



UNIVERSITY OF TWENTE.

The Impact of a Web-based Psychological Self-help Intervention for Partners of Cancer Patients On Self-compassion

May 2016

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Abstract

Background

Cancer is a devastating disease that impacts psychologically and physically on an individual's life and the lives of those around them. As a result, not only the patients, but also these proximally affected people often require professional support. However, interventions that are currently available often fail to meet the partners' needs and preferences. Previously, partners of cancer patients have reported that they need, and want, an easy accessible, flexible, theory-based, positive, step-by-step intervention to support them in better dealing with the new situation. In an attempt to fulfil these requirements, a web-based self-help intervention "*Hold on, for each other*" has been developed. In this master thesis, we focus on self-compassion and whether it can be enhanced by participating in the intervention. Additional aims sought to determine the effects of the study on three outcome measures (well-being, psychological distress and caregiver strain) and to examine whether self-compassion mediated the relationship between participation in the intervention and well-being, psychological distress and caregiver strain.

Methods/Design

Data were derived from 139 partners of cancer patients, who participated in a randomized controlled trial (RCT) by Köhle et al. (2015a). The RCT consisted of two active treatment conditions (personal feedback versus automated feedback) and one waiting list control condition. Self-report questionnaires that assess self-compassion (SCS-SF), positive mental well-being (MHC-SF), psychological distress (HADS) and caregiver strain (CSI) were used in the primary analysis. Additionally, a mediation analysis, based on the theory of Kristopher Preacher and Andrew Hayes, was completed in order to test for potential mediation effects.

Results

Following participation in the intervention no significant enhancement of self-compassion in any of the groups was found. Well-being also did not significantly increase and psychological distress and caregiver strain did not significantly decrease in any group. The mediation analysis found no significant mediation effect for self-compassion with regard to the relationship between participating in the intervention and the measured well-being, psychological distress and caregiver strain.

Discussion

Previous studies have found effects of enhancing self-compassion and relationships of self-compassion with well-being, psychological distress and caregiver strain. The present analysis has provided interesting insights into the relationship between participant variables and how these factors may or may not contribute to the expression of treatment effects in the partners of cancer patients, but did not directly support the results of the previous studies. It would be beneficial to conduct further research on self-compassion and online interventions. The present research provides recommendations relating to potential revisions of the existing intervention that could go some way to enhancing effects in the partners of cancer patients.

Samenvatting

Achtergrond

De diagnose kanker heeft niet alleen grote invloed op het leven van de patiënt, maar beïnvloedt ook de partner zowel psychisch als fysiek. Zij hebben vaak professionele hulp nodig, maar het aanbod van interventies sluit niet aan bij de behoeftes en voorkeuren van de partners. Het is gebleken, dat partners voorkeur geven aan een makkelijk toegankelijke, weinig tijdrovende, op theorie gebaseerde, positieve, stap-voor-stap aanpakken. Daarom is de online zelfhulp interventie "*Houvast, voor elkaar*" ontwikkeld. In dit afstudeeronderzoek ligt de focus op zelfcompassie en of dit toeneemt door deel te nemen aan de interventie. Daarnaast waren doelen van de studie om de effecten van de interventie op drie andere uitkomstmaten (welbevinden, psychische stress en inspanning van de zorgverleners) te bepalen en om te bepalen of zelfcompassie de relatie tussen de deelname aan de interventie en de drie uitkomstmaten (welbevinden, psychische stress en inspanning van der zorgverlener) medieert.

Methode

De data van 139 partners van kankerpatiënten van een randomized controlled trail (RCT) van Köhle et al. (2015a) werd gebruikt. Het interventie onderzoek bestond uit twee actieve behandeling condities (individueel feedback en automatische feedback condities) en een controle conditie. Voor de eerste analyse werden vragenlijsten om zelfcompassie (SCS-SF), positief mentaal welbevinden (MHC-SF), psychische stress (HADS) en inspanning van de zorgverlener (CSI) te meten gebruikt. Bovendien werd een mediatie-analyse, gebaseerd op de theorie van Kristopher Preacher en Andrew Hayes, uitgevoerd om de mediatie-effecten te bepalen.

Resultaten

Na afloop van de interventie werd in geen van de groepen een significante toename van zelfcompassie gevonden. Verder nam welbevinden in geen groep significant toe en de psychische stress en de inspanning van de zorgverlener nergens significant af. In de mediatie-analyse waren geen significante mediatie effecten voor zelfcompassie, wat betreft de relatie tussen deelname aan de interventie en het gemeten welbevinden, de psychische stress en de inspanning van de zorgverlener, aangetoond.

Discussie

Hoewel andere studies al de mogelijkheid van een toename van zelfcompassie en zijn relatie met welbevinden, psychische stress en inspanning van de zorgverlener hebben getoond. Echter liet dit onderzoek interessante aspecten van de relatie tussen deelnemer variabelen en een mogelijke bijdrage bij het uitdrukken van de effecten van de behandeling in partners van kankerpatiënten zien. De resultaten tussen de uitgevoerde en bestaande studies komen niet overeen. Desondanks zou het belangrijk zijn om zelfcompassie en online interventies verder te onderzoeken. Het huidige onderzoek geeft aanbevelingen wat betreft mogelijke herzieningen van de bestaande interventie om de effecten voor de partners van kankerpatiënten te vergroten.

Acknowledgement

I would like to express my deepest appreciation to my supervisor Nadine Köhle, who has supported me mentally, was always reachable, shared her expertise with me and improved my paper much with her ideas and hints. I would also acknowledge my second supervisor Dr. Constance Drossaert, who also gave many valuable comments and steered me in the right direction with regards to working with Nadine. She did more than an 'ordinary' second supervisor. I am very thankful for the possibility to finish this paper in such a short period of time and for helping me to recognize that it can be a pleasure to work and write academically.

Further I want to thank Tom for his patient and professional support with the language and Johanna for her positive support with the comprehension of the content as independent reader. They both did important work to make the paper more understandable and easily readable.

I need to thank my parents, who in the first place offered me the possibility to do this study and therefore to write this paper. I really appreciate to be that privileged and to have such great family members who are always standing behind me and my decisions.

Finally, I must express my profound gratitude to my boyfriend Alexander who gave me the time I needed to finish this paper, was always appreciative and tried to take over as many tasks as he could. I value these traits of him and am full of gratitude.

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Introduction

Background

Couples who share a living environment are often not aware that they also share the psychological and emotional environment of one another. This is of particular importance for partners of patients suffering from cancer, as they are being directly and indirectly influenced by the psychological, emotional and physical state of their ill partner. These people not only share a house, daily tasks and anything else which belongs to life, a diagnosis of cancer can change the whole distribution and nature of their tasks (Thomas, Morris & Harman, 2002). The standard procedure for cancer consists of treatment and psychological counselling of the patient, but usually does not include the partner of the patient. This study is about a web-based intervention that has been developed to help partners of cancer patients to deal properly with their challenging situation (Köhle et al., 2015a).

Important components to be considered when talking about the consequences of cancer for the partners of cancer patients are psychological and emotional impacts, impacts on daily life, on physical health and on work performance. It is important to acknowledge that the well-being of the caring partner may be closely correlated to the stage of their partners' disease. If the patients' suffering increases the well-being of the ill partner is likely to decrease. This decrease in well-being may impact negatively on the life of the partner, leading to deteriorations in psychological and physical health (Kurtz, Given, Kurtz & Given, 1994). Gustavsson-Lilius, Julkunen, Keskiavaara and Hietanen (2007) found that the psychological status of the patients and partners becomes more similar following a diagnosis of cancer. It is difficult for partners to cope with their own emotional distress and to simultaneously function in the carers role (Hochschild, 1979). Thomas et al. (2002) suggest that many carers put their spouses needs and interests above their own. The diagnosis of the ill partner is also associated with the development of depression and anxiety symptoms in the partner. Previous research shows that 40% of cancer patients, and their partners, report increased levels of depression, psychological distress and low quality of life once a cancer diagnosis has been made (Moser, Künzler, Nussbeck, Bargetzi & Znoj, 2013). In a recent study about longer-term oesophageal cancer carers the scores on anxiety and depression symptoms questionnaires significantly increased over twelve months, indicating that they are at risk (Hospital Anxiety and Depression Scale (HADS) of eight or higher) for developing a psychological condition themselves (Graham, Dempster, McCorry, Donnelly & Johnston, 2015).

Considering the physical, or more overt impacts, such as behavior in social situations, Manne, Siegel, Heckman and Kashy (2015) found that the illness can also directly affect the work performance of the partner, as a study among spouses of women with breast cancer showed. With increasing functional impairment of the patient, the work performance of the

partners decreases and they are more frequently absent from work. The distress perceived by the carers also leads to an increase in caregiving-related health problems such as fatigue, blunted interest in physical exercise or not taking prescribed medications (Milbury, Badr, Fossella, Pisters & Carmack, 2013).

In this section, the different impacts of cancer on the partners became obvious. It became apparent that there is a need for support to manage the challenging situation and to improve quality of life. It seems to be important to decrease their psychological distress and the caregiver strain (Manne et al., 2015; Thomas et al., 2002) and to improve partner well-being (Graham et al., 2015; Kurtz et al., 1994).

Existing interventions for cancer patients

Despite the profound impact the disease has on partners, only few supporting interventions exist. Some interventions, for example the studies of McLean, Jones, Rydall, Walsh, Esplen, Zimmermann and Rodin (2008) or Kuijjer, Buunk, De Jong, Ybema and Sanderman (2004), have shown effective improvements for the patients, and sometimes effective improvements for the relationship. However, there are rarely positive results only for the partners in a caring role. A recent meta-analysis (Northouse, Katapodi, Song, Zhang & Mood, 2010) found that a number of interventions for partners of cancer patients lead to some positive effects for them (e.g. less caregiver burden, higher self-efficacy, less distress and anxiety, improved social functioning). However, most existing interventions address the couple and not solely the partner and have achieved small to medium effects. The analysis showed that there are many possibilities to improve, as for example improving caregivers' social functioning and reducing caregiver depression. Ussher, Perz, Hawkins and Brack (2009) conducted a systematic review to evaluate the efficacy of psycho-social interventions for caregivers of cancer patients. They found that it is important to base interventions on theories, to make them meet the needs of the people who mostly need the support and to test them in randomized controlled trials (RCT).

Considering the needs and preferences of partners of cancer patients, research has shown that the needs and preferences are actual not currently being met. Recent research by Meyer, et al. (2015) suggests that partners of patients of a total laryngectomy do not go to psychologists. Following the study there is little information about the availability of services, partners have insufficient motivation to use existing services, travel considerations and feelings of not having the right to access help; because they are not self-affected. The study further shows that psychological distress is stable for about half of the participants, indicating a need for support and an appropriate solution. Another problem, described in a systematic review (Applebaum & Breitbart, 2013) of 49 caregiver oriented interventions of eight different categories (1. psycho education; 2. problem-solving or skills building interventions; 3. supportive therapy; 4. family or couples therapy; 5. cognitive-behavioral therapy; 6.

interpersonal therapy; 7. complementary and alternative medicine interventions; 8. existential therapy), is that informal carers of cancer patients are difficult to reach. A potential solution for the issues relating to access could be following Appelbaum et al. (2013) the use of alternative treatment modalities, such as telephone or the internet, to deliver interventions to those persons unlikely to actively help seek. Taken together it became clear that there is need for an appropriate intervention (theory-based, easy accessible, fitting the needs of the partners, not too time consuming) that can support informal carers of cancer patients.

One solution for the problematic situation of the informal caregivers and their limited possibilities to make use of support could be to use the internet. This would make the support readily (24 hours a day, seven days a week) available and access as simple as possible. Web-based interventions are attractive as they enable people who are isolated to easily interact with a psychologist (or other health professionals) without long journeys and investment of time and money. Furthermore, the internet is a medium that is widely accepted by many people. This may be in part that many are familiar with the interface, particularly younger people. From the view of the health care provider it seems to be attractive to offer online interventions because of the reduction of health service costs (Griffiths, Lindenmeyer, Powell, Lowe & Thorogood, 2006).

In light of the background described above, Köhle et al. (2015b) conducted a qualitative investigation to determine the needs and preferences of partners, regarding a web-based intervention. The first important finding was that some of the participants were interested in a web-based intervention (six out of 14 were interested and four had ambivalent feelings). Further they found aspects that seem to be important for the partners, like a “step-by-step” approach (the content of the intervention should match the stage the partners’ disease) and that the intervention is not too time consuming. They also pointed out that the potential participants would prefer a positive approach. A positive focus had already helped to reduce anxiety and depression in oesophageal cancer carers (Graham et al., 2015).

Based on the background described above and the study of Köhle et al. (2015b) Köhle et al. (2015a) developed in co-creation with partners of cancer patients a positive framed web-based self-help intervention which is partially evaluated in this paper. The next section discusses the theoretical background of the study and the intervention described below.

Theoretical framework

The web-based intervention “*Hold on, for each other*” is based on acceptance and commitment therapy, mindfulness and self-compassion. However, we will primarily focus on self-compassion in this paper. To be self-compassionate means that one is positive and connected towards the self and others. People who are self-compassionate are less self-critical and accept that failure, suffering and inadequacies belong to life (Neff, 2003a). Neff describes the following six components as possible responses to pain and failure. One side

describes a positive and constructive approach and the other side leads to suffering and uncompassionate coping.

1. **self-kindness versus self-judgment:** Being understanding, gentle, supportive, warm and unconditionally accepting towards the self instead of judging and attacking oneself for shortcomings or being harshly critical.
2. **common-humanity versus isolation:** Taking a broader perspective and seeing everyone as part of a connected whole and not as separate pieces. Integrate the own experiences in the large human experience and recognize that mistakes are normal and all people have imperfect lives instead of feeling isolated by the own difficult conditions and thinking that all others are leading happy lives.
3. **mindfulness versus over-identification:** Being clearly and without suffering aware of the here and now instead of losing the self in negative stories about the life and the life experiences and over-identifying with those negative aspects. Neff and Germer (2013) say that it is important to find a balance between rumination and ignorance.

The different components are separated from each other but have impact on each other. This suggests that if, for example, the person is self-compassionate then mindfulness increases (e.g. "I can see my misstep clearly."). In turn, this may lead to a decrease of egocentric view and therefore less isolation and more common-humanity (e.g. "I am not the only one who fails. Everyone is making mistakes.") (Neff, 2015).

Research has shown that self-compassion not only helps to deal more positively with pain and failure, it is also connected to well-being (Barnard & Curry, 2011). Self-compassion is considered to be associated with increased well-being (Neff, 2003b). This likely translates into lower depression, lower anxiety and improved life satisfaction. In a meta-analysis, MacBeth and Gumley (2012) found a strong relationship between self-compassion and better mental health and reduced psychopathology (less depression, anxiety and stress). Approaching a painful feeling with self-compassion should lead to more happiness and an optimistic mindset. These developments facilitate the ability to grow, explore and understand the self and others (Neff, Rude & Kirkpatrick, 2007).

Despite the growing interest in self-compassion, little is known about the impact of self-compassion on cancer carers. There is a study among cancer patients indicating that higher self-compassion is related to less psychopathological symptoms in cancer patients and increasing quality of life (Pinto-Gouveia, Duarte, Matos & Fráguas, 2014). From a study of parents of children with autism it became apparent that self-compassion plays a significant role for the well-being of the parents, because it provides a kind of safety net to the caring parent and further it is an important coping resource (Neff & Faso, 2015). According to that

study, self-compassion leads to acceptance and understanding towards oneself, protection against rumination and self-criticism, better outcomes for all types of parenting stress and functional relationships with their children. According to Neff (2011) it is important for an informal carer to be self-compassionate to recharge their batteries and prevent from burn out. People who have more self-compassion often have greater mental health and provide better support to their loved ones.

Recent research has shown that self-compassion, and its components, can be positively affected by interventions. Self-compassion seems to be modifiable by training (Barnard et al., 2011; Neff et al., 2013). One example of such a training is the mindful self-compassion (MSC) which was developed by Neff and colleagues. During an eight-week intervention, participants completed exercises in groups with a teacher and alone in their daily contexts. Every session addressed a different topic, for example session one was a general introduction of self-compassion. In the second week foundational knowledge of mindfulness was provided and in week three the application of self-compassion in different situations in life were discussed. In the fourth week the participants learned to develop a compassionate inner voice and in week five they learned to emphasize the importance of living following the core values. The sixth week taught the participants dealing with difficult emotions and week seven taught dealing with challenging interpersonal relationships. The eighth session learned how to relate to positive aspects of oneself and one's life with appreciation. The goal of that program was to support participants in coping with difficult situations more adaptively, whilst learning to problem solve for effectively. The MSC can be used in both general and clinical populations and has been proved to successfully bring about long lasting change by teaching participants to be more self-compassionate (Neff et al., 2013). Another study by Mosewich, Crocker, Kowalski and DeLongis (2013) showed that a short-term intervention (five modules over seven days) already could lead to increased self-compassion (participants here: women athletes). That is why Köhle, et al. (2015a) developed an online intervention with the goal to improve self-compassion in partner of cancer patients.

The web-based self-help intervention "Hold on, for each other"

Köhle et al. (2015a), recently developed, in cooperation with the Dutch Cancer Society, the online self-help course "*Hold on, for each other*". This course addresses partners of people suffering from cancer and it aims to provide information and support, so that partners can make the most of the difficult times they are in.

The course was created in collaboration with partners of cancer patients to meet their needs (Köhle et al., 2015a). The researchers developed an intervention that consists of six modules and two optional modules. The normal duration of the intervention was 6-12 weeks. The themes addressed in the intervention were: module one – the emotional consequences of being a partner of a cancer patient; module two – how to manage a period of chronic stress;

module three – worrying and negative thoughts; modules four and five – values in life and in the relationship and the commitment to those values and the importance of beloved moments in a relationship; module six – the importance of communication. If the partners decided to do an extra module, they received two weeks extra to finish it. The themes of these additional modules were: how to move on with life after successful cancer treatment and as a second additional module - a module which focuses on the terminal phase (Köhle et al., 2015a). All modules consisted of texts, psychological exercises, mediation exercises, practical information, tips, links to websites and organizations, poems or inspiring texts. There was also the possibility to receive text messages with short inspiring texts. As part of the intervention, two different types of social support were offered: peer- to peer support and professional support.

A few examples shall demonstrate how the components of self-compassion were addressed in the online course: The fact that the participants can interact with each other, met the component common-humanity. In each module they had the opportunity to share their experiences with others by clicking on the 'share'-button. Participants could exchange private messages or could read about the experiences of others under the button 'read the experiences of others'. The social contact with other partners is considered to reduce feelings of isolation by showing that other people also have to deal with comparable burdens.

The present intervention also aims to promote self-compassion in cancer caregivers by providing information in combination with active exercises where participants have to provide individual input. An example is the exercise 'Compassion with yourself.' The participant is asked to describe how he or she would deal with a friend whose partner suffers with cancer. After that the participant should compare this to the way he or she deals with him or herself. This exercise should train the individual to become more kind to oneself as someone would be towards others.

The program contains mindfulness exercises at the end of each module with a different focus for each module. In module two for example a mindfulness exercise is offered that trains the partners of cancer patients to direct more kindness towards themselves as people who have to deal with many burdens every day. Furthermore, the exercise should make the people more conscious about their situation (mindfulness) and tries to protect them from over-identifying with the problems they are confronted with.

In module four ('What is actually really important?') another mindfulness exercise, named 'Kindness against yourself,' is presented. The goal is to be kind towards oneself, become less self-judging and accept the self as it is. These are only examples of many exercises of the intervention to enhance self-compassion. Overall, the treatment aims to impart less self-judgment, over-identification and isolation and more self-kindness,

mindfulness and common-humanity upon the cancer carers. This leads to the following section dealing with the objectives of this paper.

Present study

The aim of the present study is to analyze the role of self-compassion in the online self-help intervention developed by Köhle et al. (2015a). Additionally, the responses to treatment (looking at well-being, psychological distress and caregiver strain) are tested. We formulated the following objectives:

1. Did the intervention lead to an increase in self-compassion?
 - Neff (2015) found that training of self-compassion leads to higher scores on the positive subscales of the self-compassion scale (self-kindness, common-humanity and mindfulness) and therefore to more self-compassion. It is reasonable to hypothesize that the two active treatment groups will have improved on self-compassion compared to the waiting list, because they have trained their self-compassionate abilities. Mosewich et al. (2013) showed that short interventions could already lead to increased self-compassion.
2. Did the intervention lead to reduced psychological distress or caregiver strain or an increase in well-being?
 - It is expected that psychological distress and caregiver strain will be lower for the active treatment groups following course completion, than for the waiting list group, because they are getting support that fits their needs and preferences (Köhle et al., 2015b, Meyer et al., 2015). Recent research has shown that it is possible to reduce negative aspects as anxiety and depression symptoms by offering support to informal cancer carers (Northouse et al., 2010). Well-being will improve for people in the active treatment conditions, because they will feel supported and less helpless with the current situation (Kurtz et al., 1994). The people who wait and get treatment as usual are expected to not improve in well-being.
1. Were any of the intervention effects mediated by self-compassion?
 - Barnard et al. (2011) showed that self-compassion is connected to well-being and Neff (2003b) suggests that it is associated with increased well-being (lower depression, lower anxiety and more life satisfaction). She already showed that it is important for the well-being of parents of children with autism (Neff et al., 2015). Self-compassion also seems to be related to better mental health (MacBeth et al., 2012) and to an optimistic mindset (Neff et al., 2007). Pinto-Gouveia et al. (2014) showed decrease in psychopathology related to self-compassion in cancer patients. Although there is currently little known about the impact of self-compassion on informal cancer carers, a mediational effect based on the studies mentioned is expected.

This study could have important implications for the development of web-based interventions, because they offer new possibilities for a treatment with a lower threshold for many people, with lower costs and less personnel than face-to-face treatment and at the same time individually meeting the participants needs (Griffiths et al., 2006). It would be also important with regards to the development of the online self-help course *“Hold on, for each other”* and the knowledge about self-compassion and its relationships to well-being, psychological distress and caregiver strain.

Method

Study design

This paper drew upon the data of a RCT conducted by Köhle et al. (2015a) (for further information see the study protocol of Köhle et al., 2015a). Participation in the study was voluntary. The RCT consists of three parallel conditions: 1) Web-based intervention *“Hold on, for each other”* with feedback from a personal counsellor (personal), 2) Web-based intervention *“Hold on, for each other”* with automated feedback via pop-ups (automated) or 3) the participants will be on a waiting list for 3 months from entry/intake (waiting). They were receiving *“Hold on, for each other”* (with automated feedback), three months after the intake of the intervention for the active treatment conditions. There were four measurement points, but only the baseline measure (T0) and the measure three month after the baseline measurement (T1) were used in this study.

Population and procedure

The participants for this study were selected via different community-based recruitment channels (e.g. papers, media, websites). Participants had to meet the following inclusion criteria: a) 18 years or older, b) partner of a cancer patient or cancer survivor, c) internet access, d) fluent comprehension of the Dutch language and e) mild to moderate psychological distress symptoms (Hospital Anxiety and Depression Scale (HADS) - Score >3). Participants were excluded from the study when a) reported symptoms of a severe depression or anxiety (HADS-A or HADS-D-Score ≥ 15), b) started a psychological or psychopharmacological treatment less than three months ago, c) not available to spend 1-1.5 hours on the course each week, d) partner died because of cancer and e) less than three months ago the partner received the diagnosis.

If the people decided to participate, they had to fill in the informed consent and different socio-demographic variables. To check if they had not too severe anxiety and depression symptoms they received the HADS via e-mail. With a score ≥ 15 on the HADS depression scale or the HADS anxiety scale they were excluded. If they had a moderate score (11-14) on

HADS anxiety and/or HADS depression, they were phoned to assess the depressive episode module and the anxiety disorder module of the Mini International Neuropsychiatric Interview (M.I.N.I.) (Sheehan et al., 1997). People considered to have a depressive or anxiety disorder following the M.I.N.I. had to complete the Sheehan Disability Scale (SDS) (Leon, Olfson, Portera, Farber & Sheehan, 1997) to determine how severe the symptoms were. The participants were asked to what extent work, social life and family life were affected by the symptoms. If the scores on the 10-point-scale (0= no impairment, 10= worst impairment) were for two areas higher than seven, the participant was excluded from the study. All excluded people were offered adequate help and support to find an appropriate solution to deal with their situation.

In the next step the 203 participants were randomly divided into three comparable groups. Of these 139 completed both (T0 and T1) and these were used for the present study. The automatic randomization allocated men and women equally over the conditions. Additionally, individuals were classified based on the self-reported phase of the partners' cancer by the following statements: 1) My partner is still in treatment and we have good hope that he/she will recover, 2) The treatment is completed and we are moving on with our lives and 3) My partner is unlikely to be cured. After this procedure the course started and individuals in the active treatment condition could log in. They were able to finish the module in one time, but they could also log in several times and complete the module in parts.

Measurements

As part of the RCT the partner had to fill in several questionnaires:

Participants' personal characteristics and cancer-related characteristics of the patients

At T0 the participants were asked to give the following information: age, gender, number of children, country of birth, their relationship with the patient, work situation and their level of education. Regarding the patients' disease, participants were asked about: type of cancer, time since diagnosis, current treatment, and self-reported phase of disease.

Outcome measures

Self-Compassion: The Self-Compassion Scale Short Form (SCS-SF) (Neff, 2003b; Raes, Pommier, Neff & Gucht, 2011) was used to measure the different components of self-compassion: self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification. There were twelve items (two items for each component) and each had to be scored from one to seven. A mean score was calculated and a high score means high self-compassion. The reliability (Cronbach's alpha) was good for this scale (T0: $\alpha = .81$; T1: $\alpha = .84$).

Positive mental health: The Mental Health Continuum Short Form (MHC-SF) (Keyes, 2005; Lamers, Glas, Westerhof & Bohlmeijer, 2012) was used to measure the three different aspects of positive mental health: emotional well-being (three items), psychological well-being (six items) and social well-being (five items). The whole questionnaire consists of 14 items. The scores of the answers reach from one to six and a mean score of all answers was calculated; a higher score indicating a greater mental health. The reliability (Cronbach's alpha) was good for this scale (T0: $\alpha = .87$; T1: $\alpha = .89$).

Psychological distress: The Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983) was used to measure psychological distress. The whole questionnaire consists of 14 items and measures the presence and severity of anxiety or depression symptoms. There were seven items to test for anxiety and seven to test for depression. The responses had to be scored from zero to three and the scores were added to a scale score. Higher scores were indicative of higher psychological distress. The sub scores lie between zero and 21 for each domain. Scores lower than seven meant not at risk, scores between eight and ten meant the people were at risk and eleven to 21 meant that there were symptoms of a psychological disorder. The total distress score lied between zero and 42. The reliability (Cronbach's alpha) was good for the total scale (T0: $\alpha = .87$; T1: $\alpha = .89$), the depression scale (T0: $\alpha = .81$; T1: $\alpha = .84$) and the anxiety scale (T0: $\alpha = .79$; T1: $\alpha = .81$).

Caregiver Strain: The Caregiver Strain Index (CSI) (Robinson, 1983) was used to measure the strain of the caregivers with 13-items in the following domains: employment, financial, physical, social and time. The participant had to answer questions with 'yes' (=1) or 'no' (=0). A higher score was indicating more strain. The total score could range from zero to 13, with a cut off score of seven. The reliability (Cronbach's alpha) was a bit lower, but still in order for this scale (T0: $\alpha = .63$; T1: $\alpha = .69$).

Data analysis

Data management and analysis were performed using the Statistical Program for Social Science (SPSS) 21.

Study population and baseline measurements

First, to get an overview of the population, the demographic variables were analyzed by calculating the descriptive statistics for each condition and the total population. The randomization was tested by doing a Kruskal-Wallis Test for the age and Chi-square Tests for the other demographical variables. A one-way analysis of variance (ANOVA) was used to compare the scores at T0 and to determine if the scores significantly differed between the conditions. Within this step a post hoc analysis was done, to analyze which conditions in detail differ from each other.

The outcomes

To get an overview of the outcomes (well-being, caregiver strain, psychological distress and self-compassion) for the different conditions (the active treatment groups and the waiting list group) the means and standard deviations at T0 and T1 were calculated. To determine the differences between the first measurement and the second measurement and the three conditions one repeated measure ANOVA for time and condition was done. The calculations tested for two-sided significance because both tendencies were possible.

The mediation

To find out if there was a mediation effect the bootstrapping method of Preacher and Hayes (2004) with 1000 bootstrap resamples was used. Figure 1 shows a framework of the mediation model: X is the independent variable (in this case the scores of the waiting list condition (0) were compared to one active treatment condition (1) (both conditions were added to one condition to be able to compare treatment against waiting list)), Y the dependent variable (in this case well-being, psychological distress, anxiety symptoms, depression symptoms or caregiver strain) and M stands for the mediator (in this case self-compassion). The dependent variable consists of the change scores of the two measurements (T1-T0). The relation of X and M is a and b is the relation of M and Y. c is the total effect and stands for the 'normal' relation of X and Y and c' describes the relation of X and Y adjusted for M and therefore the direct effect. The indirect effect is the product of $a * b$ and this is the same as the direct effect subtracted from the total effect ($a * b = c - c'$) (Preacher et al., 2004).

To calculate the mediating effect a plug-in for SPSS created by Andrew Hayes was used (available at <http://www.processmacro.org/download.html>). The output of the SPSS plug-in gave values for the a-path, b-path, c-path, c'-path and for $a * b$. If the 95%- confidence interval (CI) for $a * b$ (the indirect effect) does not include zero, there could have been a mediation. The indirect effect would in that case be significantly different from zero at $p < .05$ (two-sided testing). The effect of the independent variable X on the dependent variable Y could be mediated by M. The mediation can be perfect, if $c' = 0$ or nearly zero or partial if there is still room for other mediators (Mathieu & Taylor, 2006). The whole analysis had to be done five times, because there were five outcome variables and subscales (well-being, general psychological distress, anxiety symptoms, depression symptoms and caregiver strain). For answering the research question it was necessary to look separately at each outcome variable.

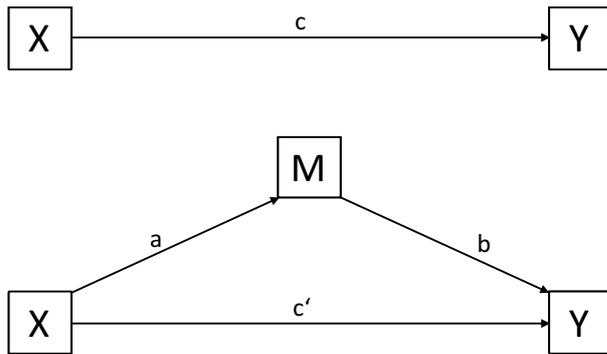


Figure 1. Mediation model

To investigate the relationships between the different variables, Pearson correlations for the differences (T1-T0) between the outcome measures (self-compassion, well-being, psychological distress, anxiety symptoms, depression symptoms and caregiver strain) and the two conditions were calculated.

Results

Study population

The demographics for the 139 participants and the cancer-related information of each condition and the total population are presented in table 1. From the data it is apparent that the majority of the population was female (71.9%), had no children living at home and was 55,4 years old. Most of the participants were from the Netherlands and living with their ill partner. More than half of the people were highly educated and worked more than 20 hours each week. Most of the cancer patients were under treatment and 59,7% had a poor prognosis (probably won't get better anymore). The partners had very different diagnoses. The most frequently occurring cancer were prostate cancers (13,7%) and colon cancers (12,2%).

Table 1 *Participants' personal characteristics and patient cancer-related characteristics (N=139)*

Participants variables	total (n=139)		personal (n=47)		automated (n=39)		waiting (n=53)		p ¹
	n	%	n	%	n	%	n	%	
Gender									
male	39	28,1	14	29,8	10	25,6	15	28,3	.912
female	100	71,9	33	70,2	29	74,4	38	71,7	
country of birth									
Netherlands	133	95,7	42	89,4	38	97,4	53	100	.027*
other	6	4,3	5	10,6	1	2,6	0	0	
children									
no	87	62,6	30	63,8	29	74,4	28	52,8	.106
yes	52	37,4	17	36,2	10	25,6	25	47,2	
relationship									
living together	134	96,4	47	100	37	94,9	50	94,3	.263
living separate	5	3,6	0	0	2	5,1	3	5,7	
education									
low	19	13,7	4	8,5	7	17,9	8	15,1	.239
medium	40	28,8	15	31,9	14	35,9	11	20,8	
high	76	54,7	27	57,4	16	41,0	33	62,3	
other	4	2,9	1	2,1	2	5,1	1	1,9	
work									
no	63	45,3	19	40,4	24	61,5	20	37,7	.050*
>20 hours/week	72	51,8	26	55,3	13	33,3	33	62,3	
other	4	2,9	2	4,3	2	5,1	0	0	
Age (M (SD); [range])	55,4 (10,68); [27; 82]		56,4 (10,40); [29; 82]		57,4 (11,28); [30; 74]		53,1 (10,14); [27; 77]		.066
<u>Cancer-related characteristics of the patient</u>									
kind of diagnosis									
prostate cancer	19	13,7	3	6,4	9	23,1	7	13,2	.077
colon cancer	17	12,2	3	6,4	5	12,8	9	17,0	
lung cancer	14	10,1	4	8,5	5	12,8	5	9,4	
lymphatic cancer	13	9,4	8	17,0	3	7,7	2	3,8	
breast cancer	11	7,9	5	10,6	4	10,3	2	3,8	
leukaemia	9	6,5	5	10,6	1	2,6	3	5,7	
head and neck cancer skin cancer	7	5,0	4	8,5	0	0	3	5,7	
cancer	2	1,4	2	4,3	0	0	0	0	
other	47	33,8	13	27,7	12	30,8	22	41,5	
under treatment									
yes	97	69,8	31	66,0	26	66,7	40	75,5	.517
no	42	30,2	16	34,0	13	33,3	13	24,5	
self-reported phase of disease									
Patient is still in treatment, but good hope of recovery.	34	24,5	13	27,7	10	25,6	11	20,8	.831
Treatment is completed; patient is recovered.	22	15,8	8	7,0	7	17,9	7	13,2	
Patient will (probably) not get better anymore.	83	59,7	26	55,3	22	56,4	35	66,0	
time of diagnosis									
3-6 months ago	31	22,3	10	21,3	7	17,9	14	26,4	.753
6-12 months ago	35	25,2	13	27,7	9	23,1	13	24,5	
1-5 years ago	51	36,7	18	38,3	14	35,9	19	35,8	
5-10 years ago	14	10,1	4	8,5	7	17,9	3	5,7	
more than 10 years ago	8	5,8	2	4,3	2	5,1	4	7,5	

note: 1: Kruskal-Wallis test for age and chi-square test for all other variables; * = significant at $\alpha = .05$

Baseline measurement

It can be concluded that randomization was successful regarding the different partner variables and the cancer-related characteristics of the patient. However, there were significant differences between the conditions for the country of birth and work, but they are considered

to not influence the results. The ANOVA at T0 shows that there is no significant difference between the three conditions (personal, automated and waiting) for the SCS-SF ($F = 2,46, df = 2, p = .089$) measuring self-compassion, the MHC-SF ($F = 1,07, df = 2, p = .348$) measuring well-being, the total HADS scale ($F = ,97, df = 2, p = .382$) measuring psychological distress, the HADS subscale for anxiety ($F = ,98, df = 2, p = .379$) measuring anxiety symptoms and the HADS subscale for depression ($F = 1,23, df = 2, p = .295$) measuring depression symptoms. Only for the scores on the CSI significant differences were found between the three conditions at the baseline measure ($F = 3.89, df = 2, p = .023$). The post-hoc analysis showed that the people receiving personal feedback perceived significant less caregiver strain at baseline than the people who received automated feedback.

Effects on outcome measures

The means and standard deviations of the scores on the different questionnaires are summarized in table 2. It further represents the results of the repeated measures ANOVA. From the analysis no significant main effect of time or condition for any of the outcome variables were found, indicating that self-compassion is not significantly increased science baseline. The measured well-being was not higher as well as the measured psychological distress, the anxiety and depression symptoms and the caregiver strain were not less three months after baseline. In addition, no interaction effects were found, indicating that the conditions do not influence the results of the different conditions.

Table 2 Means and standard deviations of all instruments at baseline (T0) and post intervention (T1) and the values of the within group interaction of condition and time (N=139)

instrument	measure moment	total	personal	automated	waiting	condition*time	
		(n=139)	(n=47)	(n=39)	(n=53)	F(df)	p
		M (SD)	M (SD)	M (SD)	M (SD)		
SCS-SF	T0	4,6 (.91)	4,5 (.99)	4,9 (.89)	4,5 (.81)	,67(2)	.511
	T1	4,6 (.95)	4,6 (.97)	5,0 (1,04)	4,5 (.79)		
MHC-SF	T0	4,2 (.73)	4,2 (.70)	4,3 (.67)	4,1 (.79)	,92 (2)	.402
	T1	4,1 (.86)	4,2 (.72)	4,1 (1,01)	3,9 (.86)		
HADS	T0	12,2 (5,64)	12,6 (5,77)	11,2 (5,21)	12,7 (5,81)	1,78 (2)	.173
	T1	13,1 (6,44)	12,4 (5,70)	11,6 (6,65)	14,7 (6,66)		
HADS-A	T0	7,3 (3,08)	7,7 (3,16)	6,8 (2,93)	7,3 (3,12)	1,63 (2)	.201
	T1	7,6 (3,52)	7,6 (3,08)	6,6 (3,57)	8,2 (3,77)		
HADS-D	T0	5,0 (3,17)	4,9 (3,32)	4,4 (2,95)	5,5 (3,17)	1,62 (2)	.201
	T1	5,5 (3,49)	4,8 (3,03)	5,0 (3,74)	6,5 (3,52)		
CSI	T0	7,1 (2,44)	7,6 (2,65)	6,2 (2,31)	7,2 (2,20)	2,28 (2)	.106
	T1	6,9 (2,70)	6,9 (2,66)	6,3 (2,61)	7,3 (2,76)		

note: SCS-SF= Self-Compassion Scale - Short Form; MHC-SF= Mental Health Continuum - Short Form (well-being); HADS (-A/-D) = Hospital Anxiety and Depression Scale (-Anxiety/ -Depression); CSI= Caregiver Strain Index

Mediation effect of self-compassion

Table 3 indicates that at three months after the baseline individuals were more self-compassionate and the wellbeing of the participants is worse than at the beginning. The psychological distress and the anxiety and depression symptoms are increased and the

caregiver strain is decreased. The Pearson correlations for the change scores (T1-T0) of the participants indicate, that the improvement in self-compassion is highly significantly correlated with an increase in well-being and significant correlated with a decrease of psychological distress, anxiety symptoms and a decrease of caregiver strain. An increase in well-being is highly significantly correlated with a decrease in psychological distress, anxiety symptoms and depression symptoms. An increase of psychological distress is highly significantly correlated with an increase of anxiety and depression symptoms and an increase in caregiver strain. An increase in anxiety symptoms is highly significantly correlated with an increase in depression symptoms and significant correlated with an increase in caregiver strain. An increase in depression symptoms is also highly significantly correlated with an increase in caregiver strain.

Table 3 Means and standard deviations of the change scores of self-compassion, well-being, psychological distress and caregiver strain and the correlations among the study variables (N=139)

variable	M(SD)	1)	2)	3)	4)	5)	6)	7)
1) conditions (0;1)		-						
2) Δ SCS-SF	,01(.78)	.099	-					
3) Δ MHC-SF	-,12 (.66)	.045	.227**	-				
4) Δ HADS	,81 (6,05)	-.153	-.173*	-.386**	-			
5) Δ HADS-A	,31 (3,47)	-.153	-.167*	-.245**	.912**	-		
6) Δ HADS-D	,49 (3,22)	-.123	-.146	-.462**	.898**	.639**	-	
7) Δ CSI	-,17 (2,19)	-.096	-.167*	-.154	.253**	.174*	.288**	-

note: **=significant at $p = .01$, * significant at $p = .05$; SCS-SF= Self-Compassion Scale - Short Form; MHC-SF= Mental Health Continuum - Short Form (well-being); HADS (-A/ -D) = Hospital Anxiety and Depression Scale (-Anxiety/ -Depression); CSI= Caregiver Strain Index; conditions: 1= active treatment condition (the two active treatment conditions are added to one, because no significant difference was found), 0= waiting list

The results of the mediation analyses can be found in table 4. All 95%- confidence intervals (CI) of the indirect effect ($a * b$) include zero at $p < .05$. This shows that no mediation effects were measured. The only significant regression lies between self-compassion and well-being, showing that self-compassion is significantly related to well-being.

Table 4 Results of the mediation analysis for the different outcome variables

dependent variable relation	B	SE	t	p	95% confidence interval (CI)	
					min	max
MHC-SF						
X->M (a-path)	,16	,14	1,16	.25	-,11	,43
M->Y (b-path)	,19**	,07	2,68	<.01	,05	,33
X->Y (c-path)	,06	,12	,52	.60	-,17	,29
X->Y adjusted for M (c'-path)	,03	,11	,27	.79	-,19	,26
a*b = c-c' (indirect effect)	,03	,03			-,01	,11
HADS						
X->M (a-path)	,16	,14	1,16	.25	-,11	,43
M->Y (b-path)	-1,24	,65	-1,90	.06	-2,53	,05
X->Y (c-path)	-1,89	1,05	-1,81	.07	-3,97	,17
X->Y adjusted for M (c'-path)	-1,70	1,04	-1,63	.11	-3,77	,36
a*b = c-c' (indirect effect)	-,03	,03			-,13	<,01
HADS-A						
X->M (a-path)	,16	,14	1,16	.25	-,11	,43
M->Y (b-path)	-,68	,37	-1,83	.07	-1,42	,06
X->Y (c-path)	-1,09	,60	-1,81	.07	-2,27	,10
X->Y adjusted for M (c'-path)	-,98	,59	-1,63	.10	-2,16	,21
a*b = c-c' (indirect effect)	-,11	,12			-,43	,03
HADS-D						
X->M (a-path)	,16	,14	1,16	.25	-,11	,43
M->Y (b-path)	-,56	,35	-1,59	.11	-1,25	,13
X->Y (c-path)	-,81	,56	-1,45	.15	-1,92	,29
X->Y adjusted for M (c'-path)	-,73	,56	-1,29	.19	-1,83	,38
a*b = c-c' (indirect effect)	-,09	,10			-,39	,02
CSI						
X->M (a-path)	,16	,14	1,16	.25	-,11	,43
M->Y (b-path)	-,45	,24	-1,88	.06	-,92	,02
X->Y (c-path)	-,43	,38	-1,13	.26	-1,19	,33
X->Y adjusted for M (c'-path)	-,36	,38	-,95	.35	-1,11	,39
a*b = c-c' (indirect effect)	-,07	,08			-,31	,03

note: **=significant at $p = .01$; MHC-SF= Mental Health Continuum - Short Form (well-being); HADS (-A/-D) = Hospital Anxiety and Depression Scale (-Anxiety/ -Depression); CSI= Caregiver Strain Index; X= active treatment condition (the two active treatment conditions are added to one, because no significant difference was found) vs. waiting list; Y= differences (T1-T0) of MHC-SF, HADS, HADS-A, HADS-D or CSI; M= difference (T1-T0) of SCS-SF

Discussion

The main purpose of this paper was to examine the role of self-compassion in web-based psychological self-help intervention for partners of cancer patients developed by Köhle et al. (2015a). Additional aims were to analyze the other responses to treatment (with regard to well-being, psychological distress and caregiver strain). The rationale for the study was based on the fact that little is known about the role self-compassion plays in cancer carers. Further the study was designed to determine the effects of the intervention on well-being, psychological distress and caregiver strain and to test if self-compassion mediates the relationship between the intervention and the three outcome measures. These three aspects are supposed to play a role in the psychological and physical health status of cancer carers (Moser et al., 2013; Graham et al., 2015; Manne et al., 2015) and could be connected with self-compassion in cancer carers (Barnard et al., 2011; Neff, 2003b).

Findings

The first research question was to test if the intervention would lead to an increase in self-compassion. The results indicate no significant enhancement of self-compassion for the active treatment groups at the second measure moment.

Taken together, these results do not support the hypothesis that self-compassion can be positively influenced by training, although research said that it is possible to enhance self-compassion and its' components (Neff et al., 2013). Different explanations might explain this lack of effect. First, it could be possible that the intervention tried to reach too many goals. As mentioned in the introduction, Neff et al. (2013) developed a program to influence self-compassion in clinical and general populations. They showed the efficacy of the mindful self-compassion (MSC), with a comparable population to the sample used in this analysis (most were females of comparable mean age, but no mentioning of any partner characteristic). This program, compared with the one tested in this study, only focused on self-compassion and mindfulness. This leads to the conclusion, that it is likely, that the participants of the current intervention maybe had too many topics they were working on. The themes of the intervention were varied (self-compassion, psychological flexibility, posttraumatic growth, resilience etc.) and they had to take care of their own health, well-being and life and of the health, well-being and life of their partner. Because the goal is not to develop a completely different intervention, it could be a solution to determine their biggest difficulties at the beginning of the intervention and let them mainly do exercises to work on these topics.

On the other hand, it is important to acknowledge that another intervention (Mosewich et al., 2013), which was shorter also led to increase of self-compassion. But the intervention mentioned dealt with female athletes instead of partners of cancer patients of which more than half have no chance of recovery (59%). Being (nearly) sure to lose a loved one is considered to influence the partner much more deeply and for a longer period than the knowledge of a disease with a chance of remission. Many of the participants see themselves confronted with the possible death of their spouse. They may not be able to pay attention to the impacts of the disease, because they have to reorder their whole live and organize many things. May be those people would better respond to a more intensive face-to-face therapy.

With regards to the notion that higher levels of self-compassion are beneficial for people suffering themselves from cancer (Pinto-Gouveia et al., 2014) and for parents of children suffering from autism (Neff et al., 2015), it is proved that it is good for caregivers and also in a long-term illness context as with autism or cancer. It is necessary to find a way to enhance self-compassion in informal cancer carers and to therefore give them a possibility to recharge their batteries. The current intervention could be a good starting point, but it might be modified to better meet the goals it is considered to.

Regarding the second aim of our study, the extent to which the intervention leads to more well-being and less psychological distress and less caregiver strain was tested. Interestingly no interaction effects were found for condition and time, which suggests that the intervention examined in the present study does not lead to significantly more well-being or less psychological distress or caregiver strain. One possible explanation for no increase of well-being, could be that the participants after following the course were more conscious about and open towards their situation and feelings than before they took part in the course, and therefore judge their well-being differently - in this case more critically. A second explanation could be, looking at the scores on the scale measuring psychological distress (at baseline and three months later), that no participant is at risk for a psychological condition. Therefore, they could score lower on this scale at T1, but primary the scale was developed to measure the severity of an emotional disorder, instead of the development of the psychological distress of someone without an emotional disorder. Finally, many participants perhaps, as already mentioned in the context of self-compassion, were in a difficult situation in which they on the one hand were open and wanted to receive help, but on the other hand were not able to benefit from the help as participants with partners with less severe diagnoses.

The last aim of the analysis was to test if self-compassion mediated any of the effects of the intervention. Regarding the means, it became obvious that only self-compassion (more) and caregiver strain (less) of the participants developed in the right directions. Self-compassion seems to be highly significantly correlated with an increase in well-being as also recently found out by other research (Barnard et al., 2011; Neff, 2003b) and with a decrease in psychological distress and anxiety symptoms as already indicated by MacBeth et al. (2012). From the mediation analysis we conclude that self-compassion did not mediate any of the outcome measures. Generally, these results should be interpreted with caution, because the results of the repeated measures ANOVA were not significant. Because of these tight results, and the significant correlations, it could be possible that a mediation effect would become apparent in in an other study about this intervention in a slightly different population.

Strengths and limitations of this study

An important strength of the study relates to that the data worked with is evidence-based, at the pre- and post-test, only psychometrically validated scales become used to collect the relevant data from the active treatment groups and the control group and a randomized controlled trial design was done to test the intervention. The intervention was manualized and is therefore standardized for those who implement it and it is positively framed. To give as broad and realistic explanations and interpretations of the results the demographic data of the participants and their partners was used. For the analysis the different parts of the questionnaires and the total scales were used to make sure that no effects of small components of the instrument were overlooked. The different instruments were analyzed by

using different methods (repeated measures ANOVA, mediation and correlation analysis) to find out whether the effects were related to each other, to time and between the conditions. To examine the personal feedback condition and to ensure a high quality of the counselling, the feedback was performed by trained master students from the University of Twente, who were under professional supervision.

Looking at the population of this study one problem was that the stage of cancer of many partners was really critical, as mentioned above, or even deteriorated during the program. The low scores on psychological distress, anxiety symptoms and depression symptoms at baseline gave less space for improvement. Another issue that was not addressed in this study was whether the female majority and the Dutch nationality majority among the participations influenced the results in anyway. Despite a possible influence, it made the results difficult to generalize to the general population. One source of weakness in this study which could have affected the results were the small sample sizes of the different conditions, which limited the validity of the study. All information and answers to the questionnaires were self-reported, what might have led to response biases, because of sensitive questions or simply because of becoming conscious about things they have never thought of before.

The participants of *'Hold on for each other'* had the possibility to skip exercises during the intervention, but still participate on the course. The present study did not take care about how reliable and frequently the different exercises were done. A probable explanation for insignificant results may be a low adherence to the self-compassion parts of the course. This should be measured in future studies. First it would be important to verify this hypothesis and if necessary doing research on why they are skipping the exercises. This could be done by analyzing the log-in data and the time they spend doing the different exercises. To make sure that they have really worked on the exercises a time slot could be added that only opens after a certain time was spent on that site. Another module to control for skipping exercises are text fields that need to be filled before being able to go on with the intervention.

Future research

Whilst this study did not confirm all of the hypothesized results, it did provide good reasons and motives for further research on the role of self-compassion and web-based support for carers of cancer suffers. Future research could examine whether an intervention applied to the carer or the cancer patient can bring about change in the other partner. It would be interesting to explore palpable connections between the two partners' general health status and their psychological status, therefore conducting research on the couple, but only giving the intervention to one of them but giving questionnaires to both. Kurtz et al. (1994) found a connection between the stage of the patients' disease and the well-being of the partner. It may

be possible that an intervention positively influencing the partner would also have a positive impact for the patient. This would further enhance the evidence to offer support to partners.

Another interesting research topic while looking at the development of self-compassion and other measurable aspects of human health (as well-being, psychological distress and caregiver strain) could be the associations with the general personality structure of the person in question. Further research projects, with regard to the development of this intervention, should for example consider if there are connections in becoming more self-compassionate and particular personality traits (e.g. measurable with the NEO-Personality Inventory-Revised (NEO-PI-R)). In addition, further studies need to be carried out in order to look for other possible mediators between the intervention and the outcome measures and to determine if there are differences between the results of partners with (nearly) no chance of remission and those of cancer survivors. Furthermore, clinical trial research is needed to estimate if interventions as *"Hold on for each other"* could also be beneficial for other informal carers (children, other relatives).

Conclusion

The results of the present study did not confirm the hypotheses that self-compassion and well-being increase and psychological distress and caregiver strain decrease by following the intervention and that self-compassion mediates the relationship between participation on the intervention and the level of well-being, psychological distress and caregiver strain, but it became obvious that further research is necessary. Modifying the existing intervention is promising with regards to the enhancement of self-compassion and to reach an important step in developing support that fits the participants needs.

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