

Health and Wellness in The Midst of Covid-19, An Emotional Relationship

Aura María Vasco Ospina¹ and Santiago Restrepo Restrepo^{2*}

¹Ph. D. in Psychology and Neuroscience, specialist in Medical Law, specialist in Organizational Psychology, specialist in Health Economics and Finance. Research professor, American University Corporation in Medellín, Colombia

²Psychologist, specialist in Organizational Psychology, master's degree in Neuropsychology, PhD in Cognitive Neuroscience, postdoctoral fellow in Sciences. Researcher and professor at the American University Corporation in Medellín, Colombia.

*Corresponding author

Santiago Restrepo Restrepo, Psychologist, specialist in Organizational Psychology, master's degree in Neuropsychology, PhD in Cognitive Neuroscience, postdoctoral fellow in Sciences. Researcher and professor at the American University Corporation in Medellín, Colombia.

Submitted: 30 Mar 2022; **Accepted:** 08 April 2022; **Published:** 28 April 2022

Citation: Aura María Vasco Ospina and Santiago Restrepo Restrepo (2022). Health and Wellness in The Midst of Covid-19, An Emotional Relationship. *Adv Neur Neur Sci*, 5(2), 80-84.

Abstract

This paper is part of some dissertations and analysis on the Covid-19 pandemic. The outbreak of Covid-19 in China has caused commotion because of the fear that the fact of getting sick instills in people. The growing number of patients and suspected cases, and the increasing number of cities and countries affected by outbreaks have sparked public concern about becoming infected. From other countries it can be observed that social fear is growing, and it is not only generated in Colombia, but in all those countries that are confirming cases of Covid-19. We will address in the article important aspects that revolve around public health, mental health. The chapter was developed from a research result review perspective where the results of published research on Covid-19 between 2019 and 2020 are analyzed, systematized and integrated, in order to account for the progress and trends of development around this topic.

Keywords: Covid-19; Stress; Mental Health; Telemedicine and Telepsychology.

Introduction

What at the beginning was presented as an epidemic in the world, quickly transformed and has us landed in other realities that have demanded and demanded the participation of all sectors to make decisions and responder for a public health situation that crossed world borders. A future difficult to anticipate due to this COVID pandemic that continues to grow in many countries [1].

The outbreak of the coronavirus disease 2019 (Covid-19) WHO declares a global pandemic with a health emergency on all continents from January 30, 2020 when all 34 regions of China had cases of infection, and the total case count exceeded the 2003 acute respiratory syndrome (SARS) count (Ho, Chee, Ho, 2020). The story of a person (Liu, 2020) who lives in a city near Wuhan, reflects the restrictions and in which they have spent two months giving recommendations to stay at home, taking more strict measures to contain this virus, living like this this pandemic from its origin [2].

In a report published on February 9 of this year, Yao, Chen, Xu, (2020) discussed 50 cases of Covid-19 among patients hospitalized in a psychiatric hospital in Wuhan, China; have raised concerns

about the role of mental disorders in coronavirus transmission [3]. Possible explanations include cognitive impairment, poor awareness of risk, and decreased efforts related to personal protection in patients, as well as conditions confined to psychiatric wards. People with mental disorders may be exposed to more barriers to accessing timely health services due to discrimination, all associated with mental health problems in health care settings.

There have been reports of people from China being excluded from some restaurants and cruise ships, operators have announced bans on Chinese citizens from traveling on cruise ships, creating dangerous scenarios of xenophobia [4]. Psychological symptoms related to Covid-19 have already been observed in the population including compulsive shopping invaded by panic, anxiety, in addition to the paranoia present when attending community events. Students, workers and tourists were prevented from accessing their training institutions, workplaces, homes, respectively, they are expected to present psychological symptoms due to stress and reduced autonomy and concerns about income, work and security [2].

Aspects of human emotionality that lead people to assume roles in public health events to design management strategies in times

of pandemic. Consequently, critical and important decisions are made on health issues to make decisions, and healthcare providers in all provide shock responses that support the eradication, or at least the control of diseases or even the current pandemic that the world is experiencing [5].

With the emergence of smart phones and online services, the current and future generation can and will access online health services, as well as education and entertainment. 19. The rapid transmission of the virus between people makes traditional psychological interventions difficult, therefore psychological interventions through technological means provide safety [2]. These measures implemented in China have generated greater support for these patients.

The books describe some characteristics and skills (competencies) in people. In an increasingly digitization in the world has saturated the media and service access and navigate health information sources and tools, such as television, internet and mobile applications [6]. Being more and more connected to the world is generating a rapid flow of information that can inform the whole of society in a fast and agile way. In a study conducted in China from January 31 to February 2, 2020, conducted on 1,210 people, it was found that in the initial phase of the Covid-19 outbreak, more than half of those surveyed rated the psychological impact moderate to severe, and about a third reported moderate to severe anxiety. The elements that influence or affect behaviors and impact people's mental health are identified, therefore, to minimize their adverse effects, mental health actions are implemented. in the mental health of vulnerable groups during the Covid-19 epidemic [2].

Chen, Liang, Li, Guo, Fei, Wang, He, Sheng, Cai, Li, Wang and Zhang (2020) carried out a psychological intervention developing mainly the following three areas: psychological intervention for the medical team provided in an online courses to guide medical personnel in dealing with common psychological problems; a counseling hotline team, which provided guidance and supervision to resolve psychological problems; and psychological interventions, which provided various group activities to release stress [7]. In another study conducted by Li, Ge, yang, Feng, Qiao, Jiang, Bi, Zhan, Xu, Wang, Zhou, Zhou, Pan, Liu, Zhang, yang, Zhu, Hu, Hashimoto, Jia... yang (2020), we worked mainly with medical personnel in direct contact with positive Covid-19 patients and its effects on psychological problems. Therefore, greater attention should be paid to the psychological problems of medical personnel, especially first-line nurses and the public in general under the situation of spread and control of Covid-19; and propose early strategies that aim to prevent and treat indirect traumatization in medical personnel and general public.

Telemedicine and telepsychology in the world

Trauma-focused cognitive-behavioral therapy (TF-CBT) is an evidence-based psychological treatment that can effectively improve symptoms of depression and anxiety that are common responses to exposure to trauma (Shealy, Davidson, Jones, López, from Arellano, 2015). Services can be problematic, especially for tra-

ditionally underserved populations such as rural residents, racial / ethnic minorities, and those from lower socioeconomic strata. People living in remote areas encounter additional barriers to care, including travel distances to services, longer time away from work or school, lack of access to transportation, and difficulties in caring for children. In Colombia, the phenomenon can occur that many people cannot access psychological treatments due to monetary shortages, difficulty of access, or lack of information. Barriers to treatment, including lack of transportation, can increase the potential for dropout. Telemedicine is a novel technique that can address barriers to treatment, increase initial access, and reduce attrition in suicide-focused treatment. Interventions through telemedicine can help decrease attrition and allow timely live treatment during a crisis (Ward-Ciesielski, Peros, Conigliaro, Gilmore, 2018). This has shown that the use of technological resources will be increasingly common for psychological treatments and emergency interventions. Morland, Greene, Rosen, Kuhn, Hoffman, Sloan (2017) specify that the possible ways in which telemedicine technologies help overcome barriers related to care are first addressed in terms of providing mental health treatment.

Administration of treatment via telemedicine, specifically the use of video conferencing allowing real-time communication between a patient and a physician at a distant site, has been shown to be an effective approach to increase reach and reach. access to treatment for mental health disorders and other chronic disorders [8]. Hospital psychological care through technological tools (such as video-conferencing) allows a greater accompaniment to people who are positive for Covid-19. Castro, Gili, Ricci-Cabello, Roca, Gilbody, Pérez-Ara, McMillan (2019), evaluated the effectiveness of the administration of telephone psychotherapy for depression in adults compared to control conditions or other active treatments, and to determine adherence to psychotherapy administered by telephone [9]. We included randomized controlled trials examining the impact of telephone-administered psychotherapy on depressive symptomatology. Hoefl, Stephens, Vannoy, Unützer, Kaysen (2019) agree that further research is needed in adapting the treatment of post-traumatic stress disorder (PTSD) to strengthen its foundations; considering collaborative care to improve the scope of PTSD treatments including the contribution of psychotherapy.

In another study carried out regarding tele-psychology, it was found that there is little evidence regarding the costs of telemedicine [16]. This analysis had as objective to analyze the trajectory of the cost of medical care before, during and after an intervention through tele-psychology. Crow, Mitchell, Crosby, Swanson, Wonderlich, Lancaster, (2009) They conducted a controlled study of face-to-face cognitive behavioral therapy versus telemedicine for bulimia nervosa; This was effective in both contexts, considering that in the case of telemedicine, fewer costs were evidenced. These findings underscore the potential applicability of telemedicine approaches for treating disorders in general [13].

A group of reviews (Ekeland, Bowes & Flottorp, 2012) recommended a controlled study design to assess the impacts of telemedicine [17]. A second group proposed standardization of populations

or interventions and outcome measures to reduce heterogeneity and facilitate meta-analysis. A third group recommended combining quantitative and qualitative research methods and others chose to apply different naturalistic approaches including methodologies that address mutual adaptations of services and users; This research was formatively directed towards collaboration, to ensure the capacity to improve services in natural environments. Cáceres, Gómez, García, Gatell and del Pozo (2006) developed the installation of a clinical routine that provides a telemedicine service, complementing standard care with a telecare follow-up for the treatment of stable patients infected with HIV in a chronic stage of your illness; to cover the entire care process with a telemedicine system that allows the patient to improve their self-care and be remotely followed by the health professional.

Morland, Greene, Rosen, Kuhn, Hoffman, and Sloan (2017) specify that the possible ways in which telemedicine technologies help overcome barriers related to care are first addressed in terms of providing mental health treatment. Telemedicine has also been used in the treatment of obsessive compulsive disorder (OCD), the use of telemedicine in this disorder represents some of the first technological interventions in mental health. A review of telemedicine efficacy data in OCD provides a window into the telemental revolution and informs us about the best supported technological tools in the treatment of OCD (Aboujaoude, 2017) [2].

Executive function and adolescents

Adolescence is a period of life in which the young adult faces different environmental challenges and stressors; it is a time of enormous changes in development, only surpassed by infancy and early childhood in terms of training and brain growth (Neufeld, Luczynski, Oriach, Dinan & Cryan, 2016). Furthermore, during adolescence, there is a rapid development of stress reactivity systems, leading to high negative emotion and the use of coping substances (Chaplin, Niehaus & Gonçalves, 2018) [12]. The adolescent. Essence marks a moment of unique neurocognitive development, in which executive functions reach the maturity levels of adults. While many central facets of executive function may mature in childhood, these processes continue to be refined and stabilized during adolescence. This is mediated, in part, by interactions between the hippocampus and the prefrontal cortex; Developing this circuit refines adolescents' ability to extract relevant information from previous experience to support task-relevant behavior. The development of this circuit is said to be mediated by increases in dopaminergic neuromodulation present in adolescence, which may be the basis for memory processing, plasticity, and circuit integration (Murty, Clabro, and Luna, 2016).

Executive function (EF) skills are integral components of growing competence in young children, but little is known about the role of early family context and experiences in their development. Much of the influence of early risks on later EF appears to be transmitted through the quality of parent-child interactions during infancy (Rhoades, Greenberg, Lanza & Blair, 2011). A large body of evidence indicates that interpersonal trauma increases the risk of depression in adolescents and adults (De Price and Shirk, 2013)

[15]. Executive functions and socially antagonistic attitudes and behaviors support an interrelated and coherent set of behavioral strategies designed to improve reproductive success (Life History Theory (LH) of Wenner, Bianchi, Figueredo, Rushton & Jacobs, 2013). Executive function, a neurocognitive aspect of decision making, it involves impulse control, future thinking, and behavior regulation. Furthermore, the addiction continuum involves executive function, which makes this a viable target for substance use prevention and treatment (Carr, Stewart, 2019) [19]. There is solid evidence of an association between insomnia, anxiety and depression in adolescence (Blake, Trinder & Allen, 2018) where a range of relevant biological factors is broadened, such as polymorphisms and dysregulation in serotonin, dopamine and circadian clock genes, alterations in brain circuits, cortisol reactivity to stress, inflammatory cytokine dysregulation, skewed memory consolidation, changes in sleep architecture; psychological factors (ie, cognitive inflexibility, interpretive biases, judgment biases, negative attribution styles, worry, rumination, threat-biased attention, dysfunctional beliefs and attitudes about sleep, misperception of sleep deficit); and social mechanisms (reduced and impaired social interactions, unhelpful parenting behaviors, family stress) [5].

School nurses in a unique position tackle two of the most critical adolescent health problems: addiction and mood. Cognitive behavioral therapy, the mainstay in the management of adolescent mood disorders, shows promise in the treatment and prevention of addictive behaviors. Quality decision-making can protect teens from substance abuse (Carr & Stewart, 2019) [19]. According to the study by McGovern, Militello, Arcoletto and Melnyk (2018), great findings provide strong support for the triangle of thinking, feeling and behaving for adolescents. To promote healthy lifestyle behaviors in adolescents, interventions must incorporate cognitive behavioral skills to develop activities, strengthen healthy lifestyle beliefs, and enhance positive health behaviors.

An online therapist-assisted parenting program was found to be acceptable to parents of adolescents suffering from anxiety and depression, their intended population. Professionals considered that the TOPS program would broaden parents' knowledge of how to recognize and respond to symptoms of clinical anxiety and depression in their adolescent (Fulgoni, Melvin, Jorm, Lawrence and Yap, 2019) [18]. Recent studies on food addiction provided a better understanding of this condition in various populations (Rodríguez, Gearhardt & Bégin, 2019). In fact, the authors have shown that food addiction was almost as common in adolescents as in adults, and similar correlates were observed in both populations (disordered eating behaviors, depressive and anxiety symptoms, impulsivity). Additionally, previous research indicates that anticipatory processing associated with anxiety may directly interfere with storage and testing processes of working memory demands (Lea, Alderson, Patros, Tarle, Arrington & Grant, 2018).

Depression and inventory Beck

Depression is one of the most clinically relevant mood disorders, and many assessment instruments have been developed to measure it. Probably the most widely used instrument is the Beck Depres-

sion Inventory (BDI) (Sauer, Ziegler & Schmitt, 2013). Despite the high prevalence of depression among adolescents with mild to borderline intellectual disabilities, little is known about the etiology and cognitive processes that play a role in the development of depression in this group (Weeland, Nijhof, Otten, Vermaes and Buitelaar, 2017). This is why it is important to understand the causes and perpetuation mechanisms of depression in adolescents with intellectual disabilities for the development of effective prevention and treatment programs for adolescents with this condition (Weeland, Nijhof, Otten, Vermaes and Buitelaar, 2017). Many studies have linked the symptoms of depression after an acute myocardial infarction (AMI) with negative health outcomes, including mortality. However, it has been suggested that this link may be due to a biased measurement of depressive symptoms in post-acute myocardial infarction patients related to confusion with AMI-related somatic symptoms (Thombs, Ziegelstein, Beck & Pilote, 2008).

Symptoms of suicidal thinking, loss of interest in sex, and lack of courage require immediate attention from families, peers, friends, and academic tutors, and should be examined in detail along with other manifestations. They constitute a red flag for severe states of academic vulnerability, environmental difficulty or severe depressive conditions (De Sá Junior, De Andrade, Andrade, Gorenstein & Wang, 2018) [14]. Studies of culturally adapted psychotherapy (CAP) are limited and so far there are few published examples that illustrate the process of cultural adaptation with treatments provided by the internet (Richards, Timulak and Salamanca-Sanabria, 2019) []. The Beck Depression Inventory (BDI) is widely used to assess the psychological well-being of adolescents, high BDI-21 scores in the absence of depression can reflect a wide range of challenges in an adolescent's psychological development (Savilahti, Haravuori, Ryttilä-Manninen, Lindberg, Kettunen and Marttunen, 2018). The simplified BDI (BDI-S) is a more efficient version of the BDI that has been shown to be no less reliable or valid (Sauer, Ziegler, and Schmitt, 2013).

The Beck hopelessness scale in Colombian patients with suicidal tendencies shows results similar to the original version, with adequate reliability and moderate concurrent and predictive validity (Rueda-Jaimes, Castro-Rueda, Rangel-Martínez-Villalba, Moreno, Quijano, Martínez-Salazar and Camacho, 2018).

Validity and reliability of the Beck depression inventory

Sanz and Vázquez, (1998) used the Beck depression inventory (self-report instrument most used internationally to quantify depressive symptoms in normal and clinical populations, both in professional and research practice), as an instrument to identify depressive subjects subclinics in experimental psychopathology studies. The data have been obtained in a sample of 1,393 university students. The reliability figures of the BDI were high both in terms of internal consistency (Cronbach's alpha coefficient = 0.83) and temporal stability (test-retest correlations ranged between 0.60 and 0.72 for three different subgroups of the total sample). It is concluded that the BDI is a valid instrument for detecting and quantifying depressive symptoms in patients, although its usefulness as a tool for the differential diagnosis of depression

is a question pending investigation, Sanz, García-Vera, Espinosa, Fortún and Vázquez, 2005) [1-20].

Conclusions

It is necessary to count on the efforts of nations to deal sensibly and immediately with other health issues that, in addition to immunity, allow the development of local response capacities for situations of such high complexity as mental health. Through health technologies such as telemedicine and telepsychology, it is possible to face situations that will generate other issues of a global epidemic, as we have already described and we are without a doubt referring to mental illness.

The responsibilities of those of us who are part of a select group of researchers and scientists, we find ourselves in immediate responsibility for developing proposals and projects that revolve around the prevention and promotion of mental health in times of pandemic, when we have already understood that it will cease to be so and is projected as a world endemic.

References

1. Bao, Y., Sun, Y., Meng, S., Shi, J., & Lu, L. (2020). 2019-nCoV epidemic: address mental health care to empower society. *The Lancet*, 395(10224), e37-e38.
2. Aboujaoude, E. (2017). Three decades of telemedicine in obsessive-compulsive disorder: a review across platforms. *Journal of obsessive-compulsive and related disorders*, 14, 65-70.
3. Asmundson, G. J., & Taylor, S. (2020). Coronaphobia: Fear and the 2019-nCoV outbreak. *Journal of anxiety disorders*, 70, 102196.
4. Asmundson, G. J., & Taylor, S. (2020). How health anxiety influences responses to viral outbreaks like COVID-19: What all decision-makers, health authorities, and health care professionals need to know. *Journal of anxiety disorders*, 71, 102211.
5. Blake, M. J., Trinder, J. A., & Allen, N. B. (2018). Mechanisms underlying the association between insomnia, anxiety, and depression in adolescence: implications for behavioral sleep interventions. *Clinical psychology review*, 63, 25-40.
6. Caamaño, L., Fuentes, D., González, L., Melipillán, R., Sepúlveda, M., & Valenzuela, E. (2011). Adaptación y validación de la versión chilena de la escala de impacto de evento-revisada (EIE-R). *Revista médica de Chile*, 139(9), 1163-1168.
7. Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L., ... & Zhang, Z. (2020). Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7(4), e15-e16.
8. Lin, L. A., Casteel, D., Shigekawa, E., Weyrich, M. S., Roby, D. H., & McMenamin, S. B. (2019). Telemedicine-delivered treatment interventions for substance use disorders: a systematic review. *Journal of substance abuse treatment*, 101, 38-49.
9. Castro, A., Gili, M., Ricci-Cabello, I., Roca, M., Gilbody, S., Perez-Ara, M. and McMillan, D. (2019). Effectiveness and adherence of telephone-administered psychotherapy for depression: A systematic review and meta-analysis.

10. Caceres, C., Gomez, E. J., Garcia, F., Gatell, J. M., & del Pozo, F. (2006). An integral care telemedicine system for HIV/AIDS patients. *International journal of medical informatics*, 75(9), 638-642.
11. Carr, K. L., & Stewart, M. W. (2019). Effectiveness of school-based health center delivery of a cognitive skills building intervention in young, rural adolescents: Potential applications for addiction and mood. *Journal of pediatric nursing*, 47, 23-29.
12. Chaplin, T. M., Niehaus, C., & Gonçalves, S. F. (2018). Stress reactivity and the developmental psychopathology of adolescent substance use. *Neurobiology of stress*, 9, 133-139.
13. Crow, S. J., Mitchell, J. E., Crosby, R. D., Swanson, S. A., Wonderlich, S., & Lancaster, K. (2009). The cost effectiveness of cognitive behavioral therapy for bulimia nervosa delivered via telemedicine versus face-to-face. *Behaviour research and therapy*, 47(6), 451-453.
14. De Sá Junior, A. R., de Andrade, A. G., Andrade, L. H., Gorenstein, C., and Wang, and. P. (2018). Response pattern of depressive symptoms among college students: What lies behind items of the Beck Depression Invention-II? *Journal Of Affective Disorders*, 234, 124-130.
15. DePrince, A. P., & Shirk, S. R. (2013). Adapting cognitive-behavioral therapy for depressed adolescents exposed to interpersonal trauma: A case study with two teens. *Cognitive and Behavioral Practice*, 20(2), 189-201.
16. Egede, L. E., Gebregziabher, M., Walker, R. J., Payne, E. H., Acierno, R., & Frueh, B. C. (2017). Trajectory of cost over-time after psychotherapy for depression in older Veterans via telemedicine. *Journal of Affective Disorders*, 207, 157-162.
17. Ekeland, A. G., Bowes, A., & Flottorp, S. (2012). Methodologies for assessing telemedicine: a systematic review of reviews. *International journal of medical informatics*, 81(1), 1-11.
18. Fulgoni, C. M., Melvin, G. A., Jorm, A. F., Lawrence, K. A., & Yap, M. B. (2019). The Therapist-assisted Online Parenting Strategies (TOPS) program for parents of adolescents with clinical anxiety or depression: Development and feasibility pilot. *Internet interventions*, 18, 100285.
19. Li, S., Wang, Y., Xue, J., Zhao, N., & Zhu, T. (2020). The impact of COVID-19 epidemic declaration on psychological consequences: a study on active Weibo users. *International journal of environmental research and public health*, 17(6), 2032.
20. Li, Z., Ge, J., Yang, M., Feng, J., Qiao, M., Jiang, R., ... & Yang, C. (2020). Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control. *Brain, behavior, and immunity*, 88, 916-919.

Copyright: ©2022 Santiago Restrepo Restrepo. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.