Holistic Health Practice Model in Prevention and Management of Suicidal Ideation, Anxiety, and Depression in Reference to Covid-19 Condition

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Abstract
COVID-19 pandemic has affected human lives to the core which resulted in suicidal ideations among many people, and various people attempting suicide.

The present study aims to 1) assess suicidal ideation, depression and anxiety among patients who reported at the clinic for psychosocial counseling for COVID-19 condition, and 2) examine the effectiveness of the Holistic Health Practice Model (HHPM) in preventing suicidal ideation.

In a pretest-posttest control group design 60 patients (above the age of 18 years) were chosen for the two groups – Experimental group (N=30; male-15, female-15) and Controlled group (n=30; male-15, female-15). Data was collected and analyzed from August 2021 to June 2022.

Both the groups were initially assessed for suicidal ideation, anxiety and depression using Modified Scale for Suicidal Ideation (MSSI), Beck Anxiety Inventory (BAI), and Beck Depression Inventory-II (BDI-II) respectively. The experimental group received Holistic Health Practice Model (HHPM) as an intervention for 24 weeks. The mean difference was calculated using a paired t-test method.

Baseline assessment indicates that both groups were similar before the therapy. Post-therapy assessment shows a significant difference between the experimental and controlled groups (t value: MSSI – 24.47 > 0.05, BAI – 12.9 > 0.05, BDI – 28.16 > 0.05). Significant differences were also found in pre and post-therapy assessment of the experimental group (t value: MSSI – 43.26 > 0.05, BAI – 19.13 > 0.05, BDI – 24.13 > 0.05).

The result indicates Holistic Health Practice Model (HHPM) to be a successful model in reducing suicidal ideation, anxiety, and depression.

The pandemic is now over but its aftermath is still lingering. COVID-19 has left its impact on everyone’s life irrespective of their direct contact with the disease-causing virus. All domains of human lives were affected including physical, social, and economic. It also has majorly affected mental health widely. Actions taken by the government to combat the pandemic situation became the cause of rising mental health issues. Complete lockdown, social distancing, and quarantine restricted human movement and socialization which resulted in a wide range of mental health problems such as anxiety, phobia, a sense of loneliness, post-traumatic stress disorder, depression, etc.¹² Even in the same house, people were isolated from their families for several days. Social isolation along with a disturbed lifestyle and continuous news...
of death rates due COVID-19 virus shown by media has led to anticipatory grief, worry, and anxiety.\(^3\) There has also been an alarming increase in the rate of suicides during the COVID-19 pandemic. According to the report published by NCRB, in India, there has been an increase in suicide rates by 8.7% and 6.2% during 2020 and 2021 respectively in comparison to their previous years.\(^4\) Dsouza et al., (2020) analyzed 69 suicide cases that took place in India during the upsurge of COVID-19 and found that the fear or anticipation of COVID-19 infection was the leading cause of suicide. Increased unemployment, loss of income, and low social interaction became major reasons for elevated suicidal rates.\(^2\)

Suicide is not an immediate behavior. Suicidal ideation and suicide attempts are the repercussions of suicide. Suicidal ideation refers to the thoughts and desires of ending one's life. Since there is no definite pattern of suicidal thoughts, it is a typical and heterogeneous phenomenon and varies in intensity, duration, and character.\(^5\) The National Mental Health Survey of India (2015–16), reveal suicidal ideation to be a leading cause of suicidality.\(^6\) Research conducted by Farooq et al. (2021) showed the prevalence of suicidal ideation to be 11.5%.\(^7\) A study conducted in China during the first phase of COVID-19 revealed the prevalence of suicidal ideation to be 16.4%.\(^8\) These rates are distressing because suicidal ideation may not necessarily lead to suicide but it increases the chances of attempting suicide by 8 times.\(^9\)

With the measures taken to deal with the pandemic arises an urgent need to take action to control and mitigate suicides. In line with this, WHO has recommended four key interventions, including limited access to means of suicide, role of responsible media, development of socio-emotional life skills in adolescents and a complete diagnosis and management for suicidal ideation.\(^10\) Research suggests taking measures at universal, selective, and indicated levels to deal with suicidal behavior. Telemedicine and other digital assessment and intervention techniques including unguided digital self-management interventions, are feasible and have shown results in reducing suicidal ideations. But these interventions are limited to people who have access to and knowledge of technology. Primary healthcare providers should educate all of their patients regarding self-harm and suicidal ideations.\(^11\) A comprehensive national suicide prevention strategy and policy should be developed by every nation and existing policies related to suicide should be strengthened. India recently launched its National suicide prevention strategy that takes into account the effects of COVID-19 and aims to reduce suicides by 10% by 2030.

Several researches have provided recommendations to mitigate suicidal ideation. However, there has been no evidence-based study for the prevention of suicidal ideation (especially in pandemic situations and observation) that has proven effective in reducing suicidal ideation. In this study, a Holistic health practice model has been proposed which is an evidence-based intervention for suicidal ideation and symptoms of depression and anxiety associated with COVID-19 condition. It also aims to improve the quality of life in post-COVID-19 conditions. Hence, the aim of the study is 1) to assess suicidal ideation, anxiety, and depression along with other risk factors among patients who reported at the clinic for psychosocial counseling for COVID-19 condition, and 2) to examine the effectiveness of the Holistic Health Practice Model in preventing suicidal ideation.

**Material and Methods:**

**Participants**

Data collection was done from August 2021 to June 2022. Every Monday, patients reported to the clinic for psychosocial counseling for COVID-19 condition. These patients had suffered from COVID-19 condition and after recovery had further developed various other psychological symptoms. Patients complained about palpitation, restlessness, forgetfulness, disturbed sleep, an increase in screen time, pain
in a specific part of the body, headache, body aches, agitation, depressed mood, decreased performance, and lazy feeling, etc. 108 patients were enrolled for the study out of which 75 patients were screened for suicidal ideation. 15 patients dropped out in between the therapy sessions. Finally, 60 patients were enlisted for the study. All the participants were above 18 years of age and belonged to the areas of Uttarakhand, Delhi NCR, and Western Uttar Pradesh covering approximately 300 and 350 km of range. The key inclusion criterion was those who themselves had suffered from COVID-19 condition and given consent to participate in the study. Those participants who had any other medical and/or psychiatric comorbidity were excluded from this study. Since it was a pre and post-test control group design, the participants were divided into two groups – the experimental group (n = 30) and the controlled group (n = 30).

Material
The Modified Scale for Suicidal Ideation (MSSI), Beck Anxiety Inventory (BAI), and Beck Depression Inventory-II (BDI-II) were used as psychometric assessment tools. The Modified Scale for Suicidal Ideation (MSSI) is developed by Miller, Norman, Bishop, and Dow in 1986. It is an 18-item semi-structured interview with the first 4 items designed for the purpose of screening and the remaining 14 items were used to gain information regarding the nature and intensity of suicidal thoughts. Response to each item was scored from 0 to 3 and the total score ranges from 0 to 54. MSSI shows high internal consistency (coefficient alpha = .94). Item-total correlations ranged from .41 to .83. It also shows a high level of inter-rater reliability. Beck Anxiety Inventory (BAI) is a 21-item self-report inventory, developed by Beck, Epstein, Brown, and Steer in 1988. It is a 4-point scale with scores ranging from 0 to 3 on each item. It has high internal consistency (Cronbach’s α=0.92) and it also shows test-retest reliability for 1 week (.75) The BAI also demonstrates concurrent validity as it was moderately correlated with the revised Hamilton Anxiety Rating Scale (.51), and was mildly correlated with the revised Hamilton Depression Rating Scale (.25). Beck Depression Inventory-II (BDI-II) is a 21-item self-report inventory widely used for measuring the severity and intensity of depressive symptoms in psychiatric and non-psychiatric patients. The measure was constructed by Beck, Steer, and Brown in 1996. Each item has 4 options and its scoring ranges from 0 to 3 on each item. BDI has high internal consistency ranging from 0.89 to 0.94. On test-retest reliability, it shows a correlation of 0.48 to 0.86 in psychiatric patients and 0.60 to 0.83 in non-psychiatric patients. BDI-II also exhibits high content validity. BDI-II correlates significantly with BDI-IA (r= 0.93), Hamilton Rating Scale for Depression (r= 0.71), and BHS (r= 0.68). Holistic Health Practice Model (HHPM) was used as an intervention for reducing suicidal ideation, anxiety, and depression symptoms. Holistic Health Practice Model contains the following domains: appropriate diet and diet patterns, brisk walking, breathing awareness, strengthening positive thoughts, journaling the positive thoughts, psychological counseling, and 5 minutes in stillness. HHPM is based on the idea of “Holistic” the whole. The principle of this approach is to treat the person as a whole and not in parts. To holistic practitioners, a person is not just a physical being but a spiritual being as well. It is believed that our mind, body and spirit are interconnected. The model works for five levels of human beings. These five levels are 1) Physical Sheath: There were two parts of this sheath- for nourishment purposes diet and diet patterns were formulated for each individual patient who participated in the experimental group and for toxin clearance, brisk walk technique was introduced. 2) Energy sheath: the breath awareness techniques were introduced for this level. 3) Mental sheath: techniques to strengthen
positive thoughts and 4) wisdom sheath: journaling the positive thoughts and attending the psychological counseling session 5) Bliss Sheath: sitting -5 minutes in stillness twice a day.

**Procedure**

The assessment was held in four steps. In the first step, the patients who reported to the clinic for psychosocial counseling for COVID-19 condition underwent clinical interviews for formulating their clinical history. Out of these patients, those with low mood, acute stress, and chronic pain condition were further screened for suicidal ideation, anxiety, and depression. For this purpose, Modified Scale for Suicidal Ideation (MSSI), Beck Anxiety Inventory (BAI), and Beck Depression Inventory-II (BDI-II) were used.

In the second step, after the baseline assessment, participants from the experimental group were introduced to HHPM individually. HHPM sessions were taken on a weekly basis at the clinic of Psychosocial counseling for COVID-19 condition. The program begins with an ice-breaking/catharsis release session followed by an exploration of their daily schedule, diet plan, sleep pattern and habit, their work, responsibilities, and other social involvement. Their fears and disappointment-related content were also explored. Brief CBT sessions were held to assist participants in managing their fears and disappointment. Participants were made to practice systematic relaxation and physical stretching. Participants were also given home assignments based on the session which included recommended diet plan, brisk walking, sleep schedule, breath awareness practice, and sitting still for five minutes twice a day. Their feedback related to home assignments was recorded.

In the third step, a mid-line assessment (after 12 weeks) was conducted. Both groups were evaluated individually for suicidal ideation, anxiety, and depression. Likewise, in the final step, an end-line assessment was conducted after 24 weeks of the program. Participants were assessed for any changes in psychometric values of the selected assessment parameters. Paired t-test method was used for statistical measurements.

**Result**

The baseline assessment shows similarities between the two groups (Table 1). The GAF range came out to be 48-50 for both groups. The difference between the experimental and controlled group in Pre-Therapy assessment was not significant on all parameters of assessment (t value: MSSI – 0.07 < 0.05, BAI – 0.59 < 0.05, BDI – 0.07 < 0.05). It suggests that there was no difference between both groups before the therapy was given. (Table 2)

Mid-Therapy assessment was conducted after 12 weeks of HHPM practice. The mean difference in the Mid-Therapy assessment was found to be significant on all parameters of assessment (t value: MSSI – 1.93 > 0.05, BAI – 4.26 > 0.05, BDI – 4.34 > 0.05). (Fig 1)

After 24 weeks of therapy, Endline assessment on all parameters showed a highly significant difference between the experimental and controlled group (t value: MSSI – 24.47 > 0.05, BAI – 12.9 > 0.05, BDI – 28.16 > 0.05). (Table 2)

Results also showed significant differences in pre and post-therapy assessment of the experimental group on all three parameters (t value: MSSI – 43.26 > 0.05, BAI – 19.13 > 0.05, BDI – 24.13 > 0.05). (Table 3) (Fig. 2) These results suggest HHPM is a highly effective technique in managing and preventing suicidal ideation along with the symptoms of anxiety and depression.
DISCUSSION
There have been a lot of observations related to an increase in the prevalence of mental health issues among people during the period of COVID-19. Among them, anxiety and depression were very common. WHO released a scientific brief that reported an increase in the prevalence of anxiety and depression globally by 25% during the first year of COVID-19. Various studies have also reported an increment in the prevalence of anxiety and depression during the COVID-19 pandemic. Bueno et al. (2021) reported 7 times higher prevalence of depression during the COVID-19 than the prevalence rate in pre-COVID conditions. In India also, a tremendous rise in anxiety and depression was observed. About one-fifth of the population in India was reported to have suffered from anxiety and depression symptoms. A higher prevalence of 14.1% of depression was found in India in comparison to 2.7% reported in the National Mental Health Survey of India, 2015-2016.

Suicidal ideation was on a rise during the pandemic. A study conducted in Canada showed a prevalence of 44% of adolescents having suicidal thoughts during the COVID-19 pandemic. Another Greece-based study showed 5.20%, 14.17% and 26.51% of people developed suicidal thoughts, anxiety, and depression. A comparative study of suicidal ideation between pre and peri-COVID-19 reveals a tremendous increase in suicidal ideation and suicidal attempts during COVID-19. Although stability was observed in completed suicide, a rise in suicidal ideation can pose a serious threat in the near future.

Various factors contributed to escalate anxiety and depression during COVID-19. The major causes of the rise in suicidal ideation, anxiety, and depression were linked to the restrictions associated with COVID-19. People weren’t able to move out of their houses and were not able to meet and help their loved ones in such a grave situation. Inability to socialize, economic crisis, apprehension of contracting the virus, the stigma attached to COVID-19, news of increasing death rates due to COVID-19, not having enough supplies to meet the end, shut down of schools and colleges, and uncertainty about the future was among the main causes for the rise in anxiety, depression, and suicidal ideation.

The aim of our study was to assess suicidal ideation, anxiety, and depression, along with other risk factors among patients, and to see the effectiveness of HHPM in preventing suicidal ideation. No significant differences were observed in the baseline assessment between the experimental and controlled groups suggesting similarities between the two groups. On the contrary, highly significant differences were observed between the two groups in the post-therapy assessment. This result implicit the usefulness of HHPM in reducing suicidal ideation, anxiety, and depression. The assessment of midline therapy (after 12 weeks) also showed significant differences between the two groups. It signifies that HHPM works in both an effective and efficient manner. Even in the same group significant difference was observed when compared between pre and post-therapy assessments.

The outbreak of COVID – 19 pandemic has made people aware of the importance of physical as well as mental health. With nowhere to go, people have turned towards holistic and eclectic approaches to living a healthy life. Our finding is supported by the previous studies which suggested a holistic approach to health as an effective alternative in downscaling suicidal ideation, anxiety, and depression. A similar holistic health intervention which included various emotional and stress management techniques, as well as self-healing methods has found significant results in decreasing educational stress, depression, and anxiety in adolescent girls even after 3 months of intervention.

Despite various research and pieces of evidence on the effectiveness of therapeutic lifestyle changes (TLC), these are underestimated in the mental health care profession against psychotherapy and pharmacotherapy. TLC includes changes in day-to-day life habits at physical, psychological, and spiritual
levels. Balanced sleep is a very important yet forgetful factor in our lifestyle that needed to be mended to reduce suicidal ideation. Short sleep duration and poor quality of sleep have been found to be of high risk for causing next-day suicidal ideation. Mindful breathing came out as an effective technique of self-awareness that aids in reducing suicidal ideation. A similar study conducted during the recent pandemic found mindful breathing as a successful technique in alleviating stress, anxiety, and depression and emphasizes the use of such non-pharmacological methods that can be implemented anytime and anywhere.

A problem in different cultures has different perceptions and different approaches to dealing with it. In the mental health sector also, westernized treatments are not necessarily valid in many non-western contexts. Thus, a culture-specific health model is a need for various mental health issues and indigenous therapies should be taken into account that is suitable for the particular population. Chan & Hazan (2021) have proposed a health hexagon model, which is a holistic lifestyle approach to mental health based on 6 elements of fundamental lifestyle (healthy sleep, healthy diet, regular exercise, nature connectedness, supportive relationships, and a sense of purpose in life) and emphasizes on adopting a lifestyle that promotes good health.

Results indicate a significant reduction in suicidal ideation, depression, and anxiety. Thus, it can be concluded that HHPM has proved to be an effective intervention for managing suicidal ideation, anxiety, and depression. With the increasing rate of suicidal ideation, it is a need of the hour and it should be implemented by mental healthcare professionals.

CONCLUSION
The result of this study suggested HHPM as an effective technique in dealing with suicidal ideation, anxiety, and depression. Along with its effect on mental health issues, it is a healthy practice for gaining self-awareness. It also promotes living a healthy lifestyle. Apart from this, it is a cost and time-effective technique, and thus highly recommended to be used not just as a therapy but as a way of life as well.

ACKNOWLEDGMENT
We are indebted to all our clients for their kind cooperation. Especially their commitment to following HHPM regularly is appreciable. Without them, this study would not have been possible. We would like to thank Mansi Kala, a research scholar, for her contribution to this paper. We would also like to extend our sincere thanks to many of our colleagues and other staff members for their support throughout. We will always be thankful to all the authors we have cited in our study.

REFERENCES


Table-1 shows the Demographic Profile of the Participants

<table>
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<th>Group-1 (Experimental)</th>
<th>Group-2 (Control)</th>
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<td>19-69 (mean: 34)</td>
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<td>Rural area (07) Urban area (23)</td>
<td>Rural area (09) Urban area (21)</td>
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<td>Study period</td>
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<td>Subjects’ Global Assessment of Functioning</td>
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Table-2: Pre-Therapy & Post-Therapy assessment differences on MSSI, BAI, and BDI between the Experimental and the Controlled Group

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<th>Post-Therapy</th>
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<td>39.31 5.87</td>
<td>40.55 4.92</td>
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2.04
Table 2: Pre-Therapy and Post-Therapy assessment differences on MSSI, BAI, and BDI of the Experimental Group

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