

# Other evidence-based interventions using CBTp principles or techniques for psychotic symptoms

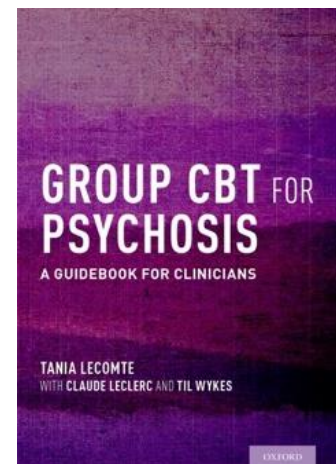
The following list is not exhaustive but covers various interventions that use CBTp techniques, principles, or target cognitive biases, in order to help people with their psychotic symptoms. We will attempt to keep this list up-to-date as new interventions are studied and empirically supported. Other interventions using CBT strategies have been developed and validated with people with psychotic disorders but do not specifically target psychotic symptoms and are therefore not presented here (e.g. CBT for trauma, CBT for supported employment, CBT for social anxiety, CBT for sleep).

Not all of the interventions listed here have received the same empirical support – some have been extensively studied in several randomized-controlled trials (and even meta-analyses) whereas others have only been studied in one or two clinical trials, but with promising results. As a Network, we do not wish to promote or favor any specific intervention above another.

## Group CBT for psychosis

Group CBTp comes in a variety of forms and can be adapted for the needs of specific participants and clinical staff. Interventions typically include some combination of psychoeducation, symptom identification and assessment, coping skills development, and relapse prevention. Most group CBTp are offered with a structured manual, detailing activities for each session. Groups that are more general and target psychotic symptoms and experiences last 16-24 sessions, whereas more symptom-specific groups can be briefer (8-12 sessions). Here are some validated CBTp groups :

- Group CBT for psychosis (Lecomte, Leclerc & Wykes) : The CBTp manual (available on website: <http://lespoir.ca> or imbedded in the Oxford press book (2016)) integrates the principles and philosophy of individual CBT for psychosis, but adapted to a group format and studied with individuals receiving services for a first episode of psychosis (but has also been used with older clients). The group has also deemed efficacious in a group videoconferencing format (zoom). A detailed description of the intervention is found in the book (Lecomte et al., 2016). The manual is built in 4 parts: 1) Stress: how it affects me, 2) Testing hypotheses and looking for alternatives, 3) Drugs, alcohol and how I feel, and, 4) Coping and competence, over the course of 24 sessions of 60-90 minutes. The manual follows a positive approach (rather than problem-based) with specific emphasis on reaching personal goals, decreasing distress, and finding what works best for them; with the

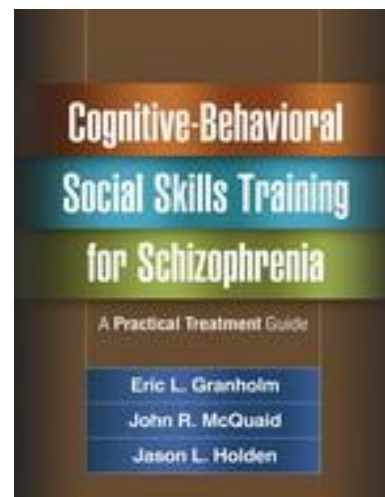


clients' being the experts of their experience and the therapists acting as guides. The participants also learn to understand and use CBT techniques such as normalization, the A-B-C's of CBT (linking events to thoughts and emotional and behavioral consequences), Socratic questioning, checking the facts, finding alternatives, trying new coping strategies, and modifying attributions. A two-day training is minimally needed to deliver this group intervention. This manual has been translated in a few languages, and is available from the author in French and in English.

*See empirical support:*

- Lecomte, Tania, Leclerc, C., Corbière, M., Wykes, T., Wallace, C., Spidel, A. (2008). Group cognitive behavior therapy or social skills training for individuals with a recent onset of psychosis? Results of a randomized controlled trial. *Journal of Nervous and Mental Disease*, 196, 866-875.
- Woodward, T., Muntz, M., Leclerc, C., Lecomte, T. (2009). Change in delusions is associated with change in "Jumping to Conclusions". *Psychiatry Research*, 170, 124-127
- Lecomte, T., Leclerc, C., & Wykes, T. (2012). Group CBT for early psychosis – are there still benefits one year later? *International Journal of Group Psychotherapy*, 62, 309-322.
- Lecomte, T., Leclerc, C., Wykes, T., Nicole, L., & Abdel Baki, A. (2015) Understanding process in group cognitive behavior therapy for psychosis. *Psychology and Psychotherapy: Theory, Research and Practice*, 88(2): 163-177. DOI: 10.1111/papt.12039
- Lecomte, T., Abdel-Baki, A., \*Francoeur, A., \*Cloutier, B., Leboeuf, A., Abadie, P., Villeneuve, M., et Guay, S. (2020) Group therapy via videoconferencing for individuals with early psychosis: A pilot study. *Early intervention in psychiatry*. <https://doi.org/10.1111/eip.13099>

- **Group CBSST for psychosis (Granholm, McQuaid & Holden):** Cognitive Behavioral Social Skills Training (CBSST) combines cognitive behavioral therapy (CBT) and social skills training (SST) techniques, such as thought challenging, role-play practice of communication skills, and problem-solving training. It is a flexible, manualized intervention (available in the book) that teaches cognitive and behavioral coping techniques, social functioning skills, problem-solving, and compensatory aids for neurocognitive impairments. CBSST targets the range of multidimensional deficits that can lead to functional disability in people with serious mental illness. Aids to compensate for cognitive impairment common in both schizophrenia and normal aging were also added. The group intervention is typically offered over 24 sessions of 2 hours. Although used with different age groups, it was originally studied with elderly clients. A two-day training is minimally needed to deliver this intervention. A two-day training is minimally needed to deliver this group intervention. More information is available at [info@cbsst.org](mailto:info@cbsst.org) or in the book from Guilford press.



*See empirical support:*

- Granholt E, McQuaid JR, McClure FS, Link PC, Perivoliotis D, Gottlieb JD, Patterson TL, Jeste DV. (2007) Randomized controlled trial of cognitive behavioral social skills training for older people with schizophrenia: 12-month follow-up. *J Clin Psychiatry*, 68(5):730-7.
- Granholt E, McQuaid JR, Link PC, Fish S, Patterson T, Jeste DV.(2008) Neuropsychological predictors of functional outcome in Cognitive Behavioral Social Skills Training for older people with schizophrenia. *Schizophr Res*. 100(1-3):133-43.
- Granholt E, Holden J, Link PC, McQuaid JR, Jeste DV.(2013) Randomized controlled trial of cognitive behavioral social skills training for older consumers with schizophrenia: defeatist performance attitudes and functional outcome. *Am J Geriatr Psychiatry*, 21(3):251-62.
- Granholt E, Holden J, Link PC, McQuaid JR. (2013) Randomized clinical trial of cognitive behavioral social skills training for schizophrenia: improvement in functioning and experiential negative symptoms. *J Consult Clin Psychol*, 82(6):1173-85.

- Group CBT for voices (Wykes). Group CBT for voices is a manualized therapy of seven sessions aiming at using CBT strategies to diminish the impact negative voices have on a person. The sessions are: (i) Engagement and sharing of information about the voices, (ii) Exploring models of psychosis, (iii) Exploring beliefs about hallucinations, (iv) Developing effective coping strategies, (v) How to improve self-esteem, (vi) Developing an overall model of coping with voices, (vii) Follow-up session. The group has been validated in different studies, suggesting stronger effects on social functioning and voices when offered to younger individuals (with fewer years of symptoms), and when delivered with more experienced therapists. To obtain the manual, contact the first author ([Til.wykes@kcl.ac.uk](mailto:Til.wykes@kcl.ac.uk))

*See empirical support:*

- Wykes T, Hayward P, Thomas N, Green N, Surguladze S, Fannon D, Landau S. What are the effects of group cognitive behaviour therapy for voices? A randomised control trial. *Schizophr Res*. 2005 Sep 15;77(2-3):201-10. doi: 10.1016/j.schres.2005.03.013. PMID: 15885983.
- Newton E, Landau S, Smith P, Monks P, Shergill S, Wykes T. Early psychological intervention for auditory hallucinations: an exploratory study of young people's voices groups. *J Nerv Ment Dis*. 2005 Jan;193(1):58-61. doi: 10.1097/01.nmd.0000149220.91667.fa. PMID: 15674136.
- Penn DL, Meyer PS, Evans E, Wirth RJ, Cai K, Burchinal M. A randomized controlled trial of group cognitive-behavioral therapy vs. enhanced supportive therapy for auditory hallucinations. *Schizophr Res*. 2009 Apr;109(1-3):52-9. doi: 10.1016/j.schres.2008.12.009. Epub 2009 Jan 26. PMID: 19176275.

- Accept Voices (Langlois). This 8-session group for voices integrates psychoeducational notions on voices, CBT strategies on coping strategies, and as well as third wave CBT concepts and strategies, mostly acceptance and self-compassion. The group lasts 6 sessions, of 90 minutes each. An initial study with 38 individuals with schizophrenia (with long experience of psychiatry) suggested significant decrease in auditory hallucinations, in beliefs about malevolence, as well as in symptoms of depression and anxiety. Coping and acceptance also improved. To obtain the manual (in English or French), contact: [tomalanglois@hotmail.com](mailto:tomalanglois@hotmail.com).

**See empirical support:**

Langlois T, Sanchez-Rodriguez R, Bourcier A, Lamy P, Callahan S, Lecomte T. Impact of the group intervention "Accept Voices©" for the management of auditory hallucinations. *Psychiatry Res.* 2020 Sep;291:113159. doi: 10.1016/j.psychres.2020.113159. Epub 2020 Jun 6. PMID: 32540685.

- **Group CBTp for families.** Groups offering psychoeducation on CBTp as well as coping strategies and support for family members who act as carers for people with psychosis have been developed and studied. One is called WITH (for Wellness, Inform, Talk, Help) by Lecomte and Leclerc. It is a multiple family group (without those receiving treatment for psychosis) includes either 24 sessions of one hour (to be offered in parallel to Group CBTp) or 8 sessions of two hours. The sessions cover what is recovery, what are the CBT strategies used in psychosis, expectancies and using CBTp coping strategies to maintain one's own mental health. The program has been studied with 40 family members and found improvements in symptoms (in parents), high satisfaction and low drop-outs. The group manual is available in English and French, at [www.lespoir.ca](http://www.lespoir.ca).

**See empirical support:**

Leclerc, C. & Lecomte, Tania. (2012). TCC pour premiers épisodes de psychose : pourquoi la thérapie de groupe obtient les meilleurs résultats ? CBT for first episode of psychosis: Why does group therapy offer better results? *Journal de thérapie comportementale et cognitive*, 22, 104-110.

Another recent family CBTp group was developed but not yet tested above the pilot level. It is from Landa and colleagues and proposes to teach parents how to use CBTp strategies with their young one who presents with a ultra-high risk (UHR) of developing psychotic symptoms. The therapy is offered as a single-family therapy, with the person at risk, and with sessions offered without the family. A total of 15 sessions are offered to the family. For more information, contact the first author: [yul9003@med.cornell.edu](mailto:yul9003@med.cornell.edu)

**See empirical support:**

Landa Y, Mueser KT, Wyka KE, Shreck E, Jaspersen R, Jacobs MA, Griffin KW, van der Gaag M, Reyna VF, Beck AT, Silbersweig DA, Walkup JT. Development of a group and family-based cognitive behavioural therapy program for youth at risk for psychosis. *Early Interv Psychiatry*. 2016 Dec;10(6):511-521. doi: 10.1111/eip.12204. Epub 2015 Jan 13. PMID: 25585830; PMCID: PMC5685498.

## **Group or individual's training and games**

- **Metacognitive training (MCT; Moritz & Woodward)** : MCT consists of a cognitive training offered with PowerPoint presentations either in a group or individually. MCT includes cognitive remediation principles, CBT, and psychoeducation. A total of 2 sets of 8 modules (covering attributions, jumping to conclusions, changing beliefs, empathy (ToM), overconfidence in memory errors, mood, self-esteem, and additional module on stigma) are delivered. The group version is not meant to target specific individual cognitions, but the individual training can. The training is interactive, dynamic and

entertaining. For more information and access to the training, go to : [https://clinical-neuropsychology.de/metacognitive\\_training-psychosis/](https://clinical-neuropsychology.de/metacognitive_training-psychosis/).

**See empirical support:**

- Moritz S., Andreou, C., Schneider, B. C., Wittekind, C. E., Menon, M., Balzan, R. P. & Woodward, T. S. (2014). Sowing the seeds of doubt: A narrative review on metacognitive training in schizophrenia. *Clinical Psychology Review, 34*, 358-366.
- Moritz, S., Veckenstedt, R., Bohn, F., Köther, U. & Woodward, T. S. (2013). Metacognitive training in schizophrenia: Theoretical rationale and administration. In D. L. Roberts & D. L. Penn (Eds.), *Social cognition in schizophrenia. From evidence to treatment* (pp. 358-383). New York, NY: Oxford University Press.
- Moritz, S., Vitzthum, F., Randjbar, S., Veckenstedt, R. & Woodward T. S. (2010). Detecting and defusing cognitive traps: Metacognitive intervention in schizophrenia. *Current Opinion in Psychiatry, 23*, 561-569.
- Moritz, S. & Woodward T. S. (2007): Metacognitive training in schizophrenia: From basic research to knowledge translation and intervention. *Current Opinion in Psychiatry, 20*, 619-625.
- Liu YC, Tang CC, Hung TT, Tsai PC, Lin MF. (2018) The Efficacy of Metacognitive Training for Delusions in Patients With Schizophrenia: A Meta-Analysis of Randomized Controlled Trials Informs Evidence-Based Practice. *Worldviews Evid Based Nurs., 15*(2):130-139.

- **Michael's game (Kazhaal):** Michael's Game is a group training module for hypothetical reasoning. It comes in the form of a written card game, where each card corresponds to a situation that the central character, named Michael, has experienced. Michael asks himself questions about the encountered situations. The group of participants has the objective to answer Michael's interrogations or to discuss the validity of his interpretations. Each card contains questions which help the participants through progressive stages, in order to formulate alternative hypotheses to Michael's. Participants are led to identify the behavioural and emotional consequences of the different alternatives generated. The game is supervised by two clinicians/staff members. Sessions take place weekly and last from 60 to 90 min. To order or more information : [yasserk1000@gmail.com](mailto:yasserk1000@gmail.com).

**See empirical support:**

- Khazaal Y, Favrod J, Libbrecht J, Finot SC, Azoulay S, Benzakin L, Oury-Delamotte M, Follack C, Pomini V. (2006) [A card game for the treatment of delusional ideas: a naturalistic pilot trial](#). *BMC Psychiatry, 30*;6:48.
- Khazaal Y, Favrod J, Azoulay S, Finot SC, Bernabotto M, Raffard S, Libbrecht J, Dieben K, Levoyer D, Pomini V. (2011) "Michael's Game," a card game for the treatment of psychotic symptoms. *Patient Educ Couns. May;83*(2):210-6.
- Khazaal Y, Chatton A, Dieben K, Huguelet P, Boucherie M, Monney G, Lecardeur L, Salamin V, Bretel F, Azoulay S, Pesenti E, Krychowski R, Costa Prata A, Bartolomei J, Brazo P, Traian A, Charpeaud T, Murys E, Poupart F, Rouvière S, Zullino D, Parabiaghi A, Saoud M, Favrod J. (2015) Reducing Delusional Conviction through a Cognitive-Based Group Training Game: A Multicentre Randomized Controlled Trial. *Frontier in Psychiatry, 28*;6:66.

## Self-help/ assisted self-help

- Guided manualized self-help (Naeem) : An initial assessment is followed by a formulation, which is shared with the individual. This formulation leads to a list of agreed problems, which are prioritized and forms the basis of delivery of the self-help intervention. The self-help material is provided weekly using handouts and worksheets. Health professionals are advised to work flexibly, taking into consideration individuals' level of motivation and difficulties with concentration. Short sessions are preferred over long sessions, and it is possible to repeat the sessions if required.

### *See empirical support:*

Naeem F, Johal R, McKenna C, Rathod S, Ayub M, Lecomte T, Husain N, Kingdon D, Farooq S. (2016) Cognitive Behavior Therapy for psychosis based Guided Self-help (CBTp-GSH) delivered by frontline mental health professionals: Results of a feasibility study. *Schizophr Res*, 173(1-2):69-74.

Naeem F., Xiang S, Munshi T.A., Kingdon D., Farooq S. (2015) Self-Help and Guided Self-Help Interventions for Schizophrenia and Related Disorders. Cochrane Database of Systematic Reviews.

## Technology-based interventions

- Avatar therapy (Leff) : AVATAR therapy's main goal is to facilitate a dialogue between the person with voices and a computerised representation of their persecutory voice in which the voice hearer is assisted to gain control over the distressing voice. The approach uses computer technology to create a visual representation of the entity (human or non-human) that they believe is talking to them. Additional software is used to transform the voice of the therapist to match closely the pitch and tone of the voice the person reports hearing, the two processes finally being combined to produce a computer simulation (a virtual agent or 'avatar') through which the therapist can interact with the participant. The therapist promotes a dialogue between the participant and the avatar in which the person eventually asserts himself and the avatar becomes more subdued. Avatar therapy involves specific training from the therapist and gear, and is available in 2-D as well as in virtual reality.

### *See empirical support:*

Craig TK, Rus-Calafell M, Ward T, et al. AVATAR therapy for auditory verbal hallucinations in people with psychosis: a single-blind, randomised controlled trial. *Lancet Psychiatry*. 2018;5(1):31-40.

du Sert OP, Potvin S, Lipp O, Dellazizzo L, Laurelli M, Breton R, Lalonde P, Phraxayavong K, O'Connor K, Pelletier JF, Boukhalfi T, Renaud P, Dumais A. (2018) Virtual reality therapy for refractory auditory verbal hallucinations in schizophrenia: A pilot clinical trial. *Schizophr Res.*, 197:176-181

- Mobile Apps: Although there has been a number of recent online or mobile interventions using CBTp principles or techniques, many randomized controlled trials are currently underway with the FOCUS intervention receiving the most empirical support to date.



- FOCUS is a smartphone-delivered intervention for people with serious mental illness (not just psychosis) that includes an app, clinician dashboard, and mHealth Support Specialist. The app uses several CBT strategies delivered via videos and written content. FOCUS can be pre-programmed to deliver automatic self-assessment prompts throughout each day and can be used on-demand any time after installation. Through the app, clients are able to gain access to five domains: voices (coping with auditory hallucinations via cognitive restructuring, distraction, and guided hypothesis testing), mood (managing depression and anxiety via behavioral activation, relaxation techniques, and supportive content), sleep (sleep hygiene, relaxation, and health and wellness psycho-education), social functioning (cognitive restructuring of persecutory ideation, anger management, activity scheduling, and skills training), and medication (behavioral tailoring, reminders, and psychoeducation). Clinicians can gain insight into these five areas using the clinician dashboard. Data can be viewed as trends over time to help not only fill in the gaps between counseling sessions, but also to see longitudinally how their clients are doing over a longer period. The mHealth Support Specialist serves as a navigator helping clients install and navigate the smartphone app and assists clinical teams with the adoption of the dashboard data into clinical care. When compared with an in-person, group-based Wellness Recovery Action Plan (WRAP) group, FOCUS yielded similar clinical results with much higher engagement in treatment initiation (90% used FOCUS compared to 58% who attended WRAP).

*See empirical support:*

Ben-Zeev D, Brian RM, Jonathan G, Razzano L, Pashka N, Carpenter-Song E, Drake RE, Scherer EA. Mobile Health (mHealth) Versus Clinic-Based Group Intervention for People With Serious Mental Illness: A Randomized Controlled Trial. *Psychiatr Serv*. 2018 Sep 1;69(9):978-985. doi: 10.1176/appi.ps.201800063. Epub 2018 May 25. PMID: 29793397.

Achtyes ED, Ben-Zeev D, Luo Z, Mayle H, Burke B, Rotondi AJ, Gottlieb JD, Brunette MF, Mueser KT, Gingerich S, Meyer-Kalos PS, Marcy P, Schooler NR, Robinson DG, Kane JM. Off-hours use of a smartphone intervention to extend support for individuals with schizophrenia spectrum disorders recently discharged from a psychiatric hospital. *Schizophr Res*. 2019 Apr;206:200-208. doi: 10.1016/j.schres.2018.11.026. Epub 2018 Dec 11. PMID: 30551981.

- PRIME is a mobile app intervention that was designed to improve motivational impairments early in the course of schizophrenia. PRIME includes a peer community, goal and achievement tracking, and cognitive behavioral therapy (CBT)-based coaching. The intervention was designed to target the motivational system by utilizing social reinforcement to engage and sustain goal-directed behavior. Results suggest that PRIME has the potential to be an effective mobile-based intervention for improving aspects of mood and motivation in young people with SSDs.

*See empirical support:*

Schlosser, D. et al (2018). Efficacy of PRIME, a Mobile App Intervention Designed to Improve Motivation in Young People With Schizophrenia, *Schizophrenia Bulletin*, Volume 44(5), 1010–1020, <https://doi.org/10.1093/schbul/sby078>

- CBT2go: Granholm and colleagues tested a mobile CBT intervention called CBT2go, offered following a single CBTp session. The app is not meant to be a stand-alone intervention, but to augment in-person content by providing real-time thought challenging intervention outside of the clinic setting, individualized to the specific symptoms or defeatist beliefs the client endorses at the time. The mobile device prompts participants to engage in cognitive restructuring. Results did not show a significant advantage of the app above self-monitoring.

*See empirical support:*

Depp CA, Perivoliotis D, Holden J, Dorr J, Granholm EL. Single-Session Mobile-Augmented Intervention in Serious Mental Illness: A Three-Arm Randomized Controlled Trial. *Schizophr Bull.* 2019 Jun 18;45(4):752-762. doi: 10.1093/schbul/sby135. PMID: 30281086; PMCID: PMC6581143.

- Promising practices:

- Bucci S, Barrowclough C, Ainsworth J, Morris R, Berry K, Machin M, Emsley R, Lewis S, Edge D, Buchan I, Haddock G. Using mobile technology to deliver a cognitive behaviour therapy-informed intervention in early psychosis (Actissist): study protocol for a randomised controlled trial. *Trials.* 2015 Sep 10; 16:404. doi: 10.1186/s13063-015-0943-3. PMID: 26357943; PMCID: PMC4566519.
- Rüegg N, Moritz S, Berger T, Lüdtke T, Westermann S. An internet-based intervention for people with psychosis (EviBaS): study protocol for a randomized controlled trial. *BMC Psychiatry.* 2018 Apr 13;18(1):102. doi: 10.1186/s12888-018-1644-8. PMID: 29653532; PMCID: PMC5899332.
- Garety PA, Ward T, Freeman D, et al. SlowMo, a digital therapy targeting reasoning in paranoia, versus treatment as usual in the treatment of people who fear harm from others: study protocol for a randomised controlled trial. *Trials.* 2017;18(1):510. Published 2017 Nov 2. doi:10.1186/s13063-017-2242-7
- Kopelovich, S., Stiles, B., Monroe-DeVita, M., Hardy, K., Hallgren, K., & Turkington, D. (2021). Psychosis REACH: Effects of a brief CBT-informed training for family and caregivers of individuals with psychosis. *Psychiatric Services.* doi: 10.1176/appi.ps.202000740. PMID: 34015942