



Effect of Positive Psychology Online Group Therapy on Spiritual Well-Being, Positive and Negative Affect of Working Women in COVID-19 Pandemic

Marziye Feizi ¹, Zahra Sadat Pour Seyyed Aghaei ², Jafar Sarani Yaztappeh ¹, Saeedeh Karbalaie Tarkeshdooz ³, Amir Sam Kianimoghadam ¹, Maryam Bakhtiyari ^{1,*}, Fatemeh Ghasemi Niaei ⁴

¹ Department of Clinical Psychology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

² Assistant Professor, Department of Counseling, Faculty of Education and Psychology, Alzahra University, Tehran, Iran

³ School of Humanities, Islamic Azad University, North Tehran branch, Tehran, Iran

⁴ School of Psychology and Educational Sciences, Allameh Tabatabaie University, Tehran, Iran

* Corresponding author: Department of Clinical Psychology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. Email: maryam_bakhtiyari@sbmu.ac.ir

Received 2023 July 10; **Revised** 2024 February 12; **Accepted** 2024 March 22.

Abstract

Background: Positive psychology is a branch of psychology that deals with the factors shaping mental health, even in dangerous situations such as the COVID-19 pandemic, by emphasizing human capabilities.

Objectives: The present study aimed to investigate the impact of positive psychology in online group meetings on the spiritual well-being and positive and negative effects of Iranian working women during the COVID-19 pandemic.

Methods: The present study was a clinical trial conducted with a pre-test, post-test, 1-month follow-up, and a control group conducted on all Iranian working women aged 18 - 45 years who were users of social networks (such as Instagram, Telegram, and WhatsApp) in 2022 - 2023. The sample was selected by convenience sampling and included 52 women assigned to the experimental (26 women) and control (26 women) groups. Data were collected using the Spiritual Well-Being scale (SWBS) of Paloutzian and Ellison and the Positive and Negative Affect Schedule (PANAS). The experimental group received 6 one-hour training sessions. The data were analyzed using a multivariate analysis of covariance (MANCOVA) through SPSS software (version 22).

Results: The MANCOVA results revealed that after the intervention, there was a significant difference between the groups regarding the positive affect variable ($P < 0.001$), while no difference was observed between the two groups in spiritual well-being and negative affect ($P > 0.05$).

Conclusions: The findings recommend interventions based on positive psychology to increase positive affect due to its emphasis on the positive points of the current situation and strengthening them, leading to the adoption of an active stance towards life. On the other hand, the insignificant effect of the treatment on spiritual well-being and negative effects necessitates more studies and more serious and long-term interventions.

Keywords: Affect, COVID-19, Mental Health, Positive Psychology, Spirituality

1. Background

The COVID-19 pandemic has been associated with irreversible and unprecedented effects on health and healthcare worldwide, with adverse and ongoing effects on the economy (1). Lockdowns restricted social contact, mobility, and access to healthcare and education. These restrictions caused the loss of jobs, along with mental health problems and existential fears (2-4). Significant

health, gender, and race inequalities are linked to the COVID-19 pandemic (5). In other words, these crises mostly affect women and men differently, resulting in women taking on various roles than men (6). In the meantime, the women who work from home during the lockdown go through moderately increased physical and mental load (7). Because some women worked in sectors that had suffered a lot, like tourism, healthcare, and the service industry, they were more vulnerable to

lose their jobs (8). A study showed that COVID-19 impacted working women, making it more difficult for them to maintain a healthy work/life balance, causing a significant setback in their long quest for equality in the workplace (8-10). Iranian researchers have also shown that COVID-19 influenced social, familial, professional, and financial issues, psychological reactions, access to services, leisure time, and physical problems of Iranian women (11).

Besides, school closure and prolongation of the quarantine period, followed by changes in social relations, an increase in family conflicts, especially family violence against women, parent-child conflicts, fear of contracting diseases, economic and social stressors (12), the lack of distinction between housewives and working women and the society having the same expectations of them, etc. (12) put great pressure on working women in this critical era. Moskowitz et al. believe that this pressure leads to psychological disorders; thus, the efficiency and mental health of women and, subsequently, their families are impaired (13).

The COVID-19 pandemic raised the interest in examining the role of religion and spiritual resources in responding to and coping with the pandemic in different societies (14). Lee et al. (15) state that religious communities benefit from spiritual well-being as a vital resource for coping with and controlling the COVID-19 pandemic. Also, González-Sanguino et al. (16) showed how spiritual well-being protects against depression and anxiety. Religious and spiritual practices are protective factors related to the psychological and spiritual aspects as well as the physical health of women of reproductive age (17).

As an important component in mental health, spiritual well-being can influence cognitive, psychological, and functional health dimensions, creating positive and reducing negative effects (18). Positive affect is a state of active energy, high concentration, and engaging in enjoyable work. It includes a wide range of positive moods, such as feeling empowered, happy, enthusiastic about life, interested, confident, and self-confident (19). On the other hand, negative affect shows a general dimension of inner despair and unpleasant preoccupation, followed by avoidant emotional states such as anger, hatred, fear, sadness, guilt, and humiliation (20). The results of a study to investigate the psychological impact of the coronavirus pandemic and quarantine showed that women are much more vulnerable than men to the types of fears examined: For every man who is afraid of

the coronavirus, there are usually 2 women with the same fear (21).

Numerous studies demonstrated that spiritual well-being increases positive affect, which has a positive and significant relationship with various dimensions of mental health, especially in preventing physical and mental disorders (22-24). It also has an influential role in reducing negative affect, which is directly related to mental disorders and causes or continues mental abnormalities (25). Research related to COVID-19 has shown that the pandemic has been associated with increased anxiety related to the pandemic (such as contamination concerns and health anxiety) and increased symptoms of psychological distress and other acute psychological problems (26). These critical conditions increase negative affect and decrease positive affect in many working women such that their psychological performance can be affected. Numerous studies reported that positive and negative effects influenced mental health (27).

After the COVID-19 epidemic was revealed as a global pandemic by the World Health Organization on March 11, 2020, several countries decided to suspend face-to-face education and switch to distance one (28). One of the interventions that have been administered to reduce the psychological impact of the COVID-19 pandemic was online group intervention of positive psychology (29). Positive psychology has emphasized human capabilities and virtues and investigated the factors promoting mental health, happiness, and life satisfaction, even in dangerous conditions (27), such as the COVID-19 pandemic. Several positive psychology interventions significantly boost well-being and decrease depressive symptoms (19, 30, 31). As the global health crisis of COVID-19 unfolded, positive psychology became vital to maintain mental health (32).

Positive Psychology has broadened the focus of psychology to the more positive side of the individual. Some believe it shares aspects with humanistic psychology and, to some extent, Buddhism (33). Seligman (34) defined positive psychology as studying human beings' positive aspects by developing personal strengths and virtues, well-being, and optimal functioning. Positive psychology treatments focus on a balanced approach by emphasizing the negative and positive potentials. Positive interventions promote positive feelings, personal strengths, behaviors, thoughts, cognitions, and well-being (30). Additionally, positive psychologists believe that their techniques not only reduce depression levels but also teach individuals the right way to live and, as a result, attain satisfaction with life (35). It can create positive resources but can

also have a reciprocal effect on negative symptoms (36). By increasing positive affect, thoughts, and emotions and satisfying a person's basic needs, such as autonomy, love, belonging, and communication, positive therapeutic interventions reduce the intensity and level of depression and increase happiness, satisfaction, and meaning in life (37). Researchers investigated the effect of positive online psychotherapy and found that such exercises reduced depression symptoms for at least 6 months (38). Senf and Liao also studied the effect of positive interventions on happiness and depression symptoms of 122 subjects and found that abilities-based interventions were effective in increasing happiness and reducing depression symptoms compared to the control group (39). A meta-analysis of 51 studies on positive psychology showed that positive interventions enhanced mental well-being and reduced negative affect (37). The critical point in the effectiveness of positive psychology is the context and conditions in which people live. Positive psychology can affect individuals' mental health if the right conditions and background are provided; otherwise, it cannot leave deep and lasting effects. The points mentioned above reveal the effectiveness of this approach and the necessity of conducting more studies in different cultural and temporal contexts (40).

COVID-19 destroyed women's sense of safety, both inside and outside the home, and had significant negative effects on their mental and emotional health. Social and economic stressors such as financial pressure, employment, and family relationships have a significant impact not only on women's safety experiences but also on their overall well-being (41). It is essential to understand the role of women and the factors and solutions to improve their mental health and well-being in the COVID-19 and post-COVID-19 era (42). It is necessary to mitigate the negative impact of the pandemic on working women to facilitate a more equitable recovery from the effects of the widespread pandemic, which is ongoing in nearly every part of the world. Indeed, COVID-19 brought about changes in social and economic mobility, altering the employment patterns of millions of people (43). It turns out that women are likely to be more affected by these changes because the employment structure has transformed, and housework has increased accordingly. However, attitudes toward gender roles in the family remain strong, and women are at the forefront of care, putting them in a stressful situation that affects their feelings and well-being. Therefore, there is a need for treatment solutions for this group. Also, the COVID-19 pandemic, its special conditions, and the cultural background of many countries can affect individuals' mental health

differently. Regarding the cultural and religious background of Iranian society, the role and status of women, and the diversity of tasks, the pandemic had a special impact on them, and research in this field can help explore the influential components.

2. Objectives

The present study aimed to investigate the impact of positive psychology in online group meetings on the spiritual well-being and positive and negative effects of Iranian working women during the COVID-19 pandemic.

3. Methods

3.1. Study Design and Participants

This research was conducted following the Declaration of Helsinki as well as the instructions of the American Psychological Association (APA). The present study was a clinical trial with no blinding, conducted with a pre-test, post-test, and 1-month follow-up treatment design, along with a control group. The sample included all of the Iranian working women aged over 18 years who used social media (e.g., Instagram, Telegram, and WhatsApp) in 2022 - 2023. The sample size was determined by the G*Power software considering previous studies (44), taking into account the effect size of 0.40, alpha of 0.05, and the effect size of 0.80. The group members were examined and matched in terms of age, sex, and education. Also, the studied population comprised only women. The inclusion criteria included the age of over 18 years, informed consent for cooperation, being employed, not receiving individual or group psychotherapy by a psychologist or psychiatrist in the last 6 months, and not using psychiatric drugs. The exclusion criteria also include incomplete filling of the questionnaires and suffering from a disease that inhibited participation.

The number of people participating in this research was 68; 16 people were excluded from the analysis process due to distorted information, and the remaining 52 people were placed in 2 groups: Control (26 people) and experimental (26 people). The code of ethics was received from Shahid Beheshti University of Medical Sciences after the project was approved, and the clinical trial code was also obtained. Then, a poster about participating in the research was published on social media (e.g., Instagram, Telegram, and WhatsApp) by the researcher. Finally, among the volunteers who completed the informed consent form, 52 people were selected considering the eligibility criteria. They were then randomly assigned to the experimental and

control groups. Simple randomization was carried out; the names of the subjects were written down as a code, and a list of numbers was obtained. Even and odd numbers were considered for the experimental and control groups, respectively. The therapist and evaluator was a Ph.D. student of clinical psychology with 4 - 5 years of experience. The intervention was carried out on the Skyroom platform. The therapist had expertise in administering face-to-face and digital positive psychology group therapy. The therapist received supervision on request at the clinic's scheduled supervision hours. The current study protocol was derived from the study by Brouzos et al. (29), which examined the effectiveness of an online group positive psychology intervention (OPPI) developed to reduce the COVID-19 pandemic psychological effect and subsequent measures to control the pandemic. The online positive psychology group therapy consisted of 6 sessions. Each treatment session lasted for 1 hour once a week. The subjects completed self-report measures (Positive and Negative Affect Schedule (PANAS) and the Spiritual Well-Being Scale (SWBS)) as pre-test, post-test, and 1-month follow-up (Table 1) (29).

Table 1. Online Group Positive Psychology Intervention (OPPI)

| Session | Goals |
|---|---|
| 1. Self-care and group formation | (1) Psychological training in self-care during the COVID-19 pandemic and after it., (2) Interaction between group members and the group leader and strengthening the sense of belonging to the group, Homework: |
| 2. Learning and practicing relaxation | (3) Awareness of how fear and anxiety can affect our behaviors, feelings, and thoughts, (4) Learning relaxation techniques, Homework: |
| 3. Increasing coping mechanisms mindfully | (5) Helping group members use adaptive mechanisms against anxiety and stress, Homework: |
| 4. Enhancing positive thoughts | (6) Teaching group members to have positive thoughts in their daily lives during the COVID-19 pandemic, Homework: |
| 5. Cultivating empathy, humanity, and love | (7) Cultivating feelings of love, humanity, and empathy toward group members, Homework: |
| 6. Conclusion and end of the meetings | (8) Reminding the group members of what they have learned, (9) Facilitating the termination of group meetings, Homework: |

3.2. Measurement

3.2.1. Positive and Negative Affect Scale (PANAS)

Watson et al. developed this scale in 1988 (45) to measure the 2 dimensions of negative affect and positive affect by 20 items. The responses are rated on a five-point Likert scale ranging from very low (1) to very high (5), and the range of scores for each subscale is 10 to 50. Cronbach's alpha for this scale was obtained in a

study in the Iranian population and equaled 0.79 for the positive affect subscale and 0.84 for the negative affect subscale (46). The whole scale reliability obtained in the present study was 0.87, and the reliability coefficients of the positive and negative affect subscales were 0.91, estimated by Cronbach's alpha method.

3.2.2. Spiritual Well-being Scale

Seitz et al. (47) developed a 20-item scale for measuring spiritual health. Half of the items measure religious health, and the other half assess existential health. The score of Spiritual Well-Being Scale (SWBS) is obtained from the sum of these two, ranging from 20 to 120. The content validity of this scale was confirmed in the Iranian population, and its reliability coefficient, estimated by Cronbach's alpha, was 0.8 (48).

3.3. Ethical Considerations

Before conducting the research, a written consent form was obtained from the participants, showing that they were aware of the research purpose and method. This research has a code of ethics from Shahid Beheshti University of Medical Sciences (IR.SBMU.MSP.REC.1400.567). Moreover, our research was registered in the Iranian Registry of Clinical Trials (IRCT20201009048974N3).

3.4. Statistical Analysis

The data were analyzed using SPSS 22, which used descriptive statistics, such as the mean and standard deviation. A multivariate analysis of covariance (MANCOVA) was used to test the research hypothesis.

4. Results

Based on the demographic characteristics of the participants, the mean age of the experimental group was 29.62 ± 6.432 years, and it was 29.27 ± 6.410 years for the control group.

The number of individuals participating in this research was 68. Among them, 16 people were excluded from the analysis due to distorted information, and the other 52 people were assigned to experimental ($n = 26$) and control ($n = 26$) groups. The results concerning the subjects' demographic characteristics (age and education level) in the control and experimental groups are reported in Table 2.

The independent samples *t*-test showed no significant difference between the mean ages of the two experimental and control groups (P -value < 0.05 , $df = 50$, $t = -0.194$). Moreover, the chi-square test indicated no

Table 2. The Results Concerning the Subjects' Demographic Characteristics in the Control and Experimental Groups

| Variables | Education Level | | | | Age (y) |
|--------------|----------------------------------|--------------------------------|------------------------------|--------------------|---------------|
| | High School Diploma ^a | Bachelor's Degree ^a | Master's Degree ^a | Total ^a | |
| Experimental | 1 (3.85) | 9 (34.62) | 16 (61.54) | 26 (100) | 29.62 ± 6.432 |
| Control | 2 (7.69) | 10 (38.46) | 14 (53.85) | 26 (100) | 29.27 ± 6.41 |

^a Variables are expressed as No. (%) or mean ± SD.

significant difference between the groups regarding educational status (P -value < 0.05, $\chi^2 = 0.77$).

Descriptive indicators (mean and standard deviation) of the research variables (spiritual well-being, positive affect, and negative affect) and the independent samples t -test results are reported in Table 3 to compare the mean values of the two groups in the pre-test, post-test, and follow-up.

The independent samples t -test (Table 3) demonstrated no significant difference between the mean scores of the two groups in all research variables in the pre-test stage (P -value < 0.05). Furthermore, no significant difference was detected between the mean scores of the two groups in the variables of spiritual well-being and negative affect (P -value < 0.05) in the post-test stage, but this difference was significant in the variable of positive affect ($t(50) = -2.733$, P -value < 0.01). In the follow-up stage, no significant difference existed between the groups in spiritual well-being and negative affect (P -value < 0.05); however, this difference was significant in positive affect ($t(50) = -2.557$, P -value < 0.05).

The results of Pearson's correlation coefficients among the variables of spiritual well-being, negative affect, and positive affect are reported in Table 4, displaying no significant correlation among these variables (P -value < 0.05).

Next, the assumptions of the MANCOVA were assessed. The Shapiro-Wilk test checked the normality of the data distribution. In the post-test stage, the significance level and the Shapiro-Wilk test statistic were equal to 0.956 and 0.053 for the variable of spiritual well-being, 0.980 and 0.532 for positive affect, and 0.971 and 0.227 for negative affect, respectively, which approved the normality of the data distribution (P -value < 0.05). The result of Levene's test indicated the acceptability of the assumption of homogeneity of variances (P -value < 0.05). Also, the regression line slope homogeneity test showed the equality of the regression line slope for both groups in the dependent variables (P -value < 0.05).

Furthermore, Box's M test examines the variance-covariance homogeneity. The homogeneity results of the variance-covariance matrix of spiritual well-being, positive affect, and negative affect revealed that the significance level related to Box's M test is > 0.05 (P -value < 0.05). Therefore, the homogeneity of the variance-covariance matrix was accepted. Also, the results of Wilks' lambda multivariate test showed that the total group effect was significant (P -value < 0.01, $F = 4.66$). Thus, there was a significant difference between the groups regarding at least one variable. The results of MANCOVA regarding spiritual well-being, negative affect, and positive affect are provided in Table 5.

The significance levels of the test were 0.54 and 0.87 for spiritual well-being and negative affect, respectively (Table 5). Therefore, no significant difference was detected between the groups in spiritual well-being and negative affect (P -value < 0.05). However, the significance level of the test for positive affect was less than 0.001. Hence, a significant difference was detected between the groups in positive affect (P -value < 0.001).

5. Discussion

We determined the effect of online group therapy with positive psychology on the spiritual well-being and positive and negative effects of working women during the COVID-19 pandemic. We found a significant difference between the groups in the positive effect after the intervention ($P < 0.001$). The findings align with Senf and Liao (39), Hendriks et al. (37), and Brouzos et al. (29). Treatment based on positive psychology strengthens hope by increasing optimism and happiness, thus increasing positive affect. According to Seligman's studies, happiness includes a pleasurable, committed, and meaningful life. Positive treatment also makes individuals more committed to life and health, and they engage actively and with more motivation. Since this active engagement requires identifying capabilities, making better use of them in life, and determining the related life goals, the training mentioned above could increase hope (49). People with higher levels of hope in stressful situations, such as during the COVID-19

Table 3. Descriptive Indicators (Mean and Standard Deviation) of Spiritual Well-Being, Positive Affect, and Negative Affect

| Variables | Group | Pre-test | | Post-test | | Follow-up | |
|----------------------|--------------|---------------|--------------------------------|---------------|--------------------------------|---------------|--------------------------------|
| | | M ± SD | Mean Difference Between Groups | M ± SD | Mean Difference Between Groups | M ± SD | Mean Difference Between Groups |
| Spiritual well-being | Experimental | 71.58 ± 4.95 | $t(50) = 0.271, P = 0.788$ | 72.35 ± 4.26 | $t(50) = -0.383, P = 0.703$ | 71.88 ± 3.64 | $t(50) = -0.118, P = 0.907$ |
| | Control | 71.96 ± 5.29 | | 71.81 ± 5.75 | | 71.73 ± 5.59 | |
| Positive affect | Experimental | 29.85 ± 6.259 | $t(50) = 0.053, P = 0.958$ | 34.19 ± 5.593 | $t(50) = -2.733, P = 0.009$ | 33.27 ± 4.82 | $t(50) = -2.557, P = 0.014$ |
| | Control | 29.92 ± 3.959 | | 30.15 ± 5.049 | | 30.04 ± 4.297 | |
| Negative affect | Experimental | 23.81 ± 7.653 | $t(50) = 0.288, P = 0.774$ | 22.19 ± 6.28 | $t(50) = -0.021, P = 0.983$ | 22.12 ± 5.65 | $t(50) = -0.50, P = 0.96$ |
| | Control | 24.38 ± 6.759 | | 22.15 ± 6.619 | | 22.04 ± 5.35 | |

Abbreviations: SD, Standard deviation; M, Mean.

Table 4. Pearson's Correlation Coefficient Values

| Variables | Spiritual Well-being | Positive Affect | Negative Affect |
|----------------------|----------------------|-----------------|-----------------|
| Spiritual well-being | 1 | | |
| Positive affect | 0.214 | 1 | |
| Negative affect | -0.086 | 0.117 | 1 |

pandemic, generally have more positive judgments and, as a result, experience more adaptive reactions and positive affect.

In this research, positive experiences were activated in working women during online group therapy based on positive psychology; as a result, they gained a sense of happiness and found the meaning of life. They felt more empowered to realize their exaggerations about life's problems during this critical period, focus on the positive points of the current situation, and strengthen them as much as possible. As a result, they took an active stance in life and shaped their personally. This intervention helps individuals shift their attention from negative to hopeful events. Besides, enumerating the positive points and teaching appreciation of oneself and others, a principle of positive psychology (50), increased the experience of positive affect in the participants.

Another finding of this research showed a significant difference between the two groups in spiritual well-being and negative affect after the positive psychology online group therapy ($P > 0.05$). This finding is inconsistent with those of Javidan and Aslani (25), Malinowski and Lim (38), Hendriks et al. (37), and Smith et al. (51). In explicating the findings, we might refer to the limitation of sessions to consolidate the teachings of positive psychology therapy. Consolidating spiritual well-being requires time, and individuals can achieve

spiritual well-being after gaining positive affect and deepening the concepts of positive psychology and connection with existential and relational dimensions at the social and spiritual levels (52). As a result, they begin to reduce and leave negative effects behind, which was not achieved in this research due to the few sessions and the limited time. It also seems that the online presentation of group therapy might justify the insignificant effect of treatment on reducing negative affect and increasing spiritual well-being because empathic presence and real eye contact, or collective spiritual well-being, are among the influential factors. Finally, in the exceptional circumstances caused by the COVID-19 pandemic, the level of well-being and public mental health decreased due to the virtual and real social space.

5.1. Limitations and Future Directions

Concerning the limitations of this research, the type of sampling was convenient and online due to the conditions of the COVID-19 pandemic. Therefore, this study should be replicated on other diseases with more accurate sampling. Considering the confirmed effect of positive group therapy on increasing positive affect, it is suggested that the effect of this group therapy be studied on the physical or mental improvement of individuals with chronic and acute diseases. Also, the

Table 5. The Results of Multivariate Analysis of Covariance Regarding Spiritual Well-being, Positive Affect, and Negative Affect

| Source of Changes | Sum of Squares | Degree of Freedom | Mean of Squares | F Statistic | P-Value | Eta Square |
|-----------------------------|----------------|-------------------|-----------------|-------------|---------|------------|
| Spiritual well-being | | | | | | |
| Group | 7.56 | 1 | 7.56 | 0.37 | 0.54 | 0.008 |
| Error | 944.26 | 47 | 20.09 | | | |
| Total | 271430.00 | 52 | | | | |
| Positive affect | | | | | | |
| Group | 231.69 | 1 | 231.69 | 14.21 | * 0.001 | 0.23 |
| Error | 766.23 | 47 | 16.30 | | | |
| Total | 55457.00 | 52 | | | | |
| Negative affect | | | | | | |
| Group | 0.87 | 1 | 0.87 | 0.02 | 0.87 | 0.001 |
| Error | 1642.35 | 47 | 34.94 | | | |
| Total | 27647.00 | 52 | | | | |

outcomes of implementing this group therapy can be investigated in groups under relatively high psychological pressure, such as women working as nurses and doctors involved with COVID-19, emergency technicians, firefighters, law enforcement officers, and employees of other stressful jobs. Another limitation of this research was that it was conducted on working women only; therefore, the results cannot be generalized to men. Other researchers are suggested to conduct similar research on men. Group-based video conferencing is a useful and feasible option to provide valuable support to at-risk populations to make psychological resources (spiritual well-being, positive and negative effects) and successfully cope with the adverse impact of the pandemic. Thus, telehealth can be effectively implemented in the context of an epidemic to provide mental health services (53).

5.2. Conclusions

Considering the effectiveness of the positive psychology online group therapy in improving the positive effect of working women during the COVID-19 pandemic, the use of this intervention, especially during pandemics, is recommended as a short-term and cost-effective intervention that forms more adaptive behaviors, increases positive affect, and maintains the performance level of women compared to normal times. On the other hand, the impact on spiritual well-being and its negative effects requires more studies and more serious and long-term interventions.

Footnotes

Authors' Contribution: M.B. conceived and designed the evaluation and drafted the manuscript; M.F, J.S and, A.K participated in designing the evaluation, performed parts of the statistical analysis and helped to draft the manuscript; M.F, M.B, J.S, A.K, and Z.P re-evaluated the clinical data, revised the manuscript and performed the statistical analysis and revised the manuscript; M.F, S.K, F.N, A.K and J.S collected the clinical data, interpreted them and revised the manuscript; M.B, M.F, J.S, A.K and Z.P re-analyzed the clinical and statistical data and revised the manuscript. All authors read and approved the final manuscript.

Clinical Trial Registration Code: [IRCT20201009048974N3](https://www.clinicaltrials.gov/ct2/show/study?term=IRCT20201009048974N3).

Conflict of Interests: The authors declare no conflicts of interest, whether actual or potential, including any financial, personal, or other relationships with individuals or organizations that could inappropriately influence the submitted work outcomes.

Data Availability: The dataset utilized in the study can be obtained upon request from the corresponding author during submission or following publication. The data is not publicly accessible due to privacy and ethical considerations.

Ethical Approval: This study is approved under the ethical approval code of [IR.SBMU.MSP.REC.1400.567](https://www.sbmupsp.org/REC/1400.567).

Funding/Support: This study was supported by the School of Medicine, Shahid Beheshti University of Medical Sciences, Iran (grant no.:29275).

Informed Consent: Written informed consent was obtained from all participants.

References

1. Okereke M, Ukor NA, Adebisi YA, Ogunkola IO, Favour Iyagbaye E, Adiola Owbor G, et al. Impact of COVID-19 on access to healthcare in low- and middle-income countries: Current evidence and future recommendations. *Int J Health Plann Manage*. 2021;**36**(1):13-7. [PubMed ID: 32857892]. <https://doi.org/10.1002/hpm.3067>.
2. Cerami C, Santi GC, Galandra C, Dodich A, Cappa SF, Vecchi T, et al. Covid-19 Outbreak In Italy: Are We Ready for the Psychosocial and the Economic Crisis? Baseline Findings From the PsyCovid Study. *Front Psychiatry*. 2020;**11**:556. [PubMed ID: 32587539]. [PubMed Central ID: PMC7297949]. <https://doi.org/10.3389/fpsy.2020.00556>.
3. Affairs S; Economic UNDo. *The Sustainable Development Goals: Report 2022*: UN;. 2022. Available from: <https://unstats.un.org/sdgs/report/2022/The-Sustainable-Development-Goals-Report-2022.pdf>.
4. Dubey S, Biswas P, Ghosh R, Chatterjee S, Dubey MJ, Chatterjee S, et al. Psychosocial impact of COVID-19. *Diabetes Metab Syndr*. 2020;**14**(5):779-88. [PubMed ID: 32526627]. [PubMed Central ID: PMC7255207]. <https://doi.org/10.1016/j.dsx.2020.05.035>.
5. Bambra C, Riordan R, Ford J, Matthews F. The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health*. 2020;**74**(11):964-8. [PubMed ID: 32535550]. [PubMed Central ID: PMC7298201]. <https://doi.org/10.1136/jech-2020-214401>.
6. Yildirim TM, Eslen-Ziya H. The differential impact of COVID-19 on the work conditions of women and men academics during the lockdown. *Gend Work Organ*. 2021;**28**(Suppl 1):243-9. [PubMed ID: 32904915]. [PubMed Central ID: PMC7461380]. <https://doi.org/10.1111/gwao.12529>.
7. Sharma N, Vaish H. Impact of COVID - 19 on mental health and physical load on women professionals: an online cross-sectional survey. *Health Care Women Int*. 2020;**41**(11-12):1255-72. [PubMed ID: 33021925]. <https://doi.org/10.1080/07399332.2020.1825441>.
8. Hoffmann C, Schneider T, Wannous C, Nyberger K, Haavardsson I, Gilmore B, et al. Impact of COVID-19 on the private and professional lives of highly educated women working in global health in Europe-A qualitative study. *Front Glob Womens Health*. 2023;**4**:1009473. [PubMed ID: 36860347]. [PubMed Central ID: PMC9969128]. <https://doi.org/10.3389/fghw.2023.1009473>.
9. Nivakoski S, Mascherini M. Gender Differences in the Impact of the COVID-19 Pandemic on Employment, Unpaid Work and Well-Being in the EU. *Inter Econ*. 2021;**56**(5):254-60. [PubMed ID: 34629500]. [PubMed Central ID: PMC8490839]. <https://doi.org/10.1007/s10272-021-0994-5>.
10. Jasrotia A, Meena J. Women, work and pandemic: An impact study of COVID-19 lockdown on working women in India. *Asian Soc Work Policy Rev*. 2021;**15**(3):282-91. [PubMed ID: 35662796]. [PubMed Central ID: PMC8653004]. <https://doi.org/10.1111/aswp.12240>.
11. Shahabi N, Hosseini Z, Homayuni A, Ezati Rad R, Gharibzadeh A. Explaining the factors affecting women's life during COVID-19 lockdown: A qualitative study among women in Southern Iran. *Health Sci Rep*. 2022;**5**(6):e957. [PubMed ID: 36439046]. [PubMed Central ID: PMC9686351]. <https://doi.org/10.1002/hsr.2.957>.
12. Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Sci Int Rep*. 2020;**2**:100089. [PubMed ID: 38620174]. [PubMed Central ID: PMC7152912]. <https://doi.org/10.1016/j.fsir.2020.100089>.
13. Moskowitz JT, Cheung EO, Freedman M, Fernando C, Zhang MW, Huffman JC, et al. Measuring Positive Emotion Outcomes in Positive Psychology Interventions: A Literature Review. *Emotion Review*. 2020;**13**(1):60-73. <https://doi.org/10.1177/1754073920950811>.
14. Achour M, Souici D, Bensaid B, Binti Ahmad Zaki N, Alnahari AAA. Coping with Anxiety During the COVID-19 Pandemic: A Case Study of Academics in the Muslim World. *J Relig Health*. 2021;**60**(6):4579-99. [PubMed ID: 34514548]. [PubMed Central ID: PMC8435299]. <https://doi.org/10.1007/s10943-021-01422-3>.
15. Lee M, Lim H, Xavier MS, Lee EY. "A Divine Infection": A Systematic Review on the Roles of Religious Communities During the Early Stage of COVID-19. *J Relig Health*. 2022;**61**(1):866-919. [PubMed ID: 34405313]. [PubMed Central ID: PMC8370454]. <https://doi.org/10.1007/s10943-021-01364-w>.
16. Gonzalez-Sanguino C, Ausin B, Castellanos MA, Saiz J, Lopez-Gomez A, Ugidos C, et al. Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain. *Brain Behav Immun*. 2020;**87**:172-6. [PubMed ID: 32405150]. [PubMed Central ID: PMC7219372]. <https://doi.org/10.1016/j.bbi.2020.05.040>.
17. Coppola I, Rania N, Parisi R, Lagomarsino F. Spiritual Well-Being and Mental Health During the COVID-19 Pandemic in Italy. *Front Psychiatry*. 2021;**12**:626944. [PubMed ID: 33868047]. [PubMed Central ID: PMC8046904]. <https://doi.org/10.3389/fpsy.2021.626944>.
18. Kim-Prieto C, Diener E. Religion as a source of variation in the experience of positive and negative emotions. *The Journal of Positive Psychology*. 2009;**4**(6):447-60. <https://doi.org/10.1080/17439760903271025>.
19. Carr A, Cullen K, Keeney C, Canning C, Mooney O, Chineealligh E, et al. Effectiveness of positive psychology interventions: a systematic review and meta-analysis. *The Journal of Positive Psychology*. 2020;**16**(6):749-69. <https://doi.org/10.1080/17439760.2020.1818807>.
20. Gharahdaghi A, Komeylipour F. [The effectiveness of positive cognitive behavioral therapy on the positive and negative affect of women with spouse with mental disorders]. *Couns Cult Psychotherapy*. 2019;**10**(38):177-94. Persian. <https://doi.org/10.22054/qccpc.2019.40597.2094>.
21. Sandín B, Valiente RM, García-Escalera J, Campagne DM, Chorot P. Psychological impact of the COVID-19 pandemic: Negative and positive effects in Spanish population during the mandatory national quarantine. *Revista de Psicopatología y Psicología Clínica*. 2020;**25**(1). <https://doi.org/10.5944/rppc.28107>.
22. Van Cappellen P, Toth-Gauthier M, Saroglou V, Fredrickson BL. Religion and Well-Being: The Mediating Role of Positive Emotions. *Journal of Happiness Studies*. 2014;**17**(2):485-505. <https://doi.org/10.1007/s10902-014-9605-5>.
23. Smith BW, Ortiz J, Wiggins KT, Bernard JF, Dalen J. Spirituality, Resilience, and Positive Emotions. *The Oxford Handbook of Psychology and Spirituality*. 2012. p. 437-54. <https://doi.org/10.1093/oxfordhb/9780199729920.013.0028>.
24. Moal-Ulvoas G. Positive emotions and spirituality in older travelers. *Annals of Tourism Research*. 2017;**66**:151-8. <https://doi.org/10.1016/j.annals.2017.07.020>.
25. Javidan L, Aslani J. [Effect of Positive Psychotherapy on the Symptoms of Mental Disorders and Well-being in Multiple Sclerosis Patients]. *Middle Eastern J Disability Studies*. 2018. Persian.
26. Choi J, Taylor, S. (2019). The psychology of pandemics: Preparing for the next global outbreak of infectious disease. Newcastle upon Tyne, UK: Cambridge Scholars Publishing. *Asian Communication Research*. 2020;**17**(2):98-103. <https://doi.org/10.20879/acr.2020.17.2.98>.
27. Niknam M. [The effectiveness intervention based on positive psychology on perceived stress and hardness on women with addicted spouse]. *J Mod Psychol Res*. 2019;**14**(54):231-51. Persian.
28. Kulbas E, Ozabaci N. The Effects of the Positive Psychology-Based Online Group Counselling Program on Mothers Having Children with Intellectual Disabilities. *J Happiness Stud*. 2022;**23**(5):1817-45. [PubMed ID: 34785986]. [PubMed Central ID: PMC8586837]. <https://doi.org/10.1007/s10902-021-00472-4>.
29. Brouzos A, Vassilopoulos SP, Baourda VC, Tassi C, Stavrou V, Moschou K, et al. "Staying Home - Feeling Positive": Effectiveness of an on-line positive psychology group intervention during the COVID-19

- pandemic. *Curr Psychol*. 2023;**42**(4):2749-61. [PubMed ID: 33776381]. [PubMed Central ID: PMC7980788]. <https://doi.org/10.1007/s12144-021-01613-x>.
30. Sin NL, Lyubomirsky S. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: a practice-friendly meta-analysis. *J Clin Psychol*. 2009;**65**(5):467-87. [PubMed ID: 19301241]. <https://doi.org/10.1002/jclp.20593>.
 31. Bolier L, Haverman M, Westerhof GJ, Riper H, Smit F, Bohlmeijer E. Positive psychology interventions: a meta-analysis of randomized controlled studies. *BMC Public Health*. 2013;**13**:119. [PubMed ID: 23390882]. [PubMed Central ID: PMC3599475]. <https://doi.org/10.1186/1471-2458-13-119>.
 32. Waters L, Algoe SB, Dutton J, Emmons R, Fredrickson BL, Heaphy E, et al. Positive psychology in a pandemic: buffering, bolstering, and building mental health. *The Journal of Positive Psychology*. 2021;**17**(3):303-23. <https://doi.org/10.1080/17439760.2021.1871945>.
 33. Breitbart W, Rosenfeld B, Gibson C, Pessin H, Poppito S, Nelson C, et al. Meaning-centered group psychotherapy for patients with advanced cancer: a pilot randomized controlled trial. *Psychooncology*. 2010;**19**(1):21-8. [PubMed ID: 19274623]. [PubMed Central ID: PMC3648880]. <https://doi.org/10.1002/pon.1556>.
 34. Seligman ME. *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Simon and Schuster; 2002.
 35. Chida Y, Steptoe A. Positive psychological well-being and mortality: a quantitative review of prospective observational studies. *Psychosom Med*. 2008;**70**(7):741-56. [PubMed ID: 18725425]. <https://doi.org/10.1097/PSY.0b013e31818105ba>.
 36. Borjali A, Eskandari H, Sohrabi F, Delavar A. [Bio-Psycho-Spiritual Modeling in Drug Dependents and Compiling of Intervention Program for Promotion of Resiliency Based on Cognitive Narratology and Positive Psychology]. *Sci Q Res Addctn*. 2009;**3**(10):97-114. Persian.
 37. Hendriks T, Schotanus-Dijkstra M, Hassankhan A, de Jong J, Bohlmeijer E. The Efficacy of Multi-component Positive Psychology Interventions: A Systematic Review and Meta-analysis of Randomized Controlled Trials. *Journal of Happiness Studies*. 2019;**21**(1):357-90. <https://doi.org/10.1007/s10902-019-00082-1>.
 38. Malinowski P, Lim HJ. Mindfulness at Work: Positive Affect, Hope, and Optimism Mediate the Relationship Between Dispositional Mindfulness, Work Engagement, and Well-Being. *Mindfulness*. 2015;**6**(6):1250-62. <https://doi.org/10.1007/s12671-015-0388-5>.
 39. Senf K, Liao AK. The Effects of Positive Interventions on Happiness and Depressive Symptoms, with an Examination of Personality as a Moderator. *Journal of Happiness Studies*. 2012;**14**(2):591-612. <https://doi.org/10.1007/s10902-012-9344-4>.
 40. Wong PT. Positive Psychology. *The Encyclopedia of Cross-Cultural Psychology*. 2013. p. 1021-7. <https://doi.org/10.1002/9781118339893.wbeccp426>.
 41. Women UN. *Measuring the shadow pandemic: Violence against women during COVID-19*. 2021. Available from: <https://data.unwomen.org/publications/vaw-rga#:~:text=Violence%20against%20women%20during%20COVID%2D19%20is%20linked%20to%20other,overall%20mental%20and%20emotional%20health..>
 42. Gonzalez-Rodriguez A, Monreal Ortiz JA. COVID-19 and physical health of women with severe mental illness. *Med Clin (Engl Ed)*. 2022;**158**(1):24-6. [PubMed ID: 34901444]. [PubMed Central ID: PMC8648614]. <https://doi.org/10.1016/j.medcle.2021.09.007>.
 43. de Palma A, Vosough S, Liao F. An overview of effects of COVID-19 on mobility and lifestyle: 18 months since the outbreak. *Transp Res Part A Policy Pract*. 2022;**159**:372-97. [PubMed ID: 35350704]. [PubMed Central ID: PMC8947947]. <https://doi.org/10.1016/j.tra.2022.03.024>.
 44. Kang H. Sample size determination and power analysis using the G*Power software. *J Educ Eval Health Prof*. 2021;**18**:17. [PubMed ID: 34325496]. [PubMed Central ID: PMC8441096]. <https://doi.org/10.3352/jeehp.2021.18.17>.
 45. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. *J Pers Soc Psychol*. 1988;**54**(6):1063-70. [PubMed ID: 3397865]. <https://doi.org/10.1037/0022-3514.54.6.1063>.
 46. Hashemi J, Jafari E. [The relationship between positive and negative affect and metacognitive beliefs and procrastination behavior among nurses]. *J Health Care*. 2016;**18**(3):217-27. Persian.
 47. Seitz RJ, Paloutzian RF, Angel HF. Believing is representation mediated by the dopamine brain system. *Eur J Neurosci*. 2019;**49**(10):1212-4. [PubMed ID: 30586210]. <https://doi.org/10.1111/ejn.14317>.
 48. Seyedfatemi N, Rezaie M, Givari A, Hosseini F. [Prayer and spiritual well-being in cancer patients]. *Payesh*. 2006;**5**(4):295-304. Persian.
 49. Butler MI, Cryan JF, Dinan TG. Man and the Microbiome: A New Theory of Everything? *Annu Rev Clin Psychol*. 2019;**15**:371-98. [PubMed ID: 30786244]. <https://doi.org/10.1146/annurev-clinpsy-050718-095432>.
 50. Emmons RA, Shelton CM. Gratitude and the Science of Positive Psychology. *Handbook of Positive Psychology*. 2001. p. 459-71. <https://doi.org/10.1093/oso/9780195135336.003.0033>.
 51. Smith BW, deCruz-Dixon N, Erickson K, Guzman A, Phan A, Schodt K. The Effects of an Online Positive Psychology Course on Happiness, Health, and Well-Being. *J Happiness Stud*. 2023;**24**(3):1145-67. [PubMed ID: 37113244]. [PubMed Central ID: PMC9979887]. <https://doi.org/10.1007/s10902-022-00577-4>.
 52. Saroglou V, Buxant C, Tilquin J. Positive emotions as leading to religion and spirituality. *The Journal of Positive Psychology*. 2008;**3**(3):165-73. <https://doi.org/10.1080/17439760801998737>.
 53. Roncero C, Garcia-Ullan L, de la Iglesia-Larrad JI, Martin C, Andres P, Ojeda A, et al. The response of the mental health network of the Salamanca area to the COVID-19 pandemic: The role of the telemedicine. *Psychiatry Res*. 2020;**291**:113252. [PubMed ID: 32623263]. [PubMed Central ID: PMC7329660]. <https://doi.org/10.1016/j.psychres.2020.113252>.