



Topic Exploration Report

Topic explorations are designed to provide a high-level briefing on new topics submitted for consideration by Health Technology Wales. The main objectives of this report are to:

1. Determine the quantity and quality of evidence available for a technology of interest.
2. Identify any gaps in the evidence/ongoing evidence collection.
3. Inform decisions on topics that warrant fuller assessment by Health Technology Wales.

Topic exploration report number:	TER306
Topic:	Individual guided and non-guided self-help for social anxiety disorder in children, adolescents and adults
Summary of findings:	<p>The Matrics Cymru evidence table (2017) recommends that adults with mild social anxiety disorder have access to book prescriptions and guided self-help materials based on cognitive behavioural therapy (CBT) and guided self-help based on CBT. The National Institute for Health and Care Excellence Clinical Guideline CG159 (2013) also recommends offering CBT-based supported self-help for adults who decline CBT. Neither make recommendations for self-help in children and adolescents with social anxiety disorder. The topic proposer states that access to recommended psychological treatments for social anxiety disorder in Wales is variable.</p> <p>The majority of the studies identified consist of systematic reviews of randomised controlled trials comparing internet-based CBT in adults to adults on a waiting list. It is unclear whether this comparator is reflective of practice in NHS Wales and secondary evidence on other forms of self-help were not identified. Of the five systematic reviews identified by Health Technology Wales researchers, only one investigated internet-based CBT in children and adolescents. All of these studies report that internet-based CBT improves symptoms of social anxiety disorder and quality of life in adults, adolescents and children. The studies comparing different ways of CBT delivery suggest that there is not a significant difference in outcomes between guided or unguided internet-based CBT and face-to-face CBT. However, not all studies reported adherence rates and all of the systematic reviews identified were reported as being of low quality. In addition, there was limited information on long-term effectiveness.</p> <p>The only economic evidence we identified comes from two international health technology assessments (HTAs). The Norwegian Institute of Public Health HTA (2018) included a cost-minimisation analysis comparing therapist-guided internet-based CBT with conventional CBT in Norway and found that the direct costs were comparable. They reported that when patients' travel costs are included in the calculation, therapist-guided internet</p>

therapy has the potential to generate cost savings compared with conventional face-to-face therapy. However, the population included a range of mental health conditions and it is unclear how specific these findings are to social anxiety disorder or how generalisable they would be for Wales.

Introduction and aims

Social anxiety disorder, also known as social phobia, is characterised by problematic anxiety and heightened self-consciousness in social situations, with associated avoidance, fears of rejection and humiliation. It often causes impairment in occupational, interpersonal, academic and familial functioning. Social anxiety disorder is one of the most prevalent psychiatric disorders, with estimated prevalence rates of between 2 to 6% in the general population, and it is common amongst both children and adults. The topic proposer states that access to recommended psychological treatments for social anxiety disorder in Wales is variable (see 'Guidance' section of this report).

Health Technology Wales (HTW) researchers searched for evidence on guided and non-guided self-help for social anxiety disorder in children, adolescents and adults. We restricted our search dates for studies with adults from 2015 to present as the Matrics Cymru evidence table states that it involved a 'scrutiny process' of the evidence in 2015. We did not include search restrictions for evidence on children and adolescents as it is unclear whether the Matrics Cymru evidence table used date restrictions for this population.

Evidence overview

HTW researchers identified Wales-specific recommendations for the treatment of social anxiety disorder in adults. We also found a guideline from the National Institute for Health and Care Excellence (NICE) on the treatment of adults and children with social anxiety disorder. Summaries of two international health technology assessments (HTAs), for the use of guided internet treatment for mental disorders in adults, have been included in this report, as well as their economic evaluations. In addition, HTW researchers identified four systematic reviews and one additional primary study investigating self-help methods for social anxiety disorder in adults (published since 2015) and one systematic review and two additional primary studies investigating self-help methods for social anxiety disorder in children and adolescents. HTW researchers identified one potentially relevant ongoing met-analysis and three ongoing primary studies for self-help interventions in adolescents with social anxiety disorder, the findings of which are described in the 'Ongoing studies' section of the 'Literature search results.'

Guidance

Wales

The Matrics Cymru evidence tables (2017), based on two meta-analyses, provide clinicians in Wales with recommendations on the most effective psychological treatments. Current recommendations for adults with mild social anxiety disorder include book prescriptions and guided self-help based on cognitive behavioural therapy (CBT). These interventions can be text-based self-help manuals presented via the internet or books and supported by therapist feedback (guided) or without additional therapist guidance (non-guided). Recommendations were not made for children and young people.

UK

NICE Clinical Guideline CG159 (2013) recommends offering CBT-based supported self-help for adults who decline CBT and wish to consider another psychological intervention. Supported self-help for social anxiety disorder should typically consist of up to nine sessions of supported use of a CBT-based self-help book over three to four months, and support to use the materials. NICE CG159 does not make recommendations on self-help in children and adolescents with social anxiety disorder.

International

The Norwegian Institute of Public Health (2018) and the Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU) (2013) published HTAs on the use of guided internet treatment for mental disorders. The systematic reviews and randomised controlled trials (RCTs) in these HTAs concluded that internet-based CBT, with the support of a therapist, reduces symptoms in adults with social anxiety compared to no treatment for adults with anxiety. Studies investigating anxiety in children and adolescents were not reported in these HTAs. Neither HTA was specific to social anxiety disorder, and the quality of the included studies was mainly reported as low. The HTA by SBU is currently being updated.

Systematic reviews

Adults

HTW researchers identified four systematic reviews published since 2015 (three looking at CBT-based therapy and one investigating acceptance and commitment therapy [ACT]-based therapy). Although RCTs made up all three of the systematic reviews investigating CBT-based therapy, the quality of the evidence was reported as being low.

Olthuis et al (2016) compared therapist-guided internet-based CBT to a waiting list, unguided self-help, and face-to-face CBT. The findings suggest that therapist-guided internet-based CBT is more effective at reducing anxiety symptoms than a waiting list and that there is not a significant difference in outcomes between unguided CBT, face-to-face CBT, or therapist-guided internet-based CBT. This was supported by a systematic review by Andrews et al (2018) of 1,103 participants, who found that internet-based CBT (with or without guidance), face-to-face CBT and bibliotherapy are equally as effective at reducing anxiety symptoms. They reported that on average, face-to-face therapy requires 7.8 times more therapist time than internet-based CBT, and that whilst internet-based CBT has high rates of satisfaction, there was moderate adherence. Neither of these systematic reviews focussed on social anxiety disorder. Kampmann et al (2016) looked specifically at social anxiety disorder (2,991 participants) and found that patients undergoing internet-based CBT showed significantly less social anxiety disorder symptoms at post-assessment than passive control conditions, and a small improvement in symptoms compared to active control conditions.

One of the systematic reviews investigated the therapeutic impact of internet-based ACT, used with or without therapist guidance, on all anxiety conditions. Only two of the included studies looked at social anxiety disorder specifically, and reported that internet-based ACT can reduce anxiety symptoms in adults. However, the studies consisted of a small number of participants (Kelson et al, 2019).

Children and adolescents

Yang et al (2019) conducted a meta-analysis investigating the efficacy of psychological interventions for social anxiety disorder in children and adolescents. The meta-analysis included 17 parallel RCTs, but only two of these studies (144 participants aged 8 to 21 years) used internet-based CBT (compared to a waiting list). Given the heterogeneity of the primary efficacy outcomes, the authors conducted a number of subgroup analyses. One subgroup analysis suggested that individual, group, combined individual and group, and internet-assisted CBT and other behavioural therapies offer similar efficacy and can improve quality of life and functioning in this population. However, a follow-up period was not reported and the evidence was deemed to be low quality.

Primary studies

Adults

In addition to the systematic reviews identified above, Stolz et al (2018) conducted a three-arm RCT in 150 adults where internet-based CBT delivered through a smartphone application was compared to internet-based CBT delivered through a computer or a wait list control group. After 12 weeks of treatment, both active conditions showed superior outcomes on all social anxiety disorder measures compared to the waiting list participants. No significant between-group effects were found between the two active conditions on the composite score, and treatment gains were maintained at three-month follow-up.

Children and adolescents

In addition to the meta-analysis by Yang et al (2019), HTW researchers identified two additional small non-RCTs looking at children aged 12 to 17 years.

Gunn et al (2019) conducted a phase I trial investigating the effectiveness of an automated unguided internet CBT treatment for social anxiety for adolescents who stutter: iBroadway. The adherence rate for the iBroadway modules over five months was 52.4%. There was evidence of positive treatment effects on a number of outcomes relating to mental health and speech.

Nordh et al (2017) conducted a study in England which involved 12 weeks of therapist-guided internet-delivered CBT sessions as well as group exposure sessions for the adolescents and internet-delivered sessions for the parents. Adolescents were generally satisfied with the treatment, and the completion rate of internet modules, as well as attendance at group sessions, was high. Post-treatment assessment showed a significant decrease in clinician-rated, adolescent-rated and parent-rated social anxiety compared with pre-treatment levels. Furthermore, 47% of participants no longer met the criteria for social anxiety disorder at post-treatment. At a six-month follow-up, symptom reductions were maintained, or further improved, and 57% of participants no longer met criteria for social anxiety disorder.

Economic evaluations

The Norwegian Institute of Public Health HTA (2018) included a cost-minimisation analysis comparing therapist-guided internet-based CBT with conventional CBT and found that the direct costs associated with therapist-guided internet therapy are comparable to the direct treatment costs associated with conventional face-to-face therapy. They reported that when patients' travel costs are included in the calculation, therapist-guided internet therapy has the potential to generate cost savings compared with conventional face-to-face therapy. The HTA by SBU (2013) suggested that treatment costs for internet-based CBT in the short-term are lower than for CBT in a group or individually, but that since the effects of these treatment alternatives have not been adequately compared, it is not possible to ascertain which alternative is cost-effective. This report is currently being updated, with an anticipated publication date of Quarter 4 2021. It is unclear how specific these HTAs are to social anxiety disorder or how generalisable the findings are to NHS Wales.

Evidence standards

Individual guided and non-guided self-help for social anxiety disorder, using the internet or digital applications, is a digital health technology and was determined to be a Tier C technology according to the [Evidence Standards Framework for Digital Health Technologies](#). Technologies within this classification allow people to self-manage a specified condition, and may include behaviour change techniques. For technologies of this classification, best practice standards to demonstrate effectiveness of the technology should come from published qualitative or quantitative evidence showing that the techniques used are: based on published and recognised effective behaviour change techniques, aligned with recommended practice, and appropriate for the target population.

Areas of uncertainty

- All of the recommendations from the identified guidelines and HTAs are for adults with social anxiety disorder. This is also reflected in the studies identified by HTW, with the vast majority of them investigating internet-based CBT in adults. There is limited evidence for the use of guided and unguided self-help in adolescents and children, and no evidence in children under eight years old. The ongoing studies we identified do not look at children younger than eight and most have a small number of participants.
- Whilst nearly all of the studies identified in the systematic reviews are RCTs, the systematic reviews are of low quality.
- Most of the studies used participants on a waiting list as a comparator and few studies were based in the UK. It is unclear whether this reflects current practice in Wales or how generalisable studies would be.
- The severity of the social anxiety disorder of the participants in the studies is unclear.
- The only self-help method we identified in the studies was internet-based CBT. We did not identify any evidence investigating other self-help techniques, such as using books. Most of the studies had a short follow-up period of a few months and so long-term effectiveness of guided and non-guided self-help remains uncertain.
- Further evidence is needed on the adherence rates of self-help methods for social anxiety disorder.
- We identified economic evidence from two international HTAs but they were not restricted to people with social anxiety and it is not clear how the results relate to this population.

Literature search results

Health Technology Assessments and Guidance

[NICE](#)

Clinical guideline (CG159) (2013). Social anxiety disorder: recognition, assessment and treatment: <https://www.nice.org.uk/guidance/cg159>

[International HTA Database](#)

Swedish Agency for Health Technology Assessment and Assessment of Social Services (SBU). Internet-based psychological treatment for anxiety and depression (an update). Originally published in 2013 and update due to be published Quarter 4 2021: <https://www.sbu.se/en/ongoing-projects/internet-based-psychological-treatment-for-anxiety-and-mood-disorders-an-update/>

The Norwegian Institute of Public Health (2018). Therapist-supported internet therapy for mental disorders – a health technology assessment: <https://www.fhi.no/en/publ/2018/Therapist-supported-internet-therapy-for-mental-disorders/>

Evidence reviews and economic evaluations

<https://www.epistemonikos.org/en/>

Kelson J, Rollin A, Ridout B, Campbell A. Internet-Delivered Acceptance and Commitment Therapy for Anxiety Treatment: Systematic Review. Journal of medical Internet research. 2019;21(1):e12530.

Olthuis JV, Watt MC, Bailey K, Hayden JA, Stewart SH. Therapist-supported Internet cognitive behavioural therapy for anxiety disorders in adults. Cochrane Database of Systematic Reviews. 2016;3:CD011565.

[Medline](#) (via Ovid or Pubmed)

Andrews G, Basu A, Cuijpers P (2018). Computer therapy for the anxiety and depression disorders is effective, acceptable and practical health care: an updated meta-analysis. J Anxiety Disord; 55:70-8: <https://doi.org/10.1016/j.janxdis.2018.01.001>

Kampmann IL, Emmelkamp PM, Morina N (2016). Meta-analysis of technology-assisted interventions for social anxiety disorder. J Anxiety Disorder; 42:71-84: <https://doi.org/10.1016/j.janxdis.2016.06.007>

Yang L; Zhou X; Pu J; Liu L; Cuijpers P; Zhang Y; Zhang H; Yuan S; Teng T; Tian L; Xie P (2019). Efficacy and acceptability of psychological interventions for social anxiety disorder in children and adolescents: a meta-analysis of randomized controlled trials. European Child & Adolescent Psychiatry. 28(1):79-89: <https://dx.doi.org/10.1007/s00787-018-1189-x>

Individual studies

[Medline](#) (via [Ovid](#) or Pubmed)

Gunn A; Menzies RG; Onslow M; O'Brian S; Packman A; Lowe R; Helgadottir FD; Jones M (2019). Phase I trial of a standalone internet social anxiety treatment for adolescents who stutter: iBroadway. International Journal of Language & Communication Disorders. 54(6):927-939: <https://dx.doi.org/10.1111/1460-6984.12496>

Nordh M; Vigerland S; Ost LG; Ljotsson B; Mataix-Cols D; Serlachius E; Hogstrom J (2017). Therapist-guided internet-delivered cognitive-behavioural therapy supplemented with group exposure sessions for adolescents with social anxiety disorder: a feasibility trial. BMJ Open. 7(12):e018345. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5735402>

Stolz T; Schulz A; Krieger T; Vincent A; Urech A; Moser C; Westermann S; Berger T (2018). A mobile app for social anxiety disorder: A three-arm randomized controlled trial comparing mobile and PC-based guided self-help interventions. Journal of Consulting & Clinical Psychology. 86(6):493-504. <https://dx.doi.org/10.1037/ccp0000301>

Ongoing research

[PROSPERO database](#)

Tamara Barack, Alice Wickersham, Lauren Cross, Johnny Downs. The efficacy of computer-assisted cognitive behavioural therapy (cCBT) for the treatment of depression and anxiety in adolescents: a systematic review and meta-analysis of randomized controlled trials. PROSPERO 2019 CRD42019141941 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42019141941. Ongoing. Anticipated completion date: Sept 2019

Ongoing meta-analysis of RCTs, although it is unclear whether this will also include adolescents with social anxiety disorder. At the time of this report we have not identified the published version.

Medline

Leigh E; Clark DM (2019). Online Social anxiety Cognitive therapy for Adolescents (OSCA): protocol for a randomised controlled trial. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6781376/>

AN RCT protocol testing whether internet-based CBT is superior to waitlist in reducing social anxiety symptoms and the proportion of adolescents meeting criteria for social anxiety disorder in forty adolescents in England. Participants will be assessed up to a maximum of six-months post treatment. The proposed completion date is unknown.

Clinical trials.gov

Internet-Delivered Transdiagnostic CBT Program to Improve Access for Treatment of Anxiety and Depression in Adolescents: A Randomized Controlled Trial. Estimated completion date: July 2023. ClinicalTrials.gov Identifier: NCT04182061: <https://clinicaltrials.gov/ct2/show/NCT04182061?term=NCT04182061&draw=2&rank=1>

An RCT in Spain of 80 participants to assess the efficacy of transdiagnostic cognitive behavior therapy delivered via internet for anxiety and depression in adolescents.

Cochrane.

A Randomised Controlled Trial of Stepped Care, Internet-Based Cognitive Behaviour Therapy for child and adolescent anxiety in Australia. Anticipated completion unsure, but estimated data completion: Aug 2020. ID number: CN-01904976: <https://www.cochranelibrary.com/central/doi/10.1002/central/CN-01904976/full>

Participants in the intervention arm will receive BRAVE-ONLINE (self-help internet-based CBT and therapist-guided internet-based CBT). Patients in the other arm will receive standard, therapist-guided internet-based CBT

Evidence provided by the topic proposer

Matrics Cymru – The Evidence Tables (2017). National Psychological Therapies Management Committee, supported by Public Health Wales: http://www.1000livesplus.wales.nhs.uk/sitesplus/documents/1011/evidence-tables_final.pdf

Produced by collaborative working between the National Mental Health Forum; Psychological Therapies Management Committees of the health boards in Wales; Welsh Government; the National Psychological Therapies Management Committee and Public Health Wales. Includes the following references:

Andersson, G., Carlbring, P., Holmström, A., Sparthar, E., Furmark, T., Nilsson-Ihrfelt, E., & Ekselius, L. (2006). Internet-based self-help with therapist feedback and in vivo group exposure for social phobia: a randomized controlled trial. *Journal of consulting and clinical psychology*, 74(4), 677.

Andrews, G., Davies, M., & Titov, N. (2011). Effectiveness randomized controlled trial of face to face versus Internet cognitive behaviour therapy for social phobia. *Australian and New Zealand Journal of Psychiatry*, 45(4), 337-340.

Berger, T., Hohl, E., & Caspar, F. (2009). Internet-based treatment for social phobia: a randomized controlled trial. *Journal of Clinical Psychology*, 65, 1021–1035.

Carlbring, P., Gunnarsdottir, M., Hedensjo, L., Andersson, G., Ekselius, L & Furmark, T. (2007). Treatment of social phobia: randomized trial of internet- delivered cognitive-behavioural therapy with telephone support. *British Journal of Psychiatry*, 190, 123-128.

Chung, Y. S., Kwon, J. H. (2008). The efficacy of bibliotherapy for social phobia. *Brief Treatment and Crisis Intervention*, 8, 390-401

Furmark, T., Carlbring, P., Hedman, E., Sonnenstein, A., Clevberger, P., Bohman, B., ... & Andersson, G. (2009). Guided and unguided self-help for social anxiety disorder: randomised controlled trial. *The British Journal of Psychiatry*, 195(5), 440-447

Hedman, E., Andersson, E., Ljotsson, B., Andersson, G., Ruck, C., & Lindefors, N. (2011a). Cost effectiveness of internet-based cognitive behavior therapy vs. cognitive behavioral group therapy for social anxiety disorder: results from a randomized controlled trial. *Behaviour Research and Therapy*, 49, 729– 736.

Ledley, D. R., Heimberg, R. G., Hope, D. A., Hayes, S. A., Zaider, T. I., Van Dyke, M., ... & Fresco, D. M. (2009). Efficacy of a manualized and workbook- driven individual treatment for social anxiety disorder. *Behavior Therapy*, 40(4), 414-424.

Lewis, C., Pearce, J., & Bisson, J. I. (2012). Efficacy, cost-effectiveness and acceptability of self-help interventions for anxiety disorders: systematic review. *British Journal of Psychiatry*, 200, 15-21

Mayo-Wilson, E., Dias, S., Mavranouzouli, I., Kew, K., Clark, D.M., Ades, A.E., & Pilling, S. (2014). Psychological and pharmacological interventions for social anxiety disorder in adults: a systematic review and network meta-analysis. *The Lancet Psychiatry*, 1, 368–376.

National Collaborating Centre for Mental Health (2013). *Social Anxiety Disorder: Recognition, Assessment and Treatment*. The British Psychological Society & The Royal College of Psychiatrists.

Rapee, R. M., Abbott, M. J., Baillie, A. J., Gaston, J. E. (2007). Treatment of social phobia through pure self-help and therapist-augmented self-help. *British Journal of Psychiatry*, 191, 246–252.

Stott, R., Wild, J., Grey, N., Liness, S., Warnock-Parkes, E., Commins, S., Readings, J., Bremner, G., Woodward, E., Ehlers, A., & Clark, D. M. (2013). Internet-delivered therapy for social anxiety disorder. *Behavioural and Cognitive Psychotherapy*. 41, 383-397.

Titov, N., Andrews, G., Choi, I., Schwencke, G., & Mahoney, A. (2008a). Shyness 3: randomized controlled trial of guided versus unguided Internet-based CBT for social phobia. *Australian and New Zealand Journal of Psychiatry*, 42(12), 1030-1040.

Titov, N., Andrews, G., & Schwencke, G. (2008b). Shyness 2: treating social phobia online: replication and extension. *Australian and New Zealand Journal of Psychiatry*, 42(7), 595-605.

Titov, N., Andrews, G., Schwencke, G., Drobny, J., & Einstein, D. (2008c). Shyness 1: distance treatment of social phobia over the Internet. *Australian and New Zealand Journal of Psychiatry*, 42(7), 585-594.

Titov, N., Andrews, G., Choi, I., Schwencke, G., & Johnston, L. (2009a). Randomized controlled trial of web-based treatment of social phobia without clinician guidance. *Australian and New Zealand Journal of Psychiatry*, 43(10), 913-919.

Titov, N., Andrews, G., Johnston, L., Schwencke, G., & Choi, I. (2009). Shyness programme: longer term benefits, cost-effectiveness, and acceptability. *Australian and New Zealand Journal of Psychiatry*, 43(1), 36-44.

Date of search:

October 2021

Concepts used:

Social anxiety disorder, SAD, social phobia, psychological intervention, self-help, bibliotherapy, book prescription, cognitive behavioural therapy, self-care, telemedicine, computer-assisted therapy, e-therapy