w | 3 | 146 | -0.121 | -0.736 | 0.494 | 0.700 | 0.054 | 65.6 |
| 10w | 3 | 201 | 0.058 | -0.219 | 0.335 | 0.682 | 0.533 | 0.0 |
| 12w | 13 | 1,282 | 0.040 | -0.087 | 0.167 | 0.535 | 0.222 | 22.0 |
| 14w | 2 | 37 | 0.220 | -0.432 | 0.872 | 0.508 | 0.743 | 0.0 |
| 16w | 2 | 302 | 0.016 | -0.210 | 0.242 | 0.890 | 0.557 | 0.0 |
| 18w | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − |
| 24-26w | 11 | 1,123 | -0.122 | -0.260 | 0.016 | 0.083 | 0.204 | 25.2 |
| **36w** | **1** | **119** | **-0.388** | **-0.749** | **-0.027** | **0.035** | − | − |
| 52w | 3 | 414 | -0.113 | -0.655 | 0.428 | 0.682 | **0.001** | **86.1** |
| Publication year | 2000-2009 | 7 | 728 | 0.087 | -0.077 | 0.251 | 0.298 | 0.335 | 12.3 | **0.048** |
| 2010- | 19 | 1,562 | -0.122 | -0.249 | 0.004 | 0.058 | 0.088 | 32.2 |
| Country | Australia | 1 | 16 | -0.575 | -1.583 | 0.432 | 0.263 | − | − | 0.056 |
| **Brazil** | **1** | **85** | **-0.717** | **-1.157** | **-0.278** | **0.001** | − | − |
| Canada | 1 | 286 | 0.032 | -0.200 | 0.264 | 0.788 | − | − |
| Hong Kong | 1 | 22 | 0.197 | -0.641 | 1.034 | 0.645 | − | − |
| Spain | 1 | 130 | 0.000 | -0.344 | 0.344 | 1.000 | − | − |
| US | 21 | 1,751 | -0.043 | -0.159 | 0.073 | 0.469 | 0.112 | 28.3 |

**Notes:**

Significant results are in bold.SMD values lower than 0 indicate that telepsychiatry is advantageous over face-to-face.

The results of the subgroup analyses are not shown for diseases for which the primary outcome has been reported in only one study (autism spectrum disorder, chronic tic disorders, obsessive compulsive disorder, bulimia nervosa, insomnia, disruptive behavior disorders, substance abuse, and mild cognitive impairments).

**Abbreviations:**

CI=confidence interval, SMD=standardized mean difference

**Table S4. Results of meta-regression analysis for primary outcome**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Covariant** | **N** | **Coefficient** | **95% CI** | ***p* value** |
| **Lower limit** | **Upper limit** |
| Publication year | 26 | -0.009 | -0.032 | 0.015 | 0.464 |
| Mean age | 22 | -0.001 | -0.01 | 0.009 | 0.890 |
| % Male | 24 | 0.002 | -0.001 | 0.005 | 0.252 |
| Sample size | 26 | 0.000 | -0.001 | 0.001 | 0.764 |
| Trial duration | 26 | -0.003 | -0.011 | 0.005 | 0.434 |

**Table S5. Subgroup analysis of primary outcome measure in depressive symptoms by baseline severity**

| **Variables** | **Subgroup** | **# of Studies** | **# of participants** | **SMD** | **95% CI** | ***p* value** | **Heterogeneity** | **Between group** ***p* value** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lower limit** | **Upper limit** | ***p* value** | ***I2*** |
| Severity | Mild or Not reported | 3 | 191 | -0.382 | -0.992 | 0.229 | 0.221 | **0.018** | **75.1** | 0.809 |
| Moderate or Higher | 3 | 370 | -0.290 | -0.711 | 0.130 | 0.176 | **0.015** | **76.2** |

**Abbreviations:**

CI=confidence interval, SMD=standardized mean difference

**Table S6. Risk of bias summary**

| ***Study*** ***publication year*** | ***Random sequence generation*** | ***Allocation concealment*** | ***Blinding of participants and personnel*** | ***Blinding of outcome assessment*** | ***Incomplete outcome data addressed*** | ***Selective reporting*** | ***Other sources of bias*** | ***Number of low-risk ratings*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Acierno 2016 | ― | ― | ＋ | ― | ＋ | ― | ― | 5 |
| Acierno 2017 | ＋ | ＋ | ＋ | ― | ― | ＋ | ― | 3 |
| Arnedt 2021 | ― | ― | ＋ | ＋ | ― | ― | ― | 5 |
| Choi 2014a | ＋ | ＋ | ＋ | ＋ | ― | ＋ | ― | 2 |
| Choi 2014b | ― | ＋ | ＋ | ＋ | ― | ＋ | ― | 3 |
| Comer 2017 a | ― | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 2 |
| Comer 2017 b | ＋ | ＋ | ＋ | ― | ― | ＋ | ― | 3 |
| De Las Cuevas 2006 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 1 |
| Egede 2015, Egede 2016 | ― | ― | ＋ | ＋ | ― | ― | ― | 5 |
| Frueh 2007 | ― | ＋ | ＋ | ＋ | ― | ＋ | ― | 3 |
| Haghnia 2019 | ＋ | ＋ | ＋ | ＋ | ＋ | ― | ― | 2 |
| Himle 2012 | ＋ | ＋ | ＋ | ＋ | ― | ＋ | ― | 2 |
| Hungerbuehler 2016 | ＋ | ＋ | ＋ | ― | ― | ― | ― | 4 |
| King 2014 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 1 |
| Liu 2020 | ＋ | ＋ | ＋ | ― | ― | ＋ | ― | 3 |
| Luxton 2016 | ― | ＋ | ＋ | ＋ | ＋ | ― | ― | 3 |
| Maieritsch 2016 | ― | ＋ | ＋ | ＋ | ― | ＋ | ― | 3 |
| Mitchell 2008,Ertelt 2011 | ― | ― | ＋ | ― | ― | ＋ | ― | 5 |
| Moreno 2012 | ＋ | ＋ | ＋ | ― | ― | ＋ | ― | 3 |
| Morland 2010,Greene 2010 | ＋ | ＋ | ＋ | ＋ | ― | ― | ― | 3 |
| Morland 2014 | ＋ | ＋ | ＋ | ― | ― | ― | ― | 4 |
| Morland 2015 | ＋ | ＋ | ＋ | ― | ― | ― | ― | 4 |
| Mosca 2020 | ― | ＋ | ＋ | ＋ | ― | ― | ― | 4 |
| Nelson 2003 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 1 |
| O'Reilly 2007 | ― | ＋ | ＋ | ＋ | ― | ＋ | ― | 3 |
| Poon 2005 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 1 |
| Ruskin 2004 | ― | ＋ | ＋ | ＋ | ― | ＋ | ― | 3 |
| Shulman 2017 | ＋ | ＋ | ＋ | ＋ | ― | ＋ | ＋ | 1 |
| Strachan 2012 | ＋ | ＋ | ＋ | ― | ― | ＋ | ― | 3 |
| Stubbings 2013 | ― | ＋ | ＋ | ＋ | ― | ― | ― | 4 |
| Watts 2020 | ＋ | ＋ | ＋ | ＋ | ― | ＋ | ― | 2 |
| Yuen 2015 | ＋ | ＋ | ＋ | ＋ | ＋ | ＋ | ― | 1 |

**Notes:**

Risk of bias summary: review authors' judgements for risk of each bias item for each included study

(“-”: low risk of bias; “+“: high risk of bias)

**Table S7. Results of meta-regression analysis for all-cause discontinuation on trial duration**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Diagnosis** | **N** | **Coefficient** | **95% CI** | ***p* value** |
| **Lower limit** | **Upper limit** |
| All | 27 | -0.006 | -0.013 | 0.002 | 0.129 |
| Depressive disorders | 6 | -0.007 | -0.024 | 0.010 | 0.425 |
| PTSD | 10 | -0.002 | -0.019 | 0.015 | 0.802 |

**Abbreviations:** CI=confidence interval, N=number of trials, PTSD= post-traumatic stress disorder

**Figure S1 (A). Funnel plot analysis of primary outcome (change in the standard symptom scale scores used for each disease), combining all studies for all diagnoses**







**(B) Funnel plot analysis for primary outcome (change in the standard symptom scale scores used for each disease), depressive disorders**







**(C) Funnel plot analysis for Primary outcome (change in the standard symptom scale scores used for each disease), two or more diagnoses included**





**(D) Funnel plot analysis for primary outcome (change in the standard symptom scale scores used for each disease), post-traumatic stress disorder**





**Figure S2 (A). Risk of all-cause discontinuation (Overall)**



**Figure S2 (B). Risk of all-cause discontinuation (Depressive disorders)**



**Figure S2 (C). Risk of all-cause discontinuation (PTSD)**



**Abbreviations:** PTSD= post-traumatic stress disorder

**References**

ACIERNO, R., GROS, D. F., RUGGIERO, K. J., HERNANDEZ-TEJADA, B. M., KNAPP, R. G., LEJUEZ, C. W., MUZZY, W., FRUEH, C. B., EGEDE, L. E. & TUERK, P. W. 2016. BEHAVIORAL ACTIVATION AND THERAPEUTIC EXPOSURE FOR POSTTRAUMATIC STRESS DISORDER: A NONINFERIORITY TRIAL OF TREATMENT DELIVERED IN PERSON VERSUS HOME-BASED TELEHEALTH. *Depress Anxiety,* 33**,** 415-23.

ACIERNO, R., KNAPP, R., TUERK, P., GILMORE, A. K., LEJUEZ, C., RUGGIERO, K., MUZZY, W., EGEDE, L., HERNANDEZ-TEJADA, M. A. & FOA, E. B. 2017. A non-inferiority trial of Prolonged Exposure for posttraumatic stress disorder: In person versus home-based telehealth. *Behav Res Ther,* 89**,** 57-65.

ARNEDT, J. T., CONROY, D. A., MOONEY, A., FURGAL, A., SEN, A. & EISENBERG, D. 2021. Telemedicine versus face-to-face delivery of cognitive behavioral therapy for insomnia: a randomized controlled noninferiority trial. *Sleep,* 44.

CHOI, N. G., HEGEL, M. T., MARTI, N., MARINUCCI, M. L., SIRRIANNI, L. & BRUCE, M. L. 2014a. Telehealth problem-solving therapy for depressed low-income homebound older adults. *Am J Geriatr Psychiatry,* 22**,** 263-71.

CHOI, N. G., MARTI, C. N., BRUCE, M. L., HEGEL, M. T., WILSON, N. L. & KUNIK, M. E. 2014b. Six-month postintervention depression and disability outcomes of in-home telehealth problem-solving therapy for depressed, low-income homebound older adults. *Depress Anxiety,* 31**,** 653-61.

COMER, J. S., FURR, J. M., KERNS, C. E., MIGUEL, E., COXE, S., ELKINS, R. M., CARPENTER, A. L., CORNACCHIO, D., COOPER-VINCE, C. E., DESERISY, M., CHOU, T., SANCHEZ, A. L., KHANNA, M., FRANKLIN, M. E., GARCIA, A. M. & FREEMAN, J. B. 2017a. Internet-delivered, family-based treatment for early-onset OCD: A pilot randomized trial. *J Consult Clin Psychol,* 85**,** 178-186.

COMER, J. S., FURR, J. M., MIGUEL, E. M., COOPER-VINCE, C. E., CARPENTER, A. L., ELKINS, R. M., KERNS, C. E., CORNACCHIO, D., CHOU, T., COXE, S., DESERISY, M., SANCHEZ, A. L., GOLIK, A., MARTIN, J., MYERS, K. M. & CHASE, R. 2017b. Remotely delivering real-time parent training to the home: An initial randomized trial of Internet-delivered parent-child interaction therapy (I-PCIT). *J Consult Clin Psychol,* 85**,** 909-917.

DE LAS CUEVAS, C., ARREDONDO, M. T., CABRERA, M. F., SULZENBACHER, H. & MEISE, U. 2006. Randomized clinical trial of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment. *Telemed J E Health,* 12**,** 341-50.

EGEDE, L. E., ACIERNO, R., KNAPP, R. G., LEJUEZ, C., HERNANDEZ-TEJADA, M., PAYNE, E. H. & FRUEH, B. C. 2015. Psychotherapy for depression in older veterans via telemedicine: a randomised, open-label, non-inferiority trial. *Lancet Psychiatry,* 2**,** 693-701.

EGEDE, L. E., ACIERNO, R., KNAPP, R. G., WALKER, R. J., PAYNE, E. H. & FRUEH, B. C. 2016. Psychotherapy for Depression in Older Veterans Via Telemedicine: Effect on Quality of Life, Satisfaction, Treatment Credibility, and Service Delivery Perception. *J Clin Psychiatry,* 77**,** 1704-1711.

ERTELT, T. W., CROSBY, R. D., MARINO, J. M., MITCHELL, J. E., LANCASTER, K. & CROW, S. J. 2011. Therapeutic factors affecting the cognitive behavioral treatment of bulimia nervosa via telemedicine versus face-to-face delivery. *Int J Eat Disord,* 44**,** 687-91.

FRUEH, B. C., MONNIER, J., YIM, E., GRUBAUGH, A. L., HAMNER, M. B. & KNAPP, R. G. 2007. A randomized trial of telepsychiatry for post-traumatic stress disorder. *J Telemed Telecare,* 13**,** 142-7.

GREENE, C. J., MORLAND, L. A., MACDONALD, A., FRUEH, B. C., GRUBBS, K. M. & ROSEN, C. S. 2010. How does tele-mental health affect group therapy process? Secondary analysis of a noninferiority trial. *J Consult Clin Psychol,* 78**,** 746-50.

HAGHNIA, Y., SAMAD-SOLTANI, T., YOUSEFI, M., SADR, H. & REZAEI-HACHESU, P. 2019. Telepsychiatry- Based Care for the Treatment Follow-Up of Iranian War Veterans with Post-Traumatic Stress Disorder: A Randomized Controlled Trial. *Iran J Med Sci,* 44**,** 291-298.

HIMLE, M. B., FREITAG, M., WALTHER, M., FRANKLIN, S. A., ELY, L. & WOODS, D. W. 2012. A randomized pilot trial comparing videoconference versus face-to-face delivery of behavior therapy for childhood tic disorders. *Behav Res Ther,* 50**,** 565-70.

HUNGERBUEHLER, I., VALIENGO, L., LOCH, A. A., RöSSLER, W. & GATTAZ, W. F. 2016. Home-Based Psychiatric Outpatient Care Through Videoconferencing for Depression: A Randomized Controlled Follow-Up Trial. *JMIR Ment Health,* 3**,** e36.

KING, V. L., BROONER, R. K., PEIRCE, J. M., KOLODNER, K. & KIDORF, M. S. 2014. A randomized trial of Web-based videoconferencing for substance abuse counseling. *J Subst Abuse Treat,* 46**,** 36-42.

LIU, L., THORP, S. R., MORENO, L., WELLS, S. Y., GLASSMAN, L. H., BUSCH, A. C., ZAMORA, T., RODGERS, C. S., ALLARD, C. B., MORLAND, L. A. & AGHA, Z. 2020. Videoconferencing psychotherapy for veterans with PTSD: Results from a randomized controlled non-inferiority trial. *J Telemed Telecare,* 26**,** 507-519.

LUXTON, D. D., PRUITT, L. D., WAGNER, A., SMOLENSKI, D. J., JENKINS-GUARNIERI, M. A. & GAHM, G. 2016. Home-based telebehavioral health for U.S. military personnel and veterans with depression: A randomized controlled trial. *J Consult Clin Psychol,* 84**,** 923-934.

MAIERITSCH, K. P., SMITH, T. L., HESSINGER, J. D., AHEARN, E. P., EICKHOFF, J. C. & ZHAO, Q. 2016. Randomized controlled equivalence trial comparing videoconference and in person delivery of cognitive processing therapy for PTSD. *J Telemed Telecare,* 22**,** 238-43.

MITCHELL, J. E., CROSBY, R. D., WONDERLICH, S. A., CROW, S., LANCASTER, K., SIMONICH, H., SWAN-KREMEIER, L., LYSNE, C. & MYERS, T. C. 2008. A randomized trial comparing the efficacy of cognitive-behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. *Behav Res Ther,* 46**,** 581-92.

MORENO, F. A., CHONG, J., DUMBAULD, J., HUMKE, M. & BYREDDY, S. 2012. Use of standard Webcam and Internet equipment for telepsychiatry treatment of depression among underserved Hispanics. *Psychiatr Serv,* 63**,** 1213-7.

MORLAND, L. A., GREENE, C. J., ROSEN, C. S., FOY, D., REILLY, P., SHORE, J., HE, Q. & FRUEH, B. C. 2010. Telemedicine for anger management therapy in a rural population of combat veterans with posttraumatic stress disorder: a randomized noninferiority trial. *J Clin Psychiatry,* 71**,** 855-63.

MORLAND, L. A., MACKINTOSH, M. A., GREENE, C. J., ROSEN, C. S., CHARD, K. M., RESICK, P. & FRUEH, B. C. 2014. Cognitive processing therapy for posttraumatic stress disorder delivered to rural veterans via telemental health: a randomized noninferiority clinical trial. *J Clin Psychiatry,* 75**,** 470-6.

MORLAND, L. A., MACKINTOSH, M. A., ROSEN, C. S., WILLIS, E., RESICK, P., CHARD, K. & FRUEH, B. C. 2015. TELEMEDICINE VERSUS IN-PERSON DELIVERY OF COGNITIVE PROCESSING THERAPY FOR WOMEN WITH POSTTRAUMATIC STRESS DISORDER: A RANDOMIZED NONINFERIORITY TRIAL. *Depress Anxiety,* 32**,** 811-20.

MOSCA, I. E., SALVADORI, E., GERLI, F., FABBRI, L., PANCANI, S., LUCIDI, G., LOMBARDI, G., BOCCHI, L., PAZZI, S., BAGLIO, F., VANNETTI, F., SORBI, S. & MACCHI, C. 2020. Analysis of Feasibility, Adherence, and Appreciation of a Newly Developed Tele-Rehabilitation Program for People With MCI and VCI. *Front Neurol,* 11**,** 583368.

NELSON, E. L., BARNARD, M. & CAIN, S. 2003. Treating childhood depression over videoconferencing. *Telemed J E Health,* 9**,** 49-55.

O'REILLY, R., BISHOP, J., MADDOX, K., HUTCHINSON, L., FISMAN, M. & TAKHAR, J. 2007. Is telepsychiatry equivalent to face-to-face psychiatry? Results from a randomized controlled equivalence trial. *Psychiatr Serv,* 58**,** 836-43.

POON, P., HUI, E., DAI, D., KWOK, T. & WOO, J. 2005. Cognitive intervention for community-dwelling older persons with memory problems: telemedicine versus face-to-face treatment. *Int J Geriatr Psychiatry,* 20**,** 285-6.

RUSKIN, P. E., SILVER-AYLAIAN, M., KLING, M. A., REED, S. A., BRADHAM, D. D., HEBEL, J. R., BARRETT, D., KNOWLES, F., 3RD & HAUSER, P. 2004. Treatment outcomes in depression: comparison of remote treatment through telepsychiatry to in-person treatment. *Am J Psychiatry,* 161**,** 1471-6.

SHULMAN, M., JOHN, M. & KANE, J. M. 2017. Home-Based Outpatient Telepsychiatry to Improve Adherence With Treatment Appointments: A Pilot Study. *Psychiatr Serv,* 68**,** 743-746.

STRACHAN, M., GROS, D. F., RUGGIERO, K. J., LEJUEZ, C. W. & ACIERNO, R. 2012. An integrated approach to delivering exposure-based treatment for symptoms of PTSD and depression in OIF/OEF veterans: preliminary findings. *Behav Ther,* 43**,** 560-9.

STUBBINGS, D. R., REES, C. S., ROBERTS, L. D. & KANE, R. T. 2013. Comparing in-person to videoconference-based cognitive behavioral therapy for mood and anxiety disorders: randomized controlled trial. *J Med Internet Res,* 15**,** e258.

WATTS, S., MARCHAND, A., BOUCHARD, S., GOSSELIN, P., LANGLOIS, F., BELLEVILLE, G. & DUGAS, M. J. 2020. Telepsychotherapy for generalized anxiety disorder: Impact on the working alliance. *Journal of Psychotherapy Integration,* 30**,** 208-225.

YUEN, E. K., GROS, D. F., PRICE, M., ZEIGLER, S., TUERK, P. W., FOA, E. B. & ACIERNO, R. 2015. Randomized Controlled Trial of Home-Based Telehealth Versus In-Person Prolonged Exposure for Combat-Related PTSD in Veterans: Preliminary Results. *J Clin Psychol,* 71**,** 500-12.