

Master thesis

When love hurts;

The efficacy of structured writing as intervention on anxious
relationship beliefs.



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Dutch Abstract

De kwaliteit van een romantische relatie is van invloed op de kwaliteit van het leven. Echter is het aangaan en hebben van een goede relatie niet vanzelfsprekend, soms staan we hierbij onszelf in de weg. Eigen gedachten over relaties kunnen van invloed zijn op het durven aangaan van een relatie en de kwaliteit van deze. Er kan onderscheid worden gemaakt tussen reële en irreële gedachten. In het huidige onderzoek is onderzocht of angstige (irreële) relatiegedachten veranderbaar zijn door interventie. Als interventie is gekozen voor gestructureerde schrijfofdrachten met een cognitieve - gedragstherapeutische insteek. De schrijfofdrachten zijn gericht op het onderzoeken van de irreële gedachten en deze te vervangen door meer helpende gedachten. Er wordt verwacht dat de mate van angstige relatiegedachten afneemt als gevolg van de interventie. Ook wordt verwacht dat er een verband is tussen relatietevredenheid, angst om te binden, rumineren en angstige relatiegedachten. Verder wordt verwacht dat de kwaliteit van het leven zal verbeteren als indirect gevolg van de interventie. Tot slot wordt er een positief verband verwacht tussen neuroticisme, hechtingstijl in relaties en angstige relatiegedachten. De participanten waren enkel vrouwen (N=29), zowel met, als zonder relatie, verdeeld over de interventie conditie (N=19) en de controle conditie(N=10). De participanten hebben de volgende vragenlijsten ingevuld: Fear of Close and Personal Relationship Questionnaire (FCPRQ), Experience in Close Relationship Questionnaire (ECR), Big Five Inventory-NL (BFI-NL), Perceived Social Support (PSS), Ruminative Responses Scale (RRS), Positive Mood, Emotional Loneliness en Brief Symptom Inventory (BSI).

De resultaten van de studie bevestigen, zoals verwacht, dat participanten in de schrijfgroep een significant grotere afname van de meeste angstige relatiegedachten laten zien dan participanten in de controlegroep. De resultaten laten zien dat de relatiestatus de sterkte en de inhoud van de afname van de angstige relatiegedachten beïnvloedt. Opvallend is dat participanten zonder een relatie significant hoger scoren op angstige relatiegedachten. Relatietevredenheid laat een negatief verband zien met angstige relatiegedachten, waar angst om te binden een positief verband laat zien met angstige relatiegedachten. De kwaliteit van het leven verandert echter niet door de interventie. Wel wordt gevonden dat participanten die hoog scoren op neuroticisme, ook hoger scoren op angstige relatiegedachten. Hetzelfde wordt gevonden voor de manier van hechting die vrouwen hanteren. De gevonden resultaten suggereren dat gestructureerde schrijfofdrachten, als interventie voor vrouwen met angstige relatiegedachten een positief effect kunnen hebben. Het wel of niet hebben van een relatie is van invloed op de inhoud en de sterkte van de bestaande angstige relatiegedachten, en beïnvloed ook de sterkte van de afname.

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Acknowledgements

During the past six months we have tried to get a better understanding of the influence of the human mind on the relationships we have with others. We have chosen to specifically study the variability of anxious relationship beliefs. Since this is of great influence on all our lives, we think it is very important to provide more research, and in that way more understanding, about these kinds of beliefs. The goal of our research was to expand the already existing knowledge. During the research process we have experienced some anxious beliefs ourselves as well. These beliefs were not so much about our own relationships but more about this thesis. At first they did not help us in a positive way and even scared us, but in the end they triggered us to be better and become more critical.

The process of writing this thesis was instructive, enhancive and sometimes frustrating. But it was a journey during which we have learned a lot. We can honestly say that we have developed ourselves and that we have reached a higher distinction in our scientific level of education.

This would not have been possible without the support and unconditional trust of a few people. Without their help and support, this process could not have been the success it is now. Therefore in this way we would like to show them our gratefulness. First of all we would like to thank our mentor Lisalotte Verspui. Her clear and bright insight has lifted our research to a higher level. Furthermore we would like to thank her for her enthusiasm, positivism, persistent support and critical feedback; all this has helped us to make our article a prosperity success. Secondly we would like to thank Joran Jongerlink for his never-ending knowledge about our statistical analyses. And last but not least we would like to thank our partners for their indisputable patience and support, and our parents for making these years of studying possible.

When love hurts;

The efficacy of structured writing as intervention on anxious relationship beliefs.

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The aim of the present study was to investigate the effect of structured writing on anxious relationship beliefs. It was presumed that through a structured writing intervention, which focused on investigating the anxious relationship beliefs and replacing them by more helpful thoughts, the strength and presence of these beliefs would reduce. Also was expected that the intervention would have a positive effect on lifestyle quality. Furthermore an association between relational satisfaction, fear of committing to a relationship, rumination and anxious relationship beliefs was expected. At last a relationship was expected between neuroticism, adult attachment in relationships and anxious relationship beliefs. Participants were all female (N=29), who either were or were not involved in a relationship. They were randomly assigned to the intervention condition (N=10) or the control condition (N=19). The results show a significant stronger decrease of most anxious relationship beliefs in the intervention condition. These results suggest that structured writing assignments, as intervention for people with anxious relationship beliefs, can have a positive effect. Whether or not having a relationship affects the content and level of reduction of the existing anxious relationship beliefs. Furthermore the results show a positive relationship between neuroticism, adult attachment in relationships and anxious relationship beliefs.

‘I would never die for my beliefs because I might be wrong.’

Bertrand Russell (1872-1970)

Anxious relationship beliefs influence romantic relationships in such a way that existing relationships can become problematic or hamper the forming of new romantic relationships. As Bertrand Russell cited, ‘you will never know if what you belief is the same as reality’. The fact that anxious relationship

beliefs are assumed to be of influence on romantic relationships and committing to a romantic relationship, can be seen in different examples. For instance, people who have anxious relationship beliefs have a negative attitude towards themselves and others. They are convinced they are worthless to others and

will not have positive ideas about their relationships. The same can be found for people suffering from fear of abandonment, fear of vulnerability, fear of rejection, fear to lose control and fear to lose their own individuality; these fears could also negatively influence someone's relationship (Hatfield en Rapson, 1993; Carter & Sokol, 1988). Irrational thinking leads to self-defeating behavior and thus is seen to affect poorer adjustment, while more rational, functional thinking is seen to affect better adjustment. A substantial body of literature presumes that this incompetence of maintaining intimacy is based on the beliefs that individuals hold about themselves and others as well as about their relationships (Epstein, 1986) and relational maintenance behaviors (Dainton, 2000).

Research so far has shown minor evidence for an effective treatment to change anxious relationship beliefs. A potential treatment could be found in the cognitive behavior therapy. Cognitive therapy focuses on identifying and changing dysfunctional thinking, behavior, and emotional responses (Ten Broeke, Van der Heiden, Meijer, & Hamelink, 2008). Behavior therapy focuses on behavior and treatment by exposure to feared stimuli. An important element of cognitive behavior therapy is cognitive restructuring. This is a process in which faulty thinking is challenged with the goal of replacing the irrational beliefs with more accurate and useful beliefs and testing their credibility by exposing them. One way to implement cognitive restructuring is writing therapy (Ten Broeke et al., 2008; Pennebaker & Beall, 1986).

The effect of writing as a coping style has been greatly influenced by the work of Pennebaker and colleagues (1990, 1986). From this influential work, two efficacy writing interventions evolved. The first line involves interventions that use the traditional Pennebaker paradigm (Pennebaker & Beall, 1986). This paradigm contains the idea that writing as a disclosure technique about thoughts and feelings concerning a personal topic, has a positive impact on one's feelings, thoughts and behavior. It is repeatedly shown that writing about one's thoughts and feelings concerning a personal and meaningful topic has a positive impact on individuals' health (Pennebaker, Colder & Sharp, 1990; Stanton et al., 2002). The working factor seems to be disclosure. In a recent meta-analysis, bringing together research on the Pennebaker paradigm, Frattaroli (2006) concluded that experimental disclosure is beneficial for one's psychological health, physical health and one's overall functioning, but that its average effect size is small. The second line of writing interventions involves interventions that use structured writing assignments, which are heavily influenced by cognitive-behavioral principles. These writing assignments consisted of three phases: imaginary exposure, cognitive reappraisal, and social sharing. Findings from a previously randomized controlled trial showed that participants in the treatment condition improved more on trauma related symptoms and general psychopathology than participants in the waiting-list control condition (Lange, Rietdijk, Hudcovicova, van de Ven, Schrieken, & Emmelkamp, 2003).

Building on the work of Lange and colleagues (2003), Wagner and colleagues designed and tested an Internet-based cognitive-behavioural therapy program for bereaved people suffering from complicated grief (Wagner, Knaevelsrud, & Maercker, 2006, 2007). The first phase of their intervention was similar to the one used by Lange. The cognitive restructuring and social sharing phases, on the other hand, focused on rather different elements that are more suitable to the specific treated situation. Findings from a randomized controlled trial showed that participants who received the new treatment improved significantly on symptoms of intrusion, avoidance, and general psychopathology as well as on post-traumatic growth, compared to participants in the waiting list condition (Wagner et al., 2006, 2007). Van der Houwen (2009) recently integrated the two lines of writing interventions into one Internet-based writing intervention, containing structured writing assignments for bereaved individuals. Results showed that writing decreased feelings of emotional loneliness and increased positive mood, in part through its effect on rumination. However, writing did not have an effect on grief or depressive symptoms.

Intervention on anxious relationship beliefs

In line with the studies named above, it would be interesting to investigate whether an intervention using structured writing assignments as the study of Van der Houwen (2009), will effect anxious relationship beliefs. This study gives us a good reason to assume that an intervention using structured writing

assignments may benefit individuals who are experiencing anxious relationships beliefs. Research has demonstrated that the experience of loss through break-up from a romantic relationship has similarity with grief after losing someone through death (Harends, Jager & Jeursen, 2009). It is therefore assumed that people, who experience problems with maintaining or forming a romantic relationship due to anxious relationship beliefs, will also benefit from an intervention that is effective for bereaved people. Also the use of disclosure, exposure and cognitive restructuring will be of influence on thoughts, especially on anxious beliefs. This intervention should prove a cost-effective, accessible intervention and when chosen not to provide feedback, it also eliminates the need for trained work force.

Expectations of the current study

The current study focuses on restructuring anxious relationship beliefs by an intervention based on structured writing assignments. It is presumed that these structured writing assignments will lower the strength and presence of these beliefs. It is expected that anxious relationship beliefs can have a negative association with the rating of relationship satisfaction and the fear of committing to a relationship. Moreover it is expected that the intervention has a positive effect on one's lifestyle, measured by the mechanisms rumination, emotional loneliness, perceived social support, current symptoms, positive mood and satisfaction with the current relational status. It is expected that the

mechanisms mentioned above will be changed by the writing intervention. Even though no research on these topics exists, it is expected that there is a correlation between the constructs and anxious relationship beliefs. Van der Houwen (2009) studied these mechanisms as well and found a change of these constructs through structured writing assignments.

Further, a positive relationship between neuroticism and anxious relationship beliefs is expected. In earlier research it was found that people scoring high on negative affect or neuroticism, are more vulnerable to anxiety disorders (Clark, Watson & Mineka, 1994). Therefore personality will be controlled for. There is also an influence expected of adult attachment style in relationships on anxious relationship beliefs. Bauminger and colleagues (2008) demonstrated the link between a sense of security and the ability to form an intimate friendship. More insecure individuals experience more problems forming intimate relationships. Finally in the current study it is expected that more insecure attached individuals will experience stronger anxious relationship beliefs.

Methods

Participants

A sample of 77 participants was recruited from the community. Of them, 32 participants filled in both questionnaires (25% response rate). The other participants (45) did not fill in the second questionnaire and were therefore

excluded from the present study¹. Given the fact that mostly females applied for the study (only 3 males), males were excluded to create a homogeneous group. The final sample consisted of 10 women in the intervention condition and 19 women in the control condition. Age ranged from 20 to 54 with mostly high levels of education. The mean age of the participants in the study was 31.5 (SD 10.3). For the control group the mean age was 31.9 (SD 11.2), for the intervention group the mean age was 32.8 (SD 8.7). All 29 females had a heterosexual preference. During the study period 10 participants (34,5%) were not involved in a relationship and 19 participants (65,5%) were involved in a relationship. The average duration of the relationships was 47,7 (SD 49.6) months (3,1 years). The shortest duration was 1 month, the longest 12,5 years. More selected demographic characteristics of the sample are shown in Table 1.

¹ The experimental study still continues, therefore not all participants were able to fill in the second questionnaire at the time of measurement.

Table 1

Background and Relationship Characteristics of the Sample (N=29)

Background characteristics	
Gender (N (%))	
Woman	29 (100%)
Age (in years)	
Mean (SD); minimum-maximum	31 (10.3); 20-54
Education (highest level of schooling) (N (%))	
Low (MBO and lower)	6 (20.7%)
Medium (HBO)	8 (27.6%)
High (WO)	15 (51.7%)
Employment (N (%))	
partime	17 (58.6%)
fulltime	10 (43.5%)
unemployed	2 (6.9%)
Divorced parents (N (%))	
yes	11 (37.9%)
no	18 (62.1%)
Divorced (N (%))	
yes	6 (20.7%)
no	23 (79.3)
Relationship (N (%))	
yes	19 (65.5%)
no	10 (34.5%)
Experience unfaithfulness	
yes	13 (44.8%)
no	16 (55.2%)
Disconnect relationship (N (%))	
Self	11 (37.9%)
Other	8 (27.6%)
Still in the relationship	8 (27.6%)
Otherwise	2 (6.9)

Procedure

Participants were recruited through the Internet on websites and forums that focused on people with relationship problems or single persons. In order to obtain as many participants as possible it made no difference whether people were involved in an established relationship or whether they were not involved in a relationship. Participation succeeded after signing in through the email-address: schrijven.onderzoek@gmail.com. To be

included in the study the participants had to meet the following criteria: they had to be at least 18 years of age and they had to experience some form of difficulty with romantic relationships.

Recruitment of participants took place from March till June 2010. People who were interested in participating were able to register for the study at the email-address. After registration they received an email that the study started within two weeks. When the

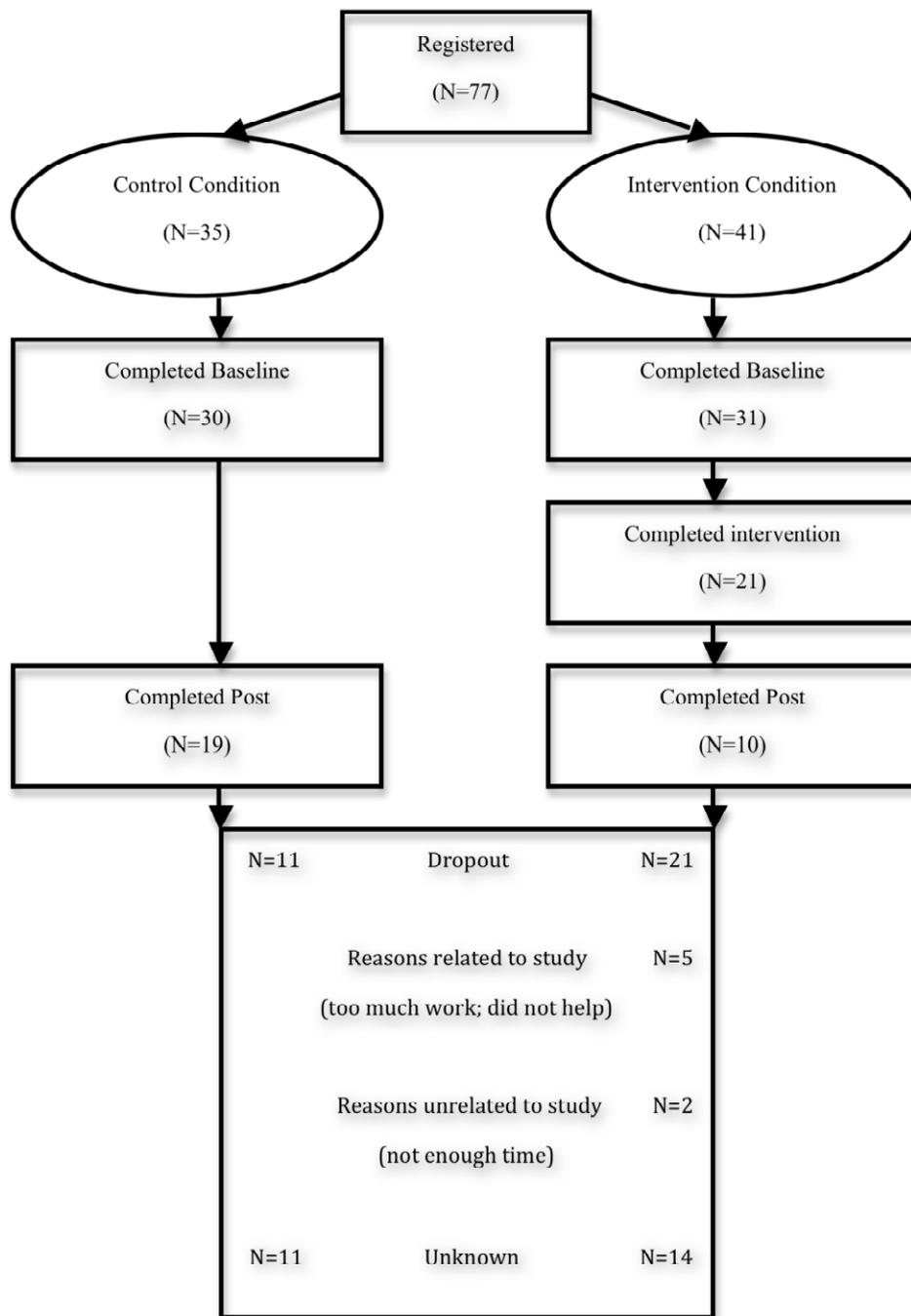
research started, all the registered participants were randomly assigned to the intervention- or the control condition. The first 20 participants were placed in the intervention condition and the following 20 participants were placed in the control condition, and so on. Both conditions received a different email. The intervention condition received an email with information about the questionnaires and the writing assignments. It was also underlined that they could end their participation at any time. The email provided all the information to make an informed consent about participating in this study. In this email there was also the link to the first questionnaires. The participants were invited to fill in the questionnaires, which measured background, irrational relationships beliefs, attachment, personality, rumination, social support, emotional loneliness and aspects of mental and physical health. The control condition received an email with the same information about the questionnaires and was also informed about the meaning of the control condition. They were offered the opportunity to participate in the intervention after answering the last set of questionnaires.

After answering the first set of questionnaires, participants in the intervention

group received information about the first assignment. This information was accompanied with the first writing assignment. The sending of the two assignments was spaced at two-week intervals. After one week the participants who had not returned their assignment received a reminder. Participants were asked to write at least three times a week for a minimal of 10 minutes straight. They were told to do this for two weeks. After each week they were asked to send the writing assignment back to the email-address. When they did not feel comfortable with sending their assignment back, they were free to choose not to. There was no feedback provided on the assignments.

After completing the last writing assignment the participants received an email with the link to the last set of questionnaires. The control condition also received this e-mail after the expended time. After filling in the questionnaires they received the writing assignments. Finally, acknowledgement gift-coupons were raffled. In figure 1 an overview can be found of the participants who completed the baseline and the participants who completed the program (including the intervention and second questionnaire).

Figure 1 *Participant flow and dropout.*



Background and relationship related variables

At the first measurement point questions were asked about general background like age, gender, education level and current employment-status of the participants (having or not having a job). Further, there were questions about having children, sexual

orientation, divorce experience (through parents or own experience) and experience with unfaithfulness of a partner. Finally questions were asked about the current or former romantic relationship of participants. Participants who were in a romantic relationship at the time of the study received

questions about the satisfaction of the relationship, the duration of this relationship, quality of the relationship, possible former romantic relationships, duration of the former relationship and reason of separation. Participants who did not have a romantic relationship at the time of the study were asked if they ever had a romantic relationship. Furthermore questions were asked about the duration of the relationship, how long ago this relationship was broken, the quality of the relation and the reason for separation. Finally in both groups questions were asked about fear of committing to a relationship, (a) “On the whole, I think it is frightening to commit to a relationship” (Ik vind het over het algemeen eng om een relatie aan te gaan) and (b) “On the whole, I think it is frightening to commit myself to another person” (Ik vind het over het algemeen eng om me aan iemand te binden).

Measurement instruments

Personality

The big five factors of personality were only measured at the first measurement point, using the Dutch translation of the Big Five Inventory (BFI-NL; Denissen, Geenen, van Aken, Gossling & Potter, 2008). This questionnaire measures the factors Neuroticism, Extraversion, Agreeableness, Conscientiousness and Openness to experience. The average congruence coefficient in comparison to the English version is .92. This indicates overall similarity in factor structures. In the study of the Big Five Inventory Cronbach’s alpha was .83.

(John & Srivastava, 1999). In this study the BFI shows a Cronbach’s alpha of .70. The independent scales show Cronbach’s alphas from .66 till .80.

Attachment organization was measured with the well-validated Experiences in Close Relationships-Revised Questionnaire (ECR-R; Fraley, Waller, & Brennan, 2000). The ECR-R assesses individual differences with respect to attachment-related anxiety and attachment-related avoidance. Cronbach’s alpha was .93 for both attachment-related anxiety and attachment-related avoidance in earlier studies. In this study the ECR questions were asked in two different ways. One was for the participant involved in a romantic relationship and one for participants not involved in a relationship. The alpha for participants not involved was .85 and for participants involved .76.

Intimacy

The Fear of Close and Personal Relationships Questionnaire (FCPRQ; Sheehan, 1989) was used to measure five specific fears and intimacy: fear of merger, fear of abandonment, fear of exposure, fear of attack and fear of own destructiveness. Cronbach’s alpha was .96. In the present study the alpha was .90 for the participants involved in a relationship, with a variation from .50 to .82. For the participants not involved in a relationship the Cronbach’s alpha was .83, with a variation from .50 to .88.

Social Support

Social support was measured with a 4-item scale, and consisted questions about perceived

social support of family members and of friends and relatives (Stroebe, Zech, Stroebe, & Abakoumkin, 2005). The questions comprised the same two items for family members and for friends and relatives (a) on the whole, how much do your family members (friends and relatives) make you feel loved and cared for? And (b) how much are your family members (friends and relatives) willing to listen when you need to talk about your worries or problems? The 4-item scale ranged from ‘a great deal’ to ‘not at all’ and ‘not applicable’. Cronbach’s alpha for this scale was .88. In the current study the Cronbach’s alpha was .83 for the first questionnaire and .79 for the second questionnaire.

Lifestyle Measures

Rumination was measured using the ruminative responses scale (RRS; Treynor, Gonzalez & Nolen-Hoeksema, 2003). From this questionnaire only the reflection and brooding scales were used. Cronbach’s alpha was .90 for the total scale. In the present study the depression scale was excluded because this construct was measured with the BSI. After excluding this scale there was an alpha of .45 for the brooding scale. After excluding the question “thinking about a recent event and hoping for a better outcome” (nadenken over een recente situatie en hopen dat het beter was gegaan) the Cronbach’s alpha was .74. For the reflection scale there was a Cronbach’s alpha found of .86.

Positive mood was measured with the 10 items of the Positive Affect and Negative Affect

Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Cronbach’s alpha ranged from .93 to .95.

Emotional loneliness was measured with two items developed by Stroebe, Abakoumkin and Schut (1997): (1) I feel lonely even if I am with other people, and (2) I often feel lonely. On a 7-point scale ranging from totally disagree (1) to totally agree (7). Cronbach’s alpha ranged from .80 to .86. In the present study there was an alpha found of .83.

Symptoms of psychopathology were measured with the Brief Symptom Inventory (BSI; de Beurs, & Zitman, 2005). This is a shorter version of the Symptom Checklist 90 (SCL-90) with the same psychometric quality as the SCL-90 only half as long fill-in time. The Cronbach’s alpha ranged from .71 to .96. In the present study it ranged from .50 to .90, with a total Cronbach’s alpha of .95.

The Intervention

Exposure, cognitive reappraisal and integration and restoration were the three phases followed in the assignments outlined by Lange and colleagues (2003). The intervention consisted of two writing assignments. The general guidelines for the assignments included information about what was expected of the participants in terms of time investment and deadlines. Adjacent to this, it also contained advice, for example about when to write, not to worry about grammar, spelling or writing style. There was no personalized feedback given to the assignments. The guidelines for

the writing assignments were developed based on research about the effectiveness of the Pennebaker paradigm, research about the effectiveness of structured confrontational writing (Van Emmerik, 2005) and basic cognitive-behavioral principles.

The first writing assignments used in this study was inspired basically on the intervention used in the study of van der Houwen (2009), and adjusted to relationship situations. Participants were asked to write about their most distressing thoughts about love relationships (exposure). Second the participants were asked to identify unhelpful as well as helpful thoughts they might have with respect to a romantic relationship, how it makes them feel, and to write down helpful thoughts that might replace unhelpful thoughts (cognitive reappraisal). Both the unhelpful thoughts as the helpful thoughts have to be rated by the participants.

The second writing assignment asked participants to write a letter of advice for a 'rainy day'. The letter should incorporate lessons learned from the first assignment, and challenge negative thinking. This assignment was trying to attempt a future orientation and accomplish a lasting result (cognitive integration).

Statistical analyses

Prior to conducting the analyses, all variables were examined for accuracy of data entry, missing values, and fit between their distributions and the assumptions of multivariate normality. An analysis of covariance was adopted for this study. The

pretest can be seen as a covariant. An important advantage of this approach is that it has more power than when there was chosen for an analysis of variance.

In order to investigate the main goal of this study, the effect of structured writing assignments on anxious relationship beliefs, a number of steps were made: First, ANCOVA's were conducted to determine whether anxious relationships beliefs reduced after structured writing. Secondly, regression analyses were done to identify the contribution of relationship satisfaction, fear of committing and rumination on anxious relationship beliefs. Thirdly, the effect of writing assignments on lifestyle quality was measured with paired sample t-tests. Finally, Pearson's correlations coefficients were conducted to determine the influence of neuroticism and attachment on anxious relationship beliefs.

Results

Preliminary analyses

Before investigating the main goal of this study, the nature of the differences of the demographic variables on the levels of anxious relationship beliefs had to be determined. Multivariate analysis of variances was computed. The major demographic variables used for this study were: relationship status, age and level of neuroticism.

First, a MANOVA was computed for the variable 'relationship status'. Remarkable and unexpected, the variable did differ significantly on anxious relationship beliefs.

To be more specific: participants who were not involved in a romantic relationship scored significantly higher on anxious relationship beliefs in comparison to participants who were involved in a romantic relationship. Respectively, participants who were not involved in a relationship scored higher than participants who were involved in a relationship on fear of merger ($F(1, 27) = 4.2, p < .049$), fear of abandonment ($F(1, 27) = 4.1, p < .052$), fear of exposure ($F(1, 27) = 6.6, p < .016$), fear of attack ($F(1, 27) = 5.7, p < .024$) and fear of own destructiveness ($F(1, 27) = 3.0, p < .094$). Likewise, participants not involved in a relationship scored higher on attachment anxiety ($F(1, 144) = 10.2, p < .003$) than those who were involved in a relationship (See table 2 for the mean scores). This means that, people who are not involved in a relationship tend to have higher levels of anxious relationship beliefs than people who are involved in a relationship. Since it was found that the variable 'involvement in a relationship' surprisingly differs significantly on the level of anxious relationship beliefs, further analysis have to be controlled for this variable.

Second, the variable 'age' did not differ significantly on anxious relationship beliefs. This means that participants' age did not influence the scores on anxious relationship beliefs.

Finally, the variable 'neuroticism' did not differ significantly on anxious relationship beliefs. This means that participants with high scores on 'neuroticism' did not significantly

have higher scores on anxious relationship beliefs.

The effect of structured writing on anxious relationship beliefs

The main goal of the study was to examine the effectiveness of a structured writing intervention on anxious relationship beliefs. A one-way between groups analysis of covariance was conducted to compare the effectiveness of the intervention condition with the control condition.

According to the expectation of the present study, a significant difference was found between the intervention and control group on the scales fear of abandonment ($F(1,25)=2.89, p < .1, \text{partial } \eta^2=.10$) and attachment anxiety ($F(1,25)=3.98, p < .057, \text{partial } \eta^2=.14$). This means that the intervention condition has lower mean scores in comparison to the non-writing control group on fear of abandonment and attachment anxiety as a result of the structured writing intervention. Although the remaining scales did not differ significantly on the conditions, the scales did show lower scores in the intervention condition except on the scale fear of attack (see table 2).

It was very interesting that, after controlling for relationship status, the differences remained significant. Striking, other scales turned out to change as well due to the writing intervention. First of all, participants not involved in a relationship scored significant lower on the scales fear of merger ($F(1,6)=5.32, p < .061, \text{partial } \eta^2=.47$), fear of abandonment ($F(1,6)=8.47, p < .026,$

partial $\eta^2=.59$) and attachment anxiety ($F(1,6)=13.23, p <.011, \text{partial } \eta^2=.69$) after the intervention. This means that participants not involved in a relationship in the intervention condition tend to have lower mean scores in comparison to the non-writing control group on fear of merger, fear of abandonment and attachment anxiety after structured writing. The effect sizes that were found when controlling for relationship status are considered large. Second of all, participants who were involved in a relationship scored significantly lower on the scales fear of exposure ($F(1,15)=4.20, p <.058, \text{partial } \eta^2=.22$) and attachment avoidance ($F(1,15)=3.46, p <.082, \text{partial } \eta^2=.19$) after the intervention. In addition to the former findings this means that participants who were involved in a relationship in the intervention condition tend to have lower mean scores in

comparison to participants involved in a relationship in the control condition on the scales fear of exposure and attachment avoidance.

Recapitulating the previous section, the structured writing intervention has an effect on the strength of most anxious relationship beliefs (fear of abandonment, attachment anxiety). After controlling for relationship status the differences remained significant. Remarkable is that other scales turned out to be significant as well due to the writing intervention. Overall, there is an effect of the structured writing intervention on anxious relationship beliefs that appears to be stronger when controlled for relationship status. Furthermore, relationship status seems to influence the content of the decreased anxious relationship beliefs as a result of structured writing.

Table 2

Mean scores for the outcome measures (SD in parentheses) for the intervention and control condition at post-test

	<i>Total sample</i>			
	Intervention condition		Control condition	
	Post-test	N	Post-test	N
Fear of Merger	12.2(4.5)	29	16.1(4.3)	29
Fear of Abandonment	15.4(4.1)	29	15.7(4.2)	29
Fear of Exposure	11.7(2.8)	29	13.3(3.4)	29
Fear of Attack	14.0(3.7)	29	13.9(4.0)	29
Fear of own Destructiveness	11.5(2.4)	29	13.2(3.8)	29
Attachment Anxiety	48.0(8.9)	29	52.1(11.2)	29
Attachment Avoidance	38.7(7.5)	29	44.0(11.0)	29
	<i>Not involved in a relationship</i>			
	Intervention condition		Control condition	
	Post-test	N	Post-test	N
Fear of Merger	14.7(7.0)	3	18.1(3.3)	7
Fear of Abandonment	15.7(2.9)	3	18.4(4.8)	7
Fear of Exposure	14.7(3.2)	3	14.7(4.3)	7
Fear of Attack	16.0(3.6)	3	16.1(4.0)	7
Fear of own Destructiveness	11.7(2.9)	3	15.1(3.5)	7
Attachment Anxiety	52.7(9.6)	3	60.4(14.2)	7
Attachment Avoidance	46.0(10.4)	3	46.1(12.5)	7
	<i>Involved in a relationship</i>			
	Intervention condition		Control condition	
	Post-test	N	Post-test	N
Fear of Merger	11.1(3.0)	7	14.9(4.5)	12
Fear of Abandonment	15.3(4.7)	7	14.1(3.0)	12
Fear of Exposure	10.4(1.4)	7	12.5(2.6)	12
Fear of Attack	13.1(3.7)	7	12.6(3.5)	12
Fear of own Destructiveness	11.4(2.4)	7	12.1(3.6)	12
Attachment Anxiety	46.0(8.5)	7	47.2(4.9)	12
Attachment Avoidance	35.6(3.3)	7	42.4(10.3)	12

The effect of structured writing on lifestyle quality

Unexpectedly, almost no noteworthy effects of structured writing on lifestyle quality could be verified in the present study. It appeared that only rumination was partly effected by the structured writing intervention. The rumination scale “brooding” changed significantly in the

intervention condition for people not involved in a relationship from Time 1 ($M=8.67$, $SD=2.08$) to Time 2 ($M=13.67$, $SD=1.53$), ($t(2)=-3.27$, $p < .082$ (two-tailed)). This means that rumination (brooding) increases as a result of the writing intervention for people not involved in a relationship. It was expected that

rumination would decrease as a result of the writing intervention, so this outcome surprises.

The relation between relationship satisfaction, fear of committing to a relationship and anxious relationship beliefs

A series of regression analyses was conducted to determine the nature of the association between relationship satisfaction and fear of committing and anxious relationship beliefs. Analyses were obtained separately for participants who were involved in a relationship and participants who were not, as the construct relationship satisfaction was measured different depending on relationship status.

The association between relationship satisfaction and anxious relationship beliefs was conducted for participants who were involved in a relationship. As expected the regression analyses revealed that relationship satisfaction and fear of committing to a relationship had a significant relation with fear of merger ($\text{adj.}R^2 = .54, p < .001$), fear of abandonment ($\text{adj.}R^2 = .32, p < .022$), fear of exposure ($\text{adj.}R^2 = .33, p < .020$), fear of attack ($\text{adj.}R^2 = .49, p < .000$), fear of own destructiveness ($\text{adj.}R^2 = .33, p < .019$), attachment anxiety ($\text{adj.}R^2 = .21, p < .069$) and attachment avoidance ($\text{adj.}R^2 = .39, p < .010$). Although no conclusions can be drawn about causality, this means that a large amount of the variances in fear of merger (54%), fear of abandonment (32%), fear of exposure (33%), fear of attack (49%), fear of own destructiveness (33%), attachment anxiety

(21%) and attachment avoidance (39%) are explained by relationship satisfaction and fear of committing to a relationship. As expected there is a negative association between anxious relationship beliefs (fear of merger, fear of exposure, fear of attack) and relationship satisfaction, with low scores on anxious relationship beliefs associated with higher scores on relationship satisfaction. As anticipated there is also a positive association between anxious relationship beliefs and fear of committing to a relationship, with a high score on anxious relationship beliefs associated with a higher score on fear of committing to a relationship.

The association between relationship satisfaction, fear of committing to a relationship and anxious relationship beliefs was also conducted for participants who were not involved in a relationship. The regression analyses revealed that relationship satisfaction and fear of committing to a relationship contributed significantly to the prediction of fear of merger ($\text{adj.}R^2 = .62, p < .009$). This means that a large amount in the variance of fear of merger (62%) was explained by relationship satisfaction. There is a strong positive association between fear of merger and relation status satisfaction, with a high score on fear of merger associated with a higher score on relation status satisfaction. In Table 3 the results of the regression analyses with respect to the relation between relationship satisfaction and fear of committing are shown.

Table 3

Multiple regression outcomes showing the relationship between satisfaction and fear of committing to a relationship and anxious relationship beliefs

	<i>Not involved in a relationship</i>					
	Relationship satisfaction			Fear of committing		
	<i>B</i>	<i>SD B</i>	β	<i>B</i>	<i>SD B</i>	β
Fear of Merger	.56	.19	.64**	.81	.48	.36
Fear of Abandonment	-.08	.29	-.11	.19	.75	.09
Fear of Exposure	-.17	.21	-.27	.60	.55	.38
Fear of Attack	-.28	.22	-.39	1.13	.58	.61
Fear of own Destructiveness	.20	.20	.39	.69	.51	.41
Attachment Anxiety	.24	.74	.12	.43	1.91	.08
Attachment Avoidance	-.19	.62	-.10	2.70	1.59	.55
	<i>Involved in a relationship</i>					
	Relationship satisfaction			Fear of committing		
	<i>B</i>	<i>SD B</i>	β	<i>B</i>	<i>SD B</i>	β
Fear of Merger	-2.9	.93	-.51**	1.2	.38	.54**
Fear of Abandonment	-.90	.98	-.18	1.17	.40	.59**
Fear of Exposure	-1.48	.77	-.38*	.75	.31	.48**
Fear of Attack	-1.90	.80	-.41**	1.08	.32	.58**
Fear of own Destructiveness	-1.00	.82	-.24	.96	.33	.57**
Attachment Anxiety	-1.90	2.73	-.15	2.62	1.10	.50**
Attachment Avoidance	-3.81	2.31	-.31	2.83	.93	.57**

*Note: $p < .05$ ** , $p < .1$ **

The relation between rumination and anxious relationship beliefs

Further series of regression analyses were conducted to determine the nature of the relationship between rumination and anxious relationship beliefs. Very interesting was the revelation that rumination has contributed significant to fear of merger ($\text{adj.}R^2 = .14, p < .058$) and fear of own destructiveness ($\text{adj.}R^2 = .20, p < .023$). This means that a small amount in the variances of fear of merger (14%) and

fear of own destructiveness (20%) was explained by rumination. Only the reflection scale of rumination shows significant medium positive associations with anxious relationship beliefs (fear of merger, fear of own destructiveness). Although, no conclusions can be drawn about causality, high scores on anxious relationship beliefs seem to come with higher scores on reflection. Table 4 shows the results of the regression analyses.

Table 4

Multiple regression outcomes showing the relation between rumination and anxious relationship beliefs

	<i>Rumination</i>					
	<i>Brooding</i>			<i>Reflection</i>		
	<i>B</i>	<i>SD B</i>	β	<i>B</i>	<i>SD B</i>	β
Fear of Merger	-.41	.32	-.23	.47	.23	.36*
Fear of Abandonment	-.19	.29	-.12	.35	.21	.30
Fear of Exposure	.03	.25	.02	.06	.18	.07
Fear of Attack	-.06	.27	-.04	.41	.20	.38
Fear of own Destructiveness	-.12	.23	-.09	.47	.16	.49**
Attachment Anxiety	-.64	.77	-.16	.54	.56	.18
Attachment Avoidance	-.08	.74	-.02	.75	.54	.27

*Note: $p < .05^{**}$, $p < .1^*$*

The relationship between neuroticism, attachment and anxious relationship beliefs

Correlations were conducted to determine the nature of the relationship between neuroticism and attachment and anxious relationship beliefs. Correlation coefficients were obtained for the entire sample.

According to the expectation of the present study, a medium positive correlation was found for fear of merger ($r = .35$, $n = 29$, $p < .06$) and fear of exposure ($r = .33$, $n = 29$, $p < .092$) with neuroticism. This means, the higher the level of neuroticism, the stronger some anxious relationship beliefs (fear of merger, fear of exposure) are reported.

Likewise, a positive relationship was expected between adult attachment and anxious relationship beliefs. A high positive correlation was found for 'attachment anxiety' and fear of abandonment ($r = .81$, $n = 29$, $p < .000$), fear of attack ($r = .45$, $n = 29$, $p < .014$) and fear of own destructiveness ($r = .53$, $n = 29$, $p < .003$). There was also a high, positive correlation between 'attachment avoidance'

and fear of merger ($r = .76$, $n = 29$, $p < .000$), fear of exposure ($r = .80$, $n = 29$, $p < .000$), fear of attack ($r = .61$, $n = 29$, $p < .000$) and fear of own destructiveness ($r = .45$, $n = 29$, $p < .015$). This means that for the entire sample, high levels of attachment anxiety or attachment avoidance are associated with higher levels of anxious relationship beliefs.

Conclusions and Discussion

The efficacy of structured writing as an intervention for anxious relationship beliefs

The results of the present study support the main hypothesis that structured writing assignments that focus on restructuring anxious relationship beliefs, lower the strength and presence of these beliefs. The findings show a decrease in the intervention condition on fear of abandonment and attachment anxiety. The structured writing assignments affect anxious relationship beliefs in a positive way. Overall, these findings support the efficacy of writing interventions as developed

by Lange and colleagues (2003). They found that structured writing assignments, which are heavily influenced by cognitive-behavioral principles, could be help worthy. The findings further support the theory of Wagner and colleagues (2006, 2007) that the effectiveness is due to the focus of the writing intervention on the specific treated situation, in this study anxious relationship beliefs.

Remarkably, Van der Houwen (2009) did not find a main effect of the writing intervention, where our study does. This could be due to the fact that participants were recruited on websites indicating problems with their current or previously ended relationship, with gaining a relationship or with committing to a relationship. This could indicate a somewhat coloured group, existing of people with higher anxious relationship beliefs at the start of the study.

Unexpected, the results show that when controlled for relationship status, the effect of the writing intervention amplifies. Remarkably, being or not being involved in a relationship seems to influence the content of the decreased anxious relationship beliefs. This means that the structured writing intervention seems to be helpful for people who were not involved in a relationship, by decreasing anxious relationship beliefs containing fear of merger, fear of abandonment en attachment anxiety. For people who are involved in a relationship, the intervention tends to decrease anxious relationship beliefs containing fear of exposure and attachment anxiety.

The decline of these specific beliefs can be clear-headed by explaining the content of the beliefs by Sheehan (1989). First, most people experience fear of abandonment. Some people react by avoiding romantic relationships, so they will never have to experience the pain of losing someone. Those who do get into a relationship, tend to be very controlling to the other person to keep the relationship being. Apparently, the writing intervention effects beliefs about fear of abandonment with a strong effect for people not involved in a relationship. This suggests that the anxious beliefs effected by the writing intervention were more about avoiding relationships, to protect themselves from being abandoned.

Second, merging is the experience of literally losing one's self in the other person; of not knowing where one's own body and self ends and the other person begins (Sheehan, 1989). Fear of merger is about the fear to lose one's identity and autonomy and losing control when committing to a relationship. The findings of the present study only support an effect of the intervention on fear of merger for participants not involved in a relationship. This could be explained by the content of fear of merger, and can be seen as a fear to commit to an intimate relationship.

Third, there are two ways in which fear of exposure can cause anxiety. One way is that people fear that someone will see their negative side. The other way is that through self-disclosure they are confronted with themselves. The findings of the present study only support an effect of the intervention on

fear of exposure for participants who were involved in a relationship. This could be explained by the content of fear of exposure, which is about fear to disclose one's self to another person. It could be that they are afraid to show their partner the part of themselves where they are not proud of. Furthermore, it could be that disclosing about one's thoughts through the writing intervention is the cause of the decrease on fear of exposure (Pennebaker, 1986).

Finally, attachment anxiety is a personality trait and contains the three above-mentioned fears. Cassidy (2001) described anxious individuals as focused on obtaining but not providing support, as less flexible in accepting aspects of others and as tending to exaggerate the importance of proximity, intimacy, involvement, connectedness, and other manifestations of an attachment that suggested a desire for interpersonal fusion. Therefore it suggests that when the writing intervention lowers certain anxious relationship beliefs, it also lowers attachment anxiety. Nevertheless this could also be explained by the agreements between the constructs used to measure anxious relationship beliefs and attachment. A marginal note should be taken: in the present study it is implicated that attachment is changeable due to a writing intervention. However most research states the inalterability of attachment and it is seen as a personality trait. Therefore, we feel that the changeability is likely due to the fact that the scales used to measure anxious relationship beliefs and attachment measured the same construct. The

strong associations found between anxious relationship beliefs and attachment could underpin this. So the decrease on attachment anxiety should be interpreted with caution.

The influence of relationship satisfaction and fear of committing to anxious relationship beliefs

Not the main goal, but still of interest was the prospect that relationship satisfaction has an association with anxious relationship beliefs. This expectation was supported in this study. People who are involved in a relationship and report more relational satisfaction tend to have less anxious relationship beliefs. Furthermore, when they experience more anxious relationship beliefs, they tend to show more fear of committing to a relationship. An explanation for this finding could be found in literature, presuming that the incompetence of maintaining intimacy is based on the beliefs individuals hold about themselves and others as well as their relationships (Epstein, 1986) and associated relational maintenance behaviors (Dainton, 2000). More specifically, these beliefs can influence a person in such a way that committing becomes a problem. Anxious beliefs reflect negative attitudes towards themselves and others as well as an essential fear of vulnerability, abandonment, rejection, the fear to lose control and their own individuality and the fear of being locked up and /or lose their autonomy (Hatfield en Rapson, 1993; Carter & Sokol, 1988). These facts can contribute to the fear of committing to their relationship, for people who are in a

relationship and experience anxious relationship beliefs.

People not involved in a relationship who report high fear of merger, tend to experience more relationship status satisfaction. This result might be unexpected at first, but looking closer at fear of merger it is comprehensible. Fear of merger focuses on identity and independency (Sheehan, 1989), so people who are content with their single status may find it important to keep their own identity and being independent. It could be that they are afraid to lose this satisfaction when they commit to a relationship. Baxter (2004) showed in his research that losing autonomy by interdependency can be a dark side of relationships. Fear of committing to a relationship showed no association with anxious relationship beliefs for people not involved in a relationship. This is remarkable; given that Spielmann, MacDonald and Wilson (2009) find in their study that singles tend to be pessimistic about their future relationship. Though they studied rebound effects, this could explain the different effects.

The efficacy of structured writing on lifestyle quality

Unexpected, there were almost no effects found on lifestyle quality. However, surprisingly the intervention did increase the level of rumination for people not involved in a relationship. This could implicate that the writing intervention increases the frequency and focus of thinking about their love life, which apparently increases rumination.

Overall, rumination has a positive association with fear of merger and fear of own destructiveness. People with stronger anxious relationship beliefs tend to have higher scores on rumination, specifically reflection.

The fact that we found almost no effects of structured writing on lifestyle variables is particularly noteworthy. In the study of Van der Houwen (2009) was found that structured writing has an influence on lifestyle outcomes for bereaved people. However, our study did not find such effects. We can only speculate that the impact of the intervention on lifestyle was too small for an effect to become evident. Further, in the study of Van der Houwen (2009) it was expected that stronger effects of the writing intervention would be found for people with severe grief compared to people with normal grief. This study does not control for the severity of anxious relationship beliefs, or the severity of attachment anxiety or attachment avoidance. It could be that when there will be controlled for bereavement after breaking up, more effects on lifestyle quality outcomes will be found (Harends, Jager & Jeursen, 2009).

The relation between neuroticism, attachment and anxious relationship beliefs

Finally the results revealed a positive association between attachment and neuroticism with anxious relationship beliefs. Attachment shows a strong association with all anxious relationship beliefs. Nevertheless, only fear of merger and fear of exposure were associated with neuroticism, while it was

expected for all the constructs that measure anxious relationship beliefs. Possible explanations for these findings can be found in the sample size, as ours was very small. Also, by recruiting the participants there was no selection made for neuroticism. A plausible explanation for the failure of solid results is most likely a shortage of people who score high on neuroticism.

The relationship between attachment and anxious relationship beliefs is reasonable and expected, given the fact that the content of both constructs show resemblances. For example, fear of merger and fear of exposure show similarities with attachment avoidance. They are both strongly related to avoidant coping strategies (David, Shaver & Vernon, 2003). Bauminger and colleagues (2008) demonstrated that more insecure individuals experience more problems forming intimate relationships. Hence, it could be that more insecure attached individuals also experience more anxious relationship beliefs. This could clarify the high associations found between attachment and anxious relationship beliefs in the present study.

Methodological considerations

Like in any other research, the present study knows several strengths and limitations.

Registered cognitive-behaviour therapists developed the assignments. This way the intervention had a strong foundation, positively contributing to the found effects. The questionnaires used in the study were all very powerful and reliable. Therefore the construct

was measured well. Also the fact that this study has a future orientation, with use of a letter for a rainy day, can be considered as a strength.

However a few limitations of this study deserve attention. First, the sample size used in the study was relatively small. Further research should focus on a more extended sample. Likely, stronger statements could be made with a more generalized group. Second, dropout rates were relatively high. The assignments were emotionally exhausting and time consuming, and the fact that participants were comparatively anonymous, could mean they felt fewer obligations to follow through. Dropping out did not require any action. We do feel, however, that anonymity and easy withdrawal were very valuable elements of this study, as it did not put pressure on participants. Also, there was no feedback provided, which could have improved motivation and commitment and decreased dropout. Another flaw of this research is the participation of only women. It would be interesting to include men to see if results differ per gender. Furthermore, research has shown that women tend to score higher on neuroticism and anxiety disorders (Lynn & Martin, 1997), which speculates that fewer effects will be found for men. Finally, a few participants had some difficulty with the assignments. Confusions about what was expected from the participants and a difference in interpretation could have distracted or de-motivated some of the participants.

Future directions

This study has contributed to the literature in a number of ways. Important outcome variables were included that have not typically been assessed in research to anxious relationship beliefs. We have tried to develop an intervention useful for every person who suffers from these beliefs. The current findings have both theoretical and practical implications.

With respect to the theory, the current findings are a first step to a better understanding of anxious relationship beliefs. The idea that structured writing is effective as a coping strategy is not particularly new. In fact, numerous previous researches highlight this fact (Lange, et al., 2003; Wagner et al., 2006, 2007). But the finding that structured writing also effects anxious relationship beliefs is rather new and has implications for future research. The current study suggests that future studies should indicate a larger and more generalized group. Present research only measured at two times: at the baseline and after the writing assignments were completed. Of interest would be the effect of time on the outcomes. This could be measured with a follow up study. It would be informative to further investigate the differences in anxious relationship beliefs between people being or not being involved in a relationship. Another

point of interest for future research could be attachment style. In the current study the ECR was measuring both anxious relationship beliefs and adult attachment in relationships. This could have distorted the results positively; interesting would be the results of another attachment scale, focussing more on adult attachment style overall. Stackert and Bursik (2003) found that people who described themselves as having either an anxious-ambivalent or an avoidant adult attachment style endorsed significantly more relationship-specific irrational beliefs than those with a secure adult attachment style. These findings are an indication for the existing influence of attachment style on anxious relationship beliefs.

An implication for further research is to control for the severity of the anxious relationship beliefs and attachment to see if this affects the efficacy of the intervention. Also providing feedback could imply the effects of the writing intervention.

With respect to practical implication, the current study shed light on the challenges to treating anxious relationship beliefs, especially for those who experience relationship complication as a result of those beliefs. This study has showed the effectiveness of a structured writing intervention on anxious relationship beliefs.

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