

Multimedia Appendix 3. Summary of web-based and computer-delivered interventions to improve depression, anxiety, psychological distress and stress conducted in higher education populations included in the present review.

Study	Design, arms (N per arm), N, location	Sample demographics and inclusion criteria	Intervention	Length/dosage	Location	Outcome measures	Analysis
Arpin-Cribbie et al 2012	RCT 3 arms: Intervention (29), CI (26), WLC (25) N=77 One HEI, Canada	Selective/indicated Undergraduate psychology students 70% female, M age 20.1yrs High levels of perfectionism (PCI)	Internet-delivered CBT for perfectionism Self-administered	13 modules over 10 weeks; suggested order for working through intervention (not mandatory)	Own location	CES-D ATQ BAI ASI PSS MPS-F – CM MPS-HF PCI	Completers
Botella et al 2010	RCT 3 arms: Intervention (62), CI (36), WLC (29) N=127 Two HEIs, Spain	Treatment Undergraduate and postgraduate students 61 females, M age 24.4yrs (completers only) Met DSM-IV diagnostic criteria for social anxiety/phobia	"Talk to Me": website-based CBT for fear of public speaking Self-administered	Available over 8 weeks, participants exposed to anxious situation through use of embedded videos	Own location	SAD BDI BFNE FPSQ SSPS MS	ITT
Braithwaite & Fincham 2007*	RCT 3 arms: Intervention, CI and AC N=91 One HEI, USA	Universal Undergraduate psychology students 59% female In romantic relationship of ≥4 months duration	<i>ePREP</i> : relationship functioning intervention Based on CBT Delivered via computer Semi-guided	1-hour computer session followed by weekly standardised emails over 8 weeks □ Participants had paper copy of computer intervention	Researcher-monitored laboratory	BAI BDI PANAS CTS-2 PRQC CPQ-CC Trust scale	Uncertain
Braithwaite & Fincham 2009	RCT 2 arms: Intervention (38), AC (39) N=77 One HEI, USA	Universal Undergraduate psychology students 71% female, M age 19.4yrs In romantic relationship of ≥4 months duration	<i>ePREP</i> : relationship functioning intervention (same as Braithwaite & Fincham 2007) Semi-guided	Same as Braithwaite & Fincham (2007)	Researcher-monitored laboratory	BAI BDI CTS-2 CSI	ITT

Cavanagh et al 2013	RCT 2 arms: Intervention (54), WLC (50) N=104 One HEI, UK	Universal Undergraduate and postgraduate students 92 females, M age 24.7yrs	" <i>Learning Mindfulness Online</i> ": intranet-based website designed to teach Mindfulness Semi-guided	Available over 2 weeks, 4 standardised reminder emails sent over period	Own location	PSS PHQ-4 FFMQ	ITT
Chiauzzi et al 2008*	RCT 3 arms: Intervention (80), AC (80), NTC (80) N=77 Six HEIs, USA	Selective/indicated Undergraduate students 123 females 18-24yrs, experiencing elevated perceived stress (PSS)	<i>My StudentBody-Stress</i> : psycho-educational student-tailored website for stress management - possibly based on cognitive therapy Self-administered	≥20 minutes at least four times over two week period	Own location	PSS HPLP-II CAS	Uncertain
Cukrowicz & Joiner 2007	RCT 2 arms: Intervention (81), AC (71) N=238; N=152 analysed One HEI, USA	Selective/indicated Undergraduate psychology students 169 female, M age 19.2yrs Minimal/mild symptoms of depression and anxiety (BDI, BAI)	<i>CBASP</i> : psycho-educational and CBT for depression and anxiety Delivered via computer Semi-guided	2-hour computer session followed by weekly standardised emails over 8 weeks Eight worksheets based on Situational Analysis - participants to work through these when encounter stressful situation.	Researcher-monitored laboratory	BAI BDI PANAS STAI-S	Completers
Day et al 2013	RCT 2 arms: Intervention (33), WLC (33) N=66; N=66 analysed Three HEIs, Canada	Selective/indicated Undergraduate and postgraduate students 59 females, M age 23.55yrs Mild/moderate symptoms of depression or anxiety or stress (DASS-21)	" <i>Feeling Better</i> ", website-based CBT program Semi-guided	5 core modules, plus 6 optional modules. Completed in own time over 6 week period. Participants received weekly email or telephone non-therapeutic support from a program coach - this was to monitor and support completing intervention.	Own location	DASS-21	ITT

Ellis et al 2011	RCT 3 arms: Intervention (13), CI (13), NTC (13) N=39 One HEI, Australia	Selective/indicated Undergraduate psychology and health sciences students 77% female, M age 19.6 yrs Low-to-moderate levels of psychological distress (K-10)	<i>MoodGym</i> : internet-delivered CBT program Semi-guided	Five modules accessed during three 60-minute sessions over three weeks	Researcher-monitored laboratory	DASS-21 ATQ K10 CBT-Lit OSSS	ITT
Kanekar et al 2010*	RCT 2 arms: Intervention, AC N=60; 39 analysed One HEI, USA	Universal Postgraduate students 34 male, M age 24.6yrs Full-time international students of Indian nationality	Internet-delivered intervention: sessions focused on education about social support, hardiness and acculturation Semi-guided	Three sessions completed over eight weeks	Own location	K-10 (analysed as K-6)* ISEL AIRS Hardiness scale	Completers
Kenardy et al 2003	RCT 2 arms: Intervention (43), WLC (40) N=83 One HEI, Australia	Selective/indicated Undergraduate psychology students 65 females, M age 19.9yrs Elevated anxiety sensitivity levels (ASI)	<i>Online Anxiety Prevention Program</i> : psycho-educational and CBT-based internet-delivered intervention Self-administered	Six sessions over six weeks Recommended to spend 5-7 days working on each session	Own location	ASI CES-D BSQ CCQ-M ACQ	Completers
Lintvedt et al 2011	RCT 2 arms: Intervention (81), WLC (82) N=163 Two HEIs, Norway	Selective/indicated Undergraduate and postgraduate students 125 females, M age 28.2yrs Elevated levels of psychological distress (K-10)	<i>MoodGym</i> : internet-delivered CBT program + <i>BluePages</i> : informational website about depression Unsure about level of human support	Five <i>MoodGym</i> modules made available on sequential weekly basis. Trial period was eight weeks. Participants given manuals detailing which parts of intervention to access weekly.	Own location	CES-D ATQ TDL	ITT (Completers' analysis reported separately)

Orbach et al 2007	RCT 2 arms: Intervention (47), AC (43) N=90 One HEI, UK	Selective/indicated Undergraduate and postgraduate students 58 female, M age 24.2yrs Not receiving treatment for test anxiety Self-reported text anxiety	Internet delivered intervention for test anxiety; based on CBT Self-administered	Six modules; suggested dosage 30 minutes per week (but not mandatory)	Own location	TAI AHQ EPSI GSES STAI-S	Completers
Radhu et al 2012	RCT 2 arms: Intervention (28), WLC (30) N=58; 47 analysed One HEI, Canada	Selective/indicated Undergraduate psychology students 34 female, M age 22.6yrs High levels of perfectionism (PCI)	Internet-delivered CBT for perfectionism (same as Arpin-Cribbie 2012) Self-administered	13 modules over 12 weeks; could access anytime	Own location	CES-D ATQ BAI ASI PSS MPS-F MPS-HF PCI APSR	Completers
Rose et al 2013	RCT 2 arms: Intervention (34), AC (32) N=66; 59 analysed One HEI, USA	Selective/indicated Postgraduate students, mostly from Management and Law courses 33 females, M age 27.3yrs Elevated stress (PSS)	<i>SMART-OP</i> : CBT-based stress management and resilience training program. Delivered via computer program 6 sessions over 6 weeks + homework between sessions + reminder emails Semi-guided	Six sessions over six weeks; accessed once a week + homework activities between sessions	Researcher monitored laboratory	PSS SPCS Trier Social Stress Test Biological markers: a-amylase (saliva), heart rate + variability (ECG), skin conductance, systolic and diastolic blood pressure	Completers
Sethi et al 2010	RCT 4 arms: Intervention (9), CI 1 (10), CI 2 (9), NTC (10) N=38 One HEI, Australia	Selective/indicated Undergraduate psychology students 25 females, M age 19.47yrs Low-to-moderate depression and/or anxiety (DASS-21)	<i>MoodGym</i> : internet-delivered CBT program Semi-guided	Five modules accessed during three sessions over three weeks	Researcher-monitored laboratory	DASS-21 K10 ATQ	ITT

Taitz 2011	RCT 2 arms: Intervention (86), NTC (89) N=175 One HEI, USA	Universal Undergraduate students 150 female, M age 20.7yrs ≥18 yrs, no lucid dreaming experience	Lucid dreaming instruction taught via the internet Self-administered	Website accessed once a week over four week period	Own location	BDI LOC scale Lucid Dream Recall + Control questionnaire Dream recall questionnaire	Uncertain
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Abbreviations: RCT – randomised controlled trial; AC – active control; CI – comparison intervention; WLC – wait-list control; NTC – no treatment control; ITT – intention-to-treat analysis; HEI – higher education institution; CBT – cognitive-behaviour therapy.

Measures: ACQ – Agoraphobia Cognitions Questionnaire; AHQ – Anxiety Hierarchy Questionnaire; AIRS – American International Relations Scale; APSR – Almost Perfect Scale–Revised; ASI – Anxiety Sensitivity Index; ATQ – Automatic Thoughts Questionnaire; BAI – Beck Anxiety Inventory; BDI – Beck Depression Inventory ; BFNE – Fear of Negative Evaluation scale; BSQ – Body Sensations Questionnaire; CAS – College Adjustment Scales; CBT-Lit – Cognitive Behavioural Therapy Literacy Scale; CCQ-M – Catastrophic Cognitions Questionnaire-Modified ; CES-D – Centre for Epidemiologic Studies–Depressed Mood Scale; CPQ-CC – Communication Patterns Questionnaire – Constructive Communication Subscale; CSI – Couples Satisfaction Index; CTS-2 – Revised Conflict Tactics Scale; DASS-21 – Depression, Anxiety and Stress Scale – 21 item version; EPSI – Exam Problem-Solving Inventory; FFMQ – Five Facet Mindfulness Questionnaire; FPSQ – Fear of Public Speaking Questionnaire; GSES – General Self-Efficacy Scale –exam related; HPLP-II – Health-Promoting Lifestyle Profile II; ISEL – Interpersonal Support Evaluation list; K-10 – Kessler Psychological Distress Scale; LOC scale – Internal/External Locus of Control Scale; MPS-FM-CM – Multidimensional Perfectionism Scale – Concern over Mistakes subscale ; MPS-HF – Multidimensional Perfectionism Scale; MS – Maladjustment scale; Online Social Support Scale (OSSS); PANAS – Positive and Negative Affect Schedule; PCI – Perfectionism Cognitions; PRQC – Perceived Relationship Quality Components Inventory; PSS – Perceived Stress Scale; SAD – Social Avoidance and Distress Scale; SPCS – Stress and Perception of Control Scale; SSPS – Self-Statements During Public Speaking; STAI-S – State Trait Anxiety Inventory – State; TAI – Test Anxiety Inventory; TDL – Treatment Depression Literacy.