



Effect of Adopting Cultural Acceptance and
Commitment Therapy (ACT) on Mental Health
Among COVID-19 Survivors:a Systematic
Review

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**Effect of Adopting Cultural Acceptance and Commitment therapy (ACT)
on Mental Health Among COVID-19 Survivors: A Systematic Review**

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TABLE OF CONTENTS

Abstract	2
Introduction	3
Methods	9
Results	11
Discussion	14
Conclusion	17
References	18

ABSTRACT

COVID-19 pandemic has negative implications for mental health and psychological well-being. Studies emphasized that the rates of depression, anxiety, post-traumatic stress, and sleep-related issues were significantly higher during that time. Such an effect has extended up to 18 months even after the pandemic. Obviously, the time during the pandemic was challenging for all populations. However, that time was even more challenging for corona virus survivors, showing higher rates for anxiety and depression disorders.

Many interventions were used on such population to improve their psychological well-being, one of them is Acceptance and Commitment Therapy (ACT) which has the intention to improve mental health by encouraging psychological flexibility. The goal of ACT is to help in accepting the current mental and emotional experiences. Therefore, psychological flexibility is considered one of the fundamental core concepts of ACT. A decent body of research has been conducted lately on the positive implications of ACT for many psychologically related disorders, mainly depression, anxiety, coping issues, and many others.

When comparing ACT to other intervention it was approved that there is no significant difference between ACT and other psychological interventions. Also, when comparing the two interventions on post-traumatic growth and perceived positive and negative emotions among Corona survivors.

The findings of the current systematic review approved the effectiveness of using ACT as an intervention to reduce negative symptoms, and played a positive role in improving mental health among the targeted population. However, cultural adaption ACT is not fully investigated in Arabs countries and especially in Saudi population.

Keywords: Acceptance and Commitment therapy, (ACT), Mental Health, COVID-19 Survivors, Cultural adoption, Interventions

INTRODUCTION

The outbreak of the COVID-19 pandemic started in Wuhan, China, in December 2019, and the World Health Organization (WHO) announced it as a world-wide pandemic in March 2020. With the increased number of cases who were diagnosed with COVID-19 and the high rates of death around the world (Kuckertz et al., 2020; Otaredet al., 2021; Shahidiet al., 2023).

While the pandemic of COVID-19 was rapidly continuing to spread throughout the world, human life has been affected by that. Studies conducted in this regard have claimed that individuals have experienced a high level of a variety of negative outcomes, mainly stress and anxiety at that time. That means an individual's psychological state was negatively affected by the pandemic (Joharifard et al., 2022; Widha et al., 2021). Such an experience has affected general population in multiple directions. The reason beyond these negative implications is due to many factors such as fear of being infected, fear of death, worrying about other family members, socioeconomic factors, changes in lifestyle, financial condition, and fear of the future (Widha et al., 2021; Fung et al., 2021; Han et al., 2022; Polizzi et al., 2020). Therefore, studies on the impact of the pandemic on mental health have been targeted as a highly needed research priority (Jaywant et al., 2022; Arslan et al., 2020; Landi et al., 2020).

Studies highlighted that the rates of depression, anxiety, post-traumatic stress, and sleep-related issues were significantly higher during that time. Such an effect has extended up to 18 months even after the pandemic (Wallace-Boyd et al., 2023; Widha et al., 2021; Landi et al., 2020). These negative implications were the result not only of the Corona virus itself but also of the other complexity-related challenges that people faced during that time. Such as most of the people were locked down in their homes, children were not allowed to go to school, many financial issues, low income, social isolation, being unable to care for loved ones who are ill or dying, intolerance of uncertainty, health crises, distributions of daily routine, coping

struggles, and many other factors (Mallett et al., 2021; Faizah et al., 2021; Arslan et al., 2020).

Which leads to huge changes in the lifestyle to be adjusted to the dangerous situation at that time (Kuckertz et al., 2020). Populations who were at higher risk of being infected by the virus faced even a higher level of challenge; these conditions were cancer survivors, diabetes, cardiovascular diseases, MIS, and others. That causes a complex situation of fear, anxiety, and stress among them (Nikrah et al., 2023; Fishbein & Arch, 2022; Polizzi et al., 2020).

The Impact of Covid-19 on Mental Health

There is no doubt that time was challenging during the pandemic of COVID-19 among all populations, and it has a negative impact on psychological outcomes. However, that time was even more challenging for coronavirus survivors. Studies found that one of the most psychologically affected populations during that time was survivors (Nodezh et al., 2022; Park & Im, 2021). It has been found that 59% to 65% of them were clinically diagnosed with depression, anxiety, and stress. COVID-19 survivors face a huge number of psychological, environmental, and social stressors that increase the risk of psychiatric symptoms (Mazza et al., 2020). The uncertainty of the transmission approach and the appropriate protocol that should be used to control the infection for personal protection. Not only that, but the limited sources and health staff and the social isolation that occurred created another level of complexity for them. Especially for hospitalized patients (Nodezh et al., 2022; Jaywant et al., 2022). It is essential to mention that a study conducted in 2022 by Wang et al. claimed that health care providers played one of the most significant roles during the pandemic. Some of them were in direct contact with the patients of the virus; this population was very important to be highlighted because researchers discovered that they have a direct impact on the survivors' health experiences, thus affecting their mental health and psychological well-being (Kuckertz et al., 2020; Park & Im, 2021; Haddadi et al., 2023). Such a psychological effect did

not stop by the end of the pandemic; consequently, they struggled to deal with their feelings, cope with problems, and be more psychologically stable a long time after that, between 1 and 3 years later (Han et al., 2022; Otared et al., 2021).

Anxiety and depression disorders, whose studies reported a high rate of survivors, were diagnosed as common damaging disorders that are approved to be risk factors for quality-of-life deterioration. Because of their association with a wide range of negative implications for the individual's psychological, physical, and mental health (Joharifard et al., 2022; Mazza et al., 2020). These implications include suicide, eating disorders, expression aggressiveness, educational and occupational dysfunction, sleep problems, eating disorders, social impartsments, and isolation, as well as substance abuse (Otared et al., 2021; Faizah et al., 2021). That resulted in an enormous number of negative feelings that survivors had to experience, such as helplessness, shame, denial, anger, fear, overwhelm, frustration, exhaustion, anxiety, stress, hopelessness, and even guilt (Smith-MacDonald et al., 2022; Park & Im, 2021).

There are many approaches that are used for improving mental health and psychological well-being, the effectiveness of these approaches vary depends on many variables mainly the patients' situations, background, personality, diagnose, treatment plans and others. One of the fundamental approaches is cognitive behaviour therapy (CBT). Nevertheless, ACT consider as a model of the third generation of CBT which aims to encourage psychological flexibility. There are two fundamental core skills that ACT highlighted, which are acceptance and mindfulness, and the other core is the committed and behaviour change process and enhancing self-determined ability. A huge body of research has been conducted lately on the positive implications of ACT for many psychological issues, mainly depression, anxiety, problem coping, and many others (Rutschmann et al., 2023; Shepherd et al., 2022; Landi et al., 2020). It was found that ACT was an effective approach for clinical and non-clinical populations. In

comparison with other alternative approaches, ACT was claimed to be highly efficient with patients' problems, chronic pain' patients, depression, trauma patients, as well as cancer adaptation (Wallace-Boyd et al., 2023; Fishbein & Arch, 2022; Han et al., 2022; Hakansson et al., 2022). Studies have established that ACT is one of the psychological interventions found to be effective in treating mental fatigue and negative emotions. The goal of such an intervention is to help in accepting the current mental and emotional experiences (Haddadi et al., 2023; Nodezh et al., 2022; Fung et al., 2021). Therefore, psychological flexibility is considered one of the fundamental core concepts of ACT. On the other hand, the psychological inflexibility in another core model in ACT is considered one of the complex and dynamic psychological contexts (Arslan et al., 2020; Landi et al., 2020). That investigate the individual's ability to adapt to the environment and the circumstances in that surrounding environment (Finucane et al., 2022; Hakansson et al., 2022).

From a cogitative perspective, executive functioning is one of the main influences on psychological inflexibility, which refers to the brain 's ability to optimally integrate conditions. Such mental fatigue would affect the executive functioning of the individual, which would prevent the brain from adopting optimal strategies, consequently preventing the psychological fixability of the individual (Jia et al., 2021; Fung et al., 2021; Faizah et al., 2021). Therefore, it affects the psychopathology process of individuals, leading to a wide range of mental and psychical-related issues such as burnout, anxiety, depression, stress, and sleep-related disorders (Wang et al., 2022; Otared et al., 2021; Widha et al., 2021). ACT as a treatment approach is based on six main interdependent processes to create flexibility, which are: contact with the present moment, self as context, values, acceptance, committed actions, and diffusion (Otared et al., 2021; Shepherd et al., 2022; Smith-MacDonald et al., 2022). The aim of this approach is to attempt to alert the psychological functions and influence on overt behaviour, increase the capacity for changing the targeted behaviour in a way that avoidance emotions could be treated,

and deal with the excessive literal response to cognitive content and barriers to making and keeping commitments to value-based actions (Hakansson et al., 2022; Smith-MacDonald et al., 2022). The acceptance-based coping approach is related to changing how the individual relates to the responses to certain stressors for events that are uncontrollable by applying some techniques for coping. Such as becoming nonjudgmentally aware of the effect of internal states that arise in response to them in an accepting and planful manner. This phenomenon of not striving to change, distract from, or otherwise divert from spontaneous physical or emotional responses is indeed a good reason to fear the virus, as it is a potential death sentence, but fear need not dominate one's existence. Rather, it is suggested that it is possible to coexist with realistic fears, to observe their reactions, and to stand apart from them (Polizzi et al., 2020).

Effect of ACT among Corona Survivors

ACT as an intervention was approved to be highly effective in reducing negative symptoms like depression and anxiety and improving mental health and psychological well-being among the survivors of Corona various. The result of a recent study conducted by Golchin et al. (2023) showed that there is no significant difference between ACT and compassionate mind-based therapy when comparing the two interventions on post-traumatic growth and perceived positive and negative emotions in adult patients who were corona survivors. Therefore, both approaches impact positive and negative emotions and post-traumatic development post-test and after 3-month follow-up.

It is essential to highlight the limited amount of research that has been conducted on such a population. Although ACT is considered one of the main approaches that are used in similar situations, or for those who might face a complex multi-level challenge in their lives, it is also found that ACT was often used during the pandemic and after to improve mental health

and psychological well-being with health care providers and was found to be very beneficial (Muñoz-Martínez et al., 2022; Wang et al., 2022; Otared et al., 2021). A limited body of research was conducted on corona survivors using adoptive cultural ACT. Also, a thorough review of the existing literature has revealed only a limited number of scientific studies directly addressing this issue. Besides, specific areas present a gap in the current body of scientific knowledge, warranting further investigation, particularly in the Middle East population (El-Sayed et al., 2023). Although there are several studies that used adoptive cultural ACT as an intervention for improving mental health among the Saudi population, one of them was among Saudi Muslim females with mental health disorders, which concluded that adoptive cultural ACT group therapy was well appreciated and viewed as being culturally and religiously acceptable by the Saudi Muslim female participants. It has been found that ACT is efficient for improving mental health and increasing positive emotions in Saudi women who are diagnosed with depression (Bahattab & AlHadi, 2021). However, studies suggested more research be conducted on such an intervention among the Saudi population (El-Sayed et al., 2023).

This systematic review aims to investigate the effect of adoptive cultural ACT on mental health during the COVID-19 pandemic among survivors based on well-established criteria. The objectives are to analyse the effectiveness of the adoptive cultural ACT as an intervention that is used to improve mental health and psychological well-being in the selected populations. Such a need to explore such a topic lies in its potential to inform both researchers and clinical practices and impact policy in psychological treatment.

METHODS

This systematic review was conducted by using Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines. PRISMA provides a standard guideline with a checklist, which was followed by this review.

Search strategies

A literature search on the adoptive cultural ACT effect on improving mental health was conducted utilizing the electronic databases of Effat University (EBSCO) as well as the PsycINFO database and ResearchGate database. The search terms were (“acceptance”) (“ACT”) (“acceptance and commitment”) AND (“COVID-19 OR corona”) AND (“mental health” OR “psychological well-being” OR “stress” OR “anxiety”) AND (“survivors” “patients” “cases”) (adoptive cultural ACT) (adoptive cultural intervention) (adoptive cultural psychotherapy). The terms were searched for within the title and abstract of the articles, besides the key words of the studies. The selected period of the search was the past five years. The forward and backward snowballing technique was applied via cited reference searches and reading reference lists from each single paper.

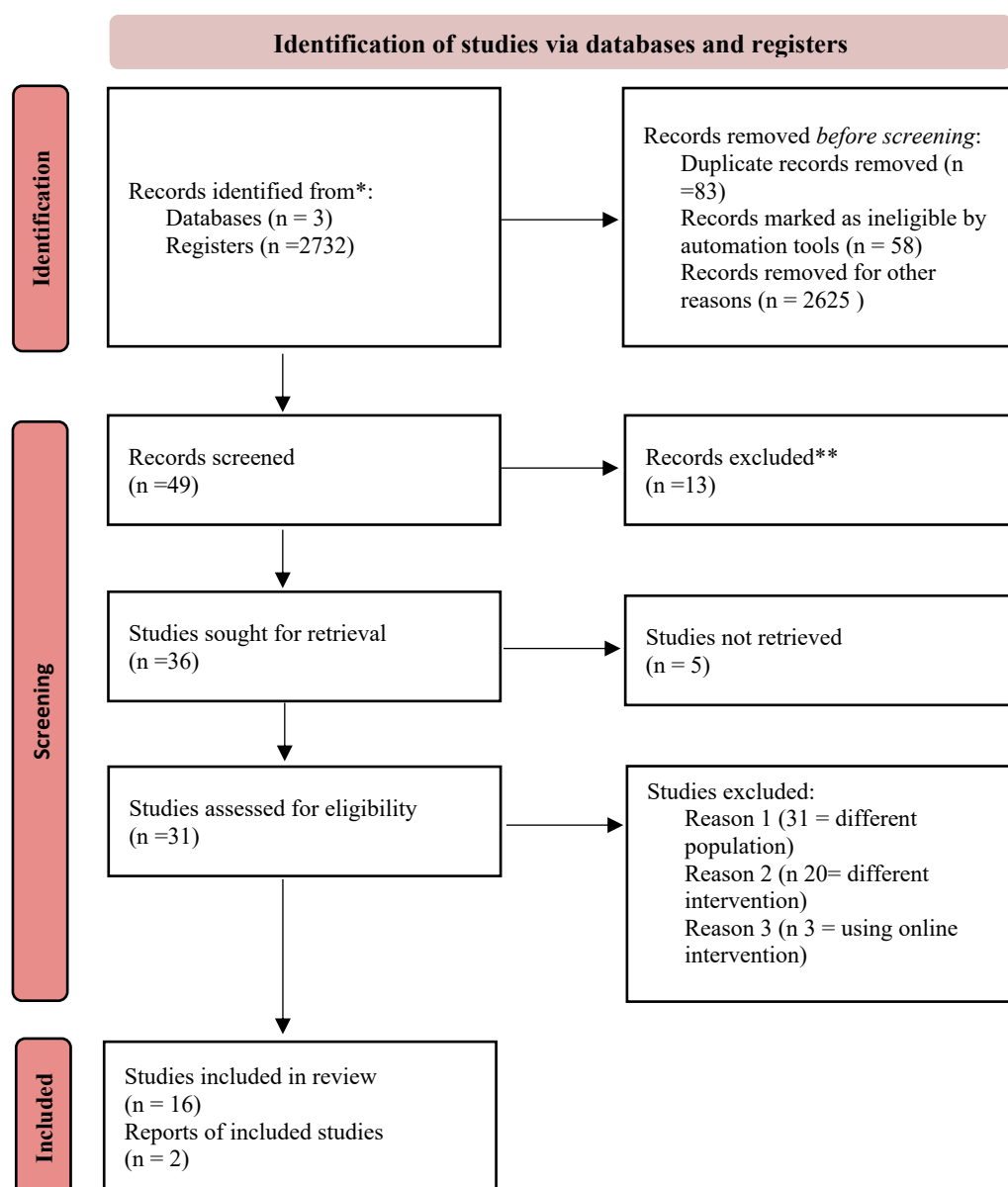


Figure (1) From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

Inclusion and exclusion criteria

A total of 2732 studies were found when the research was started in searching for the effectiveness of ACT as a psychological intervention. After selecting only studies that were published within the last 5 years, besides selecting English, abstracts, and full text studies, as well as removing duplicates and screening the titles of these, only 49 studies were selected. Among these 49 studies, only 31 were selected to be used in this systematic review. Some

inclusion criteria were followed when filtering the most appropriate studies that were found. Most of the studies in regard to using ACT as an intervention during COVID were applied to health care providers, mainly nurses. As in some of the studies, the participants were not corona survivors; consequently, they were suffering from other diagnoses such as cancer survivors, diabetes, bowel diseases, trichotillomania, severe back pain, and lupus erythematosus. Other populations rather than corona survivors were also excluded, for instance, students, pregnant women, medical staff, nurses, health care providers, parents of children with disabilities, parents of children with autism or ADHD, caregivers, adolescents, individuals with disabilities, and children. After searching back and forth in the reference list of each study, only 16 studies were included, that investigated the effect of ACT in reducing negative impact and improving mental health among a specific population, which were the Corona virus survivors only.

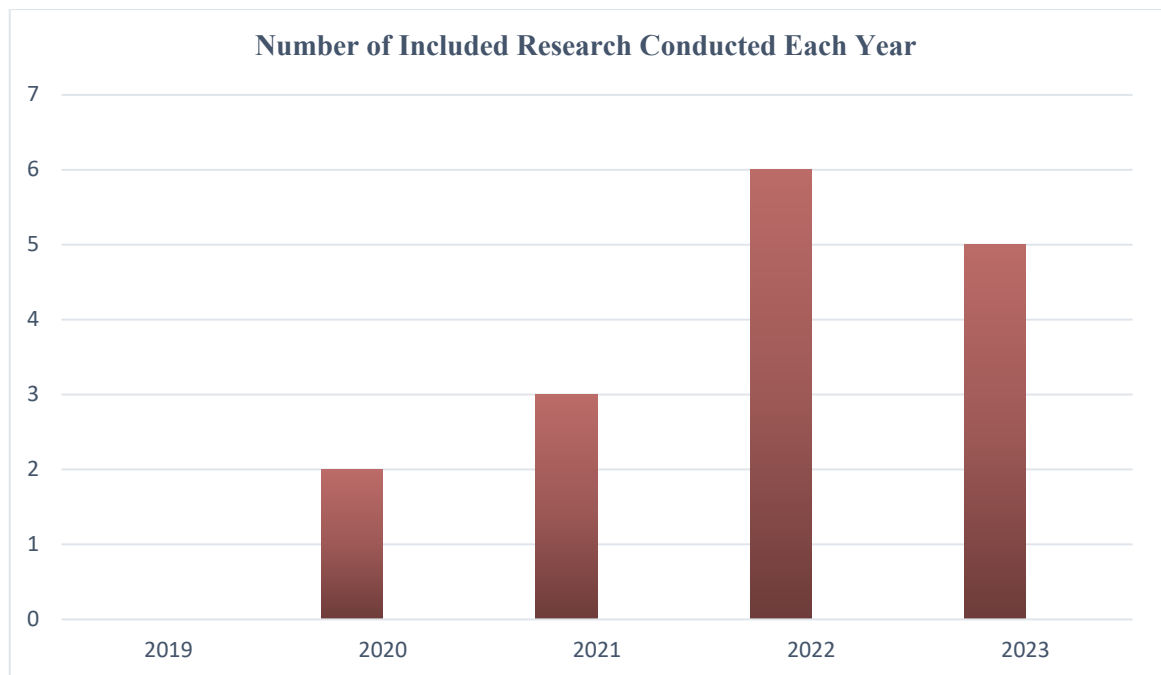


Figure (21) explains the number of the included research that conducted each year

Ethical Issues

Some of the main issues regarding to the ethics in systematic review are, database bias, citation bias, availability bias, language bias and multiple publication bias, and this systematic review insured no ethical issues is contained. However, there is no ethical consent was required due to the fact that all of the data in this review was taken from published literature which consider as a secondary resource.

RESULTS

A total of 16 studies were included in the analysis of this systematic review. The general result that was concluded is the effectiveness of using ACT as an intervention to reduce negative symptoms like stress, depression, and anxiety among Corona survivors. Not only that, but it has also been found that ACT played a positive role in improving mental health and psychological well-being among the targeted population. The studies vary in their research design. Two of them were only qualitative studies; one had 8 participants and was conducted in 2020 by Kuckertz et al., which found a positive association between ACT and reducing stress and anxiety symptoms among the participants. On the other hand, another qualitative study by Shepherd et al. (2020) indicated that no significant changes were found for COVID-related distress. Results were continued at one- and two-month follow-up, suggesting lasting change.

Whereas the other 14 were quantitative research designs of a total of 1239 participants. Four of them were correlational studies aimed at analysing the relationship between the ACT and reducing negative symptoms associated with COVID-19. Two studies were correlation studies which compare the effectiveness of the ACT by allocating the participants into two groups: the control group and the intervention group (who had ACT as an intervention), with a total of 182 participants. One of the main limitations highlighted was that the correlation design would not allow interpretation for causality.

Two of the studies investigate the effect of ACT in the comparison of other interventions such as CBT (85 participants), such as a study conducted by Wallace-Boyd et al. (2023) that used CBT in a comparison with ACT. Thus, another study used behavioural therapy as an intervention (Jaywant et al., 2021). One of the studies was a short-term longitudinal design, which was done by Park and Im (2020). The total duration of data collection was only 12 days; therefore, subsequent studies should ensure a sufficient duration of study to retest the hypothesis and suggest a longer period of time, for instance, 6 months (Fishbein & Arch, 2022).

Eight of the studies were quasi-experimental research designs that evaluated the participants' mental health status before the ACT intervention and re-evaluated the participants post-intervention (a total of 912 participants in all the studies) to investigate the effectiveness of ACT among them. Six of the studies had the advantage of following up for a period of at least 8 months after the intervention and suggested another follow-up to be done after a longer time.

In regard to the types of surveys that were used, studies employed a variety of measures to assess the effectiveness of ACT as an intervention. Such as Connor and Davidson's (2003) Resilience Scale (CD-RISC) and the World Health Organization's (1995) Quality of Life Questionnaire (WHOQOL-BREF) (Nikrah et al., 2023). Others used the Beck Depression Inventory (BDI-II) and the World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) again in pre- and post-tests (Sobhani et al., 2022). Other scales that were used as a tool of measurement were the Corona Disease Anxiety Scale (CDAS), the resilience questionnaire, and the life quality scale. Mazza et al. (2020) used a clinical interview, and a battery of self-report questionnaires were used to investigate post-traumatic stress disorder (PTSD), depression, anxiety, insomnia, and obsessive-compulsive disorder (OCD) symptomatology. Sociodemographic information, clinical data, baseline inflammatory markers, and follow-up oxygen saturation levels were collected.

The ACT interventions were also varied from one study to another; some of the studies used intensive courses of mindfulness (which are considered one of the main components of ACT), like three times a week, and ACT therapy, like one every other week (Rutschman et al., 2023). A recent study conducted in 2023 by Wallace-Boyd et al. used focus groups and open-ended questions to explore the usability and acceptability of the intervention as well as levels of engagement and adherence to the intervention.

One of the main limitations that were included in the majority of the studies was the small sample size. Although the rate of the patients who were diagnosed with COVID was considered very high, it was challenging to involve them in psychological intervention studies, which could be due to the critical health condition of the COVID survivors. Although ACT was significantly effective as an intervention to be used in tough times, third-wave therapies such as ACT were less popular to be used as interventions during COVID, which raises a question in this gap of research for researchers and practitioners to be answered. However, that could be as a result of several complex factors, such as the fact that the majority of the psychological interventions used at the time were CBT due to its effectiveness over a shorter period of time (Mahoney et al., 2021). The lack of experienced and trained psychologists in ACT makes it less common to be used as an intervention during that time.

Another limitation that was stated in much research was the self-report measurement, which could be an advantage and disadvantage at the same time, which could be effective in the accuracy of the result.

DISCUSSION

Overall, the findings indicated the effectiveness of using ACT as an intervention to enhance health and improve psychological well-being. The results of a study done by Park and Im (2021) displayed that anxiety and depression decreased and committed action increased in

participants. These results highlight a complex relationship between restrictions and concerns related to COVID-19 and psychological health; based on the results, the positive impact of ACT on psychological health was found. Another study has found that from pre-treatment to post-treatment, symptoms decreased significantly and global functioning as well as quality of life improved significantly (Rutschman et al., 2023). The differentiation between pre-treatment and follow-up was significant for clinical symptoms, psychological well-being, and quality of life. Another study was published in 2022 by Hakansson et al., and the demonstration of viability for the CBT and ACT interventions in the present study had potential consequences for the treatment of many patients with the post-COVID syndrome. That actually corresponded with other studies as well, which showed the provision of social support and ACT can be done as a preventive effort to maintain the mental health and subjective well-being of COVID-19 patients during the treatment period, both in the hospital setting and independent isolation at home (Faizah et al., 2021). As well, a study indicated that ACT can be used as an efficient method to improve the life quality and resilience of those recovered from COVID-19 by employing six main relationships with the present time: processes of observer self, acceptance, fusion, value, and committed action (Nodezh et al., 2020).

However, more questions were raised, although it was an applicable intervention, and studies disclosed that ACT was as effective as other interventions like CBT. The question that was raised is why ACT was not commonly used during COVID to psychologically treat patients after being diagnosed with the Corona virus (Mahoney et al., 2021). Moreover, when it comes to the research field, a gap was found in the current body of scientific knowledge, warranting further investigation, particularly in the Middle East population and especially in Saudi Arabia. The question is whether adoptive cultural ACT was used by the practitioners during COVID, and more research should be conducted to fill this gap.

Strengths

There are several strengths of the current systematic review, mainly it aimed to evaluate the effectiveness of the ACT as an intervention in reducing negative symptoms and improving survivors' mental and psychological well-being. Such a topic raises questions about the support that Corona survivors needed and whether they gained that desire support when mentioning their mental statues at that time or not. Not actually only during that challenging time of their diagnoses and treatment process, but as showed in studies, the negative impact could continue several months later. The question is whether mental health was urgent at such times or whether only their physical recovery was the most important priority for the health providers and families. This systematic review raises awareness about such an issue. Moreover, this review could be considered an invitation to practitioners to apply ACT as an intervention for individuals who faced serious challenges in their lives, especially in such an Islamic culture community and patients, because it is highly associated to Islamic beliefs about acceptance of what is happening, and Muslims should hold the firm belief that everything that occurs goes in accordance with Allah's decree and His knowledge and will. Which enhance the strong believes in Allah and empower the Muslims' faith and satisfaction of the occurred situation and gave another level of contentment to the patients or individuals through tough times.

Limitations

On the other hand, there are some limitations to the current systematic review; the lack of studies that were found was limited, and this is another gap in the body of research in the field that should be considered more by the researchers and the practitioners. Not only is the sample size in many studies considered small, regardless of the huge number of survivors at that time. In addition to that the issue of the language where some of the excluded researches were not in English rather they were wittier in other language, which could be an issue to be

considered in future research. Additionally, not all studies conducted follow-up outcome assessments, which might be important and encouraged. Hence, the contributions of the long-term effect and evaluation could be fundamental.

Future research

In response to the limitation, improvement would definitely be considered in future research. More studies should be included. Also, a comparison between ACT and other approaches should be conducted. As well as investigating the effect of adoptive cultural ACT on other populations than survivors. It is suggested to highlighted number of studies conducted each year starting from the year of the start of the pandemic (2019) until today, and observe the change in number of research, whether the number is decreasing or increasing thought the years. Besides, it is suggested to resume evaluating the use of ACT on other issues, not only during COVID-19 but other challenging times that individuals are going through, such as war's casualties, prisoners, refugees, and victims of violence. Another suggestion would be to consider ACT as one of the innervations that are used among psychotic patients.

It is also suggested to conduct a systematic review that investigate the online based ACT intervention and its effectiveness on mental health and psychological well-being, because there are some studies used online interventions, which were also found to be effective especially because of the lockdown during the pandemic (Kuckertz et al., 2020). However, the issue about online intervention, is the lack of control in such a situation. However, as is typical in psychological intervention research, blinding of participants was not possible in online studies. Similarly, outcome assessors were not blinded to participants' circumstances in the online-based intervention's study due to the self-reported nature of outcome measures.

Conclusion

The current systematic review aims to address the effect of adoptive cultural ACT on improving mental health among Corona survivors. The results concluded that ACT was beneficial when used among the targeted population, improved their mental health, and reduced negative symptoms such as anxiety, stress, and depression. Besides, when comparing ACT with other interventions, such as CBT, they are found to be equally effective and have the same outcomes as other psychological interventions. Even though, despite the positive findings, due to the limitation of the number of studies that are included, such a result could be inconclusive, more studies should be conducted in the area for more accurate findings.

REFERENCES

- Arslan, G., Yıldırım, M., Tanhan, A., Buluş, M., & Allen, K. A. (2020, June 4). Coronavirus Stress, Optimism-Pessimism, Psychological Inflexibility, and Psychological Health: Psychometric Properties of the Coronavirus Stress Measure. *International Journal of Mental Health and Addiction*, 19(6), 2423–2439. <https://doi.org/10.1007/s11469-020-00337-6>
- Bahattab, M., & AlHadi, A. N. (2021, January). Acceptance and commitment group therapy among Saudi Muslim females with mental health disorders. *Journal of Contextual Behavioral Science*, 19, 86–91. <https://doi.org/10.1016/j.jcbs.2021.01.005>
- El-Sayed, M. M., Elhay, E. S. A., Taha, S. M., Khedr, M. A., Mansour, F. S. A., & El-Ashry, A. M. (2023, August 17). Efficacy of acceptance and commitment therapy on impulsivity and suicidality among clients with bipolar disorders: a randomized control trial. *BMC Nursing*, 22(1). <https://doi.org/10.1186/s12912-023-01443-1>
- Faizah, I., Kartini, Y., Yunita Sari, R., Rohmawati, R., Afiyah, R. K., & Suryadi Rahman, F. (2021, November 19). Social Support and Acceptance Commitment Therapy on Subjective Well-Being and Mental Health of COVID-19 Patient. *Open Access Macedonian Journal of Medical Sciences*, 9(G), 238–243. <https://doi.org/10.3889/oamjms.2021.7216>
- Finucane, A., Hulbert-Williams, N. J., Swash, B., Spiller, J. A., Lydon, B., & Gillanders, D. (2022, June 22). Research Evaluating Staff Training Online for Resilience (RESTORE): Protocol for a single-arm feasibility study of an online Acceptance and Commitment Therapy intervention to improve staff wellbeing in palliative care settings. *AMRC Open Research*, 3, 26. <https://doi.org/10.12688/amrcopenres.13035.2>
- Fishbein, J. N., & Arch, J. J. (2022, April). Examining the effects of prior Acceptance and Commitment Therapy (ACT) treatment among anxious cancer survivors during the COVID-19 pandemic: Evidence from a randomized controlled trial. *Journal of Contextual Behavioral Science*, 24, 31–37. <https://doi.org/10.1016/j.jcbs.2022.03.006>
- Fung, K., Liu, J. J., Vahabi, M., Li, A. T. W., Zurowski, M., & Wong, J. P. H. (2021, December 6). Pandemic Acceptance and Commitment to Empowerment Response (PACER) Training: Protocol for the Development and Rapid-Response Deployment. *JMIR Research Protocols*, 10(12), e33495. <https://doi.org/10.2196/33495>
- Golchin, A., Nejat, H., Akbari, H., & Masuodi, S. (2023). Comparing the effectiveness of emotion-based therapy and compassionate mind-based therapy on post-traumatic growth and perceived positive and negative emotions in adult inpatients who have recovered from Coronavirus. *Journal of Fundamentals of Mental Health*, 25(3), 179-188. doi: 10.22038/jfmh.2023.22610
- Haddadi, A., Yazdi-Ravandi, S., Moradi, A., & Hajaghaie, E. (2023, March 1). Comparing the Resilience of the Medical Staff During the COVID-19 Pandemic After Yalom Group Psychotherapy and Acceptance and Commitment Group Therapy. *Journal of Research & Health*, 13(3), 227–236. <https://doi.org/10.32598/jrh.13.3.1751.1>

- Han, J., Zhang, L., Liu, Y., Zhang, C., Zhang, Y., Tang, R., & Bi, L. (2022, June 20). Effect of a group-based acceptance and commitment therapy programme on the mental health of clinical nurses during the COVID-19 sporadic outbreak period. *Journal of Nursing Management*, 30(7), 3005–3012. <https://doi.org/10.1111/jonm.13696>
- Håkansson, A., Cronhjort, M., Lidin-Darlington, P., Lilja, G., Nilsson, A., Schandl, A., & Friberg, H. (2022, July 15). Cognitive Behavioral Therapy and Acceptance and Commitment Therapy (CBT-ACT) vs. Standard Care After Critical Illness Due to COVID-19: Protocol for a Pilot Randomized Controlled Trial. *Frontiers in Psychiatry*, 13. <https://doi.org/10.3389/fpsy.2022.907215>
- Jaywant, A., Bueno-Castellano, C., Oberlin, L. E., Vanderlind, W. M., Wilkins, V. M., Cherestal, S., Boas, S. J., & Kanellopoulos, D. (2021, November 29). Psychological Interventions on the Front Lines: A Roadmap for the Development of a Behavioral Treatment Program to Mitigate the Mental Health Burden Faced by COVID-19 Survivors. *Professional Psychology: Research and Practice*. Advance online publication. <http://dx.doi.org/10.1037/pro0000417>
- Jia R., Yu J., Liang D., Wu Z., Chen., & Lu G. (2021). Effectiveness of Telehealth Acceptance and Commitment Therapy for Generalized Anxiety Disorder During the COVID-19 Pandemic: Protocol for a Systematic Review and Meta-Analysis. *Research Square*, 17(5). DOI: 10.21203/rs.3.rs-666275/v1
- Joharifard, R., Nouri, R., Hazrati, S. ., & Fekryan-Arani, S. . (2022). Effectiveness of Acceptance and Commitment Therapy on COVID-19 Induced Anxiety among Worried People. *International Journal of Body, Mind and Culture*, 9 (2), 97–105. <https://doi.org/10.22122/ijbmc.v9i2.350>
- Kuckertz JM, Van Kirk N, Alperovitz D, Nota JA, Falkenstein MJ, Schreck M and Krompinger JW (2020) Ahead of the Curve: Responses From Patients in Treatment for Obsessive-Compulsive Disorder to Coronavirus Disease 2019. *Front. Psychol.* 11:572153. doi: 10.3389/fpsyg.2020.572153
- Landi, G., Pakenham, K. I., Boccolini, G., Grandi, S., & Tossani, E. (2020, August 31). Health Anxiety and Mental Health Outcome During COVID-19 Lockdown in Italy: The Mediating and Moderating Roles of Psychological Flexibility. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.02195>
- Mahoney, A., Li, I., Haskelberg, H., Millard, M., & Newby, J. M. (2021, September). The uptake and effectiveness of online cognitive behaviour therapy for symptoms of anxiety and depression during COVID-19. *Journal of Affective Disorders*, 292, 197–203. <https://doi.org/10.1016/j.jad.2021.05.116>
- Mallett, R., Coyle, C., Kuang, Y., & Gillanders, D. T. (2021). Behind the masks: A cross-sectional study on intolerance of uncertainty, perceived vulnerability to disease and psychological flexibility in relation to state anxiety and wellbeing during the COVID-19 pandemic. *Journal of contextual behavioral science*, 22, 52–62. <https://doi.org/10.1016/j.jcbs.2021.09.003>

- Mazza, M. G., De Lorenzo, R., Conte, C., Poletti, S., Vai, B., Bollettini, I., Melloni, E. M. T., Furlan, R., Ciceri, F., Rovere-Querini, P., & Benedetti, F. (2020, October). Anxiety and depression in COVID-19 survivors: Role of inflammatory and clinical predictors. *Brain, Behavior, and Immunity*, *89*, 594–600. <https://doi.org/10.1016/j.bbi.2020.07.037>
- Muñoz-Martínez, A. M., Otto-Scheiber, C. S., Zuluaga-Jassir, S., Medina-Díaz, A., Pulido-Rozo, J., Venegas-Ramírez, M., & Igua-Jojoa, A. (2022, July). Scalability of an ACT-Based strategy for improving well-being in health care providers: A mix-method and preliminary evaluation of efficacy. *Journal of Contextual Behavioral Science*, *25*, 136–144. <https://doi.org/10.1016/j.jcbs.2022.07.005>
- Nikrah, N., Bahari, F., & Shiri, A. (2023, October). Effectiveness of the acceptance and commitment therapy on resilience and quality of life in patients with post-acute COVID-19 syndrome. *Applied Nursing Research*, *73*, 151723. <https://doi.org/10.1016/j.apnr.2023.151723>
- Nodezh, M., Amirfakhraei, A., & Samavi, A. (2022). Efficacy Effectiveness of Acceptance and Commitment Therapy (ACT) on the Life Quality and Resilience of Those Recuperated from Recovered COVID-19 Patients. *Journal of Applied Psychological Research*, *13*(4), 125-138. doi: 10.22059/japr.2023.328932.643948
- Otared N, Moharrampour NG, Vojoudi B, & Jahanian Najafabadi A (2021). A Group-based Online Acceptance and Commitment Therapy Treatment for Depression, Anxiety Symptoms and Quality of Life in Healthcare Workers during COVID-19 Pandemic; A Randomized Controlled Trial. *International Journal of Psychology & Psychological Therapy*, *21*(3), 399-411.
- Park, S. R., & Im, S. Y. (2021, December 9). Is Posttraumatic Growth Helpful in Overcoming Mental Health Disorders Due to COVID-19?: The Moderating Effect of Posttraumatic Growth in the Relationship Between COVID-19 and Psychological Health. *Frontiers in Psychology*, *12*. <https://doi.org/10.3389/fpsyg.2021.773326>
- Polizzi, C., Lynn, S. J., & Perry, A. (2020). Stress and Coping in the Time of COVID-19: Pathways to Resilience and Recovery. *Clinical neuropsychiatry*, *17*(2), 59–62. <https://doi.org/10.36131/CN20200204>
- Rutschmann, R., Romanczuk-Seiferth, N., & Richter, C. (2023, January 11). Acceptance and commitment therapy in a psychiatric day hospital—A longitudinal naturalistic effectiveness trial. *Frontiers in Psychiatry*, *13*. <https://doi.org/10.3389/fpsyg.2022.1052874>
- Shahidi, S., Zargar, F., Aghae Khajelangi, H., & Tarrahi, M. J. (2023). The Effect of Internet-delivered Mindfulness Stress Reduction Combined with Acceptance and Commitment Therapy on Health Anxiety and Quality of Life of Caregiver of Patients Infected by COVID-19: A Randomized Clinical Trial. *International journal of community based nursing and midwifery*, *11*(2), 110–121. <https://doi.org/10.30476/IJCBNM.2023.97271.2172>
- Shepherd, K., Golijani-Moghaddam, N., & Dawson, D. L. (2022, January). ACTing towards better living during COVID-19: The effects of Acceptance and Commitment therapy for

individuals affected by COVID-19. *Journal of Contextual Behavioral Science*, 23, 98–108. <https://doi.org/10.1016/j.jcbs.2021.12.003>

- Smith-MacDonald, L., Lusk, J., Lee-Baggley, D., Bright, K., Laidlaw, A., Voth, M., Spencer, S., Cruikshank, E., Pike, A., Jones, C., & Bremault-Phillips, S. (2022, January 14). Companions in the Abyss: A Feasibility and Acceptability Study of an Online Therapy Group for Healthcare Providers Working During the COVID-19 Pandemic. *Frontiers in Psychiatry*, 12. <https://doi.org/10.3389/fpsy.2021.801680>
- Sobhani, M. R., Jahandar Pour, S., & Khalili, N. (2022, February 1). Effect of Acceptance and Commitment Therapy on Depression and Quality of Life among Women with Chronic Pain during COVID-19 Pandemic Lockdown. *Journal of Clinical and Basic Research*, 6(1), 37–45. <https://doi.org/10.52547/jcbr.6.1.37>
- Wallace-Boyd, K., Boggiss, A. L., Ellett, S., Booth, R., Slykerman, R., & Serlachius, A. S. (2023, May 11). ACT2COPE: A pilot randomised trial of a brief online acceptance and commitment therapy intervention for people living with chronic health conditions during the COVID-19 pandemic. *Cogent Psychology*, 10(1). <https://doi.org/10.1080/23311908.2023.2208916>
- Wang, D., Xie, X., Tian, H., Wu, T., Liu, C., Huang, K., Gong, R., Yu, Y., Luo, T., Jiao, R., & Zhang, L. (2022, July 15). Mental fatigue and negative emotion among nurses during the COVID-19 pandemic. *Current Psychology*, 41(11), 8123–8131. <https://doi.org/10.1007/s12144-022-03468-2>
- Widha, L., Rahmat, H. K., & Basri, A. S. H. (2021). A Review of Mindfulness Therapy to Improve Psychological Well-being During the COVID-19 Pandemic. *Proceeding International Conference on Science and Engineering*, 4, 383–386. Retrieved from <https://sunankalijaga.org/prosiding/index.php/icse/article/view/693>