

# **UNIVERSITY OF TWENTE.**

Faculty of Behavioural, Management & Social Sciences (BMS)

## **Bachelor Thesis Psychology**

The correlation between specific therapeutic behaviours of counsellors in email support and an increase in well-being and selfcompassion after participating in a multi-component positive psychology intervention

> Dinah Pohle Under the supervision of Dr. Marijke Schotanus-Dijkstra & Dr. Erik Taal June 2017

#### Abstract

*Background:* There is growing evidence that therapist behaviours would affect the effectiveness of a treatment. Therefore, the current study content-analysed the specific therapist behaviours of personal counsellors giving email support in a multi-component positive psychology intervention designed as a Randomized Controlled Trial (RCT) by Schotanus-Dijkstra, Drossaert, Pieterse, Walburg and Bohlmeijer (2015). Furthermore, the relationships between the therapist behaviours and the participant's increases in both wellbeing and self-compassion were examined. It was expected to find a mediation effect of an increase in self-compassion on the relation between these behaviours and an increase in wellbeing.

*Methods:* 506 emails of 6 personal counsellors that were in contact with 70 participants were content-analysed and 12 different therapist behaviours were found. Then, these behaviours were correlated to the participants' increases in both well-being and self-compassion and a mediation analysis was conducted.

*Results:* The results showed that (1) no significant correlation was found between the therapist behaviours and an increase in well-being, (2) one significant correlation was found between 'alliance bolstering' and an increase in self-compassion, (3) the correlation between an increase in well-being and self-compassion is strong and significant, and (4) mediation effects of an increase in self-compassion were found for the effects of 'alliance bolstering' and 'reminder email' on an increase in well-being.

*Conclusion:* Therefore, it is to conclude that the majority of the therapist behaviours had no effects on the participants' increases in well-being and self-compassion, but rather on their adherence to the intervention.

*Keywords*: positive psychology – self-compassion – well-being - online support – email support – therapist behaviour.

### Content

1. Int	roduction	4
1.1	Positive psychology	4
1.2	Self-compassion	4
1.3	A multi-component positive psychology intervention	5
1.4	The current study	7
2. Me	ethods	9
2.1	Design	9
2.2	Participants	9
2.3	Intervention	10
2.4	Procedure – Qualitative Analysis	11
2.5	Analysis – Qualitative Data	12
2.6	Measures – Quantitative Analysis	15
2.7	Statistical Analysis – Quantitative Data	15
3. Re	sults	17
3.1	Coding scheme	17
3.2	Well-being	17
3.3	Self-compassion	19
3.4	Well-being and self-compassion	19
3.5	Mediation analysis	19
4. Di	scussion	21
4.1	Most relevant findings	21
4.1	.1 The applicability of the coding scheme	21
4.1	.2 The relation between therapist behaviours and well-being	
4.1	.3 The relation between therapist behaviours and self-compassion	
4.1	.4 The relation between well-being and self-compassion	23
4.1	.5 Self-compassion as a mediator	
4.2	Strengths and limitations	24
4.3	Implications	24
4.4	Conclusion	
5. Re	ferences	

#### 1. Introduction

#### 1.1 Positive psychology

The turn of the millennium in 1999/2000 not only brought a shift in time along, but also a shift in psychology. In the 20<sup>th</sup> century, it was the common modus operandi for psychologists to focus mainly on pathology. Eventually, one of the main triggers was World War II which caused the people to lay emphasis on the act of healing and on repairing certain damage (Csikszentmihalyi, 2000). However, this view of stressing illness seemed not to be capable to do justice to the individual who consists of more than its weaknesses and diseases. In the 21<sup>st</sup> century, Seligman introduced positive psychology and its aim "[...] to catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life" (Csikszentmihalyi, 2000). It was through this introduction he wanted people to remember the two lost missions of psychology, namely to foster high talent and to make life more fulfilling for everyone (Gillham & Seligman, 1999).

Five years after introducing positive psychology, Seligman, Steen, Park and Peterson (2005) published a paper that examined the efficacy of several positive psychology interventions (PPIs) they invented themselves. In total, they tested five interventions with the aim to increase people's happiness. Their results showed that two interventions actually made people happier up to six months after participation: namely one where people had to daily write down three good things that happened to them that day, and another one requesting the participants to first indicate a top five of their strengths which they then had to use in a completely new way, every day. Besides these two interventions other PPIs seem to be effective too. Two meta-analyses showed that PPIs (1) significantly enhance well-being and (2) are effective in treating the symptoms of a depression (Sin & Lyuobomirsky, 2009; Bolier et al., 2013). Thus, PPIs seem to have a small to moderate effect on well-being, happiness and the reduction of depressive symptoms.

#### 1.2 Self-compassion

Although positive psychology especially focuses on the positive side of life, the individual should not automatically blind out the sometimes negative aspects in life. Thus, Neff (2003a) introduced self-compassion as a concept allowing people to interact with these negative events and one's weaknesses, and she explained it as involving alternatives in life like "[...] being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness".

She also defined three underlying components of self-compassion: (1) self-kindness, (2) common humanity and (3) mindfulness. Self-kindness emphasizes the act of extending both kindness toward and understanding of oneself instead of judging and criticizing oneself. Common humanity stresses the importance of acknowledging an experience as part of the bigger human experience. Mindfulness refers to the act of keeping unpleasant feelings and thoughts in balanced awareness instead of over-identifying with them. By internalizing these components and being self-compassionate, Neff (2003b) suggests that negative feelings can be converted into a more positive state of emotion that allows (1) for a better understanding of a specific situation and (2) to adopt actions changing both the environment and oneself in appropriate ways.

In order to find out about the efficacy of self-compassion interventions, Neff and Germer (2012) evaluated the Mindful Self-Compassion (MSC) program. This program is an eight-week intervention aimed at helping people to achieve compassion for themselves. The results indicated a positive effect of the program on self-compassion when compared to a waitlist control group. Additionally, a higher level of life satisfaction and fewer symptoms of depression and stress were reported within the experimental group when compared to the control group. Another study investigated the benefits of self-compassion exercises for individuals that are vulnerable to depression (Shapira & Mongrain, 2010). The exercises had to be completed online within a one-week period. First of all, the participants in the selfcompassion group had to think about a situation during the day that had stressed them out and made them feel upset. Afterwards, they had to write a letter to themselves thinking about what he or she would have said to a friend in the same situation in order to support the friend. The results demonstrated that these participants showed fewer symptoms of depression up to three months following the intervention and that they were happier up to six months compared to the control group. Although the construct is relatively new and the literature about the efficacy of self-compassion is still in its infancy, the few existing studies have shown positive effects on mental health (Smeets, Neff, Alberts & Peters, 2014; Germer & Neff, 2014; Neff & Germer, 2012; Shapira & Mongrain, 2010).

#### 1.3 A multi-component positive psychology intervention

While these studies are mostly attached to single component interventions, less is known about the possible effects of self-compassion training within multi-component interventions. One of these multi-component PPIs is the one designed by Schotanus-Dijkstra, Drossaert, Pieterse, Walburg and Bohlmeijer (2015) which is based on the self-help book *This* 

*is your life* by Bohlmeijer and Hulsbergen, 2013. The experimental group in this intervention received weekly email support in addition to the self-help book and was compared to a waitlist control group. The self-help book covers six different concepts of positive psychology: positive emotion, use of strengths, optimism, self-compassion, resilience and positive relations. It contains exercises at the end of each chapter deepening the acquired theoretical knowledge. One of the exercises in the self-compassion chapter asks the participant to recall situations from the previous week where he or she acted nice and friendly towards either him or herself, or towards others. Then, the participant has to reflect on what these situations evoked inside of him/her or the other person, and what this reveals about the participant's personality. By carrying out this exercise the soothing part of the emotion system is stimulated which leads the individual to experience inner peace and satisfaction (Bohlmeijer & Hulsbergen, 2013). Results of the Randomized Controlled Trial (RCT) showed that the multi-component PPI was effective in increasing well-being and self-compassion up to 12 months, among other things. However, it is not yet known why this multi-component PPI seems to have a positive effect on well-being and self-compassion.

Matten (2016) examined the possibility of the email support increasing the participant's level of well-being within the PPI This is your life as web-based therapy and support are on the rise (Dahlin et al., 2016; Andersson, Cuijpers, Carlbring, Riper & Hedman, 2014; Spek et al., 2007). Martin, Garske and Davis (2000) argue that especially the relationship between a client and a therapist does contribute to the effectiveness of a therapy. According to Watson, Cooper, McArthur and McLeod (2012), this relationship is fostered to a great extent by the therapist's behaviours, such as asking questions and giving suggestions, clarification and direction. Within psychoanalytic therapy these therapist behaviours are, among others 'identifying and analysing resistances and defences', 'working on dreams and fantasies' and 'free association or saying whatever comes to mind'; and opposed to this, within the cognitive-behavioural approach the counsellor is 'warm, genuine and congruent', 'attentive to the client' and 'accepting, respectful and non-judgemental' (Westerhof, Bohlmeijer & van den Berg, Chapter 3 & 5, 2013). While these behaviours are characteristics of face-to-face therapy, little is known about how they are applied in online therapy. Therefore, Paxling, Carlbring, Cuijpers and Andersson (2013) examined the content of therapist e-mails within internet-delivered cognitive behaviour therapy. They found eight different therapist behaviours, namely 'deadline flexibility', 'task reinforcement', 'alliance bolstering', 'task prompting', 'psycho-education', 'self-disclosure', 'self-efficacy shaping',

and 'empathetic utterances'. Matten (2016) included them in her analysis of the emails sent by the personal counsellors within the PPI.

In total, Matten (2016) used 4 levels of analysis: (1) content-related, (2) relationrelated, (3) process-related and (4) form-related. The content-related level emphasized asking questions, reinforcing desired behaviour and reacting in a shallow way. The relation-related level includes behaviour that strengthens the relationship between personal counselor and participant. The process-related level focuses for example on behaviour that keeps the participant on track with the whole process, such as sending reminders. The behaviour of the form-related level consists of the number of words per mail. Matten (2016) aimed to find out about the effects of the therapist behaviours on the intervention's effectiveness. The results indicated that they did not seem to have had any effect on well-being, but did have one on the participant's satisfaction with the email support of the counselor. As Matten (2016) concentrated in her study on the therapist behaviours' effects on well-being and the participant's satisfaction using a small sample only, there is still room left for (1) the analysis of a bigger sample indicating a greater representativeness and (2) further analyses of other constructs measured within the intervention, such as self-compassion.

#### 1.4 The current study

Accordingly, this current study aims to analyse the therapist behaviours within the email support and their possible correlations with the increases in well-being and self-compassion. Therefore the following research questions are constructed:

- 1. To what extent is an already existing coding scheme of therapist behaviours in online therapy applicable to a multi-component positive psychology intervention?
- 2. What is the correlation between content-, relation- and process-related behaviour of a personal counselor in a multi-component positive psychology intervention and an increase in well-being?
- 3. What is the correlation between content-, relation- and process-related behaviour of a personal counselor in a multi-component positive psychology intervention and an increase in self-compassion?
- 4. What is the correlation between an increase in self-compassion and an increase in well-being in a multi-component positive psychology intervention?

5. Does an increase in self-compassion act as a mediator between the content-, relationand process-related behaviour of a personal counselor in a multi-component positive psychology intervention and an increase in well-being?

It is expected that (1) the coding scheme is mostly applicable as Matten (2016) had already used it to analyse a sub-sample of the current study, (2) the replication with a larger sample is similar to findings in the literature indicating that PPIs have positive effects on well-being, (3) an increase in self-compassion is related to therapist behaviours, (4) the increases in both self-compassion and well-being are related to each other and (5) an increase in self-compassion also acts as a mediator between these behaviours and an increase in well-being.

#### 2. Methods

#### 2.1 Design

This current study is mainly designed as a replication of the study of Matten (2016). Thus, the data from the RCT about the PPI *This is your life* by Schotanus-Dijkstra et al. (2015) were used. A qualitative content analysis of emails from the personal counsellors was carried out to identify the therapist behaviours by examining the applicability of an already existing coding scheme. A quantitative analysis was used to examine the relationship between the specific behaviours of the personal counselor, the levels of increased well-being, and the levels of increased self-compassion.

#### 2.2 Participants

The participants of the RCT were recruited by placing advertisements in national newspapers. The advertisement addressed people living in The Netherlands, with a minimum age of 18 years, who were interested in spending an average time of 4 hours per week in the program, with an acceptable internet connection and a valid email address. The exclusion criteria for participating in the study were (1) showing moderate or severe anxiety or depressive symptoms and (2) possessing a flourishing mental health (Schotanus-Dijkstra et al., 2017). In total, 275 people participated in the RCT, of which 137 were allocated to the intervention group. 122 of these 137 participants actually sent at least one email. From these 122 participants, 70 have been randomly selected as the sample of the current study. Their ages ranged from 20 to 67 years with an average of 48.93 years (SD 11.64). The sample consisted of 11 men and 59 women. Most of the participants were higher educated, in paid employment and married. These characteristics are similar to the total sample of 275 participants (Schotanus-Dijkstra et al., 2017). Table 1 summarizes the demographics of the current sample.

Category	Subcategory	Ν	%	
Gender	Male	11	15.7	
	Female	59	84.3	
Age	20-34	10	14.3	
	35-54	32	45.7	
	55-67	28	40	
Nationality	Dutch	65	92.9	
	Other	5	7.1	
Education	Low	5	7.1	
	Intermediate	16	22.9	
	High	49	70	
Marital status	Married	26	37.1	
	Single	25	35.7	
	Separated or Divorced	19	27.1	
Employment status	Paid Employment	42	60	
	Unemployed or Unable To	)		
	Work	19	27.1	
	Retired, Student or			
	Homemaker	9	12.9	

**Table 1.** Demographics of the participants (n=70).

#### 2.3 Intervention

The intervention included (1) the self-help book *This is your life* written by Bohlmeijer and Hulsbergen (2013) and (2) personal email support. The book emphasizes two psychological well-being theories, one by Seligman (as cited in Conway, 2012) and one by Ryff (1998). In total, the book consists of 8 chapters: positive emotions, strengths, flow, optimism, self-compassion, resilience, positive relations and spirituality. Each chapter consists of a theoretical part and a practical one. The theoretical part forms the introduction of each chapter covering information about the specific theory. The aim of the practical part is to deepen the learned material by practicing positive psychology exercises. An example exercise of the chapter positive emotions is the positive events diary: the participant was asked to keep a daily diary about positive things that have happened to him or her during the course of a day. As a consequence, he or she would concentrate more on positive events and therefore gain a positive view of things in life, possibly leading to greater happiness. The participants of the study had to complete the 8 chapters of the book within 12 weeks. They had been instructed to read one chapter per week in combination with completing the exercises attached to each chapter.

Besides the self-help book, the intervention also consisted of email support by personal counselors. These counselors were master-students of psychology at the University of Twente. Before the intervention took place, they participated in a class of email-counselling and in a workshop wherein they were trained on how to carry out the email support. Additionally, they received a weekly supervision by a clinical psychologist and two researchers. The personal counselors' task was basically to stimulate the participants to complete the exercises and to keep them motivated on participating in the intervention. The email conversation started with an introduction email offering the participant the chance to introduce himself or herself. Then, the counselor answered by paraphrasing the information and by motivating the participant to start with the first chapter. After this introduction, the participant was asked to weekly write an email noting down his/her experiences after completing a chapter. The counselor usually answered on a specific day every week depending on what they agreed on in the introduction mail.

#### 2.4 Procedure – Qualitative Analysis

The qualitative content analysis used a deductive (top-down) method by adapting Matten's (2016) modification of Paxling et al.'s (2013) coding scheme. In total, Matten (2016) had coded 40 email conversations of the RCT study. The actual coding of an email conversation started with the first reaction of the personal counsellor on the participant's experiences with the first chapter. Each email within this conversation was coded chronologically, sentence by sentence. In some cases it was possible to code only a few words or half a sentence, and in other cases more than one sentence had been marked as one code. These marked passages were defined as segments. Segments could receive several codes, but a code could only be used once in each segment. Additionally, two sentences next to each other could both be marked with the same code, and not just be marked as one segment when referring to a completely different topic as the sentence before or thereafter.

Firstly, three new researchers started coding 3 email conversations independently from each other using Matten's coding scheme consisting of 12 codes. An email conversation was defined as the total contact between a participant and a personal counselor throughout the whole intervention and not just one email that was sent within the conversation. Secondly, the three researchers compared and discussed their results, in order to gain a general understanding of the codes and to get to know in which way the established coding scheme needed to be adjusted. Thus, the codes' definitions were modified in order for the codes to be applicable to the content of the emails sent by the personal counsellors. Thirdly, the researchers again coded 5 email conversations independently from each other and discussed their results in order to modify the definitions of the codes on an even more detailed level. Fourthly, the researchers coded another 5 email conversations independently from each other. The final coding scheme is illustrated in Table 2. In the end, all three researchers coded 20 emails on their own using the jointly agreed coding scheme.

#### 2.5 Analysis – Qualitative Data

The coding of the email conversations was conducted using the qualitative data analysis program Atlas.ti. In the beginning, the 70 email conversations were transferred to the program and the coding scheme of Table 2 was set-up in Atlas.ti. Then, the researchers coded one email after the other. In the end, the program displayed the frequencies of the used codes per email conversation and the researchers manually assigned the frequencies per code and email conversation to the data set of Schotanus-Dijkstra et al. (2015) which contains all the email conversations with the participant bound demographics and his or her outcomes on the specific questionnaires.

Additionally, it was of interest to calculate the inter-rater reliability, Cohen's kappa, of the three researchers. Therefore the researchers coded independently 10 out of the 70 email conversations by indicating per email whether or not each of the codes was used. A 0 indicated that the code was not used at all in one email and a 1 indicated that a code was used for at least one time in one email. Cohen's kappa was calculated by comparing researcher 1 and researcher 2 throughout 5 email conversations and by comparing researcher 1 and researcher 3 throughout the other 5 email conversations. The results showed the reliability between 2 researchers concerning 1 code. According to Cohen (1960) a value of <0 indicates no agreement, values between 0.01 and 0.20 show none to small agreement, a value of 0.21-0.40 is seen as fair, values between 0.41 and 0.60 indicate a moderate agreement, a value of 0.61–0.80 is substantial, and a value between 0.81 and 1.00 is an almost perfect agreement (as cited in McHugh, 2012). In the current study, a small to fair agreement is shown by the codes 'task prompting' ( $\kappa$ =0.16) and 'alliance bolstering' ( $\kappa$ =0.28). Moderate agreement is displayed by the codes 'deadline flexibility', 'clarifying framework + giving information', 'emphasize patient responsibility' and 'psycho-education' (resp.  $\kappa=0.42$ ,  $\kappa=0.45$ ,  $\kappa=0.49$ ,  $\kappa$ =0.56). Substantial to almost perfect agreement is shown by 'empathetic utterance' ( $\kappa$ =0.63),

'summarizing' ( $\kappa$ =0.73), 'task reinforcement' ( $\kappa$ =0.78), 'insightful questions' ( $\kappa$ =0.81), 'self-disclosure' ( $\kappa$ =0.85) and 'reminder-email' ( $\kappa$ =1).

Table 2. Coding scheme of the therapist behaviours.

Category	Code	Definition	Example
Content	Task reinforcement	Behaviours aimed at reinforcing assignments already completed by the participant	"You've described your worry thoughts in a good way"
	Insightful questions	Asking the participant questions that will stimulate his/her thinking and new insights	"You said x. What does this mean to you?"
	Psycho-education	Information about psychological processes, goals of the treatment and explanation of purpose and meaning of the work involved in the treatment	"Worrying is part of a generalized anxiety disorder"
	Task prompting	Behaviours prompting the participant to work with a given homework assignment and explicit interest in future results of the participant's progress	"I'm looking forward to hearing from you next week"
Relation	Empathetic utterance	Writings that attempt to convey understanding and empathy for the participant's suffering,	"I understand that you"
		frustration or general life situation.	"I can see why you"
	Alliance bolstering	Non-treatment specific writings that pertain to interest in the participant's life situation and care for his or her situation	"How nice that you've had a good week"
	Emphasize patient responsibility	Expressing that the patient is responsible for (among other things) his/her own decisions.	"You yourself have to determine what is best."
	Summarizing	Affirming by summarizing and repeating what the patient wrote.	"You write that"
	Self-disclosure	Mentioning the therapists own experience and using personal examples from one's own life.	"I've also had trouble sleeping"
Process	Deadline flexibility	Behaviours that pertain to lenience from the therapist concerning deadlines for homework submissions and allowance of extra time to work with a given module.	"You can wait with this week's task and continue with the one you're working on"
	Clarifying framework + giving information	Clarifying, emphasizing or reminding the patient about the internet treatment framework, and giving practical information about a module/chapter	"Module 6 will cover"
	Reminder email	Reminding the participant to complete the exercises, or reminding to send an email	/

#### 2.6 Measures – Quantitative Analysis

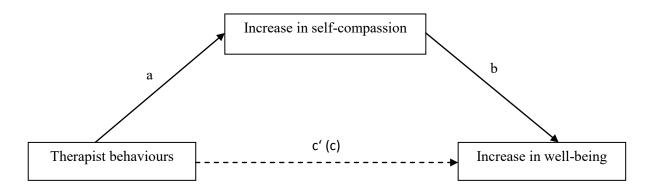
Besides the qualitative part of this study, the data already gained by Schotanus-Dijkstra et al. (2015) offered room for quantitative analysis. One part of these data formed the results of the 12 item Self-Compassion Scale – Short Form (SCS-SF) invented by Raes, Pommier, Neff and Van Gucht (2010). All items are answered by a 7-point answer scale ranging from 1 (rarely or never) to 7 (almost always). The total score on the scale is indicated by a total sum that can range from 12 to 84. Literature assures that the shortened form of the SCS shows "adequate internal consistency (Cronbach's alpha  $\geq$  0.86 in all samples) and a near-perfect correlation with the long form SCS ( $r \geq 0.97$  all samples)" (Raes et al., 2010).

Furthermore, mental well-being was assessed with the Mental Health Continuum -Short Form (MHC-SF). This continuum measures three different kinds of well-being; emotional, psychological and social well-being; by using 14 items (Keyes et al., 20008). Items 1 to 3 measure the degree of emotional well-being which is defined by satisfaction with life and positive affect. Items 4 to 8 measure the participant's level of social well-being that is defined by social acceptance, social coherence, social actualization, social integration and social contribution. Items 9 to 14 measure the degree of psychological well-being which is defined by personal growth, purpose in life, autonomy, positive relations with others, selfacceptance and environmental mastery. The participants rated the answers on a 6-point scale ranging from 0 (never) to 5 (almost always) ( $\alpha$ = 0.88). The total score on the scale was indicated by calculating a mean score for the total scale and the three sub-scales. According to Lamers, Westerhof, Bohlmeijer, ten Klooster and Keyes (2011) this short form of the continuum scores high on internal reliability and moderate on test-retest reliability.

#### 2.7 Statistical Analysis – Quantitative Data

The statistical analyses have been carried out using the Statistical Package for the Social Sciences (SPSS), version 24. Firstly, it was examined to what extent the participant's level of self-compassion had changed over time. Therefore the difference scores between the baseline scores and the post-tests were calculated (t1-t0). Secondly, a paired sample t-test was conducted in order to compare the participant's scores on both the MHC-SF and the SCS-SF at t0 to their scores at t1. Thirdly, a Spearman's rho correlation was performed to determine the correlations between the therapist behaviours themselves, and these behaviours and the difference scores of both the MHC-SF and the SCS-SF. The therapist behaviours were always measured in frequencies. Fourthly, a mediation analysis was conducted. This was done following the procedure of Hayes (2012) using the PROCESS macro. The difference score of

the MHC-SF was entered in the regression analysis as the dependent variable. The frequencies of the therapist behaviours were indicated as the independent variable and the difference score of the SCS-SF was entered as the mediator. Figure 1 illustrates this mediation model. Path a represents the relationship between the therapist behaviours and an increase in self-compassion. Path b forms the relation between the increase in self-compassion and the increase in well-being. Path c represents the relationship between therapist behaviours and an increase in increase in well-being. Path c' indicates the direct effect between the two controlling for the mediator, the increase in self-compassion. If a model shows any mediation effect, it is displayed by the indirect effect. The indirect effect represents the amount of mediation and whenever its confidence interval is different from 0, it indicates a mediation effect.



*Figure 1.* Mediation model with therapeutic behaviours as the independent variable, the increase in well-being as the dependent variable and the increase in self-compassion as the mediator.

#### 3. Results

#### 3.1 Coding scheme

In total, 6 personal counsellors conducted 70 email conversations as the sample consists of 70 participants. These counsellors sent 506 emails in total. On average 7.23 (SD 2.73) emails were sent per email conversation with on average 245.66 (SD 81.88) words per email. In total, the 12 codes were in total 4875 times allocated to the therapist behaviours and were efficient in identifying the behaviours of the personal counsellors. Table 3 shows that the top three of the most frequently used codes were 'summarizing' (n=1171), 'task reinforcement' (n=791) and 'task prompting' (n=633). Opposed to this, the code 'self-disclosure' was only coded 18 times throughout the 421 emails. Furthermore, Table 3 illustrates the average use of the therapist behaviours per email conversation and their ranges. For example, the code 'summarizing' was used 16.77 (SD 8.37) times on average with a minimum use of 0 times and a maximum use of 37 times throughout one email conversation. In contrast, the code used at least was 'self-disclosure' which on average was 0.26 (SD 0.58) times used with a range of 0 to 3 times per email conversation.

#### 3.2 Well-being

Using a paired sample t-test, the participants' mental well-being scores at baseline were compared to their scores at post-test. Well-being ratings were significantly higher after completing the intervention (M=2.97) than before (M=2.5) as indicated by a significant t-test, t(69)=6.77, p <.05. Furthermore, Table 3 shows the Spearman's rho correlations between the therapist behaviours and the difference score on mental well-being. No significant correlation was found between these behaviours and an increase in well-being, leading to the assumption that the increase in the level of well-being might be more related to other factors such as the content of the self-help book rather than therapist behaviours in the email support.

Category	Code	Total use N (%)	Average use		Range of average use		$\Delta$ Well-being		$\Delta$ Self-compassion	
			М	SD	Minimum	Maximum	(MHC-SF) Spearman's rho	p	(SCS-SF) Spearman's rho	р
Content	Task reinforcement	791 (16.23)	11.3	6.67	0	33	.08	.493	.20	.100
	Insightful questions	394 (8.08)	5.6	3.5	0	18	10	.396	.03	.831
	Psycho-education	191 (3.92)	2.73	2.98	0	13	.05	.710	.07	.588
	Task prompting	633 (12.98)	9.03	4.44	0	19	05	.708	.04	.763
Relation	Empathetic utterance	339 (6.95)	4.86	3.45	0	16	12	.311	.06	.622
	Alliance bolstering	580 (11.9)	8.27	3.9	0	19	.11	.349	.35	.003
	Emphasize patient responsibility	163 (3.34)	2.33	2.13	0	11	04	.746	.13	.283
	Summarizing	1171 (24.02)	16.77	8.37	0	37	.004	.975	.13	.302
Process	Self-disclosure Deadline flexibility	18 (0.37) 37 (0.76)	0.26 0.54	0.58 0.76	0 0	3 3	.10 .02	.418 .841	.12 .10	.345 .411
	Clarifying framework + giving information	473 (9.7)	6.44	3.67	0	19	13	.291	.05	.684
	Reminder email	66 (1.35)	0.94	1.33	0	6	19	.123	21	.089

**Table 3.** Total use of therapist behaviours throughout all email conversations (n=70), average use of therapist behaviours per email conversation and their range, and the correlations between these behaviours on well-being (t1-t0) and self-compassion (t1-t0).

#### 3.3 Self-compassion

The paired sample t-test on self-compassion compared the participants' scores at baseline to their scores at post-test. Self-compassion ratings were significantly higher after completing the intervention (M=51.06) than before (M=44.9) as indicated by a significant t-test, t(69)=5.05, p<.001. Furthermore, Table 3 shows the Spearman's rho correlations between the therapist behaviours and the difference score on self-compassion. Only one significant correlation was found between these behaviours and an increase in self-compassion, between 'alliance bolstering' and an increase in self-compassion. This indicates that the increase in the participant's level of self-compassion might also be more related to other factors, as for example the content of the self-help book, rather than to the therapist behaviours in the email support.

#### 3.4 Well-being and self-compassion

A Spearman's rho correlation was calculated between the increase in well-being and the one in self-compassion. The results indicate a strong and significant correlation between the two with a coefficient of r=.66 and a p-value of p<.00. This implies that the greater the increase in self-compassion is throughout the intervention, the greater is the increase of well-being as well.

#### 3.5 Mediation analysis

Table 5 summarizes the results of the mediation analyses with the therapist behaviours as the independent variable, the increase in well-being as the dependent variable and the increase in self-compassion as the mediator. The results show that for most of the therapist behaviours there was no mediation found for self-compassion, except for 'alliance bolstering' and 'reminder email'. The indirect effects indicate that the confidence intervals of these two behaviours were different from 0 (resp. 95% CI: 0.01, 0.07; -0.14, -0.01) and therefore showed mediation effects. These significant results indicate that the effect of 'alliance bolstering' and 'reminder email' on the increase in well-being was mediated by the increase in self-compassion.

Independent variables	a b		<b>Total effect</b>	Direct effect	Indirect effect a*b	
			С	с'	(95% CI)	
Task reinforcement	0.25**	0.04*	0.01**	-0.00**	0.01 (01, .03)	
Insightful questions	-0.13**	0.04*	-0.02**	-0.02**	-0.01 (03, .02)	
<b>Psycho-education</b>	0.44**	0.04*	0.01**	-0.01**	0.02 (03, .05)	
Task prompting	-0.05**	0.04*	-0.00**	-0.00**	-0.00 (02, .02)	
Empathetic utterance	0.13**	0.04*	-0.01**	-0.02**	0.01 (02, .03)	
Alliance bolstering	0.87*	0.04*	0.02**	-0.02**	0.04 (.01, .07)	
Emphasize patient	0.6**	0.04*	-0.01**	-0.04**	0.02 (03, .12)	
responsibility						
Summarizing	0.07**	0.04*	-0.00**	-0.00**	0.00 (01, .02)	
Self-disclosure	1.16**	0.04*	0.07**	0.02**	0.05 (08, .23)	
Deadline flexibility	1.26**	0.04*	0.03**	-0.02**	0.05 (06, .18)	
Clarifying framework	0.12**	0.04*	-0.02**	-0.03**	0.01 (02, .023)	
+ giving information						
Reminder email	-1.8*	0.04*	-0.07**	0.00**	-0.07 (15,01)	

Table 5. Mediation analysis of the therapist behaviours on the increase in well-being (t1-t0), mediated by the increase in self-compassion (t1-t0).

p≤0.05 \*\*p>0.05

#### 4. Discussion

In this study, therapist behaviours in email support alongside a multi-component PPI were content-analysed and related to the participant's increase of both well-being and self-compassion. The results showed that (1) the adapted coding scheme was applicable to the therapist behaviours of the personal counsellors of the PPI, (2) there was no significant correlation found between the therapist behaviours and an increase in well-being, (3) there was one significant correlation between the therapist behaviours and an increase in self-compassion, (4) the correlation between an increase in well-being and self-compassion is strong and significant, and (5) mediation effects of an increase in self-compassion were found for the effects of two therapist behaviours on an increase in well-being.

#### 4.1 Most relevant findings

#### 4.1.1 The applicability of the coding scheme

The content analysis of the email conversations showed that the coding scheme of Matten (2016) was applicable to the therapist behaviours of the personal counsellors. While small modifications of some of the definitions were made and irrelevant codes to the current study got deleted from the scheme, the overall framework was efficient for the analysis. Other studies which examined the applicability of the coding scheme by Paxling et al. (2013), building the basis for Matten's (2016) scheme, found it relevant for their study (Schneider, Hadjistavropoulos & Faller, 2016). Still, Schneider, Hadjistavropoulos and Faller (2016), for example, had to add three new categories to the scheme of Paxling et al. (2013) as they found three new behaviours that would not fit into the scheme. This might be due to the slight difference in samples. Schneider, Hadjistavropoulos and Faller (2016) content-analysed the emails of personal counsellors within an internet-based cognitive behaviour therapy (iCBT) for depressive symptoms. Opposed to this, Paxling et al. (2013) analysed therapist behaviours within an iCBT for generalized anxiety disorder among males only. When comparing these samples to the one of the current study, it is to notice that exactly these characteristics (showing moderate or severe anxiety or depressive symptoms) were criteria that led to an exclusion from the RCT of Schotanus-Dijkstra et al. (2015). Despite these differences of the samples, the current study was able to make use of Matten's (2016) coding scheme that was built on the findings of Paxling et al. (2013).

#### 4.1.2 The relation between therapist behaviours and well-being

The results indicated that there was no significant correlation between the therapist behaviours and an increase in well-being. This finding is similar to the ones of Matten (2016) who analysed this relationship pattern within a smaller sample of the current study. Thus, it is to conclude that her results are still applicable to a bigger sample. When trying to compare these results to other research about the relation between therapist behaviours and an increase in well-being, research is hardly to be found. Fava and Ruini (2003) explain this fact by the former focus on psychological dysfunction by the absence of well-being rather than stressing its presence. For this reason, literature only reveals the more general effects of therapist behaviours on the outcome of certain intervention. For example, Holländare et al. (2016) and Paxling et al. (2013) showed a relation between therapist behaviours and the outcome of a treatment. While the former examined the therapist behaviours of counsellors within an iCBT among participants with major depression, the latter analysed therapist behaviours of counsellors within an iCBT for participants with a generalized anxiety disorder. Their results indicated that the therapist behaviours were related to adherence and a favourable outcome. One possible explanation for the different results compared to the current study might lie in different approaches used within the given email support. While, for example, Holländare et al. (2013) instructed their personal counsellors to give constructive feedback on the tasks, Schotanus-Dijkstra et al. (2015) assigned their personal counsellors to motivate the participants to complete the exercises and the intervention. Thus, there exists a main difference in the purpose of the email support during an intervention. When comparing the results of these studies, it is to suggest that email support which is directed at giving constructive and content-based feedback might be more effective on the outcome than motivating email support. Still, the results of Schotanus-Dijkstra et al. (2015) showed that the PPI This is your life was able to increase the experiment group's level of well-being throughout the intervention compared to the control group. As this outcome was not due to the specific behaviours of the personal counsellor, it might be explained by other factors such as the self-help book.

#### 4.1.3 The relation between therapist behaviours and self-compassion

Similar to the findings of well-being, there were almost no significant correlations found between the therapist behaviours and an increase in self-compassion. However, one of these behaviours, namely 'alliance bolstering', showed a significant correlation. This indicates that the more a personal counsellor was interested in the participant's life situation and cared for his or her situation, the more the participant's level of self-compassion increased throughout the intervention. As sufficient research about the relation between therapist behaviours and self-compassion is missing, this result cannot adequately be compared to other studies. Nevertheless, it is to compare in a more general sense as Martin, Garske and Davis (2000) did, who argued that the therapist-client relationship does contribute to an intervention's outcome as 'alliance bolstering' strengthens this relationship. Furthermore, it is noticeable that just like the results of well-being, there are further non-significant correlations between the behaviours and an increase of self-compassion. This also differs from the comparable studies and results of Holländare et al. (2013) and Paxling et al. (2013) as they found a correlation between the behaviours and the outcome in their interventions. Again, the different types of email support might explain the different results. Additionally, it is important to notice that research about self-compassion is still in its infancy, so little is known about the underlying processes of the construct that could explain for its increase.

#### 4.1.4 The relation between well-being and self-compassion

The results showed that the relation between well-being and self-compassion was significant. This is similar to the results of Baer, Lykins and Peters (2011) who conducted a study that examined the relations between self-compassion, meditation experience, self-reported mindfulness and well-being among a sample of 152 participants. Half of the sample has been experienced meditators, the other half has been non-meditators. Their results indicate that self-compassion was a strong predictor of well-being. Further research supports this stating that increases in self-compassion are associated with an increased psychological well-being (Van Dam, Sheppard, Forsyth & Earleywine, 2011; Neff, Kirkpatrick & Rude, 2007).

#### 4.1.5 Self-compassion as a mediator

The mediation analyses indicated that self-compassion did not act as a mediator between most of the therapist behaviours and an increase in the participant's level of wellbeing. However, mediation effects of an increase in self-compassion were found for 'alliance bolstering' and 'reminder email'. These mediation effects explain that once a personal counsellor makes more use of, for example, 'alliance bolstering', he or she stimulates the participant's level of self-compassion leading to an increase in well-being. Similarly, selfcompassion acts as a mediator in the study of Kuyken et al. (2010) in which the mechanisms of mindfulness-based cognitive therapy (MBCT) were examined. They found that increases in self-compassion mediated the effectiveness of MBCT on depressive symptoms. When comparing the two findings, it is important to notice the different contents of the interventions. While MBCT concentrates on mindfulness, *This is your life* laid emphasis on different aspects of positive psychology. Furthermore, as mindfulness is one of the three components of self-compassion it was to be expected to identify a mediation effect like Kuyken et al. (2010) did. In contrast, the current study focused on the email support part where self-compassion was not directly addressed opposed to the self-help book. Thus, this might explain for self-compassion not acting as a mediator between the majority of the personal counsellor's specific behaviour and an increase in well-being.

#### 4.2 Strengths and limitations

A strength of the current study lies within the possibility of comparing qualitatively gained data with quantitative ones indicating a greater depth within the findings. Another advantage is represented by its relevance to today's topics as it examines the (1) effects of email support as online medium and (2) builds on prior research about the effectiveness of a multi-component positive psychology intervention with email support (Matten, 2016; Schotanus-Dijkstra et al., 2015). Additionally, it was possible to replicate the study of Matten (2016) in a larger sample giving the findings an even more representative status.

However, one limitation of the current study lies within the wide varying inter-rater reliability that ranges from small to almost perfect which indicates to some extent a rather subjective way of coding the email conversations. This means that the three researchers did not always agree in their coding approach. Thus, it might be possible that one of them declared a therapist behaviour to a specific code while another researcher coded it as a completely different behaviour. However, most of the codes display a rather moderate to almost perfect reliability. Thus, the coding of the three researchers seems in general reliable. In conclusion, the strengths of the study outweigh its short-comings. Still, a wide varying inter-rater reliability is not to be underestimated and should therefore be considered in future research.

#### 4.3 Implications

The results of the qualitative data analysis indicate that the coding scheme based on Paxling et al. (2013) is applicable to different samples and therefore could be used for further research analysing the different therapist behaviours of personal counsellors within online therapy. Furthermore, as this study found that the therapist behaviours show non-significant correlations with an increase in well-being and self-compassion, further research should examine why these increases still occurred throughout the PPI *This is your life*.

#### 4.4 Conclusion

This current study indicated that most of the therapist behaviours within the multicomponent PPI This is your life mostly did not have any effects on the participant's level of well-being and self-compassion. Instead, the email support was especially important for motivating the participants to keep on completing the intervention. Furthermore, selfcompassion did not act as a mediator between most of the behaviours and increase in wellbeing, except for two of them: 'alliance bolstering' and 'reminder email'. This means that the effect of, for example, the personal counsellor's interest in the participant's life situation on an increase in well-being is explained by an increase in self-compassion. While the results of this study state that there were both significant and non-significant correlations, it is not known why these correlations between therapist behaviours and an increase in well-being and self-compassion occurred. Still, it is important to find out about their main causes as they contribute to the effectiveness and the success of PPIs like This is your life. Therefore, the results of this study can be used as a solid basis for further analyses about the actual causes of these correlations. As it might be difficult to find these reasons only in quantitative data, it would be helpful to interview the participants finding out about how they experienced the email support in detail. Nevertheless, as the RCT has already ended this could only be realised by setting up a replication study containing interviews after the completion. Thus, another starting point of a further analysis might be offered by the self-help book. For example, it is possible to content-analyze the emails of the participants examining which chapters and exercises of the book in specific influenced their well-being.

#### 5. References

- Andersson, G., Cuijpers, P., Carlbring, P., Riper, H. & Hedman, E. (2014). Guided Internetbased vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: a systematic review and meta-analysis. *World Psychiatry*, *13(3)*, 288-95.
  DOI: 10.1002/wps.20151
- Baer, R.A., Lykins, E.L.B. & Peters, J.R. (2012). Mindfulness and self-compassion as predictors of psychological wellbeing in long-term meditators and matched nonmeditators. *The Journal of Positive Psychology 2012*, 1–9. http://dx.doi.org/10.1080/17439760.2012.674548
- Bohlmeijer, E. & Hulsbergen, M. (2013). *Dit is jouw leven ervaar de effecten van de positieve psychologie*. Amsterdam: Boom.
- Bolier, L., Haverman, M., Westerhof, G.J., Riper, H., Smit, F. & Bohlmeijer, E. (2013).
  Positive psychology interventions: a meta-analysis of randomized controlled studies. *BMC Public Health*, *13(119)*. DOI:10.1186/1471-2458-13-119.
- Csikszentmihalyi, M. (Ed.). (2000). Flow and the Foundations of Positive Psychology The Collected Works of Mihaly Csikszentmihalyi. Dordrecht, NL: Springer.
- Conway, R. (2012) Flourish: a new understanding of happiness and wellbeing and how to achieve them, by Martin E.P. Seligman. *The Journal of Positive Psychology*, 7(2), 159-161. DOI: 10.1080/17439760.2011.614831
- Dahlin, M., Andersson, G., Magnusson, K., Johansson, T., Sjögren, J., Håkansson, A., Pettersson, M., Kadowaki, Å.. Cuijpers, P. & Carlbring, P. (2016). Internet-delivered acceptance-based behaviour therapy for generalized anxiety disorder: A randomized controlled trial. *Behaviour Research and Therapy* 77, 86-95.
- Fava,G.A. & Ruini, C. Development and characteristics of a well-being enhancing psychotherapeutic strategy: well-being therapy. *Journal of Behavior Therapy and Experimental Psychiatry 34*, 45–63. DOI:10.1016/S0005-7916(03)00019-3
- Germer, C.K. & Neff, K.D. (2014). Cultivating Self-Compassion in Trauma Survivors [PDF file]. Retrieved from https://chrisgermer.com/wpcontent/uploads/2017/02/Transforming-Trauma.pdf

- Gillham, J.E. & Seligman, M.E.P. (1999). Footsteps on the road to a positive psychology. *Behaviour Research and Therapy*, *37*, 163-173.
- Hayes, A. F. (2012). PROCESS: A versatile computational tool for observed variable mediation, moderation, and conditional process modelling. Retrieved from http://www.afhayes.com/public/process2012.pdf
- Holländare, F., Gustafsson, S.A., Berglind, M., Grape, F., Carlbring, P., Andersson, G.,
  Hadjistavropoulos, H. & Tillfors, M. (2016). Therapist behaviours in internet-based
  cognitive behaviour therapy (ICBT) for depressive symptoms. *Internet Interventions* 3, 1-7. https://doi.org/10.1016/j.invent.2015.11.002
- Keyes, C.L.M., Wissing, M., Potgieter, J.P., Temane, M., Kruger, A. & van Rooy, S. (2008).
  Evaluation of the Mental Health Continuum–Short Form (MHC–SF) in Setswana-Speaking South Africans. *Clinical Psychology and Psychotherapy 15*, 181–192.
  DOI:10.1002/cpp.572
- Kuyken, W., Watkins, E., Holden, E., White, K., Taylor, R.S., Byford, S., Evans, A., Radford, S., Teasdale, J.D. & Dalgleish, T. (2010). How does mindfulness-based cognitive therapy work? *Behaviour Research and Therapy 48*, 1105-1112.
- Lamers, S.M.A., Westerhof, G.J., Bohlmeijer, E.T., ten Klooster, P.M. & Keyes, C.L.M. (2011). Evaluating the Psychometric Properties of the Mental Health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology, Vol. 67(1)*, 99-110. DOI: 10.1002/jclp.20741
- Martin, D.J., Garske, J.P. & Davis, M.K. (2000). Relation of the Therapeutic Alliance With Outcome and Other Variables: A Meta-Analytic Review. *Journal of Consulting and Clinical Psychology*, 68(3), 438-450. DOI: IO.I037//0022-006X.68.3.438
- Matten, M. (2016). Wat kenmerkt een kwalitatief goede email-begeleiding? Een onderzoek naar de specifieke gedragingen van begeleiders binnen de zelfhulpcursus 'Dit is jouw leven'. (unpublished Master Thesis). University of Twente, Enschede, The Netherlands.
- McHugh, M. L. (2012). Interrater reliability: the kappa statistic. *Biochemia Medica*, 22(3), 276–282.

- Neff, K. (2003a). Self-Compassion: An Alternative Conceptualization of a Healthy Attitude Toward Oneself. *Self and Identity, 2,* 85-101. DOI: 10.1080/15298860390129863
- Neff, K. (2003b). The Development and Validation of a Scale to Measure Self-Compassion. Self and Identity, 2, 223-250. DOI:10.1080/15298860390209035
- Neff, K.D. & Germer, C.K. (2012). A Pilot Study and Randomized Controlled Trial of the Mindful Self-Compassion Program. *Journal of Clinical Psychology*, 69(1), 28-44. DOI: 10.1002/jclp.21923
- Neff, K.D., Kirkpatrick, K.L. & Rude, S.S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality*, 41, 139–154. DOI:10.1016/j.jrp.2006.03.004
- Raes, F., Pommier, E., Neff, K.D. & Van Gucht, D. (2011). Construction and Factorial Validation of a Short Form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy*, 18, 250–255. DOI: 10.1002/cpp.702
- Ryff, C.D. & Singer, B. (1998). The Contours of Positive Human Health. *Psychological Inquiry*, 9(1), 1-28. DOI: 10.1207/s15327965pli0901\_1
- Schneider, L.H., Hadjistavropoulos, H.D. & Faller, N.Y. (2016). Internet-delivered Cognitive Behaviour Therapy for Depressive Symptoms: An Exploratory Examination of Therapist Behaviours and their Relationship to Outcome and Therapeutic Alliance. *Behavioural and Cognitive Psychotherapy*, 44, 625–639. DOI:10.1017/S1352465816000254
- Schotanus-Dijkstra, M., Drossaert, C.H.C., Pieterse, M.E., Walburg, J.A. & Bohlmeijer, E.T. (2015). Efficacy of a Multicomponent Positive Psychology Self-Help Intervention:
  Study Protocol of a Randomized Controlled Trial. *JMIR Research Protocols, 4(3)*. DOI:10.2196/resprot.4162
- Schotanus-Dijkstra, M., Drossaert, C.H.C., Pieterse, M.E., Boon, B., Walburg, J.A. & Bohlmeijer, E.T. (2017). An early intervention to promote well-being and flourishing and reduce anxiety and depression: A randomized controlled trial. *Internet Interventions 9*, 15-24. http://dx.doi.org/10.1016/j.invent.2017.04.002

- Seligman, M.E.P., Steen, T.A., Park, N. & Peterson, C. (2005). Positive Psychology Progress Empirical Validation of Interventions. *tidsskrift for norsk psykologforening*, 42, 874– 884.
- Shapira, L.B. & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology*, 5(5), 377-389. DOI: 10.1080/17439760.2010.516763.
- Sin, N.L. & Lyubomirsky, S. (2009). Enhancing Well-Being and Alleviating Depressive Symptoms With Positive Psychology Interventions: A Practice-Friendly Meta-Analysis. *Journal of Clinical Psychology*, 65(5), 467-487.
- Smeets, E., Neff, K., Alberts, H. & Peters, M. (2014). Meeting Suffering With Kindness: Effects of a Brief Self-Compassion Intervention for Female College Students. *Journal* of Clinical Psychology, 70(9), 794-807. DOI:10.1002/jclp.22076
- Spek, V., Nyklíček, I., Smits, N., Cuijpers, P., Riper, H., Keyzer, J. & Pop, V. (in press).
   Internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years old: A randomized controlled clinical trial. *Psychological Medicine*.
   Published online by Cambridge University Press 30 Apr 2007.
- Van Dam, N.T., Sheppard, S.C., Forsyth, J.P. & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders*, 25, 123–130. DOI:10.1016/j.janxdis.2010.08.011
- Watson, V.C., Cooper, M., McArthur, K. & McLeod, J. (2012). Helpful therapeutic processes: Client activities, therapist activities and helpful effects. *European Journal of Psychotherapy & Counselling*, 14(1), 77-89. DOI: 10.1080/13642537.2012.652395
- Westerhof, G., Bohlmeijer, E. & van den Berg, S. (Ed.). (2013). *The Individual*. New York, NY: McGraw-Hill Custom Publishing.