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The Effectiveness of Compassion-Focused Therapy on Resilience, Shame, Internal Self-criticism, and Quality of Life of Patients with Vitiligo

Saina Fatollahzadeh [1], Amir Sam Kianimoghadam [1], Rogayeh Bahri [2], Maryam Khesali [3], Zahra Pour Seyyed Aghaei [4] and Abbas Masjedi Arani [1, *]

[1] Department of Clinical Psychology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran
[2] Islamic Azad University, Tabriz, Iran
[3] School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran
[4] Department of Counseling, North Tehran Branch, Islamic Azad University, Tehran, Iran

[*] *Corresponding author*: Department of Clinical Psychology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran. Email: dr.masjediarani@gmail.com

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Abstract

Background: Vitiligo is a disease of progressive and permanent skin depigmentation. This disease impacts patients' quality of life through psychological distress, which shows itself in various ways. This distress includes shame and internal self-criticism in patients with vitiligo. Resilience can appear as the strength against distress.

Objectives: This research aimed to assess the impact of compassion-focused therapy (CFT) on various outcomes, including resilience, shame, internal self-criticism, and quality of life in individuals with vitiligo.

Methods: In this study, an RCT design was employed, incorporating both pre- and post-test evaluations alongside a control group, to examine the impact of CFT on resilience, shame, internal self-criticism, and quality of life in patients with vitiligo. Forty patients with vitiligo were selected from Razi Dermatology Hospital in Tehran in 2019. The participants were randomly assigned to either a control or experimental group. The World Health Organization Quality of Life Questionnaire, Connor-Davidson Resilience Scale, levels of self-criticism scale, and Internalized Shame Scale were used to complete the pre-and post-test phases. Compassion-focused therapy based on the Gilbert therapy package was held in eight 2 h sessions once a week for the experimental group. The control group received the intervention after the end of the experimental group intervention.

Results: The results of the covariance analysis indicated that CFT significantly increased the quality of life ($P < 0.05$, $F = 308.97$) and resilience ($P < 0.05$, $F = 125.75$) and reduced shame ($P < 0.05$, $F = 228.30$) and internal self-criticism ($P < 0.05$, $F = 53.44$) of patients with vitiligo.

Conclusions: Compassion-focused therapy can improve the quality of life and resilience and reduce the shame and internal self-criticism of patients with vitiligo.

Keywords: Psychological, Resilience, Self-assessment, Self-compassion, Shame, Vitiligo

1. Background

Vitiligo is a disorder characterized by milky white macules and patches with a chronic and unpredictable course (1) that typically develops before age 20 (2). The worldwide vitiligo prevalence ranges from 0.5 to 2% (3). There are three main hypotheses regarding the cause of vitiligo, including auto-cytotoxic, autoimmune, and neuronal mechanisms triggered by psychological trauma (4). Vitiligo significantly impacts patients' quality of life, as they often experience psychological distress (5). In Iran, it is demonstrated that individuals with vitiligo, particularly women, have high anxiety, depression, and hopelessness (6). Moreover, investigations on Iranian subjects indicated that vitiligo can significantly lower individuals' quality of life, imposing a substantial psychological burden (7, 8). Appearance-altering diseases such as vitiligo can affect the psychological well-being of the sufferers (9, 10). Patients with visible skin lesions experience shame, which can impose significant psychosocial restrictions (11, 12). Shame

involves a negative self-evaluation based on the perceived incongruity between an individual's real and ideal self (13). It should be noted that shame can sometimes result from stigmatization, and vitiligo can stigmatize its victims (14, 15). Research has revealed a significant association between self-reported skin shame and individuals' quality of life (16). Shame and self-criticism reinforce each other mutually, and the relationship between shame and psychopathology is mediated through self-criticism (17). Internalized self-criticism refers to a pessimistic self-perception compared to personal and internal high standards. It can result in feelings of guilt, shame, anger, self-destructive behavior, and negative thoughts, which can manifest in various ways in patients with chronic diseases such as dermatological conditions. Self-criticism, particularly in the form of shame, can also affect the quality of life (18, 19). Self-criticism can be recovered by resilience (20). Resilience is the ability to adapt positively and maintain mental health despite experiencing adversity (21, 22). Resilience has been identified as a crucial factor in assisting patients to manage stressors that adversely affect their mental well-being, such as the skin depigmentation experienced in individuals with vitiligo (23, 24). Resilience has been shown to improve quality of life and facilitate adaptation to chronic diseases such as vitiligo (25, 26). The influence of vitiligo on the quality of life has been observed specifically in women, dark-skinned patients, and those with genital lesions, with negative effects on relationships, sexual life, social and leisure activities, daily routines, and emotional well-being (27-30).

Self-compassion Therapy can improve the quality of life and psychological distress of patients with dermatological disease (31). Self-compassion is an emotion regulation strategy that involves treating oneself with kindness and understanding in the face of negative emotions and challenging life experiences, such as chronic illness (32). This therapy focuses on cultivating self-compassion to address chronic psychological health problems, including shame and self-criticism (33). Through self-compassion, patients learn to create emotional security, enabling them to identify problematic emotional, cognitive, and behavioral patterns without engaging in self-criticism. It encourages using positive emotions in response to unpleasant experiences by integrating the systems of logic and emotion (34, 35). Observing weaknesses and inadequacies without self-criticism due to self-compassion positively affects mental well-being by supporting resilience (36, 37). Vitiligo is known to cause substantial psychological challenges, impacting various facets of patients' lives and diminishing their overall quality of life, particularly within the Iranian population, where it has been observed that the quality of life tends to be lower. The hypotheses that are used in this study to achieve its goal include: (1) there is a significant difference between the mean and standard deviation of age, education, marriage, sex, and job in patients with vitiligo in experimental and control groups (2) there is a significant difference in resilience, shame, internal self-criticism, and the quality of life between pre-and post-test of CFT in vitiligo patients, (3) there is a significant difference between the score means of post-test of resilience, shame, and internal self-criticism, and the quality of life in patients with vitiligo in experimental and control groups.

2. Objectives

In general, this study aimed to assess the effectiveness of CFT on resilience, shame, internal self-criticism, and quality of life in patients with vitiligo.

3. Methods

3.1. Participants

In 2019, the researchers incorporated all vitiligo patients referred to Razi Dermatology Hospital in Tehran into their study, yielding a sample size of 40 chosen patients using a convenience sampling approach. To ensure the patients met the inclusion criteria, the researchers conducted a preliminary interview and confirmed the vitiligo clinical diagnoses, including skin sampling and a dermatologist validation. The inclusion criteria required participants to meet the following conditions: Having a documented history of the disease for at least six months, not having participated in CFT treatment programs in the last six months, not having used psychiatric medications, providing informed consent by signing the consent form, showing no apparent psychiatric disorders according to a clinical interview, reporting no addiction or alcohol use, not having been hospitalized in psychiatric wards, being between 20 and 45, and having received at least a primary education. The patients were randomly allocated to the experimental or control group, with 20 patients in each group. Exclusion criteria included failure to complete questionnaires or participate in three CFT sessions.

3.2. Measures

3.2.1. World Health Organization Quality of Life Questionnaire (WHOQOL, 1998)

The WHOQOL contains 26 items and provides four domain scores in physical health (WHO-PHY),

psychological health (WHO-PSY), social relationships (WHO-SOC), and health environment (WHO-ENV). All areas were scored on a 4 (poorest quality of life) to 20 (highest quality of life), and the scale could be converted to a score range of 0 - 100. A study on the Iranian population showed that the reliability value with the intraclass correlation coefficient in physical health was 0.77, psychological health was 0.77, social relationships were 0.75, and environmental health was 0.84. Internal consistency with Cronbach's alpha in the patient population was 0.77 for four domains (38).

3.2.2. The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davison, 2003)

This questionnaire consists of 25 items to quantify individuals' capacity to manage and adapt to stressful situations and challenges. Respondents were required to evaluate their responses utilizing a 5-point Likert scale encompassing values between 0 and 4, resulting in a potential score range of 0 - 100 per scale. Internal consistency was reported to be 0.87 (39). A questionnaire survey in Iranian society also showed that the internal consistency with Cronbach's alpha was high enough to provide confidence in the interpretation of scores (0.83 achievement motivation, 0.91 self-confidence, 0.79 tenacity, and 0.78 adaptabilities). Test-retest correlations were also acceptable to ensure the reliability of the resilience criterion (0.78 achievement motivation, 0.85 confidence, 0.88 stiffness, and 0.81 adaptation) (40).

3.2.3. The Levels of Self-criticism Scale (LOSC; Thompson & Zuroff, 2004)

This Scale is a self-report questionnaire consisting of 22 items. The questionnaire encompasses two dimensions: Internalized self-criticism (ISC) and comparative self-criticism (CSC). The CSC dimension comprises 12 items, while the ISC dimension comprises 10 items. This is a 7-point Likert scale ('not at all' to 'very well'). Internal reliability with Cronbach's a-coefficients in non-clinical adult populations for CCs and ICS was 0.84 and 0.88, respectively (18). Mousavi and Ghorbani (2006) validated this scale in Iran, and they reported Cronbach's alpha reliability coefficients of .87 and .55 for the two levels, respectively (41).

3.2.4. The Internalized Shame Scale (ISS; Cook, 1994)

This self-report questionnaire comprises 30 items. It aims to internalize shame that arises from experiencing enduring and intolerable shame during one's developmental years. Internalized shame is distinguished from situational shame, which is typically associated with embarrassing situations. This is a 4-point Likert scale ('never' to 'almost always'). The internal reliability of this scale is approximately 0.95 (42). Rajabi and Abbasi (2011) documented a Cronbach's alpha reliability coefficient of .90 for the scale in Iran (43).

3.3. Procedure

A randomized control trial (RCT) study employing a pre-and post-test design with a control group was conducted to assess the potential impact of CFT on resilience, shame, quality of life, and internal self-criticism in patients with vitiligo. This study was conducted at 15 Khordad Hospital. The Ethics Committee of the Shahid Beheshti University of Medical Sciences approved this research with the code of ethics: IR.SBMU.MSP.REC.1399.312 and the Iranian Registry of Clinical Trials with the code of ethics IRCT20201103049252N1, and the participants completed an informed consent form. CFT was considered the independent variable, while resilience, shame, internal self-criticism, and quality of life were considered dependent variables. First, an introduction letter was sent from the relevant faculty to the deputy director of education at Razi Dermatology Hospital to seek approval for the study. After obtaining the necessary approvals, 40 eligible patients were selected through available sampling. Participants were randomized to control and CFT groups (20 patients in each group). Randomization was achieved by even/odd serial numbers. Patients completed self-report measures before and at the end of treatment and received eight two-hour sessions of weekly face-to-face CFT at 15 Khordad Hospital. In contrast, the remaining 20 patients were placed on a non-intervention waiting list and assigned to the control group. Ethical principles such as introducing the researcher, maintaining confidentiality, respecting beliefs, allowing free participation, and ensuring privacy were followed throughout the study. Descriptive statistics were used for data analysis, including mean indices, standard deviation, graphs, and tables. The data was analyzed with SPSS 24, and the analysis of covariance and the Bonferroni post hoc test was employed to confirm the hypotheses at the inferential level. When the study reached its conclusion, the control group received therapy sessions.

3.3.1. Compassion-Focused Therapy Package

The ideas, foundations, and practices of CFT were covered in eight two-hour sessions, with content based on Gilbert's book on CFT. The program materials were adapted from Gilbert and translated into Persian with adjustments based on Iranian culture (44). The protocol for CFT is shown in Table 1.

Table 1. Summary of the Procedure for Performing Therapy Sessions

Sessions	Targets	Content of the Sessions	Homework	Expected Behavior
Session 1	In setting the general doctrine of treatment	Acquaintance of the therapist and group members with each other; talk about the goals and general construction of the meeting; investigate expectations from the treatment plan; grouping; an overview of the structure of the meetings; introduction to the general principles of compassion-focused therapy; evaluate and assess the degree of shame; self-criticism and self-interest of members; conceptualizing self-directed education	Recording cases of shame and self-criticism in daily activities and challenges	Identifying and being aware of self-criticism
Session 2	Recognition of the components of self-critical compassion	Identify and introduce the components of compassion; examining each component of compassion in members and identifying its characteristics; familiarity with the characteristics of people with compassion and a review of the self-compassion of members.	Record the components of self-care in daily activities	Identify and be aware of the Components of self-compassion
Session 3	Educating self-compassion to members	An overview of the assignments of the previous session; cultivate a feeling of warmth and kindness toward themselves; cultivating and understanding that others also have flaws and problems (cultivating a sense of human commonality in the face of self-destructive feelings and shame; learn to empathize with themself, form and create more emotions in connection with people's issues; increase care and attention to their health.	Record the components of self-compassion in daily activities	Self-compassion training
Session 4	Self-knowledge and identification of self-criticism factors	Review and practice the previous session; encouraging subjects to self-knowledge and examine their personality as a "compassionate" or "non-compassionate" person; identification and application of "cultivating compassionate mind" exercises (The value of self-compassion, empathy, and compassion for oneself and others; teaching the physiotherapist metaphor); accept mistakes and forgive themself for mistakes to speed up change.	Record daily mistakes and identify causes.	Breeding self-compassion
Session 5	Correction and expansion of compassion	Review and practice the previous session; Identification and application of "compassionate mind cultivation" exercises (forgiveness, acceptance without judgment; teaching the metaphor of the flu and teaching the patient); acceptance of training issues, accepting the changes ahead, and enduring complex and challenging conditions due to the changing nature of life and people facing different challenges	Forgiveness and acceptance without judgment in challenging daily activities and recording these cases	Improve and develop self-compassion
Session 6	Teach styles and methods of expressing compassion	Review the practice of the previous session; practical practice of creating compassionate images; teaching styles and methods of expressing compassion (verbal compassion; practical compassion, intermittent compassion, and continuous compassion); applying these methods in daily life and for family and friends; training to develop valuable and transcendent emotions	Apply compassion in daily activities	Feelings of worth and self-compassion
Session 7	Techniques and expression of compassion	Review the practice of the previous session; learn to write compassionate letters for themself and others; teaching the method of "recording and daily recording of real situations based on compassion and performance of the person in that situation	Write compassionate letters to themself and those around them	Improving self-compassion and self-worth
Session 8	Evaluation and application	Training and practicing skills; review and practice the skills presented in the previous sessions to help the subjects cope with different life situations in different ways; strategies for maintaining and applying this treatment method in daily life; summarizing; concluding and answering members' questions and evaluating all sessions; thanks, and appreciation to the members for participating in the meetings; executing post-test, coordinating a follow-up meeting over the next month	Recording and noting self-compassion in daily challenges	Breeding and growing Self-compassion

4. Results

The age range encompassed by the CFT category reached a maximum of 29 to 36 years. The age range of participants in the study was from 20 to 45. Table 2 tabulates the demographic characteristics of both groups. There were no significant differences between the demographic characteristics of the two groups ($P > 0.05$).

To analyze the second hypothesis, the scores of resilience, shame, self-critical, and quality of life are demonstrated in Table 3. The statistical method of covariance analysis was used to investigate these differences and more accurately evaluate the treatment results. Using the analysis of covariance requires compliance with a set of assumptions. To ensure the normal distribution of data, the Shapiro-Wilk test was used to check the normality of data distribution. The Levin test was used to equalize the variance of scores, and the assumptions of using covariance analysis were checked and confirmed.

Table 4 demonstrates the results of the multivariate analysis of covariance about the effectiveness of CFT on subjects' cognitive regulation strategies and quality of life.

The analysis of covariance (ANCOVA) showed a significant main effect of CFT on internal self-criticism ($\eta 2 = 0.59$, df = 1, $P < 0.05$), resilience ($\eta 2 = 0.77$, df = 1, $P < 0.05$), shame ($\eta 2 = 0.86$, df = 1, $P < 0.05$), and quality of life ($\eta 2 = 0.89$, df = 1, $P < 0.05$). The observed F value indicated a significant difference between the score means of post-test of resilience, shame, quality of life, and internal self-critical, as well as the intensity in patients with vitiligo in experimental and control groups. Therefore, it could be concluded that CFT induced the reduction of variables in the experimental group more than in the control group.

Considering the results of the intergroup test and then the statistical analysis, the Bonferroni post hoc test was also calculated. The results demonstrated significant differences between the experimental and control groups ($P < 0.05$). The resilience in the experimental group (M 55.75, SD = 3.041), shame in the experimental group (M = 43.65, SD = 3.843), and internal self-criticism in the experimental group (M = 29.40, SD = 3.102), and quality of life in the experimental group (M = 78.35, SD = 5.547) were significantly lower than in the control group. The social relations in the experimental and control groups did not differ significantly.

5. Discussion

This study aimed to investigate the effectiveness of CFT on resilience, shame, quality of life, and internal self-criticism in patients with vitiligo. The results indicated that CFT had a significant effect on reducing shame and internal self-criticism as well as improving patients' quality of life and resilience.

Previous studies on the effectiveness of CFT on patients with vitiligo have primarily focused on aspects such as quality of life, shame, depression, anxiety, and suicidal thoughts (45, 46). However, none of these studies specifically assessed the impact of CFT on self-criticism and resilience in this population. One study examining CFT's effectiveness on resilience did not find significant results (47). In contrast, another study showed positive effects on resilience, though the observed improvement was notably lower than our findings indicated (48-50). Our study revealed a higher effectiveness of CFT in reducing shame in vitiligo patients compared to a previous study that investigated the effectiveness of CFT on shame in vitiligo and psoriasis patients (51, 52).

The findings of our study indicated a significant difference between pre- and post-tests of CFT in vitiligo patients regarding internal self-criticism. Self-criticism is a significant risk factor for major depressive disorder; it contrasts with self-compassion, which, with the help of resilience, is a protective factor against depression (53). Also, self-compassion as an emotion regulation can reduce depression (54). Perhaps reducing the symptoms of depression by replacing self-compassion with self-criticism and regulating emotions will increase vitiligo patients' quality of life.

Self-compassion consists of three components. The first component is self-kindness, which pertains to treating oneself with care and understanding rather than engaging in harsh self-criticism or self-degradation (55). loving-kindness meditation as fostering self-compassion method can reduce self-criticism (56). How self-kindness as a self-compassion component affects self-criticism is explained by how kindness toward the self can activate a regulatory system characterized by soothing and caring effects. This system is often deficient among individuals who engage in self-criticism and can be influenced by environmental criticism (57). This system reduces the effects of environmental criticism on the individual by creating a sense of satisfaction and security. When environmental criticism creates an internal pattern of insecurity, powerlessness, and evaluation of others as powerful, critical, judging, and hostile persons, self-criticism is a safety behavior for external criticism (56). We suppose self-kindness is contrasted with self-criticism through the soothing-caring affect regulation system; this is why self-criticism decreases when self-kindness increases.

Also, findings indicated a significant difference between pre- and post-tests of CFT in vitiligo patients

Table 2. Demographic Information of the Research Subjects

Variables	CFT (Mean ± SD [a])	Control (Mean ± SD [a])
Age	31.35 ± 6.515	32.5 ± 6.01
Education	3.95 ± 1.432	3.85 ± 1.424
Marriage	1.80 ± 0.616	1.90 ± 0.641
Sex	1.32 ± 0.465	1.34 ± 0.475
Job	1.72 ± 0.451	1.65 ± 0.479

[a] Standard deviation

Table 3. Descriptive Indicators of the Experimental and Control Groups

Variables	Pre-exam			Post-exam		
	Mean ± SD	Skewness	Kurtosis	Mean ± SD	Skewness	Kurtosis
Resilience						
Experiment	47.45 ± 2.395	- 0.085	- 1.343	55.75 ± 3.041	- 0.185	- 1.190
Control	46.40 ± 3.378	- 0.475	- 0.895	45.05 ± 2.946	0.179	- 1.294
Shame						
Experiment	58.45 ± 3.620	- 0.635	- 0.540	43.65 ± 3.843	- 0.253	- 0.968
Control	56.55 ± 4.045	0.269	- 1.518	56.65 ± 4.017	- 0.002	- 1.469
Internal self-criticism						
Experiment	36.90 ± 3.417	- 0.072	- 1.397	29.40 ± 3.102	- 0.111	- 1.625
Control	35.60 ± 2.664	0.610	-0.440	35.65 ± 2.059	- 0.359	- 0.756
Quality of life						
Experiment	54.70 ± 5.536	- 0.129	- 1.674	78.35 ± 5.547	0.010	- 1.347
Control	56.95 ± 3.692	- 0.393	- 1.090	60.35 ± 3.345	0.083	0.324

Table 4. Results of Analysis of Covariance on the Effect of CFT

Variables	Sum of Squares	df	Mean Squares	F	P	Effect Size
Resilience	1036.630	1	1036.630	125.758	0.000	0.773
Shame	1929.172	1	1929.172	228.304	0.000	0.861
Internal self-criticism	379.505	1	379.505	53.448	0.000	0.591
Quality of life	3582.390	1	3582.390	308.979	0.000	0.893

regarding quality of life. The first component, self-kindness, can provide unconditional acceptance of one's self, reducing vulnerability to distress and psychopathology in persons unable to accept flaws and imperfections (58, 59). Following the effect of psychopathology on quality of life, self-kindness is associated with quality of life (60).

The findings indicated a significant difference between pre- and post-tests of CFT in vitiligo patients regarding resilience. The second component involves a sense of common humanity, recognizing that imperfections are part of human suffering apart from individual failure (55). Common humanity is perceived as being vulnerable to others, which becomes the cornerstone of resilience (61). Self-compassion also helps resilience by preventing isolation and creating a social connectedness (55, 61).

The findings indicated a significant difference between pre-and post-tests of CFT in vitiligo patients regarding shame. The third element of self-compassion is mindfulness, which encompasses being aware and fully present in the current moment while accepting painful experiences without judgment (55). Mindfulness can be viewed as a mode of emotional regulation; on the other hand, emotional regulation affects chronic illness-related shame (62, 63). Mindfulness-based therapy effectively reduces shame proneness but not external shame (62). A

negative association has been found between mindfulness and shame (60, 64). Previous studies have shown an inverse relationship between self-compassion and internalized body shame, indicating that individuals who demonstrated higher self-compassion also experienced lower shame associated with their bodies (65).

Finally, past research showed mindfulness could predict quality of life. This finding is in line with our study (60). The more significant impact of self-compassion on quality of life than mindfulness reflects the impact of other components of self-compassion (66). This study aligns with the Mindfulness-Based Compassionate Living intervention that decreases self-criticism (67). Mindfulness and self-compassion programs reduce disease severity, lessen psychological distress, and improve the quality of life in chronic skin conditions (68). For the last word, prior research has demonstrated that self-compassion Therapy has an effectiveness on the quality of life of patients with vitiligo (32). This study has demonstrated that CFT influences resilience, shame, internal self-critical, and quality of life in patients with vitiligo. As the quality of life for patients with vitiligo in Iran is low (69), the findings of our study can greatly contribute to improving mental health care, enhancing their quality of life and resilience, and reducing feelings of shame and self-criticism among these individuals.

One limitation of this study was the reliance on self-report questionnaires for assessing variables such as resilience, shame, internal self-criticism, and quality of life, which may introduce social desirability bias. The absence of long-term follow-up also constitutes a limitation as it hinders an understanding of sustained effects post-CFT. Nonetheless, the study's positive findings on the impact of CFT on resilience, shame, internal self-criticism, and quality of life among individuals with vitiligo hold significant implications for mental health care and patient well-being. Its potential benefits in promoting mental health and addressing societal attitudes towards visible differences underscore its broader societal relevance.

5.1. Conclusions

Our study findings indicated a significant difference between pre- and post-tests of CFT in vitiligo patients regarding resilience, shame, internal self-criticism, and quality of life. Additionally, there is a significant difference between the experimental and control groups concerning these variables. The effect of CFT on shame and internal self-criticism showed a decreasing trend, whereas we observed an increasing impact of CFT on resilience and quality of life. CFT demonstrated the most notable effect on the quality of life of patients with vitiligo. Conversely, its impact on resilience, though significant, was comparatively less pronounced.

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Footnotes

Authors' Contribution: S.F. and A.K. contributed significantly to the study design and interpretation and discussion of the data of this work. Z.P. participated in commenting on/editing the drafts of this work. M.K. administered the treatment and collected clinical data. R.B. analyzed the statistical data. A.M. provided comprehensive administrative, technical, and material support.

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Data Reproducibility: The dataset presented in the study is available on request from the corresponding author during submission or after publication. The data are not publicly available due to accessibility to confidential information.

Ethical Approval: This study was approved under the ethical approval code of IR.SBMU.MSP.REC.1399.312.

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Informed Consent: Participants completed an informed consent form in this study.

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