

UNIVERSITY OF TWENTE

Effect of Futuring

To increase Resilience:

An effect Study

Author:

Max Spitzer

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Faculty of behavioral science

Supervision:

Jochem Goldberg

Dr. Anneke Sools

University of Twente

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Effect of Futuring to increase Resilience: An effect Study

Abstract

In the current world the identity of individuals is shaped by social crisis and rapidly transitions. To cope better with this crisis individuals may have the need for an increase in resilience. This study investigates the effect of the BPS manipulation “Letters from the future” on the concept of resilience. Therefore this effect study discusses if a imagining the future manipulation has a positive influence on the resilience of participants with regard to different moderating factors. To do this participants are divided into three groups over a two week intervention. In the first group participants had to write four “letters from the future” at different times. In the second group participants had to write one “letter from the future”. The third group was a control group in which the participants wrote about past events. In total 33 Dutch-speaking participants with ages ranging from 19 to 60 (M 26, 85, SD 11,859) took part in this research. The results of this study indicate that the effect of the intervention is independent of the personal traits neuroticism, extraversion and optimism. Significant results on the increase of resilience through the letters from the future could not be found. However this results can be ascribed to the limitations of this research as a lot of research in this field indicates the effectiveness of this BPS manipulation. Further this research gives ideas for follow up studies in this field.

Samenvatting

In de hedendaagse wereld wordt de identiteit van individuen gevormd door sociale crisis en de snelle overgangen. Om beter met deze crisis om te kunnen gaan, hebben individuen een verhoging van veerkracht nodig. Dit studie onderzoekt het effect van de Best possible Self (BPS) manipulatie "Brieven van de toekomst" op het begrip veerkracht. Daarom behandelt dit effect studie het invloed van toekomst verbeelding op veerkracht van de deelnemers met betrekking tot verschillende factoren. Om dit te onderzoeken worden deelnemers onderverdeeld in drie groepen gedurende een twee weken interventie. De eerste groep bestaat uit deelnemers die vier "brieven van de toekomst" moeten schrijven. Dit gebeurde op verschillende tijdstippen. De tweede groep bestaat uit deelnemers die een "brief van de toekomst" hebben geschreven. De derde groep is een controle groep waarin de deelnemers over gebeurtenissen uit het verleden hebben geschreven. In totaal hebben 33 Nederlands sprekende mensen in de leeftijd van 19 tot 60 m 26,85 ecu, SD 11,859) geparticipeerd aan dit onderzoek. De resultaten van deze studie tonen aan dat het effect van de interventie onafhankelijk is van de persoonlijke eigenschappen neuroticism, extraversie en optimisme. Significante resultaten op een verhoging van de veerkracht door de "brieven van de toekomst" zijn niet gevonden worden. Echter kan dit worden toegeschreven aan de beperkingen van dit onderzoek. Ander onderzoek heeft namelijk de effectiviteit van BPS manipulaties aangetoond. Desondanks worden in dit onderzoek ideeën voor een vervolgonderzoek gegeven.

Table of Content

1. Introduction	1
2. Methods	6
2.1 Design	6
2.2 Participants	6
2.3 Procedur	6
2.4 Measures	8
2.5 Analysis	8
3. Results	9
3.1 Hypothesis 1	9
3.2 Hypothesis 2	10
3.3 Hypothesis 3	11
4. Discussion	12
4.1 Discussion of Results	12
4.2 Strengths and Limitations	13
4.3 Ideal Follow-Up Study	14
4.4 Final Conclusion	15
5 References	17

1. Introduction

In the current world the identity of individuals is shaped by social crisis and rapidly transitions (Bohlmeijer, 2007). Individuals may cope better with this transitory nature of contemporary life by engaging in repeated anticipatory actions such as future imagination. Therefore this article investigates if a imagining the future manipulation has a positive influence on the resilience of participants with regard to different moderating factors. In this introduction first the theoretical background about the need for future imagination is discussed. Second the development of BPS (best possible self) manipulations, which is the kind of future imagination manipulation under investigation, are reviewed. In a third step the concept of resilience will be defined and linked to the current research at the University of Twente which is concerned with the effect of BPS manipulations on resilience. This relation has not been previously investigated.

Imagining the future manipulations are based on the two continuum model which is part of the positive psychology movement. When the absence of pathologies or mental illnesses is generally seen as mental health (Westerhof, G. J., & Keyes, C. L., 2010) the two continua model makes a clear distinction between the existence of mental health and pathology. More precisely there is a distinction between the pathogenic and the salutogenic approaches which are focusing on the mental illness and mental health respectively, which are connected but exist on different dimensions (Westerhof & Keyes, 2010). Therefore it is an important part of positive psychology to focus on the improvement of life quality and prevent “the pathologies that arise when life is barren and meaningless” instead of the “healing” of pathology (Seligman & Csikszentmihalyi, 2014). This field is about positive personal traits like “the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future mindedness, spirituality, high talent, and wisdom.” (Seligman & Csikszentmihalyi, 2014).

Within positive psychology many longitudinal studies have been conducted over the last three decades (Meevissen et al., 2011). According to Scheier and Carver (1986) these studies indicate that optimism correlates and predicts psychological and physiological well-being. In general optimism can be defined as “the tendency to believe that one will generally experience good outcomes in life” (Peters et al., 2010). But there is also evidence that this mental attitude can be connected with negative behaviour like less health protective behaviors and continued gambling. However “the benefits of optimism seem to outweigh the potential downsides”

(Meevissen et al., 2011) as it seems to correlate with higher levels of self-esteem, positive mood, more resilience to stressful or negative events and a better recovery from illness (Meevissen et al., 2011). Further optimists have the tendency to link negative events to external factors and perceive them as being unstable and short lasting, pessimists seem to link this reversed and perceive negative events as longer lasting (Peterson et al., 1982). Therefore more optimistic people have a general tendency to expect a more positive future for themselves and optimism is a personal trait which is desirable. Since this paper tries to investigate the manipulation of resilience and resilience seems to correlate with optimism a technique is needed that can manipulate those traits. However there is currently no research which shows a correlation of resilience and BPS manipulations. Therefore the following section will mainly discuss research with the purpose of increasing optimism. But as optimism correlates with resilience that research can be a useful basis for a manipulation with the purpose to increase resilience. This can be done by futuring or imagining a positive future which is based on the expectancy-value model. According to this model, a person will get more positive affects, as it is making progress towards an ambition. Through this process the individual can evaluate a more positive result (Carver & Scheier, 2001). This process is important in imagining the future manipulations because an imagination of the future can lead to similar positive evaluations and affections towards an ambition as actual behaviour towards a positive result (Carver & Scheier, 2001).

One of the first studies that manipulate optimism with the help of positive future imagination was conducted by King (2001). In this study participants imagined or write about their best possible self (BPS) (King, 2001). This technique “requires people to envision themselves in an imaginary future in which everything has turned out in the most optimal way” (Meevissen, 2011). The effect of the manipulation was compared to the writing about traumas which was a common narrative manipulation (King, 2001). “Writing about life goals was significantly less upsetting than writing about trauma and was associated with a significant increase in subjective well-being” (King, 2001). Further King (2001) concluded that writing about BPS “was associated with feeling less upset, more happy, and getting sick less often”. It may even be a better intervention to promote well-being than writing about the most traumatic events which is connected to the same benefits because participants has less emotional costs while writing (King, 2001). Therefore the BPS intervention seems to be a good alternative to boost optimism without the emotional cost of writing about traumatic events. Building up on the

work of King (2001) Meevissen (2011) “investigated whether daily BPS exercises are effective in boosting optimism over a period of two weeks” (Meevissen et al., 2011). In this study participants were asked to do a BPS exercise every day for 5 minutes over a period of two weeks. The results of this study suggest that the best possible self technique can boost optimism of participants. According to Meevissen (2011) this correlation was independent of the mood effect. This results were also supported through similar findings by Peters (2010) which also suggest the positive effects of BPS manipulations.

However optimism can also be correlated to different attributes. As reported by Nes, Segerstrom & Sephton (2005) optimism is also connected to “better psychological and physiological adjustment to stressors” (Nes, Segerstrom & Sephton, 2005). Further they suggested that optimism leads to a higher level of resilience to stressors like for example negative events. This relation is also suggested in a study by Kivimäki (2005) in which the health of people after a negative event (illness or death in the family) was examined. It was observed that the amount of sickness absence days, which were the indicator for health in this study, was smaller for highly optimistic individuals. “These findings suggest that optimism may reduce the risk of health problems and may be related to a faster recovery after a major life event” (Kivimäki, 2005). This leads to the question if there is an underlying concept that can be promoted by BPS and leads to a higher level in optimism as optimism correlates with different attributes like higher self-esteem, positive mood or resilience (Meevissen et al., 2011). As optimism seems to correlate with resilience and optimism can be manipulated by BPS, this seems to be an efficient approach to manipulate resilience. Additionally there is currently a lack in literature that investigates this effect empirically as will be shown in the following section.

According to a literature review on the research of resilience by Liebenberg (2009) “there remains a need for research that can validate the advantages of initiatives that build the capacity rather than those that alleviate disorders.” While earlier research on resilience focused on the emergence of resilience (Maste, 2001; Ungar, 2005), a new approach of investigating and manipulating resilience was developed at the University of Twente. In this approach an alternative form of BPS was used. Particularly Sools & Mooren (2012) developed the “narrative psychological approach to futuring (imagining the future) to address the question of how people can become resilient in order to anticipate (social) crisis and change” (Sools & Mooren, 2012). For this approach the concept of resilience by Liebenberg (2009) was used which defines

resilience as the ability to overcome negative life events and to use resources that improve well-being. Sools & Mooren (2012) also point out the importance of research on resilience because through the expansion of globalization, humans have to cope with fast developments and social change. Second humans can experience “loss of the Grand Recits, as well the extent to which people are capable of imagining the future, further impinges on the capacity and need for resilience” (Sools & Mooren, 2012). From a psychological perspective resilience is considered as “one important way of negotiating social change” (Sools & Mooren, 2012). In addition, Sools & Mooren hypothesized that “Narrative imagination could provide a powerful way of becoming resilient in this sense” (Sools & Mooren, 2012). Hence this manipulation form deserves more research to investigate the possibility to make people more resilient and thus let them function better in the modern and globalized world or as Sools & Mooren formulated “as the sense of vulnerability increases, the need for certainty might increase as well” (Sools & Mooren, 2012).

Narrative imagination of the future is an alternative form of the BPS in which participants are asked to write a letter from their future self. Through this exercise reflection on the own identity can be stimulated (Sools & Mooren, 2012) more than in the pure imagination on the future manipulation which was used by Meevissen (2011). More accurately participants are asked in this method to “imagine a particular situation at a particular moment in the future, in which something positive has been realised” (Sools & Mooren, 2012). The advantages of this method are that once the participant knows how to do this task can do it without the presence of a researcher and they are rather short compared to other related methods like life story interviews (Sools & Mooren, 2012). This makes it possible for the participant to do the task spontaneously and at a point of a day where he or she is motivated and has enough time for the task. But as shown above there is currently a lack in quantitative studies which investigate the relation of resilience and narrative Imagination as a form of BPS. Thus this study addresses the need in this research field of investigating the effect of a BPS narrative Imagination intervention on the concept of resilience.

Additionally other factors should be taken into account, as the effect of the intervention might possibly be moderated by character traits of the participants. According to Sools & Moren “an important question for future empirical research is if and how people with different personal, social, and cultural resources can become more skilled at narrative futuring as one way of developing resilience in the face of uncertainty” (Sools & Moren, 2012). Therefore personal

resources or personal traits are taken into account as it has been done in other empirical BPS studies. In the effect study by Meevissen (2011) optimism as moderating factor was taken into account as it might be possible that people that are already high in optimism might not benefit as much from the intervention as people who are low in optimism. However results of the study indicated “that initial levels of dispositional optimism did not moderate the intervention effects” (Meevissen, 2011). Therefore participants who scored higher in optimism did not benefit less from the BPS intervention and optimism had no moderating effect in this study. Nonetheless the moderating effect of optimism on the concept of resilience within a BPS intervention was not yet investigated and should therefore be part of this research. For explanatory reasons two other possible moderating factors can be taken into account. These factors are neuroticism and extraversion. These traits were already tested as a moderating factor for a BPS manipulation by Peters (2010) but this research tested the effect of BPS on future expectancies and mood. Therefore it is necessary to take them again into account, as the moderating effect of those traits was not yet tested on the concept of resilience during a BPS manipulation.

In sum, three hypotheses are tested:

1. The BPS manipulation in which participants write one or four letters leads to an increase in resilience compared to the control group in which participants write about past events.
2. The effects of the intervention in which participants write four letters will lead to a significant higher increase in resilience compared to the group in which participants write one letter. Confirmation of this hypothesis can lead to the conclusion that a more intensive manipulation is also more effective.
3. The effect of the BPS manipulation is not moderated by the traits optimism, neuroticism or extraversion.

2. Methods

2.1 Design

As mentioned above a total amount of three different conditions were used in this study. The study took place over a period of two weeks or 14 days (18.4.2016-2.5.2016), therefore references to specific days of the study are named as the number of days of the study. For example the study begun on day 1 which was the 18.4.2016 and ended on day 14 which is the 2.5.2016. All participants had to fill in the same questionnaires on day 1 and 14 of this research. Participants who were assigned to experimental group 1 wrote 4 letters from the future on the days 3, 6, 9 and 12 of the study. Additionally they filled in the questionnaires on day 1 and 14. Participants who were assigned to experimental group 2 were asked to write a letter from the future as form of a BPS manipulation on day 7. Additionally they filled in the questionnaires on day 1 and 14. The instructions for the letter from the future can be found in the attachments. Participants who were assigned to the control group had to write a letter about events of the past on day 7 of the study after they filled in the questionnaire on day 1. The instructions for the letter from the past can be found in the attachments.

2.2 Participants

This study was conducted with a total amount of three conditions to which the participants were randomly assigned after the beginning of the study. This paper will refer to these conditions as control condition, experimental condition 1 and experimental condition 2. A total of 33 Dutch-speaking participants with ages ranging from 19 to 60 (M 26,85, SD 11,859) was used as pool. From this pool 8 participants were male and 25 female. Through random distribution 10 participants were assigned to group 1, 11 participants were assigned to group 2 and 12 participants were assigned to group 3. Participants were selected through convenience sampling. Therefore participants were mostly psychology students from the University of Twente.

2.3 Procedure

All testing was done online with the help of the Qualtrics survey software. Therefore participants take part in this research from their own computer or another computer. Further participants were asked to take part in the study in a quiet area without distraction. One day before the research

started participants got instructions about the research via an email. All instructions that the participants received can be found in the attachments at the end of this paper. Participants were informed about the procedure of the research and got the instruction about how to write a letter from the future and the past. One the first day of the research participants received another email with the link to the study and again the instructions of the research as attachment on this email. By opening the link the participants were transferred to the Qualtrics survey, where the whole study takes place. At first the participants had to fill in the informed consent and afterwards they filled in different questionnaires. As this research was conducted by different researchers who measured different construct, this report will only approach the constructs which are used for the purpose of this research.

The three questionnaires which are important for this study were the Brief resilience scale, the Life orientation test and the FFI-NEO. More information about these measurements can be found in section 2.4 Measures. Finishing these questionnaires took the participants between 15 and 30 minutes. After the participants finished the questionnaires they were randomly assigned to the control group, experimental group 1 or experimental group 2. More information about the different conditions of these groups can be found in section 2.2. Manipulation. Afterwards the participants saw an instruction on the screen when they had to write their letters from the future or the past and the participants were asked to remember the dates for the letters. After that the participants could close the survey software at this point. The survey saves the information and lets participants proceed when they open the link to the study again and the point they stopped. Next all the participants received reminder emails on the dates on which they were asked to write their letters. Depending on which group the participants were in they were asked to write 1 to 4 letters from the future or a letter from the past in an essay box provided through the Qualtrics software on different days. Writing one of these letters took the participants between 20 and 40 minutes. On the last day of the study the participants were again reminded via an e-mail to fill in different questionnaires again. Essential for this study is the repeated completion of the Brief resilience scale to make comparison of the effect of the manipulation on the different groups possible.

2.4 Measures

To measure results of the study three different measures were used: The Brief resilience scale, the Life orientation test and the FFI NEO.

First the Dutch version of the Life orientation test was used to “measure the level of dispositional optimism of participants” (Peters, 2010). The LOT has 14 items that are rated on a six-point scale (elke dag-nooit). According to a research concerned with the accuracy of the LOT “item parameter estimates and the test information function showed that each item and the global scale satisfactorily measured the latent trait” (Chiesi et. al., 2013). The internal consistency of this scale is $\alpha = 0.65$ which is seen as acceptable.

Second parts of the Dutch version of the FFI NEO were used to measure the character traits extraversion and neuroticism. These parts consist of two times 12 statements that are rated through the participants on a 5 point scale (Helemaal oneens- Helemaal eens). The internal consistency for the extraversion scale is $\alpha = 0.74$ and for the neuroticism scale $\alpha = 0.78$. These scores are seen as acceptable.

Further this scale was evaluated through COTAN. According to this evaluation the scales were rated as good or sufficient.

Last the Brief Resilience scale was used to measure the effect of the manipulation on the concept of resilience. The BRS has 18 statements that are rated through the participants on a four point scale (sterk mee oneens- sterk mee eens). The internal consistency of this scale is $\alpha = 0.755$ which is seen as acceptable. According to Smith et. al. (2008) this scale is valid and reliable. Further the BRS “measured as a unitary construct” (Smith, 2008).

2.5 Analysis

To test the three hypothesis different statistical tests were run in SPSS 22. The first hypothesis presumed that participants who participated in the BPS intervention will have an increase in the scores on the BRS. To test the hypothesis an ANOVA was conducted that tested if participants scored significantly higher on the BRS scale if they participated in the BPS manipulation (Group 1 or Group 2) than participants who did not participate in a BPS manipulation and participated in the control condition instead. Thus the ANOVA compared the score differences of the pre-, and the posttest depending on which condition the participants were assigned to.

The second hypothesis presumed that participants who wrote 4 letters from the future scored significantly higher on the BRS scale than participants who wrote one letter. To test this hypothesis an ANOVA was conducted that compared the score differences of the pre-, and the posttest depending on the condition of the participant (experimental group 1, experimental group 2).

The third hypothesis presumed that the effect of the manipulation were not moderated by the traits optimism, neuroticism or extraversion. In order to test this hypothesis a moderator analysis was conducted. Therefore the centralized scores of the independent variable and the possible moderating variables were tested for a linear regression with the dependent variable.

3. Results

3.1 Hypothesis 1

Unlike the expected outcome the comparison of the differences of the pre-, and posttest showed that there was no significant higher score on the BRS for participants who did an BPS exercise $F(\alpha)=0,264$. These results can be found in Table 1. Moreover the participants in the control condition did have a larger difference between the pre-, and the posttest (0,250) than the experimental conditions (0,103). The results can be found in Table 2. Thus hypotheses 1 needs to be rejected. A total amount of 21 participants who received a BPS manipulation were used and a total amount of 12 participants who were in the control condition were used for this analysis.

Table 1

Comparison Effect of Treatment

Treatment	Mean	Std. Deviation	N
Letters from the future	0.1032	0.311	21
Control Group	0.25	0.399	12
Total	0.1566	0.358	33

** $p < 0.05$*

Table 2

Effect of Treatment

Sources	Sig
Corrected Mode	0.264
Intercept	0.01
Treatment	0.264
Error	

* $p < 0.05$

3.2 Hypothesis 2

Unlike the expected outcome the comparison of the differences of the pre, - and the posttest showed that there was no significant higher score for the participants who were in experimental group 1 $F(\alpha) = 0,968$ than group 2. This result can be found in Table 3. The participants in the experimental group 1 had a slightly smaller mean differences (0, 1) than participants in the experimental group 2 (0, 1061). Therefore Hypotheses 2 needs to be rejected too.

Table 3

Comparison Between Experimental groups

Treatment	Mean	Std. Deviation	N
4 Letters	0.1	0.335	10
1 Letter	0.1061	0.344	11
Total	0.1032	0.331	21

* $p < 0.05$

Table 4

Between experimental groups

Sources	Sig
Corrected Mode	0.968
Intercept	0.181
Treatment	0.968
Error	

* $p < 0,05$

3.3 Hypothesis 3

Like expected the three character traits extraversion, neuroticism and optimism had no moderating effect on the effect of the manipulation. The statistical significance of the moderating effect can be found in Table 5 (Neuroticism $F(\alpha) = 0,825$; Extraversion $F(\alpha) = 0,087$; Optimism $F(\alpha) = 0,437$). Therefore the last hypothesis will not be rejected.

Tabel 5

Moderator Analysis

Models	Unstandardized	Coefficients	Standardized	Coefficients	Sig.
	B	Std. Error	Beta	t	
Constant	0.157	0.05		3.104	0.04
FFI Neuroticism	-0.031	0.141	-0.051	-0.223	0.825
FFI Extraversion	-0.324	0.183	-0.331	-1.774	0.087
LOT Optimism	1.08	0.137	0.151	0.788	0.437

* $p < 0.05$

4. Discussion

4.1 Discussion of Results

This study showed no increase of resilience of participants in the BPS manipulation “a letter to the future”. First the effect of this manipulation was compared to a control group, writing about an event of the past. The BPS manipulation had no significant influence on resilience compared to the control group. Related results can be found in one of the first BPS studies by King (2001). In his research the effect of writing about the future was compared to writing about traumatic events of the past as an intervention to increase participant’s wellbeing. According to this research writing about the future and past had similar increasing effects on wellbeing, it was just that writing about the past was more emotionally challenging for participants. Therefore participants in this study could have also benefited from the control condition as they wrote about past events as their mean score of resilience also increased. This would make it impossible to measure significant results. However the possible emotionally challenging effect by the writing tasks were not included in this study thus there can be made no statements about this possible factor.

Secondly the effect of the manipulation on resilience of the two different experimental groups was compared because “Future research should examine whether the effects can be enhanced when the manipulation is extended, i.e. instead of a single writing and imagery session, repeated sessions are offered” (Peters, 2010). But the extended manipulation in which the participants had to write four letters did not have a significant larger effect on resilience than the short variant. Therefore it can be concluded that repeated sessions of this manipulations with the same tasks are not useful.

Finally the moderating effect of three personal traits were tested. As expected the personal traits optimism, neuroticism and extraversion had no effect on the effect of the manipulation. Therefore this results go in line with research by Peters (2010) in which also no moderating effect of this traits on a BPS manipulation could be found. It can be concluded that character traits as measured in this study do not influence the effect of the intervention. Thus this form of manipulation can be effective with no regards to the personal traits of the participants. Therefore this manipulation can be used without taking the personal traits of participants into

account. This is an advantage against manipulations that need to be done with regards to personal traits of participants.

4.2 Strengths and Limitations

The limitation which had probably the biggest influence on the results was the sample size. At the beginning of the study a total amount of 120 participants had assigned to this online study. But the use of the survey program Qualtrics lead to different errors. Depending on which browser the participants used the program was not able to save information of all the participants. This lead to the problem that many participants could not finish their study and hence their data needed to be rejected. Another part of the data was not usable because participants did not read or did not understand the instructions for the “letter to the future” and performed the task not as they were asked. This data could also not be included in the results. However only data from 33 respondents could be used for analyzing the effect of the intervention. This reduction of the sample can have a significant influence on the results, especially because this relatively small group was divided into smaller groups for each condition. Through the split of the participants over three conditions of which two were experimental conditions there are also differences in the amount of participants in the relevant conditions for these hypothesis.

Future research which wants to investigate the effect of “letters to the future” on resilience should use another research design. The pre-, and posttest can still be done online with a survey software like Qualtrics. However the pre-, - and posttest should be done in two different online surveys to avoid the problems that occurred due to saving problems. It is also possible to invite participants to two meetings where they can fill in the surveys to avoid the online surrounding. These meetings could also have the advantage that the researcher can give the instructions for the task. Participants would have the opportunity to ask questions and misunderstandings and ignoring the instructions by participants can be avoided.

Another limitation which occurred during the data collection was also related to the saving problems with Qualtrics. Due to this earlier mentioned problem several participants were asked to send their letter from the future via e-mail to maintain a large sample size. However when participants send their “letter from the future” via email they could have been concerned that the letter could be linked to their name even if this was not the case. This could lead to a

decrease in honesty in the writing of the letters due to social desirability. But this limitations also give the possibility to give recommendations to future research which will be discussed in the following section. The “letters from the future” should be excluded from the online environment to avoid this problem. Participants could write the letters at home with pen and pencil and hand them in afterwards. By using participant numbers these letters can be kept anonymous to avoid the effect of social desirability. However participants still need to be reminded via e-mail that they have to fill in the letters or attend to the pre-, and posttest.

4.3 Ideal Follow-Up Study

An ideal follow-up study should include some new aspects as the pure extension of the “letters from the future” manipulation seems to have no significant advantage. According to Riskind et al. (1996) an extended BPS manipulation could be more useful if writing about various life domains are systematically stimulated. As mentioned by Sools & Mooren (2012) BPS manipulations give participants the opportunity to get enhanced insight in their own possibilities and their own values. By including different aspects to write about participants might get insight about more aspects of their life. This could increase the effect of the manipulation on resilience. Therefore an extension of the “letters from the future” could not only include more written letters but a stimulation to write about different aspects of life.

This aspect could be included by using again three groups to which the participants are randomly assigned. One group should be the control group with a writing task about past events. The second group should write one “letter from the future” to have the normal effect of this intervention. The third group should have an extended manipulation with three letters that will stimulate the participants to write about different domains in life. These domains could be 1) social future situation, 2) professional or work related future situation and a 3) romantic or relationship future situation. However a fourth group with an extended “letters from the future” manipulation as used in this study is not necessary as the results of this study suggest no increased effect of the manipulation through a larger amount of similar “letters from the future”.

A follow up study could also measure how emotionally challenging the task are for the participants. As mentioned earlier King (2001) compared the effect of writing about the past to futuring and found the effect of this manipulations to be similar effective but writing about the past was more emotional challenging for participants. If a follow up study indicates the same

effect, it would indicate an advantage of the “letters from the future” compared to the writing about the past even if both manipulations had the same effect on resilience. However including this aspect into a follow up study could be done by measuring how emotional challenged participants are after finishing the tasks by a short scale.

Additionally there is another reason that follow-up research on “letters from the future” can be seen as necessary at the University of Twente due to the possibility to increase resilience. As Peter Gray mentions in his book “Freedom to learn” there is a decline in student’s resilience leading to larger fear of bad grading and struggle with everyday life. This can lead to serious breakdowns of these students or the need for counselling (Gray, 2015). However with the changes in university policy more grading and exams are included. Therefore the need for students to be more resilient could increase. If more future research suggest the effectiveness of “letters from the future” on resilience this could be a powerful tool to make students more resilient and cause a decrease in students breakdowns and need for counselling. Because according to Gray (2015) these issues are caused by a decline in student’s resilience. By doing further research on “letters from the future” with samples consisting of students a win-win situation could be achieved. On the one hand there is the possibility to conduct more knowledge about this manipulation form and the connection to resilience, on the other hand resilience of students could be increased and could therefore lead to less breakdowns and less need for counselling.

4.4 Final Conclusion

In this research the effect of “Letters from the future” on resilience were tested. There were no significant relation found between this BPS manipulation and resilience. However, as mentioned earlier this may be caused through the comparison with another narrative approach as control sample and the limitations of this study. As already mentioned different studies support the effectiveness of this manipulation (Mevisen, 2011; Peters, 2010; King, 2001). Under optimal conditions, like a bigger sample size, the research by hand could have indicated results that go in line with the mentioned studies. Further the research by hand indicates that “letters from the future” can be used with no regards to character traits like optimism, neuroticism or extraversion. That indicates that this manipulation is a good tool to use when a bigger sample size needs to be manipulated because the researcher does not need to measure the personal traits of this group

Effect of Futuring to increase Resilience: An effect Study

before the intervention. Moreover the research by hand indicates that an extended version of a “letters from the future “manipulation is not more effective than a short version. But this research advises to test for a new form of an extended version of this manipulation with letters regarding different life related topics. This approach has the possibility to make the tool “letters from the future “more effective.

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Effect of Futuring to increase Resilience: An effect Study

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