

ORIGINAL RESEARCH

Effects of Mindful Self-Compassion Program on Psychological Well-being and Levels of Compassion in People Affected by Breast Cancer

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ABSTRACT

Context • Preliminary studies have suggested that Mindful Self-Compassion (MSC) programs can reduce psychological problems, such as anxiety and depression, but they have rarely been investigated in people with cancer.

Objective • The study intended to investigate the effects of a standard MSC program on psychological well-being and levels of compassion in people with breast cancer.

Design • The study was an internal service evaluation that used a pre-post, quasi-experimental design.

Setting • The study took place at Breast Cancer Haven, a national cancer-support charity, in London, UK.

Participants • Of the 63 people who attended the courses, 38 completed the questionnaires both at baseline and postintervention (60%). Of the 49 participants who provided demographic details, 43 were living with breast cancer; one had bowel cancer; and five didn't have cancer. Of those 49 participants, 44 were females and 5 were males; 43% were aged 29-50 years and 57% were aged 51-69 years; and 73% were of European American/White ethnicity.

Intervention • Participants took part in a standard MSC program exploring mindfulness and self-compassion for eight weeks, three hours each week, plus a four-hour retreat.

Outcome Measures • At baseline and postintervention, participants completed four questionnaires measuring: (1) self-compassion—the Self-Compassion Scale - Short

Form (SCS-SF), (2) satisfaction with life—the Satisfaction with Life Scale (SWLS), (3) stress and depression—Depression, Anxiety, and Stress Scale (DASS), and (4) mindfulness—Cognitive and Affective Mindfulness Scale-Revised (CAMS-R). They also completed a short feedback form about their course experiences.

Results • The study found statistically significant increases in self-compassion ($n = 37$), with $P < .001$; satisfaction with life ($n = 36$), with $P < .001$; and mindfulness ($n = 35$), with $P < .001$, between baseline and postintervention as well as significant decreases in stress ($n = 38$), with $P < .001$, and depression ($n = 36$), with $P < .001$ (Wilcoxon signed rank test). Participants stated that while they had found the course to be challenging, they also had found new ways to be aware of and respond to their needs for kindness and self-compassion. They felt the course had changed their lives for the future.

Conclusions • The findings support the beneficial effects of a standard MSC course on the psychological well-being of people with breast cancer. Further larger, more rigorous mixed-method studies are required to corroborate these preliminary findings. (*Altern Ther Health Med.* [E-pub ahead of print.]

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A survey of 980 people with breast cancer reported that help with psychological problems, such as stress,¹ anxiety,² and depression,³ was the main type of support they wanted.⁴ While mindfulness-based stress reduction (MBSR) programs

have been delivered and researched for breast-cancer patients for two decades,⁵ mindful self-compassion (MSC) programs are relatively new approaches in cancer support.⁶

A small number of studies have reported on the levels of self-compassion in people with breast cancer and their relationship to other psychological factors, such as perceived stress, self-care behaviors, social support, sense of belonging, and resilience.^{7,8} However, few studies have examined the effects of self-compassion interventions on the psychological problems experienced by people with cancer.

In patients with cancer, but not in healthy individuals, greater self-compassion has been found to significantly

predict lower levels of depressive and stress symptoms and increased quality of life.⁹ These findings suggested that interventions designed to increase self-compassion attributes and skills could be beneficial to the psychological well-being of patients with cancer.

In people with breast cancer, a small, randomized trial found compassion-focused therapy to be associated with a significant reduction in depression and anxiety as compared to the results for a motivational enhancement therapy.¹⁰ Body-image-related issues in breast-cancer survivors have been reported to be modified by a writing intervention focused on self-compassion.¹¹

Cognitively-based compassion training, compared to treatment as usual, has also been shown to reduce stress and increase overall self-kindness, self-compassion, and mindfulness.¹² Increased mindfulness in people with breast cancer has been reported in several studies to be associated with benefits to health, including reductions in anxiety and depression and improved mood state, quality of life, and well-being.^{1,13}

The current study intended to investigate the effects of a standard MSC program on psychological well-being and levels of compassion in people with breast cancer.

The current study reports the findings of a service evaluation which explores the impact of an 8-week MSC program on self-compassion, satisfaction with life, depression, stress, and cognitive and affective mindfulness in a sample of people with breast cancer attending a third sector support center.

METHODS

Participants

Potential participants were included if they: (1) were over 18 years of age; wanted to learn mindfulness and self-compassion practice as a psychological self-management resource.

Potential participants were excluded if they: (1) were diagnosed as psychotic or suicidal; couldn't commit to attending at least 50% of the course

The applications provided 67 potential participants. Of them, two couldn't attend due to cancer treatment appointments, one because of going back to work, and one was going away.

Informed consent was given by the participants for their personal data to be held and processed in accordance with the Data Protection Act and for the collection of their feedback from the course. Because the study wasn't a research study, it wasn't subject to research ethical approval.

Procedures

Intervention. The course was co-taught by two healthcare professionals, who had trained to teach MSC in July 2016 with Dr Kristin Neff, a research psychologist who co-founded the MSC course with Dr Christopher Germer, a clinical psychologist. Both teachers were healthcare professionals who had practiced meditation for over 35 years and taught it for around 20 years.

A record of attendance and reasons for nonattendance was kept throughout the course.

Outcome measures. Four validated questionnaires recommended for evaluation of the MSC course by Dr Kristin Neff were obtained from her research organization Self-Compassion¹⁴ through a personal communication to Dr Caroline Hoffman in 2017.

The outcome measures included the Self-Compassion Scale - Short Form (SCS-SF)¹⁵; the Satisfaction with Life Scale (SWLS)¹⁶; a modified version of the Depression, Anxiety, and Stress Scale (DASS)¹⁷; and Cognitive and Affective Mindfulness Scale-Revised (CAMS-R).¹⁸

The paper questionnaires were given to participants to complete both at baseline, at up to seven days prior to the first session, and postintervention, after the last session at eight weeks. The participants completed them and sent them back by mail or email.

Postintervention, participants were also given a short, study-specific feedback form to collect qualitative information about their experience of the course. Participants were asked for their comments on what they found helpful and what they found challenging about the MSC course and about practicing MSC as part of their everyday lives

Intervention

Participants attended one of six courses that delivered the Mindful Self-Compassion (MSC) program⁶ at Breast Cancer Haven during the period 2017-2019. The intervention explores how to bring mindfulness and self-compassion into daily life; as well as handling difficult situations and emotions with greater ease.

The program occurs over eight weeks, three hours each week, plus a four-hour retreat session.

The MSC program includes mindfulness and self-compassion practices, exercises, and topics to help support the cultivation of MSC and its practice in everyday life.

The courses, which took place in the spring and autumn of each year during the period 2017-2019, were advertised within the London center of Breast Cancer Haven and via word of mouth. Interested applicants completed an application form and were contacted by one of the teachers to determine their suitability for the course.

With the exception of one female and the five males (one had bowel cancer), the participants had a diagnosis of breast cancer. Of those who provided clinical information, four had ductal carcinoma in situ (DCIS), 13 invasive ductal or lobular breast cancer (three grade 1, six grade 2, four grade 3) and three metastatic breast cancer. Forty women (82% of participants) had attended Breast Cancer Haven, London previously for support, but not mindfulness or self-compassion training. Of the 10 women currently accessing other therapies, only two received psychological support, one session of coaching and one session of counselling. The others received physical therapies.

Of a total of 63 participants, 49 provided details of age, sex, education, annual income and ethnicity. There were 44

females, 5 males, 43% of which were aged 29-50 years and 57% 51-69 years. The majority (88%) had graduated with a degree, 71% earned < £30,000/ year and 73% were of European American/White ethnicity. As this was a service evaluation, additional socio-demographic data was not collected.

Outcomes Measures

SCS-SF.¹⁵ This scale consists of 12 items, with scores ranging from 1 = almost never to 5 = almost always, which assess self-compassion ability during times of challenge and setback. The higher the score, the higher the degree of self-compassion. This scale has received factorial validation in three samples and demonstrated both adequate internal consistency (Cronbach's alpha ≥ 0.86) and a near perfect correlation with the long form SCS.

SWLS.¹⁶ This five-item scale measures global cognitive judgements of a person's life satisfaction, with scores ranging from 1 = strongly disagree to 7 = strongly agree. The higher the score, the higher the degree of life satisfaction. This scale demonstrates high internal consistency and high temporal reliability; it has been shown to be a valid and reliable measure of life satisfaction.

DASS.¹⁷ This scale consists of 14 items, subdivided into subscales on depression (seven items) and stress (seven items), with the three items for anxiety not being included. It's used to measure mood disorders. The scores range from 1 = does not apply to me at all to 4 = applies to me very much or most of the time. The higher the score, the greater the degree of depression and stress. This scale has been shown to have appropriate construct validity and good reliability.

CAMS-R.¹⁸ This 12-item scale assesses four aspects of mindfulness: self-regulation of attention, orientation to present-moment experience, awareness of experience, and accepting or non-judging attitude toward experience. Its scores range from 1 = rarely to 4 = almost always. The higher the score, the greater the degree of mindfulness. This scale demonstrates acceptable internal consistency and evidence of convergent and discriminant validity with concurrent measures in three samples.

Feedback form. The feedback form contained four questions or topics: (1) Do you believe you have experienced a greater degree of mindful self-compassion as a result of participating in the course?; (2) Please write down how this eight-week course and mindful self-compassion practice has been most helpful in your life.; (3) Please write down what you found the most challenging about the course and the mindful self-compassion practice.; (4) Please add any other comments about the course that you wish to make in the space below.

Demographic and clinical data. The Participant Information Form completed before acceptance on the course, contained six questions: (1) Why would you like to do the 8-week Mindful Self-Compassion course?; (2) Do you have any previous experience with mindfulness, meditation or self-compassion?; (3) Have you got any physical health conditions that we might need to be aware of? (e.g. the class involves some gentle movement and practices that focus on

body sensation); (4) Are there any psychological or emotional struggles or recent events that we might need to be aware of? (e.g. the class includes practices which may bring thoughts and feelings to the foreground of our attention and awareness); (5) Are you currently on any medications?; (6) Is there any other information that you wish to share with us?

The paper questionnaires were given to participants to complete both up to seven days prior to the first session and after the last session (at 8 weeks) of the MSC course (to take away to complete and send back), when participants were also given a short study-specific feedback form to collect qualitative information about their experience of the course.

Data Analysis

Quantitative data. The analysis used the program for statistical analysis of sampled data (PSPP) software, a free alternative to SPSS (GNU, Free Software Foundation, Boston, Massachusetts, USA). The mean scores at baseline and postintervention for each of the four outcome scales, including the DASS Depression and Stress subscales, were compared using the Wilcoxon signed rank test, with a cut-off value for statistical significance of $P = .05$ (two-tailed). This nonparametric statistical test was used because not all the data conformed to a normal distribution. Participants were included in the analysis if they had completed the questionnaires both at baseline and postintervention ($n = 35-38$), with the number varying according to the amount of missing data for a given participant or scale.

Qualitative data. A descriptive analysis was undertaken by one member of the research team, and the themes were validated independently by the second member. Free-text responses were analyzed, without the use of software, by a series of analytical steps based on framework thematic analysis. Common themes were identified and clustered into categories.¹⁹

RESULTS

Participants

Of the 67 potential participants, 63 attended the courses (94%), and 50 of those participants (79%) attended seven or more weekly sessions. Nonattendance was mostly due to illness, breast-cancer treatment, or time away from home. Of the people who attended the courses, 38 completed the questionnaires both at baseline and postintervention (60%).

With the exception of one female and five males, one of whom had bowel cancer, the 63 participants had a diagnosis of breast cancer. Of the 20 participants who provided clinical information, four had ductal carcinoma in situ (DCIS); 13 had invasive ductal or lobular breast cancer—three at grade 1, six at grade 2, and four at grade 3; and three had metastatic breast cancer (data not provided).

Forty of the female participants (82%) had previously attended programs at Breast Cancer Haven in London for support but not for mindfulness or self-compassion training. Of the 10 women who were currently accessing other therapies, only two had received psychological support—one

Table 1. Questionnaire Scores at Baseline and Postintervention

Questionnaire	n	Baseline Mean ± SD	Postintervention Mean ± SD	P Value
SCS-SF	37	28.49 ± 7.14	42.81 ± 7.29	<.001
SWLS	36	18.36 ± 6.58	23.97 ± 6.54	<.001
DASS total score	36	29.00 ± 7.64	23.03 ± 6.53	<.001
DASS: Depression subscale	36	13.08 ± 4.56	10.45 ± 3.84	<.001
DASS: Stress subscale	38	15.84 ± 4.02	12.78 ± 3.03	<.001
CAMS-R	35	27.66 ± 5.12	35.00 ± 5.34	<.001

Abbreviations: SCS-SF, Self-Compassion Scale - Short Form; SWLS, Satisfaction with Life Scale; DASS, Depression, Anxiety, and Stress Scale; CAMS-R, Cognitive and Affective Mindfulness Scale-Revised

session of coaching and one session of counseling. The others received physical therapies.

Of the 63 original participants, 49 provided details of age, gender, education, annual income, and ethnicity (data not provided). Of them, 44 were female and 5 male; 43% were aged 29-50 years and 57% were aged 51-69 years. The majority had graduated with a degree (88%); 71% earned <£30,000/ year; and 73% were of European American/White ethnicity (data not provided). Because the study was a service evaluation, additional sociodemographic data wasn't collected.

Self-compassion, satisfaction with life, depression, stress and mindfulness

No adverse effects relating to the course were reported by participants. MSC home practice wasn't measured as part of the service evaluation.

Questionnaires

A comparison of the scores of the participants who completed the four questionnaires at baseline and postintervention are shown in Table 1.

SCS-SF. A statistically significant increase occurred between baseline and postintervention in the scores for self-compassion (n = 37), from 28.49 ± 7.14 to 42.81 ± 7.29 (P<.001). An average score for this scale is 36.¹⁵ This suggests an increase in participants' ability to be kind to themselves and more accepting of their thoughts, emotions, physical sensations, and behaviors.

SWLS. A significant increase also occurred in participants' satisfaction with life (n = 36), with P<.001. The score at baseline, 18.36 ± 6.58, indicated the presence of small but significant problems in several areas of participants' lives or one area that represented a substantial problem for them. This score increased to 23.97 ± 6.54 postintervention, an average score for the scale ¹⁶, suggesting that participants were generally satisfied but had some areas where they would like some improvement.

DASS. The total score significantly decreased from 29.00 ± 7.64 at baseline to 23.03 ± 6.53 postintervention (n = 36), with P<.001. Scores for the subscales for depression (n = 36) and stress (n = 38), which indicated mild disorders (defined

as a score of 10-13 and 15-18, respectively)¹⁷ at baseline, also significantly decreased between baseline and postintervention, from 13.08 ± 10.45 to 10.45 ± 3.84 and 15.84 ± 4.02 to 12.78 ± 3.03, respectively (P<.001).

CAMS-R. Mindfulness also significantly increased from 27.66 ± 5.12 to 35.00 ± 5.34 (n = 35), with P<.001.

Helpfulness and Challenges

Forty-four participants provided their feedback in this way (Table 2).

Thematic, qualitative data analysis was performed, creating five overarching themes: (1) awareness of my own needs, difficulties, and struggles; recognition that suffering is a part of life; (2) ability to find new ways to respond to myself and my suffering, with safety and kindness; (3) acknowledgement of the difficulties of bringing self-compassion to challenging events and difficult emotions; (4) appreciation of the course's excellent facilitation; (5) merit of a course that has changed lives for the future.

The first two themes encompassed the factors that participants found helpful and were each divided into two main categories.

Included in Theme 1 was: (1) an acknowledgement of the need and ability of participants to address their own needs (n = 18) and (2) an awareness of their own suffering and that of others (n = 15)

Theme 2 included: (1) ability to be kinder to themselves and less critical when they were experiencing difficulty (n = 12) and (2) support from the self-help tools and materials provided by the course (n = 11).

Theme 3 included the factors about the course and MSC practice that were the most challenging, including: (1) acknowledgement of facing and dealing with challenging and difficult emotions (n = 26), (2) ability to meet difficulties that arose from the course content and practice (n = 20), and (3) ability to maintain the homework practice during the course (n = 14).

Further comments from participants were included in Themes 4 and 5. First, Theme 4 identified an appreciation of the excellent facilitation of the course by the teachers who: (1) embodied self-compassion and nonjudgement (n = 16), and (2) a request for further opportunities for practice

Table 2. Helpful and Challenging Aspects of MSC Course and Overarching Themes

Question	Themes	Main Categories	Participant Quotes	n
How helpful has this eight-week program and mindful self-compassion practice been in your life?	Awareness of my own needs, difficulties, and struggles; recognition that suffering is a part of life	Awareness and ability to address my own needs	I became more attentive to my needs and desires. I started taking care of myself better because being a mother of two young children and going through treatment is exhausting.	18
		Awareness that I am suffering and recognition that everyone suffers	I learned how to be compassionate to myself when I am suffering. I realized suffering is part of life. The program helped me to understand how to deal with suffering from disconnected and connected relationships- suffering from being close to or rejected by people in relationships and when I am a caregiver.	15
	Discovery of new ways to respond to and my suffering with safety and kindness	Ability to be kinder to myself and less self-critical when experiencing difficulty	The course has been completely transformative for me. It has given me a new way to approach myself as a person and my flaws and also my moment-to-moment suffering. Specifically, it has helped me to accept my flaws and suffering and be kind to myself, rather than trying to fix or push them away.	12
		Support from self-help tools and materials	The program was a tool for grounding in the present moment during a difficult time physically and emotionally. The course has made me discover the blockages and resistance I have within myself.	11
What did you find most challenging about the course and mindful self-compassion practice?	Acknowledgement of the difficulties of bringing self-compassion to challenging events and difficult emotions	Acknowledgement of facing and dealing with challenging and difficult emotions	I was able to bring my suffering to the surface and allow my pain and missing and sadness over my mum to surface. I could be brave at sitting with it.	26
		Ability to meet difficulties that arose from the course content and practices	The course provided a lot of challenges for me; finding phrases was hard. I seem to be unable to move (easily) from finding words to be compassionate to others to then find anything I could say to myself.	20
		Ability to maintain the homework practice	The weekly homework on the meditations was helpful. I am best at it in the group meditations. I need to practice more meditation on my own.	14
Any further comments?	Appreciation of the excellent facilitation of the course	Presence of teachers who embodied self-compassion and nonjudgement	I was impressed by the compassion of the teachers, and the nonjudgment. I never heard either one complain or contradict anyone. I was impressed by their capacity to share their own emotions and feelings, breaking the barrier between the teachers and the students.	16
		Request for further opportunities for practice sessions and retreats	It would be great to have a follow-up session, perhaps a retreat where we can talk about experience and do lots of practice.	12
	An excellent course that has changed lives for the future	Value of the course	It's an excellent course. It should be mandatory for all going through cancer.	11
		Course's ability to change lives for the future	This course has literally been life-changing. I intend to carry this through the rest of my life and help others learn how to bring more compassion into their lives. Thank you!	10

sessions and retreats (n = 12). Second, Theme 5 included comments about the excellence of the course: (1) the course's value during the experience of breast cancer (n = 11) and (2) the course's ability to change lives for the future (n = 10).

DISCUSSION

The current study is the first service evaluation of its kind that has assessed the outcomes of the standard eight-week MSC program for people affected by breast cancer. The findings have generally confirmed that the skills that participants had gained matched those stated by Neff.¹⁴

The baseline observations of psychological well-being for this group weren't significantly below the normal ranges as defined for each scale¹⁵⁻¹⁷, suggesting that the participants weren't significantly adversely affected. (These baseline levels were taken prior to the Covid-19 pandemic, which commenced in March 2020.) However, following participation in the MSC course, participants showed significantly increased self-compassion and satisfaction with life together with reduced depression and stress, indicating that the

program was beneficial despite moderate baseline levels of psychological distress.

The current study's results support Pinto-Gouveia et al's⁹ findings that greater self-compassion has been found to significantly predict lower levels of depressive and stress symptoms, and increased quality of life. The current study also found that mindfulness, the foundation of self-compassion, had also increased postintervention.

The current study had some limitations. The findings are the result of a service evaluation and haven't been compared to those of a control group. Furthermore, the small number of participants may have affected the results' validity. The findings aren't generalizable beyond women with breast cancer in the setting of a cancer charity. We did not measure the impact of the small number of participants without breast cancer.

Some participants had prior meditation experience, 22 out of 31 (71%), and had practiced meditation for <1 to 35 years. This might have enhanced the effectiveness of the course. However, evidence of psychological distress existed at

baseline, and it improved after the MSC course. Participants may have been new to specific self-compassion practices despite prior meditation experience.

CONCLUSIONS

The findings support the beneficial effects of a standard MSC course on the psychological well-being of people with breast cancer. Further larger, more rigorous mixed-method studies are required to corroborate these preliminary findings.

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