

NARRATIVE REVIEW

## **Brief online behavioral cognitive intervention for anxiety symptoms: what was learned during and for after the pandemic period?**

**Intervenções cognitivas comportamentais breves online para sintomas de ansiedade: o que foi aprendido durante e para após o período pandêmico?**

**Intervenciones cognitivas conductuales breves y virtuales para los síntomas de ansiedad: ¿qué se aprendió durante y para después del período pandémico?**

Marco Antônio Silva Alvarenga <sup>a</sup>, Mário Cezar Rezende Andrade <sup>a</sup>

<sup>a</sup> Universidade Federal de São João del-Rei, Departamento de Psicologia – São João del-Rei/MG – Brasil

DOI 10.5935/2318-0404.20210030

### **Abstract**

Cognitive therapies comprise a widely recognized group of psychological interventions with considerable empirical support for different mental health conditions. These interventions can be used both in a traditional clinical setting and in crisis situations, especially those involving self-perception of overestimated risk, high vulnerability, and low coping capacity. The world is currently under a crisis, specifically, the COVID-19 pandemic, which can bring substantial impact on people's routine and cause significant psychological distress. In this context, telehealth interventions are becoming a standard practice and, thus, cognitive therapists could also support patients and people in the general population using this tool for the emerging issues. This text provides a brief overview of the main issues that may arise in the current pandemic situation as possible targets for the practice of cognitive therapists and the main evidence-based strategies that could be used in this context.

**Keywords:** cognitive therapy; evidence-based strategies; COVID-19

### **Resumo**

As terapias cognitivas compreendem um grupo amplamente reconhecido de intervenções psicológicas, com considerável suporte empírico para diferentes condições de saúde mental. Essas intervenções podem ser utilizadas tanto em ambiente clínico tradicional quanto em situações de crise, principalmente aquelas

envolvendo autopercepção de risco superestimado, alta vulnerabilidade e baixa capacidade de enfrentamento. O mundo vive atualmente uma situação de crise, especificamente, a pandemia de COVID-19, que pode trazer um impacto substancial na rotina das pessoas e causar sofrimento psicológico significativo. Nesse contexto, as intervenções de cuidado online estão se tornando uma prática padrão e, assim, os terapeutas cognitivos também poderiam apoiar seus pacientes e pessoas da população em geral usando esta ferramenta para as questões emergentes. Este texto fornece uma breve visão geral das principais questões que podem surgir na atual situação de pandemia como possíveis alvos para a prática de terapeutas cognitivos e as principais estratégias baseadas em evidências que podem ser utilizadas por eles neste contexto.

**Palavras-chaves:** Terapia cognitiva; Estratégias baseadas em evidências; COVID-19

## Resumen

Las terapias cognitivas comprenden un grupo ampliamente reconocido de intervenciones psicológicas, con considerable apoyo empírico para diferentes condiciones de salud mental. Estas intervenciones pueden utilizarse tanto en un entorno clínico tradicional como en situaciones de crisis, especialmente aquellas que implican un riesgo auto percibido sobrestimado, alta vulnerabilidad y baja capacidad de afrontamiento. El mundo atraviesa actualmente una situación de crisis, específicamente la pandemia de COVID-19, que puede tener un impacto sustancial en la rutina de las personas y causar una angustia psicológica significativa. En este contexto, las intervenciones de atención en línea se están convirtiendo en una práctica estándar y, por lo tanto, los terapeutas cognitivos también podrían ayudar a sus pacientes y personas en la población general utilizando esta herramienta para problemas emergentes. Este texto ofrece una breve descripción de los principales problemas que pueden surgir en la situación pandémica actual como posibles objetivos para la práctica de los terapeutas cognitivos y las principales estrategias basadas en la evidencia que pueden ser utilizadas por ellos en este contexto.

**Palabras clave:** Terapia cognitiva; Estrategias basadas en evidencia; COVID-19

## Cognitive Therapies and their possible applications

Cognitive therapies (CT) comprise a widely recognized group of clinical approaches, which includes a set of psychological interventions with considerable empirical support for different mental health conditions. Such interventions are characterized by directive strategies like problem solving techniques and psychoeducation<sup>1</sup>. In this sense, CT can be used both in a traditional clinical setting and in crisis situations, especially those involving self-perception of overestimated risk, high vulnerability, and low coping capacity<sup>2</sup>.

## The COVID-19 pandemic and its psychological consequences

The world is currently experiencing a pandemic, the COVID-19, caused by the new coronavirus, which can lead to an acute respiratory failure and, in some cases, can be lethal. As of this writing, over 172.226.125

million cases of COVID-19 had been identified around the world, and approximately 2.2% of those infected died, according to the Johns Hopkins Coronavirus Resource Center<sup>3</sup>. The World Health Organization has recommended some prevention guidelines such as hygiene and social isolation, due to the high transmissibility of COVID-19 and lack of an effective treatment, while the first vaccines are beginning to be available of what. As a response to this, many countries have implemented, for the first time in our generation, measures of social distancing, quarantine, and isolation in a global scale.

Despite being recognized as an effective strategy to reduce the spread of the virus, it is already known that social isolation has a substantial impact on people's routine and can cause significant psychological distress<sup>2</sup>. A recent review of 24 studies on the psychological impact of quarantine during previous infection outbreaks revealed relevant and long-lasting effects like post-traumatic stress symptoms, confusion, and anger. The main stressors identified in these studies included: longer quarantine period, frustration, boredom, fear of infection, inadequate information, inadequate supplies of food, medicines, and safety equipment for general population and health professionals, financial loss, and stigma<sup>4</sup>. Independently of isolation measures, the pandemic situation itself is highly distressing. An early survey performed with general population in China, where COVID-19 outbreak started, showed 53.8% of moderate or severe psychological impact<sup>5</sup>.

Furthermore, the changes brought by the pandemic and social distancing measures may lead to catastrophic thoughts, negative emotional experiences, and maladaptive behaviors such as information overload, rumination, excessive anxiety, fear of contamination and death, sleeping difficulties, panic buying and excessive storage, interpersonal problems enhanced by pre-existing conflicts due to isolation<sup>2,6,7</sup>. The opposite can also happen with people who believe they will not be infected, in case of resistant thoughts such as only people who are distant or live in other countries will be infected<sup>2,7</sup>. These expectations and feelings caused by cognitive distortions may increase suffering, especially those who have other clinical conditions, in addition to expose people to risks<sup>2,6</sup>.

### **Possible applications of cognitive therapies strategies during and after the pandemic**

Telehealth interventions are becoming a standard practice in the current pandemic situation among different health professionals and, thus, cognitive therapists could also support clients and people in the general population using this tool for these emerging issues. Recent correlational and longitudinal data from the onset of the pandemic in China suggest that online driven cognitive therapy could help in this context<sup>7</sup>.

Classical CT traditionally targets the contents of mental processes, focusing on the role of maladaptive thinking patterns in dysfunctional emotions and behaviors. The recognition and modification of these patterns reduces suffering and enables the development of coping skills and resilience<sup>1,2</sup>. More recently, process-based models and interventions have been incorporated into CT, with a greater focus on how people relate to their thoughts and emotions, rather than their content. Such interventions have also an increasing empirical support and include Mindfulness-based Interventions, Acceptance and Commitment Therapy, Dialectical Behavior Therapy, Compassion Focused Therapy, and many others. Instead of maladaptive thinking, these

new interventions emphasize issues and outcomes such as psychological flexibility, mindfulness, decentering, metacognition, values, compassion towards themselves and others, and acceptance of intrusive thoughts and emotions<sup>8</sup>.

During the pandemic period, cognitive therapists will be able to help patients to confront negative thoughts and make them more realistic. In this sense, they can assist patients to: 1) search for safe and reliable sources of information about the necessary care during social distancing measures; 2) remind that adversities are acceptable, how to face them and keep a positive perspective on future; 3) cultivate healthy habits within the contextual and social possibilities; 4) search for previously successful coping strategies and how to use them in current circumstances; 5) formulate a contingency plan in which to work at home, storing food, water, and medications for a short period of time, avoiding panic shopping and overstocking; 6) develop assertive, positive and careful communication with family members, especially with children, about the situation and how to keep a daily routine 7) stay connected with other people on social networks and learn how to select the relevant information for the necessary care; 8) develop communication, support and acceptance skills of people whom ones lives during isolation; 9) think about when, how and where to seek help in case of persistent symptoms and when support is not enough<sup>2,6</sup>.

Process-based strategies can also be used in case of issues like information burden, overthinking and mental rumination, excessive worry, distressing emotions, and sleeping problems, high level of self-criticism and poor self-care. In such cases, mindfulness practices could be a very useful tool. However, high levels of anxiety should be reduced first, which can be achieved with behavioral techniques, like breathing and progressive relaxation training, for example. Then, mindfulness meditation techniques could be introduced. These techniques are characterized by the cultivation of a non-judgmental and non-reactive awareness, having empirical support in the reduction of stress, overthinking and improvement of sleeping quality<sup>8-10</sup>. Acceptance-based strategies, derived from Acceptance and Commitment Therapy, are also effective tools, especially for dealing with highly distressing emotions and excessive worry. Finally, the cultivation of a compassionate and kind relationship towards oneself and others can enhance wellness and self-care, in addition to mitigate interpersonal problems<sup>10</sup>.

Table 1 provides an overview of the main evidence-based strategies for intervention regarding increased anxiety in periods of crisis, considering each target and their respective expected outcomes.

**Table 1.** Evidence-based strategies in CT for counseling in COVID-19 pandemic.

Targets	Characteristics	Examples	Strategies	Expected outcomes
Fear and anxiety	Fear: primal physical response that leads to avoiding specific menaces and threats. Anxiety: global response based on expectation about risks and vulnerability	<ul style="list-style-type: none"> <li>• People with previous anxiety disorders who had symptoms enhanced due to COVID-19 pandemic</li> <li>• Health professional with high levels of anxiety and fear related to the pandemic</li> <li>• General public with disabling anxiety symptoms and fear related to the pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Breathing and Relaxation training</li> <li>• Cognitive Restructuring techniques</li> <li>• Realistic Evaluation</li> <li>• Coping strategies</li> <li>• Problem Solving techniques</li> <li>• Positive Imagery techniques</li> <li>• Acceptance strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Self-control improvement, anxiety and panic decreasing</li> <li>• More realistic thoughts and effective coping strategies.</li> <li>• Decreasing of negative emotions and thoughts</li> </ul>
Cognitive distortions and Catastrophic thoughts	Cognitive distortions: Maladaptive thoughts in general (e.g.: minimization or magnification, misattribution, personalization, overgeneralization, selective abstraction, and others) Catastrophic thoughts: Cognitive distortion style related to thoughts of vulnerability and life threats in magnanimous events (e.g.: floods, earthquakes, and pandemics)	<ul style="list-style-type: none"> <li>• General public with maladaptive and catastrophic thoughts associated to the pandemic, leading dysfunctional behavior and suffering</li> </ul>	<ul style="list-style-type: none"> <li>• Examining the evidence</li> <li>• Thought Stopping</li> <li>• Distinction between thoughts and facts</li> <li>• Cost-benefit analysis</li> <li>• Coping cards</li> <li>• Other Cognitive Restructuring techniques in general</li> <li>• Examining Information Processing and Logical Errors</li> </ul>	<ul style="list-style-type: none"> <li>• Decreasing of negative emotions and thoughts</li> <li>• More realistic thoughts and effective coping strategies, taking the necessary steps to take care of oneself and others.</li> </ul>
Rumination and information overload	Excessive information related to negative and persistent thoughts	<ul style="list-style-type: none"> <li>• People with previous episodes of generalized anxiety or health-related anxiety associated to worries and rumination enhanced during the pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• Mindfulness and decentering techniques</li> <li>• Information selection</li> <li>• Established routine and activities</li> <li>• Perspective examination</li> </ul>	<ul style="list-style-type: none"> <li>• Overthinking and stress reduction</li> <li>• Self-balancing</li> </ul>

Targets	Characteristics	Examples	Strategies	Expected outcomes
Sleeping quality	Resting, and physical/mental invigoration according to the need of each person	<ul style="list-style-type: none"> <li>• General public with any sleeping difficulties related to the pandemic or social distancing</li> </ul>	<ul style="list-style-type: none"> <li>• Established routine and activities, including time to sleep and wake up</li> <li>• Mindfulness techniques</li> <li>• Relaxation techniques</li> <li>• Sleep hygiene techniques</li> <li>• Avoid seeking information about the pandemic, especially before sleeping</li> <li>• Changing eat habits and implementing physical activities</li> </ul>	<ul style="list-style-type: none"> <li>• Anxiety reduction</li> <li>• Reduction in Interrupted Sleep</li> <li>• Feeling of enhanced physical and mental invigoration</li> <li>• Increased learning and adaptation capacity</li> <li>• Higher levels of life satisfaction</li> </ul>
Stress	Physical and mental exhaustion response	<ul style="list-style-type: none"> <li>• Health care professionals with high levels of stress from being in frontline treatment</li> <li>• General public with high stress levels due to social distancing</li> <li>• General public with high stress levels due to work overload</li> </ul>	<ul style="list-style-type: none"> <li>• Established routine and activities</li> <li>• Defining priorities</li> <li>• Mindfulness techniques</li> <li>• Breathing and Relaxation training</li> <li>• Stress management techniques in general</li> <li>• Developing coping strategies skills</li> <li>• Problem Solving techniques</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of Exhaustion</li> <li>• Self-efficacy and self-concept improvement</li> <li>• Recognizing oneself limits and capacities</li> <li>• Balancing between personal and occupation life dimensions</li> <li>• Resilience and coping skills development</li> </ul>
Interpersonal problems	Conflict with peers and groups	<ul style="list-style-type: none"> <li>• General public who had relationship problems that were accentuated as result of increased domestic coexistence and social withdrawal</li> </ul>	<ul style="list-style-type: none"> <li>• Interpersonal skills training</li> <li>• Gratitude, forgiveness, and compassion skills training</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate expression of positive and negative thoughts and emotions</li> <li>• Self-respect and respect toward others</li> <li>• Capacity of solving conflicts or at least not enhance them</li> <li>• Building positive and satisfactory relations</li> </ul>
Self-Care	Physical and mental wellness development	<ul style="list-style-type: none"> <li>• General public with high levels of self-criticism</li> <li>• People with depressive symptoms with self-criticism enhanced during the pandemic</li> <li>• Sedentary lifestyle due to social distancing</li> </ul>	<ul style="list-style-type: none"> <li>• Defining values and goals</li> <li>• Routine management</li> <li>• Development of new and healthy habits</li> <li>• Updating medical exams</li> <li>• Cultivating positive relations</li> <li>• Cultivating self-compassion</li> <li>• Establish routine and activities, including time to sleep and wake up</li> </ul>	<ul style="list-style-type: none"> <li>• Higher levels of life satisfaction</li> <li>• Positive self-perception to deal with and solve problems</li> <li>• Increased resilience</li> </ul>

The application of these strategies may help therapists in the management of distress in their patients during the pandemic. Such strategies are also convenient to be used with health professionals, who are subject to a great level of suffering, fear, anxiety, and burden since they are in the frontline of health support during this pandemic.

## References

1. Beck AT. A 60-year evolution of Cognitive Theory and Therapy. *Persp Psychol Sci.* 2019; 14(1): 16-20. doi: 10.1177/1745691618804187
2. Taylor, S. *The Psychology of pandemics: preparing for the next global outbreak of infectious disease.* Newcastle upon Tyne: Cambridge Scholars Publishing; 2019.
3. Johns Hopkins University & Medicine Coronavirus Resource Center. COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU) [Internet]. Baltimore: Johns Hopkins University; 2021 [updated 2021; cited 2021 June 4th]. Available from: <https://coronavirus.jhu.edu/map.html>
4. Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet.* 2020; 395:912-20. doi: 10.1016/S0140-6736(20)30460-8
5. Wang C, Pan R, Wan X, et al. Immediate psychological responses and associated factors during the initial stage of the 2019 Coronavirus Disease (COVID-19) epidemic among the general population in China. *Intern J Env Res Pub He.* 2020; 17(5):1729. doi:10.3390/ijerph17051729.
6. Fardin MA. COVID-19 and anxiety: A review of psychological impacts of infectious disease outbreaks. *Arc Clin Infec Diseas.* 2020; 15(COVID-19):e102779. doi:10.5812/archcid.102779
7. Wang C, Pan R, Wan X, Tan Y, et al. Longitudinal study on the mental health of general population during the COVID-19 epidemic in China. *Brain Beh Im.* 2020; 87:40-8. doi.org/10.1016/j.bbi.2020.04.028
8. Hofmann SG, Hayes SC. The future of intervention science: Process-Based Therapy. *Clinical Psychol Sci.* 2018; 7(1):37-50. doi:10.1177/2167702618772296
9. Ho CS., Chee CY, Ho RC. Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Ann Acad Med Sing.* 2020; 49(3):155-60.
10. Behan C. The benefits of meditation and mindfulness practices during times of crisis such as COVID-19. *Ir J Psychol Med.* 2020; 37: 256–258. doi: 10.1017/ipm.2020.38

Both authors declare no conflict of interest regarding this article, its arguments, the review and publication in this journal.

The authors of this article contributed jointly to the literature review, structuring, writing, and proofreading of the text.

## Correspondence

*Marco Antônio Silva Alvarenga*

alvarenga@ufsj.edu.br / E-mail alternativo: alvarenga.mas.geral@gmail.com

Submitted in: 10/02/2021

Accepted in: 05/06/2021