



Tearing an example down or pulling yourself up

Restoring self-esteem after healthy living standard
comparison by punishment or self-affirmation

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Abstract

In this thesis we examined whether self-esteem in women will decrease when they compare themselves to an extremely healthy other, and whether the self-esteem can be restored through either punishment or a combination of punishment and self-affirmation, compared to a control condition. A pilot study and an experiment were conducted online. Results showed that comparison to an *extreme health example* (EHE) lowers self-esteem (marginally significant) and makes people feel more threatened than confrontation with a regular blogger. The height of the punishment was not different between the *EHE* and the regular blogger condition. Self-esteem was however higher for those who got the chance to restore through punishment and self-affirmation in comparison to those who did not get this opportunity. Implications for further research are discussed.

Introduction

You could say that we are living in a time of a food revolution. It seems as if these days everyone is trying to find healthier and better food. People are giving up refined sugar, gluten, dairy, meat, processed food and sometimes all at the same time, while (occasionally) adding “superfoods”, that people claim to have extra nutritional value.

Because of the increasing interest people have in being healthy, there are a lot of people who are making a living out of communicating their extra healthy living styles and who actually become famous for it. Think of Gwyneth Paltrow, Rens Kroes (Dutch example of a “superfoodie”) and *Skinny Bitch*-authors Kim Barnouin and Rory Freedman (2005). They all look amazing and describe in detail what they (do not) eat and do so others can look like them. However, for the ordinary human these lifestyles are near the impossible, as they are very extreme and require a lot of time and money. It is difficult to avoid for example refined sugar, as a lot of products contain this, even products you do not expect it to like tomato sauce. Making everything you eat from scratch takes a lot of time and substitute products (without sugar or the like) are more expensive than regular products. Indeed, a study by Bisogni, Connors, Devine and Sobal (2002) showed that people often think that being a healthy eater all the time is extreme and impossible while, at the same time, people think it is their responsibility to be as healthy as they can be. Having a healthy lifestyle can be a part of someone’s life and thus identity.

Identity

Identity is a very broad term that has multiple definitions, but most agree that identity consists of different aspects that are related to the person, including group memberships (Reed, Forehand, Puntoni, & Warlop, 2012). Every decision that someone can make, will most likely have a relationship with their identity. Therefore (food) brand choice plays a part in identity as well. Escalas and Bettman (2005) show in their research that brands are part of self-concept construction and that brand connections are stronger for brands that are consistent with the in-group. It is therefore not unreasonable that food has a link with identity. It might not be the first thing to think of when describing identity, but the link is surely there. According to Franchi (2012), food choices are often not made through rational thinking. They are largely emotion based and are not just for satisfying a basic human need but can serve social goals like strengthening relationships as well. Though food choices develop during a lifetime, they often become habits. Through this process, food can become part of an identity. Food can also be used to create and manage a public image (Vartanian, Herman, & Polivy, 2007, Vartanian, 2015). For example, people who eat healthy (think vegetables, fruit and low fat products) are

seen as more feminine than people who eat a lot of meat and greasy food. The latter are seen as more masculine. This can influence both the image people have of you and how you see yourself.

Social environment also plays a big part in the choices people make about their food. For example, Polivy and Pliner (2015) argue that what we eat, how much we eat and how we feel about this is determined by social comparison. In the research by Mollen, Rimal, Ruiters and Kok (2013) on an on-campus food court, they compared the effects of descriptive (how people really behave) and injunctive norms (what is accepted as behaviour) on food choice. They used a healthy descriptive norm (*“Every day more than 150 [name of university] students have a tossed salad for lunch here”*), healthy injunctive norm (*“Have a tossed salad for lunch!”*), an unhealthy descriptive norm (*“Every day more than 150 [name of university] students have a burger for lunch here”*) and a no-message condition. As it turned out, healthy social norms (both injunctive norms and descriptive norms) resulted in more healthy food choices. Also, research by Bartels and Reinders (2010) showed that social identification and social environment are important in predicting new product adoption in the context of organic food. Committing to for example organic food can act as a sign of a (new) social identity.

As stated by Mintz and Du Bois (2002), food is often used to define and strengthen group membership. This can be on a small scale (think of a group of friends that regularly have dinner together), but also on a much larger scale with for example cultures that have certain foods associated with their culture (e.g. Chinese who have a preference for rice over potatoes and rarely eat bread). It can also be a subgroup identity, like hipsters, who define themselves for a large part by what they eat and which food they boycott (Cronin, McCarthy, & Collins, 2014). Even for young people food plays a part in their identity, social belonging and status (Stead, McDermott, MacKintosh, & Adamson, 2011).

Identity and Self-esteem

All in all, what and how we eat certainly plays a part in our identity. In turn identity has a link with our self-esteem (or self-view or self-image). Self-esteem consists of the extent to which one views him- or herself as competent, successful and able (Crocker, & Major, 1989). According to research done with children, those who have a healthy eating pattern have a higher self-esteem (Andreou, Lafis, Giannaki, & Tornaritis, 1997). However, comparing oneself with an extremely healthy person, or other “healthy” standards could lead to a decrease in the self-esteem. People can see themselves as less successful if they are not living up to that standard, all the while they might find it very important to live a healthy life. The link between identity and self-esteem has not yet been thoroughly researched, but one study that started to shine a

light on the link between self-esteem and identity regarding food, is the research done by Costa, Zepeda and Sirieix (2014). In this research they focused on the social value of organic food which can also be seen as very healthy. In this field study with organic food shoppers in France, they found that people often think organic food is associated with snobbism. They also found that people who do buy organic food can be brought down by others organic food shoppers if they only eat partially organic (which can give people that feeling of an unachievable healthy lifestyle). The results of the study indicated that organic food has a social value for people. If something has a social value it becomes criticisable for others, but also a part of your identity. This makes it likely that the same will apply to food in a healthy lifestyle. Thus, if someone criticizes your lifestyle/identity this could make you feel worse about yourself, because you think you are less successful and could, as a consequence bring down your self-esteem. This is, of course, an unfavourable situation. Human nature dictates that it does not like to be low on self-esteem. Sedikides (1993) states that this is why one is always looking for ways to self-enhance.

Restoring self-esteem

There are several ways to restore self-esteem. Bringing down the inflictor of the decreased self-esteem is one of them (van Dijk, Ouwerkerk, Wesseling, & van Koningsbruggen, 2011a). When the other makes a misstep, this can bring this person down and makes him or her look less perfect, with as a consequence that you will feel better about yourself. This can lead you to make a downward comparison; you think that you are better off than the other. Especially people who are low in self-esteem are more willing to make a downward comparison to enhance their self-esteem (Wills, 1981). When something bad befalls a high achiever (a.k.a. the person that makes you feel bad about yourself) you can feel *schadenfreude* (“a feeling of enjoyment that comes from seeing or hearing about the troubles of other people”; Merriam-Webster’s online dictionary, 2014). It is stated that *schadenfreude* is experienced as a way to protect or enhance self-evaluation (van Dijk, et al. 2011a). According to for example Van Dijk, Koningsbruggen, Ouwerkerk and Wesseling (2011b), low self-esteem can cause more self-threat when confronted with a high achiever, and with that increase *schadenfreude* towards the high achiever when something unfortunate happens to him or her.

Related to *schadenfreude* is the feeling of wanting vengeance; both feelings activate similar brain areas that are associated with reward, satisfaction and joy (Seip, Rotteveel, van Dillen, & van Dijk, in van Dijk, & Ouwerkerk, 2014). The difference is that *schadenfreude* appears when something bad befalls someone, while vengeance is the active form of hurting the other. Wanting vengeance and actually doing something with it is different, but a way that

this desire for vengeance could present itself is by punishing the person who inflicted the suffering or decrease of self-esteem. In research by Cikara and Fiske (2013), the willingness to harm the supporters of a rivalling baseball team was measured and they found that people were more likely to insult, threaten or hit a rivalling team than a neutral team. By punishing the supporters of the rivalling team, supporters of the first team could make themselves feel better. Taking someone down could make a more favourable comparison for yourself and gives you more control than when you are waiting for something bad to befall the other (about which you can feel schadenfreude).

Another way to restore or improve self-esteem is to self-affirm (e.g. Steele, 1988, as cited in van Dijk, 2014; van Dijk, et al., 2011b). This means that instead of bringing the other down, you can pull yourself up by making you feel better about yourself by for instance thinking about and ranking personal values (van Dijk, et al. 2011b). An example of this phenomenon is that when people receive threatening (relevant) health information, they can reduce their defensive reaction by self-affirming (van Koningsbruggen, Das, & Roskos-Ewoldsen, 2009). Another research by Spencer, Fein and Lomore (2001) also found that the opportunity to self-affirm can reduce concerns about threats to the self-esteem. Haddock and Gebauer (2011) also say that self-affirmation can reduce defensive reactions when threatened. All this implies that when getting an opportunity to self-affirm, self-esteem will restore, causing defensive reactions, like for example willingness to punish, to decrease since they are no longer deemed necessary to protect self-esteem.

Thus, concluding from previous research, what we eat and the way we eat is part of our identity. When we compare ourselves to another, our identity is threatened and we have a need to restore this. There are two ways to do this: getting revenge or self-affirmation. Very little research has been done on taking revenge to restore self-esteem, which is why the current research will examine this process, with a focus on the setting of food and identity. We will concentrate on the influence a comparison with an *extreme health example* (EHE, in our case a blogger that has an extremely healthy lifestyle that requires a lot of discipline) has on self-esteem, self-affirmation and willingness to punish. The hypotheses that will be answered in this study are:

- 1) When one compares oneself with an EHE, self-esteem decreases.
- 2) When the EHE commits a misstep, one will punish this person, more than a “regular” blogger/person (because punishing the EHE will restore self-esteem).

- 3) When one can self-affirm, the negative effect (meaning the decrease in self-esteem) of the comparison with the EHE will decrease. As a result, the EHE will no longer be punished to a greater extent than the regular blogger.

To research these hypotheses, we have set up two experiments. The first experiment will test whether or not the confrontation with an EHE will decrease self-esteem (hypothesis 1). This is essential for the research on restoring self-esteem; if there is no decrease, no restoration is possible. This first experiment is therefore a short pilot and has two conditions. Participants will either be confronted with an EHE or a regular person. In both cases this will concern a food blogger, but texts are modified to fit the condition. Participants will read an introduction and a recipe from this blogger. Self-esteem will be measured after confrontation to see if there is an effect on self-esteem when confronted with another person. We expect that self-esteem will be lower in the group that compares themselves to an EHE than the group who will compare themselves to a regular individual.

The second experiment consists of six conditions in which a different group of participants will again either be confronted with an extremely healthy blogger or a regular blogger. Depending on the condition, they will then get the opportunity to punish or they get to punish in combination with self-affirmation (Restoration opportunity). There will also be a control condition in which participants will not have a restoration opportunity. On the basis of the severity of the punishing (measured with the height of a fine), the taking of the self-affirmation opportunity, and self-esteem, we will answer our second and third hypotheses. We expect that the degree of punishment will be more severe when an upward comparison (with an EHE) is made, than when the participant compares the self to a regular person (hypothesis 2). However, we expect no heightened severity of punishment when people have the option to affirm themselves (hypothesis 3).

We also expect that restoration opportunity has an effect on self-esteem. In the upward comparison condition we expect a similar effect in the punishment, and the self-affirmation including punishment conditions (self-esteem goes up in both conditions), but no effect when no punishment can be given. When compared to a regular blogger, we expect self-esteem to go up when punishment and no punishment opportunity occur but that this effect is stronger when a self-affirmation opportunity also occurs (hypothesis 3).

Method pilot

Participants and design

The participants for the first study were recruited mainly from outside the university via social media and personal contacts. We targeted only female participants. The desired amount

of participants for this experiment was 75. The total of participants was 80, but somehow three male participants completed the survey, they are filtered out of the analysis and we thus remain with 77 participants. The average age of these women was 28.86 years, $SD = 9.70$ with a range between 19 and 62. The majority (93.5%) was of Dutch origins and had an university level education (55.8%), 31.2% had a college education. The average BMI score (see **Variables**) was 22.91, $SD = 3.72$.

Six participants were considered outliers because they were 54 years or older. Even though the corresponding Cooke's distances say that they do not have a large influence, and we did not consider this beforehand, participants over 35 (eight in total) are excluded from further analysis, as we fear that an older participant might not relate to the young blogger as much as a young participant will. To achieve affective responses to targets of social comparison, identification is important (Groothof, Siero, & Buunk, 2007). The second study will most likely not have this problem, as mainly first year psychology students will be recruited for this and they will presumably be under 25. Removing participants over 35 from analysis also means that the few outliers on age or BMI scores are automatically excluded. There were no outliers found on self-esteem score or self-reported Lifestyle importance. This all leaves us with 69 participants.

The design of the first study is a 2 (comparison of lifestyle: EHE vs. regular) condition design, assigned randomly to participants. Self-esteem and envy are both measured (see details below in the variables section).

Variables

The dependent variable that we focus on in the pilot is the self-esteem score. This concept is to be measured with 10 items from a translation into Dutch of the Rosenberg self-esteem test (Franck, De Raedt, Barbez, & Rosseel, 2008, see appendix A). For example "*Generally speaking I am happy with myself*" and "*I feel that I have a number of good qualities*", to be answered on a four-point scale ranging from "*Completely agree*" to "*Completely disagree*". Envy is also measured in this research with one question ("*I envy the lifestyle just described in the blog*") which will be added to the self-esteem questions and thus answered on the same four-point scale. This item will not be covered in this thesis.

The random manipulation distinguished whether someone will compare herself with a regular person or the extremely healthy example (EHE). The manipulation consisted of a recipe, picture of the recipe, text about the blogger and a picture of the blogger (see appendix D). The recipe and its pictures come from the website of my peer Emma Duchhart, with whom I

cooperated in this research. The picture of the blogger came from a royalty free picture databank (see appendix C).

Other variables that were measured for control purposes are BMI and current lifestyle. BMI was calculated by dividing weight by the squared height in meters ($\text{weight}/(\text{height}^2)$). People with a high BMI could be interesting when comparing the lifestyles, since both comparisons could be healthy in their eyes. Also, the current lifestyle of people is of influence on the degree people truly experience a downward comparison during manipulation. A self-made questionnaire of five questions determined whether the participant thinks she has a healthy lifestyle, for example: “*Generally speaking, I think I have a healthy eating pattern*” and “*I am very consciously pursuing a healthy eating pattern*”, all to be answered on a five-point scale ranging from “*Fully agree*” to “*Fully disagree*”. To see whether our manipulation was successful, three manipulation check questions are included. These questions are answered on the same scale as the lifestyle questions.

Procedure

The purpose of the first study was to see if there was a significant difference in self-esteem between people who were confronted with an EHE and people confronted with a regular example of a food blogger (first hypothesis). This research was conducted by administering online questionnaires in a broad population of both people inside and outside the university of Leiden. We targeted only female participants. We chose to do this to eliminate gender differences and because it is believed that women are more concerned with healthy eating habits (e.g. Chambers, Lobb, Butler, & Traill, 2008; Driskell, Meckna, & Scales, 2006; Oakes, & Slotterback, 2007; Prättätä, et al., 2006). Also, the blogger used in the experiment is female. To achieve identification a subject has to be self-relevant. We think that (identical) gender is important in self-relevance, we therefore assume that identifying is more difficult for a man trying to identify with a woman. Upon recruiting the women will think that they are participating in research on health and social media. The first questionnaire starts with the informed consent and basic demographic questions (e.g. age, gender, education). After this participants are randomly assigned to the two conditions (Comparison condition: confrontation with EHE or regular blogger). The EHE condition will receive three questions regarding healthy eating. They are framed in such a way that practically no one can live up to the standards set in these questions. This is done to enhance the salience of healthy eating. Participants in the regular blogger condition will have to answer three (filler) questions about marital status, children and work. These questions are purely intended to make both questionnaires the same length.

Next the participants read an introductory text about the food blogger and a recipe written by this blogger (see appendix D). Pictures of the recipe and the blogger are included to enhance manipulation (see appendix C). When they have read both, self-esteem and envy will be assessed. Current lifestyle assessment follows with five questions on a five-point scale on their perception of their lifestyle. The debriefing after this will mark the end of this first experiment.

Results pilot

Manipulation check

An ANOVA was performed on the manipulation check questions to see whether our manipulation made a difference between conditions. The reliability of the manipulation check scale was relatively low, $\alpha = .57$, and since this scale consisted of only three questions, no removal of a question could improve the alpha reliability. This is why these questions and their effects will be discussed separately.

Assumptions for ANOVAs were checked separately for each question. According to the Kolmogorov-Smirnov-test, neither of the reported manipulation check scores are normally distributed, $p < .001$ for all three questions. However, this is not considered a problem since F is considered robust because of our sufficiently large N . The assumption of homogeneous variances is not violated for either question, since both the Levene's tests are not significant (First question: $p = .779$; Second question: $p = .128$; Third question: $p = .154$) and group sizes do not differ to the factor 1.5. Independence of observations is assumed due to the research design. This means that we can continue with our ANOVAs.

The first question (“*After reading about the blogger, I felt threatened.*”) yielded marginally significant differences between conditions, with participants feeling more threatened in the EHE condition ($M = 3.97$) than in the control condition ($M = 4.32$, higher scores indicating less agreement with the statement), $F(1, 67) = 3.90$, $p = .053$. The second question (“*After reading about the blogger, I wish I had the same life.*”) showed no significant differences, $F(1, 67) = 2.53$, $p = .116$, but indicated the expected direction, $M = 3.58$ for the EHE condition and $M = 3.97$ for the control condition. The third question (“*After reading about the blogger, I felt good about myself*”) was not significant either, $F(1, 67) = .821$, $p = .368$, but again showed the expected direction, $M = 3.08$ for the EHE condition and $M = 3.26$ for the control condition. Even though the questions yielded no significant result in two cases, all manipulation check questions will be included separately as a covariate with self-esteem, after analyzing self-esteem alone (see **Self-Esteem scores**). By including these manipulation

questions in secondary analysis, we can control for influences of threatened feeling, envy and emotional influence of the manipulation on the participants.

BMI was also checked beforehand to search for a-priori differences. A difference was indeed found between the two groups on the variable BMI ($F(1, 63) = 7.05, p = .010$). BMI will therefore be controlled for when analyzing self-esteem scores.

Lifestyle

The reliability of the Lifestyle scale was $\alpha = .81$ and could not be improved by removing one of the questions. The Kolmogorov-Smirnov-test shows us that the reported self-esteem scores are not normally distributed, $p < .001$. However, again this is not considered a problem, since t is considered robust because of our large N . Both the Levene's test is not significant ($p = .324$) and group sizes do not differ to the factor 1.5, therefore the assumption of homogeneous variances is not violated. Because of our research design, we assume independence of observations. We will continue with our t -test, which shows that there is no significant difference in lifestyle between the two conditions, $t = -.55, p = .59$.

Self-Esteem scores

Assumptions of normality were checked for self-esteem scores. The reliability of the self-esteem scale was $\alpha = .74$. According to the Kolmogorov-Smirnov-test, the reported self-esteem scores are not normally distributed, $p = .025$. However, this is not considered a problem, since F is considered robust because of our sufficiently large N . The assumption of homogeneous variances is not violated, since both Levene's test is not significant ($p = .602$) and group sizes do not differ to the factor 1.5. Independence of observations is assumed, due to the research design. This means that we can continue with our ANOVA.

The initial ANOVA revealed a marginally significant difference between the two groups; $F = -1.684, df = 67, p = .097$. The means point in the right direction, since we expected that the self-esteem scores would be higher in the control condition ($M = 31.42, SD = 3.46$) than in the EHE condition ($M = 30.08, SD = 3.14$). Because the difference is only marginally significant, hypothesis one is neither proven nor disproven. Hopefully the second experiment can shed some more light on this.

Because we also found an a-priori difference between the two groups on BMI this was controlled for. However, controlling for BMI by means of a covariance analysis did not affect the pattern of results.

To see whether there was an effect of the manipulation on self-esteem, an ANOVA was performed with each manipulation check question as covariate, analyzed separately. When using the first manipulation check question "*After reading about the blogger, I felt threatened*"

as a covariate on the self-esteem scale with an ANOVA, a significant main effect of the question was found, $F(1, 65) = 7.463, p = .008$, but no significant effect of condition and no interaction were found. This indicated that, overall, participants who felt more threatened, had lower self-esteem.

The second manipulation check question “*After reading about the blogger, I wish I could have the same life*” as covariate, shows both a significant main effect of the manipulation check question, $F(1, 65) = 7.50, p = .008$ and a marginally significant interaction between condition and the second manipulation check question, $F(1, 65) = 3.684, p = .059$. As expected, self-esteem was lower in the EHE condition ($M = 30.13, SD = .512$), than in the control condition ($M = 31.04, SD = .572$). This would indicate that people who were more envious of the lifestyle of the blogger (in other words, agreed more with the statement) had lower self-esteem. The third manipulation check question “*After reading about the blogger, I felt good about myself*” was used as a covariate as well, however, no significant differences were found.

We checked to see whether self-reported lifestyle had any relationship with the results of self-esteem. To do this, lifestyle was entered as a covariate in an ANOVA analysis with condition. According to the ANOVA, lifestyle did neither have a significant main effect, nor a significant interaction on self-esteem.

Discussion pilot

Even though difference between the two groups in self-esteem scores was only found to be marginally significant, the results from the first analysis did indicate the expected direction. Moreover, analysis of the manipulation check indicates that participants who felt more threatened had a lower self-esteem. Therefore, we expect that if we make the differences between the bloggers more pronounced in the next experiment, we can achieve the proposed effect of social comparison on self-esteem. To strengthen the differences between the bloggers, we will shorten the recipe to eliminate a diminishing of the effect over time and make more salient differences by differentiating the recipes between the blogger conditions. We will also make the text about the blogger even more extreme in the case of the EHE and the text of the regular blogger is modified to a more stereotype eating pattern of a student (e.g. ordering pizza and not wanting to cook every day). Also, the participants were recruited in our own circles. This could mean that the group was not a good reflection of the population, as people who are alike tend to stick together. In the next experiment participants will most likely consist mostly of first year psychology students, which will mean that the group is possibly more homogenous and younger. Though this can enhance the identification needed for more significant results, this could be a difficulty for generalization to the population if we find significant results.

Of course, with self-reported data there is always the risk that people will give socially desired answers, and thus will not answer honestly to the questions about self-esteem. This would mean that the self-esteem scores of participants are more centered round the mean score (or positively skewed) and not on the (extreme) low ends of the spectrum.

In the next experiment a three level condition will be added that concerns Restoration. The three conditions will be punishment, self-affirmation + punishment¹ and no punishment. These conditions will distinguish whether restoration of self-esteem is possible after comparison to an EHE through these means.

Method experiment

Participants and design

The participants for this study were first and foremost recruited from the pool of first year Psychology students in exchange for study credit. Since recruitment was very slow, participants were also recruited through Facebook (in exchange for taking part in their own study) and through personal channels. Again, only females were approached and this time age was also taken into consideration (no participants over 35). This ultimately resulted in 169 responses, exceeding the desired 150. However, two male and three older participants (36, 60 and 42 years of age) were included in the dataset and 23 responses remained incomplete. When these participants are excluded, we remain with a total of 141 participants.

The demographic information of the study is as follows. The average age of the women was 21.32 years, $SD = 3.02$ with a range between 18 and 32. The majority of the participants was of Dutch origin (88.7%). Everyone had at least a HAVO/VWO education, with the majority having a university level education (48.9%). The average BMI score was 21.85, $SD = 2.57$ and ranged from 17.10 through 32.32.

The design of this second study is a 2 (Comparison: EHE vs. regular blogger) by 3 (Restoration: Self-Affirmation + Punishment vs. Self-Affirmation vs. Control) between participants design. Either of the six conditions was assigned randomly to participants. In addition to the variables measured in the pilot study, we also measured the fine people gave the blogger in their condition (control conditions excluded) as a measure of punishment (see **Procedure**).

Procedure

With this second study we wanted to test whether the EHE would be punished more severely than a regular blogger and whether self-affirmation can moderate these effects

¹ From now on stated as self-affirmation (condition) to enhance readability.

(hypotheses two and three). Like in the first experiment, the research is an online questionnaire with a target audience of females under 35. The cover story stayed the same; participants will think that they are participating in research on health and social media. See appendix C for the pictures used to enhance the manipulation, including the blogger's favourite drinks.

It started out similar to the pilot experiment; after the informed consent, demographics are asked and participants will be randomly assigned to the (made up) EHE or regular blogger. After having read the food blog (see appendix D) participants will, again, be randomly assigned, this time to either the punishment, self-affirmation and no punishment condition. This results in a total of six conditions (EHE punishment, EHE self-affirmation and punishment, EHE control, Regular punishment, Regular self-affirmation and punishment, and Regular control). The three conditions described below all follow both an EHE confrontation and a regular blogger confrontation.

In the punishment condition participants are asked to name at least five ingredients from the recipe they have read and they are asked to give their opinion on the recipe. They will get three minutes to do this. After this however, participants in the punishment condition get to punish the blogger. A text will say that this person has committed plagiarism on her food blog and will be persecuted for this. She will receive a fine between €500 and €1000, and the participant gets to decide the height of this fine.

In the self-affirmation condition, instead of naming the ingredients and their opinion of the recipe, participants are asked to reflect on at least two of their own healthy habits (think of for example fruit or sports they like). They also get three minutes to complete these questions. This is done to make sure all participants in the different conditions take the same amount of time to complete the questionnaire. After this, the same text and question will be given to participants as in the punishment condition and participants in this condition get to punish the blogger as well.

In the no punishment condition, participants are asked to name five ingredients and their opinion of the recipe, as in the punishment without self-affirmation condition. The only difference from the punishment condition is that participants in the no punishment condition do not get to punish the blogger, but instead they are asked about their opinion about the blogger. This is done to keep the experiments the same length.

All participants will fill in the Rosenberg self-esteem scale and one question about sadism and one about envy. Current lifestyle is determined with the same questions as in the pilot experiment. After the punishing opportunity, participants will answer the manipulation check (multiple choice) questions (e.g. *"After reading about the blogger, I felt threatened"*).

This is followed by the debriefing and they will be thanked for their participation and get the opportunity to put their e-mail address in the raffle for one of the gift cards of €15,-.

Results experiment

Manipulation check

An ANOVA was performed on the manipulation check questions to see whether our manipulation had an effect. The reliability of the manipulation check scale was very low, $\alpha = .08$, no removal of a question could significantly improve the alpha reliability. The questions and their effects will therefore be discussed separately.

Assumptions for ANOVA were checked separately for each question. The Kolmogorov-Smirnov-test shows us that the manipulation check scores are all not normally distributed, all $p < .001$. We do not consider this a problem, since t is robust due to our large N .

The assumption of homogeneous variances is not completely violated for all questions, since the Levene's tests are all at least marginally significant (First question: $p = .001$; Second question: $p = .054$; Third question: $p = .054$), but group sizes do not differ to the factor 1.5. Independence of observations is assumed, due to the research design. This means that we can continue with our ANOVAs.

The first question (*"After reading about the blogger, I felt threatened."*) yielded significant differences between the blogger conditions with participants feeling more threatened in the EHE condition ($M = 3.93$) than in the control condition ($M = 4.23$, higher scores indicating less agreement with the statement), $F(1,139) = 6.18, p = .014$. The second question (*"After reading about the blogger, I wish I had the same life."*) showed no significant differences. The third question (*"After reading about the blogger, I felt good about myself"*) was not significant either. The second and third question will therefore not be included in further analysis. The first question will be included as a covariate in the ANOVA with Restoration and Comparison for both self-esteem and punishment after the main analyses (see **Self-Esteem scores** and **Punishment**).

To further explore the differences of the first manipulation question, another ANOVA was done with the question (threatened feelings) as dependent variable and restoration and comparison as independent variables. This yielded a significant main effect of comparison; $F(1, 141) = 7.59, p = .007$ and a significant interaction effect of restoration and comparison; $F(2, 141) = 3.31, p = .040$. If we look at the pairwise comparisons, we can see that it is the control condition of the EHE blogger confrontation that differs from the EHE punishment ($p = .084$) and the EHE self-affirmation ($p = .008$) conditions. The estimated marginal means show that the participants in the EHE control condition ($M = 3.50, SD = .199$) score lower on this question

(lower scores indicating more threatened by the blogger) than the EHE punishment ($M = 3.96$, $SD = .172$) and the EHE self-affirmation ($M = 4.20$, $SD = .169$) conditions. This is in line with what we expected. After all, only participants in the EHE conditions have a reason to feel threatened and only the participants in the control condition do not get a chance to restore.

Lifestyle

The reliability of the Lifestyle scale was $\alpha = .73$ and could not be improved by removing one of the questions. An ANOVA was performed to see if lifestyle scores differed between the conditions. Assumptions were checked for the scale as a whole. The lifestyle scores are not normally distributed according to the Kolmogorov-Smirnov-test, $p = .002$. We do not consider this a problem because of our large number of participants. Unfortunately the Levene's test was marginally significant, $p = .086$, but since the group sizes do not differ with a factor of 1.5, we assume that the assumption of homogeneous variances is not violated. Our research design ensures us of independence of observations. The ANOVA reveals that there is no significant difference in lifestyle between the two conditions, $F(5, 134) = 1.78$, $p = .122$. Because the differences between the EHE and regular conditions are almost marginally significant, we will include Lifestyle as a covariate after main analysis of self-esteem (see **Self-Esteem scores**).

BMI

BMI has been indicated as a predicting factor in the self-esteem of participants (Biro, Striegel-Moore, Franko, Padgett, & Bean, 2006; Eidsdottir, Kristjansson, Sigfusdottir, Garber, & Allegrante, 2013; O'Dea, 2006; Viera, et al., 2012). Before we can use this variable as a covariate, assumptions of normality were checked and a priori differences researched. The Kolmogorov-Smirnov-test reveals that the BMI scores are not normally distributed, $p = .002$, but because of our large N and thus robust F , we do not see this as a problem. The Levene's-test is not significant; $p = .615$ and group sizes do not differ to the factor 1.5, thus the assumption of homogeneous variances is not violated. Due to our research design, independence of observations is assumed.

The ANOVA of BMI and condition did not find a significant difference between conditions ($p = .810$) and thus there are no a priori differences between groups. BMI will therefore not be included in further analyses.

Self-Esteem scores

To check whether self-esteem scores were different between conditions, we performed a full 2 (Comparison: EHE vs. Control) X3 (Restoration: Punishment, Self-Affirmation + punishment vs. No Punishment) model ANOVA with the Restoration variable (indicates the (absence) of a restoration opportunity like self-affirmation and/or punishment) and Comparison

variable (indicates the blogger the participant compares herself to). The reliability of this self-esteem scale was $\alpha = .88$. Assumptions of normality were checked for self-esteem scores.

According to the Kolmogorov-Smirnov-test, the reported self-esteem scores are normally distributed for most conditions, $p = .20$, save the EHE self-affirmation, $p = .059$, and Regular Control, $p = .031$, conditions. However, this is not considered a problem, since F is considered robust because of our sufficiently large N . The assumption of homogeneous variances is not violated, since both Levene's test is not significant ($p = .629$) and group sizes do not differ to the factor 1.5. Independence of observations is assumed, due to the research design. This means that we can continue with our ANOVA.

The results indicate that Restoration had a marginally significant main effect on the self-esteem scores, $F(2, 141) = 2.56, p = .08$, but there was no interaction effect. When we look at the pairwise comparisons we see that participants in the EHE control condition report marginally significantly lower self-esteem ($M = 27.61, SD = 1.13$) than in the EHE punishment condition ($M = 30.54, SD = .98$); $p = .051$, and the EHE self-affirmation + punishment condition ($M = 30.44, SD = .96$); $p = .058$. In line with our predictions, self-esteem in the EHE control condition thus was lower than in the other conditions because comparison with an EHE resulted in lower self-esteem (unlike in the Regular blogger conditions) and there was no opportunity to restore the self-esteem. This can be observed in Table 1.

Table 1

Means and Standard Deviations Self-Esteem

Comparison	Restoration	Mean	Standard Deviation
EHE	Punishment	30.54	.98
	Self-Affirmation + Punishment	30.44	.96
	Control	27.61	1.13
Regular	Punishment	30.96	1.00
	Self-Affirmation + Punishment	29.13	.98
	Control	29.33	.92

Since we know from the pilot that the comparison between the EHE and regular blogger does influence self-esteem, these results indicate that there was an effect of restoration opportunity on self-esteem.

In a secondary analysis we entered the first manipulation check question (“*After reading about the blogger, I felt threatened*”) as a covariate in the above described analysis in order to see whether the experienced threat was predictive of the self-esteem but this was not the case.

Lifestyle was also entered as covariate, this did change the results. There was a main effect of lifestyle on self-esteem, $F(1, 140) = 17.74, p < .001$, with women with a self-reported bad lifestyle having a lower self-esteem ($M = 36.5$, high scores indicating lower self-esteem, $SD = 3.18$) than women with a self-reported good lifestyle ($M = 22.4, SD = 2.01$).

Also, the previously found marginally significant simple effect of Restoration became fully significant with adding lifestyle; $F(2, 128) = 3.10, p = .048$, and participants in the EHE control condition differ from the EHE punishment condition; $p = .026$, and participants in the EHE control condition differ from the EHE self-affirmation + punishment condition; $p = .034$.

Punishment

To see whether punishment (the fine the participants gave to the blogger) was higher for the EHE blogger than for the regular blogger, we did a 2 (Comparison: EHE vs. Control) X 3 (Restoration: Punishment, Self-Affirmation + punishment vs. No Punishment) ANOVA comparison with the comparison and restoration variables. Only the punishment conditions are taken into account, since we expect that self-affirmation diminishes self-esteem effect of the comparison. To make analyzing easier, one new variable was created which combined the fines given in different conditions. Assumptions of normality were checked for this new variable. According to the Kolmogorov-Smirnov-test, the reported punishment scores are not normally distributed, $p < .001$. However, this is not considered a problem since F is considered robust because of our sufficiently large N . The assumption of homogeneous variances is not violated since both Levene's test is not significant ($p = .269$) and group sizes do not differ to the factor 1.5. Independence of observations is assumed due to the research design. This means that we can continue with our ANOVA.

Unfortunately there were no main effects of Restoration; $F(1,96) = 1.30, p = .26$ or Comparison; $F(1,96) = .48, p = .49$ and no interaction effect; $F(1,96) = .08, p = .78$. We would have expected that the punishment/fine would be lower in the Regular punishment condition than in the EHE punishment condition and that the fine would be lower in the EHE self-affirmation condition than in the EHE punishment condition. The latter statement does seem to be the case; pairwise comparisons revealed that participants in the EHE self-affirmation condition gave lower fines: $M = 548.24, SD = 94.91$ than participants in the EHE punishment condition: $M = 581.04, SD = 109.53$. But peculiar is the fact that the mean of the participants in the Regular punishment condition ($M = 590.70, SD = 139.67$) is higher than the mean of the aforementioned EHE punishment participants. Aside from the fact that results were not significant, this would mean that our second hypothesis (*"When the EHE commits a misstep, one will punish this person, more than a regular blogger (because punishing the EHE will*

restore self-esteem)”) could not have been confirmed if it would have been significant. It even seems as if the Regular blogger ($M = 580.47$, $SD = 123.36$) was given a higher fine in general than the EHE blogger ($M = 564.31$, $SD = 102.60$).

The first manipulation check question was later entered as a covariate in the above described analysis to see whether the experienced threat was predictive of punishment, but this was not the case.

The sadism question was entered in the previous ANOVA with Restoration and Comparison as a covariate in the complete model, but results remained unchanged.

Discussion experiment

With this experiment we tried to answer the second hypothesis (“*When the EHE commits a misstep, one will punish this person more than a regular blogger (because punishing the EHE will restore self-esteem)*”) and third hypotheses (“*When one can self-affirm, the negative effect (meaning the decrease in self-esteem) of the comparison with the EHE will decrease. As a result, the EHE will no longer be punished to a greater extent than the control person.*”). As it turns out, an EHE will not be punished more severely than a regular blogger. We did find proof of restoration through self-affirmation and punishment, as this did not result in a decrease in self-esteem. Still, since there was no difference in punishment between the EHE and regular blogger to begin with, we cannot confirm that punishment was equal for both groups as a result of self-affirmation.

The significant difference on the manipulation check between the EHE and the regular blogger showed us that the EHE group was indeed significantly more threatened than the regular blogger group, even though the control groups the EHE and regular blogger did not differ significantly on self-esteem. This might be due to the fact that the manipulation check question was more direct about the comparison with the health example than the self-esteem questions.

The results are less supportive when it comes to the punishment variable. We suspect that the range we have given might have resulted in a floor effect, since most answers are near the €500-mark. Another reason for this can be the frame of reference. The students that participated might see €500 as a huge amount of money and think it is too high of a fine for plagiarism, even though the fines on copyright infringement in real life can be up to €20,250 (in the Netherlands; <http://wetten.overheid.nl/>; <http://www.rijksoverheid.nl/>). Also, plagiarism is perhaps not the best subject, as there may be students that have plagiarized a little themselves in assignments and do not see the seriousness of plagiarizing, especially for a foodblog.

General Discussion

There are many things that contribute to our feeling of identity, our habits concerning our food intake being one of them (e.g. Franchi, 2012; Vartnian, Herman, & Polivy, 2007). In turn, identity is linked with our self-esteem which is fragile when we compare ourselves to others who seem to do better than us. When self-esteem is brought down, people immediately search for ways to restore self-esteem. There are different approaches: people can either choose to bring the other down, or self-affirm. In this study we combined self-esteem restoration methods and tried to find an answer to the following hypotheses:

- 1) When one compares oneself with an EHE, self-esteem decreases.
- 2) When the EHE commits a misstep, one will punish this person, more than a “regular” blogger/person (because punishing the EHE will restore self-esteem).
- 3) When one can self-affirm, the negative effect (meaning the decrease in self-esteem) of the comparison with the EHE will decrease. As a result, the EHE will no longer be punished to a greater extent than the regular blogger.

With a pilot experiment, we first tested whether comparison with an EHE (*an Extreme Health Example*) compared to control person reduced people’s self-esteem. In both instances participants saw two photos and read a recipe and an introductory text about the blogger, after which self-esteem is assessed. We expected that comparing oneself with an extreme health example would lower someone’s self-esteem. This was indeed confirmed in analysis but results were only marginally significant. This could have something to do with a too small a difference between the bloggers. The girl on the picture used as a profile picture for the blogger is young, around the age of 23. This could mean that the somewhat older (above the age of 25) participants had more trouble identifying with her. We did exclude participants over 35 years old from analysis already, but people of the age of 25 can be in a different phase of their life compared to 35 year olds. However, the analysis of the manipulation check did show that participants who felt more threatened (meaning they agreed more with this statement) had lower self-esteem.

The following experiment had the same construction as the first, but gave some participants an option for restoration through punishment or self-affirmation and punishment. This, in combination with the blogger conditions, made up a total of six conditions. We expected the EHE to be punished more severely than the regular blogger, which was not the case. We did however find evidence that self-esteem was restored through self-affirmation and punishment. This is in accordance with previously discussed literature on self-affirmation (e.g. Steele, 1988, as cited in van Dijk, 2014; van Dijk, et al., 2011b). Analysis of the first

manipulation check question did show that the EHE group was more threatened than the regular group, even though their self-esteem did not significantly differ.

With the second experiment we tried to eliminate some of the flaws in the previous experiment, like the demographic of the group of participants and we tried to strengthen the manipulation. Some flaws still remain. For example, we could not change the format in the second experiment because an online questionnaire was still used, instead of for example a questionnaire in a laboratory. This may have led to less concentration on the questionnaire. Not all participants were first year students from our university, but, because course credit was given to those who are in exchange for participation, we assume that these students were serious and focused on the task at hand. We can however not be sure of this.

Punishment data did not result in significant outcomes. This entails that we cannot be sure that punishment would be less if self-affirmation was possible than if it were not. The lack of significant results concerning the punishment that participants gave, and the fact that almost all fines are near the low mark of €500, could mean that there was a floor effect. The frame of reference for copyright fines the students have, may also have contributed to this. A plagiarism fine can be high, up to €20,250 in the Netherlands, but we doubt whether students are aware of this. We had already lowered our answer range from €5,000 - €10,000 to €500-€1,000 to give numbers that students could relate to better but we fear that these number might have still been too high. It may have been better if this question were open-ended, or if a different range was given, for example €0-€500. Also, it may have felt unnatural to punish the blogger. We tried our best to make it seem logical, but it may have been better if either a different situation was used or if participants were primed with a role instruction (like a lawyer with a specialty in plagiarism).

The results we found cannot be generalized to the general public. Even though it may have contributed to the fact that we found some results, the fact that almost all participants were students in the second study is a downside. Apart from being all young and female, the educational level was also very high. A higher educational level or intelligence is often linked with taking better care of oneself and healthy eating (termed *cognitive epidemiology*; e.g. Deary, 2010, 2008; Lubinski, 2009; Der, Batty, & Deary, 2009; Anstey, Low, Christensen, & Sachdev, 2009). We do believe that this group (highly educated women between 18 and 35) may pay the most attention to food and healthy living, therefore we think the selections we made are justified. In the end it is about the identification with the person making you lose self-esteem. When approached like this, you might say that results can be generalized to other domains as long as there is identification.

General limitations

As always with self-report questions, there is a risk that people will give the answers they think are (socially) desired. Outspoken opinions are often weakened to comply with the expected norms. This results in answers that are more centered around the mean. Especially our self-esteem scale might have been subjected to this.

Another downside to the way we conducted our research is that participants were able to answer our questionnaire from home (which did have the advantage that we did not need a lab for this research) and in their own time. This could mean that they were not truly focused and perhaps did not pay enough attention to the questions. A more controlled environment could help. If the questionnaire was to be filled in in a lab, we could be more sure of the seriousness and concentration that the participants would have shown. Since the effect of upward (and downward) comparison can deteriorate over time, a lab setting with more control over time and concentration could enhance the effects. On the other hand this could be bad for the ability to generalize into the real world.

Also, all shown texts about the blogger were written by us, and perhaps not thoroughly enough tested to see whether these texts would work the way we wanted them to. We aimed to make the EHE truly extreme in her habits concerning food and the regular blogger meant to reflect stereotype student cooking (particularly in the second experiment). We think the differences might have been strong enough, but that there might have been indicators in both texts that made it either hard to identify with, or gave it a negative spin. For example, in the EHE text the word “verslaafd” (addicted) has a negative emotional word value. Also the fact that she sees bread as bad for you (she rarely “treats herself to bread” and if she does it is healthier spelt bread) could alienate Dutch students who are generally taught that bread is good for you.

The images also might not have been influential enough, though they did most likely help with the manipulation as visual stimulation. It might have been better to test the pictures as well in pilot, making sure that people notice them and that they have the desired effect.

Future research

Our findings have no new implications for future research but, with some tweaks in our version, some new insights might be found. Upcoming research can focus on other domains of identification and comparison. For example with a male character and male participants, with a setting that speaks more to men than food and (healthy) lifestyle. Perhaps even a general role model can be found for the genders, separately. We do believe that men and women will always have different role models to identify with, but there may be certain trigger words for each

gender that can influence identification more directly. Better identification will mean more effect when this person commits a misstep and hopefully this will also affect punishment.

It is also important to keep in mind that the punishment seems natural and does not benefit the participant directly. A direct benefit, for example monetary, could give the wrong motivation to punish. A right frame of reference should also be given, participants should be told or should know what a logical punishment would be.

Our experiments found that participants who were confronted with an extreme health example had a lower self-esteem and that those felt more threatened also had a lower self-esteem (not considering the blogger type they were confronted with). Participants self-esteem was subsequently restored through punishment or a combination of punishment and self-affirmation in comparison to the control condition. Though none of this is groundbreaking, we do believe there might be something to be found in the domain of punishment as a way to enhance self-esteem, since the punishment condition also showed self-esteem improvement over the control condition. To learn more, additional research of identification and punishment to restore self-esteem is surely needed.

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Appendix A

ROSENBERG ZELFWAARDESCHAAL

Naar: Franck, E., De Raedt, R., Barbez, C., & Rosseel, Y. (2008). Psychometric properties of the Dutch Rosenberg Elf-Esteem Scale. *Psychologica Belgica*, 48(1), 25-35.

Instructies: hierna volgen 10 beweringen over je algemene gevoelens ten opzichte van jezelf. Als je helemaal akkoord gaat, omcirkel je HA. Als je akkoord gaat met de uitspraak, omcirkel dan A. Als je niet akkoord gaat, omcirkel dan NA. Als je helemaal niet akkoord gaat, omcirkel dan HNA.

		Helemaal Akkoord	Akkoord	Niet Akkoord	Helemaal Niet Akkoord
1.	Over het algemeen ben ik tevreden met mezelf	HA	A	NA	HNA
2.	Bij momenten denk ik dat ik helemaal niet deug	HA	A	NA	HNA
3.	Ik heb het gevoel dat ik een aantal goede kwaliteiten heb	HA	A	NA	HNA
4.	Ik ben in staat dingen even goed te doen als de meeste andere mensen	HA	A	NA	HNA
5.	Ik heb het gevoel dat ik niet veel heb om trots op te zijn	HA	A	NA	HNA
6.	Het is ongetwijfeld zo dat ik me bij momenten nutteloos voel	HA	A	NA	HNA
7.	Ik heb het gevoel dat ik een waardevol iemand ben, minstens evenwaardig aan anderen	HA	A	NA	HNA
8.	Ik wou dat ik meer respect voor mezelf kon opbrengen	HA	A	NA	HNA
9.	Al bij al ben ik geneigd mezelf een mislukkeling te voelen	HA	A	NA	HNA
10.	Ik neem een positieve houding aan ten opzichte van mezelf	HA	A	NA	HNA

Appendix B

Adapted from comprehensive assessment of sadistic tendencies (CAST)

All responses are collected on 5-point scales with anchors:

1 = Strongly Disagree to 5 = Strongly Agree

Direct - Verbal

1. I was purposely mean to some people in high school.
2. I enjoy making jokes at the expense of others.
3. I have purposely tricked someone and laughed when they looked foolish.
4. When making fun of someone, it is especially amusing if they realize what I'm doing.
5. Perhaps I shouldn't have, but I never got tired of mocking certain classmates.
6. I would never purposely humiliate someone. (R)

Direct - Physical

1. I enjoy physically hurting people.
2. I enjoy tormenting people.
3. I have the right to push certain people around.
4. I have dominated others using fear.
5. I enjoy hurting my partner during sex (or pretending to).

Vicarious

1. In video games, I like the realistic blood spurts.
2. I love to watch YouTube clips of people fighting.
3. I enjoy watching cage fighting (or MMA), where there is no escape.
4. I sometimes replay my favorite scenes from gory slasher films.
5. There's way too much violence in sports. (R)
6. I enjoy playing the villain in games and torturing other characters.
7. In professional car-racing, it's the accidents that I enjoy most.

Appendix C

Pictures used in manipulation



Figure 1: Zalm met geroosterde boerenkool en kokos. [Picture of the regular blogger's recipe in the experiment.] Private picture from firstweeat.nl, by E. Duchhart, 2014.



Figure 2: Clothes, cool, fashion, food, girl, model, pretty, sunglasses. [Picture of the blogger in both experiments.]. Reprinted from Favim.com, by Favim, 2011, retrieved from <http://favim.com/image/105756/>



Figure 3: Spaghetti aglio olio. [Picture of the regular blogger's recipe in the experiment.] Reprinted from firstweeat.nl, by E. Duchhart, 2014, retrieved from <http://firstweeat.nl/wp-content/uploads/aglio-olio1-940x625.jpg>.



Figure 4: [Picture of the EHE blogger's favorite drink in the experiment.]. Reprinted from healthywildandfree.com, by D. Benjamin, 2013, retrieved from <http://healthywildandfree.com/are-you-chewing-your-smoothies-juices/#sthash.Z4MIE151.0NNLr33t.dpbs>.



Figure 5: [Picture of the regular blogger's favorite drink in the experiment.]. Retrieved from [buzzfeed.com](http://www.buzzfeed.com/christinebyrne/jacques-torres-hot-chocolate#.di9X42WkP), by C. Byrne, 2014, retrieved from <http://www.buzzfeed.com/christinebyrne/jacques-torres-hot-chocolate#.di9X42WkP>.

Appendix D

Text used in manipulation

Recipe text used in pilot for EHE blogger

Zalm met geroosterde boerenkool en kokos

Dit gerecht zit echt bomvol superfoods! Boerenkool, kokos, zoete aardappel en ook nog zalm, wat natuurlijk boordevol omega 3 zit. Boerenkool kennen wij in Nederland vooral uit de oude vertrouwde stampot. Maar in Amerika is deze groente al enige tijd een echte hit doordat het zo enorm gezond is. Er zitten super veel vitaminen in, een echte superfood dus! De boerenkool recepten vliegen me daardoor al heel lang om de oren, maar verder dan een boerenkoolsalade was ik zelf nog nooit gekomen. Tot ik op dit recept stuitte, waarbij boerenkool geroosterd wordt in een marinade van kokos-, sesamolie en siracha. Kokosolie is natuurlijk ook supergezond, dus mijn interesse was gewekt! De combinatie met de zalm, boerenkool en kokosrijst is enorm verrassend en lekker. Terwijl ik de losse ingrediënten al duizend keer gegeten heb was dit echt een hele nieuwe smaaksensatie, vooral door het roosteren van de boerenkool. De zoete aardappel is, naast heel erg gezond, ook een hele smaakvolle toevoeging. Het is ook nog eens heel makkelijk omdat je alles (behalve de rijst) gewoon in de oven gooit, dus je hebt er weinig omkijken naar. Alleen maar voordelen dus!

Voor 4 personen

2 kopjes rijst (ongeveer van die kleine duralex)

200 ml kokosmelk

zout

80 ml kokosolie, gesmolten

1 tl sesamolie

1 el siracha (te koop bij de toko en grote supermarkten)

2 zoete aardappels, in blokjes van ongeveer 2-3 cm

1 tl paprikapoeder

200-300 gr boerenkool

75 gr geraspte kokos/kokos flakes

4 zalmfilets zonder huid²

² Ingredients for this recipe remain unchanged throughout conditions and experiments, they will therefore be omitted from the rest of this appendix.

1. Verwarm de oven voor op 200°C. Doe de rijst in een steelpan. Giet de kokosmelk in het glas waar je ook de rijst mee hebt gemeten. Je hebt 1,5 keer zo veel vocht als rijst nodig, 3 kopjes dus. Kijk hoe ver je komt met de kokosmelk en leng de rest aan met water. Als je dus bijvoorbeeld 2 kopjes met de kokosmelk kan vullen voeg je nog 1 kopje water toe.
2. Breng op smaak met zout en roer even door elkaar, breng aan de kook. Wanneer de rijst kookt doe je een deksel op de pan en draai je het vuur zo laag mogelijk. De rijst is klaar wanneer al het vocht is opgenomen en de rijst dus is drooggekookt, na ongeveer 10-15 minuten. Als de rijst klaar is draai je het vuur uit en laat je de deksel op de pan. De rijst blijft zo makkelijk warm tot de rest van je eten klaar is. Begin ondertussen alvast met de rest van het gerecht.
3. Maak ondertussen de dressing door de gesmolten kokosolie, sesamlolie en siracha goed te mengen, tot het een geheel is geworden. Dit gaat het makkelijkst door in een grote kom goed te mengen met een garde.
4. Doe de zoete aardappel in een ovenschaal en giet hier een eetlepel van de dressing overheen, bestrooi met het paprikapoeder en zout. Bak 30 minuten tot hij gaar is.
5. Meng de kokos flakes en boerenkool en 2/3 van de overgebleven dressing. Doe in een ovenschaal en leg de zalm hier op. Besprenkel de zalm met de rest van de dressing en bak het geheel mee tijdens de laatste 15 minuten kooktijd van de zoete aardappels. De zoete aardappels gaan dus 15 minuten in hun eentje in de oven en dan nog 15 minuten met de boerenkool en zalm.
6. Haal alles uit de oven en serveer met de kokosrijst. Eet smakelijk!

Text blogger in pilot for EHE blogger

Welkom op mijn blog, leuk dat je even een kijkje neemt! Mijn naam is Anna en op deze blog deel ik al mijn favoriete gezonde recepten. Al vanaf jonge leeftijd ben ik altijd bezig geweest met eten. Als kind stond ik al groenten uit de moestuin te plukken met mijn moeder. En sinds ik op mezelf ben gaan wonen ben ik steeds meer van koken en gezond eten gaan houden! Ik krijg er echt een kick van als mensen snoepen van een "taart" die ik van kikkererwten en dadels heb gemaakt. Ik wil mensen laten zien dat gezond eten hartstikke lekker kan zijn! Zo heb ik veel vriendinnen van mij al verslaafd gemaakt aan gezonde sapjes als ontbijt. Een combinatie van spinazie, avocado, wortel en gember is mijn favoriet (zie de foto hieronder). In het weekend verwen ik mezelf echt, dan eet ik bijvoorbeeld wel eens brood (wel speltbrood), lekker met hummus en gegrilde groenten (zie profielfoto).

Ik vind het heerlijk om over de markt te struinen op zoek naar nieuwe ingrediënten die ik kan gebruiken in mijn gerechten. Mijn hart maakt elke keer weer een sprongetje als ik een prachtig rijpe avocado in m'n handen heb. Ik hoop dat je door het lezen van mijn blog geïnspireerd raakt en net zo veel zin krijgt om de keuken in te gaan en gezonde gerechten klaar te maken. Een gezonde levensstijl begint bij jezelf, maar ik help je graag een beetje op weg!

Anna ...

... zou niet kunnen leven zonder haar slowjuicer

... bevindt zich als ze niet aan het koken is het liefste in de sportschool

... eet het liefst goji bessen

Recipe text used in pilot for regular blogger

Zalm met geroosterde boerenkool en kokos

Boerenkool kennen wij in Nederland vooral uit de oude vertrouwde stampot. Maar in Amerika is deze groente al enige tijd een echte hit, salades, stoofschotels, iedereen maakt alles met boerenkool. De boerenkool recepten vliegen me daardoor al heel lang om de oren, maar verder dan een boerenkoolsalade was ik zelf nog nooit gekomen. Tot ik op dit recept stuitte, waarbij boerenkool geroosterd wordt in een marinade van kokos-, sesamolie en siracha (mijn favoriete hot sauce). Win win win! De combinatie met de zalm, boerenkool en kokosrijst is enorm verrassend en lekker. Terwijl ik de losse ingrediënten al duizend keer gegeten heb was dit echt een hele nieuwe smaaksensatie, vooral door het roosteren van de boerenkool. Door de rijst in kokosmelk te koken wordt hij heerlijk romig en niet te vergeten smaakvol. Het is ook nog eens heel makkelijk omdat je alles (behalve de rijst) gewoon in de oven gooit, dus je hebt er weinig omkijken naar. Alleen maar voordelen dus!

<Ingredients>

1. Verwarm de oven voor op 200°C. Doe de rijst in een steelpan. Giet de kokosmelk in het glas waar je ook de rijst mee hebt gemeten. Je hebt 1,5 keer zo veel vocht als rijst nodig, 3 kopjes dus. Kijk hoe ver je komt met de kokosmelk en leng de rest aan met water. Als je dus bijvoorbeeld 2 kopjes met de kokosmelk kan vullen voeg je nog 1 kopje water toe.
2. Breng op smaak met zout en roer even door elkaar, breng aan de kook. Wanneer de rijst kookt doe je een deksel op de pan en draai je het vuur zo laag mogelijk. De rijst is klaar

wanneer al het vocht is opgenomen en de rijst dus is drooggekookt, na ongeveer 10-15 minuten. Als de rijst klaar is draai je het vuur uit en laat je de deksel op de pan. De rijst blijft zo makkelijk warm tot de rest van je eten klaar is. Begin ondertussen alvast met de rest van het gerecht.

3. Maak ondertussen de dressing door de gesmolten kokosolie, sesamolie en siracha goed te mengen, tot het een geheel is geworden. Dit gaat het makkelijkst door in een grote kom goed te mengen met een garde.

4. Doe de zoete aardappel in een ovenschaal en giet hier een eetlepel van de dressing overheen, bestrooi met het paprikapoeder en zout. Bak 30 minuten tot hij gaar is.

5. Meng de kokos flakes en boerenkool en 2/3 van de overgebleven dressing. Doe in een ovenschaal en leg de zalm hier op. Besprenkel de zalm met de rest van de dressing en bak het geheel mee tijdens de laatste 15 minuten kooktijd van de zoete aardappels. De zoete aardappels gaan dus 15 minuten in hun eentje in de oven en dan nog 15 minuten met de boerenkool en zalm.

6. Haal alles uit de oven en serveer met de kokosrijst. Eet smakelijk!

Text blogger in pilot for regular blogger

Welkom op mijn blog, leuk dat je even een kijkje neemt! Mijn naam is Anna en op deze blog deel ik al mijn favoriete recepten. Al vanaf jonge leeftijd ben ik altijd bezig geweest met eten. Als kind stond ik al koekjes te bakken met mijn moeder. En sinds ik op mezelf ben gaan wonen ben ik steeds meer van koken en lekker eten gaan houden!

Ik eet echt alles, van groenten en fruit tot een groot stuk taart of een zak chips. Maar als ik eerlijk ben, is mijn favoriete snack een tosti met salami, tomaat en drie soorten kaas, gesmolten tot het er bijna uitloopt! (zie mijn profielfoto)

Ik vind het heerlijk om over de markt te struinen op zoek naar nieuwe ingrediënten die ik kan gebruiken in mijn gerechten. Mijn hart maakt elke keer weer een sprongetje als ik een mooi stuk vlees in m'n handen heb. Ik hoop dat je door het lezen van mijn blog geïnspireerd raakt en net zo veel zin krijgt om de keuken in te gaan en smaakvolle gerechten klaar te maken.

Anna ...

... zou niet kunnen leven zonder haar braadpan

... bevindt zich als ze niet aan het koken is het liefste op de bank met een goede film

... haar favoriete avondeten is pasta

... haar favoriete drankje is warme chocolademelk met slagroom (zie foto hieronder)

Adapted recipe text used in experiment for EHE

Zalm met geroosterde boerenkool en kokosrijst

Dit gerecht zit echt bomvol superfoods! Boerenkool, kokos, zoete aardappel en ook nog zalm, wat natuurlijk boordevol omega 3 zit. Boerenkool kennen wij in Nederland vooral uit de oude vertrouwde stampot. Maar in Amerika is deze groente al enige tijd een echte hit doordat het zo enorm gezond is. Er zitten super veel vitaminen in, een echte superfood dus! In dit recept rooster je de boerenkool in een marinade van kokos-, sesamololie en siracha. Kokosolie is natuurlijk ook supergezond, yes! De combinatie met de zalm, boerenkool en kokosrijst is enorm verrassend en lekker. De zoete aardappel is, naast heel erg gezond, ook een hele smaakvolle toevoeging. Eet smakelijk!

<Ingredients>

1. Verwarm de oven voor op 200°C. Kook de rijst in de kokosmelk aangelengd met water, op smaak gebracht met wat zout.
2. Maak ondertussen de dressing door de gesmolten kokosolie, sesamololie en siracha goed te mengen, tot het een geheel is geworden. Dit gaat het makkelijkst door in een grote kom goed te mengen met een garde.
3. Doe de zoete aardappel in een ovenschaal en giet hier een eetlepel van de dressing overheen, bestrooi met het paprikapoeder en zout. Bak 30 minuten tot hij gaar is. Meng de kokos flakes en boerenkool en 2/3 van de overgebleven dressing.
4. Doe in een ovenschaal en leg de zalm hier op. Besprenkel de zalm met de rest van de dressing en bak het geheel mee tijdens de laatste 15 minuten kooktijd van de zoete aardappels.
5. Haal alles uit de oven en serveer met de kokosrijst. Eet smakelijk!

Adapted text blogger in experiment for EHE

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heb ik veel vriendinnen van mij al verslaafd gemaakt aan gezonde sapjes als ontbijt. Een combinatie van spinazie, avocado, wortel en gember is mijn favoriet (zie de foto hieronder). In het weekend verwen ik mezelf echt, dan eet ik bijvoorbeeld wel eens brood (wel speltbrood), lekker met hummus en gegrilde groenten.

Ik vind het heerlijk om over de markt te struinen op zoek naar nieuwe ingrediënten die ik kan gebruiken in mijn gerechten. Mijn hart maakt elke keer weer een sprongetje als ik een prachtig rijpe avocado in m'n handen heb. Ik hoop dat je door het lezen van mijn blog geïnspireerd raakt en net zo veel zin krijgt om de keuken in te gaan en gezonde gerechten klaar te maken. Een gezonde levenswijze begint bij jezelf, maar ik help je graag een beetje op weg!

Anna ...

... zou niet kunnen leven zonder haar slowjuicer
... bevindt zich als ze niet aan het koken is het liefste in de sportschool
... eet het liefst goji bessen

Adapted recipe text used in experiment for regular blogger

Spaghetti met knoflook en Parmezaanse kaas

Dit is de perfecte maaltijd als je even snel moet koken of geen tijd hebt om naar de supermarkt te gaan! Het is in ongeveer 10 minuten klaar en de meeste ingrediënten heb ik meestal wel in huis. Dat maakt het ook nog eens een goedkope maaltijd. Zoals veel Italiaanse gerechten wordt deze pasta op smaak gebracht met slechts een paar ingrediënten. Zo komt de smaak van de pasta en knoflook extra naar boven. Je zou er eventueel wat geroosterde tomaatjes of een simpele salade bij kunnen serveren maar zo alleen is het ook al heerlijk!

Voor 4 personen

400 gram spaghetti
4 el olijfolie
20 gram boter
3 a 4 knoflooktenen, fijngehakt
1 tl gedroogde chili flakes
1 el basilicum, in dunne reepjes gesneden
Parmezaanse kaas, geraspt

1. Kook de pasta in ruim zout water *al dente* (beetgaar).
2. Verhit, terwijl de pasta kookt, de olijfolie met boter in een koekenpan. Wanneer de boter is gesmolten en bubbelt voeg je de knoflook en chili flakes toe. Bak tot de knoflook zacht is (1-2 min), blijf roeren om aanbranden te voorkomen. Als het te hard gaat, haal dan gewoon even de pan van het vuur.
3. Giet de pasta af en bewaar wat van het kookvocht. Roer de pasta in de pan met de knoflook en chili en voeg als het te droog wordt wat kookvocht toe. Roer de basilicum er door en serveer meteen. Serveer de Parmezaanse kaas in een bakje apart op tafel

Adapted text blogger in experiment for regular blogger

Welkom op mijn blog, leuk dat je even een kijkje neemt! Mijn naam is Anna en op deze blog deel ik al mijn favoriete recepten. Al vanaf jonge leeftijd ben ik altijd bezig geweest met eten. Als kind stond ik al koekjes te bakken met mijn moeder. En sinds ik op mezelf ben gaan wonen ben ik steeds meer van koken en lekker eten gaan houden!

Ik vind het leuk om lekkere en vooral makkelijke gerechten te bedenken. Ik heb ook best wel vaak geen zin om te koken, dan eet ik stiekem gewoon een diepvriespizza. Mijn guilty pleasures zijn vissticks en taco's uit een pakje.

Alle ingrediënten voor mijn recepten kan je gewoon bij de supermarkt kopen. Het moet vooral niet te veel moeite kosten. Ik hoop dat je door het lezen van mijn blog inziet dat koken helemaal niet lang hoeft te duren. Een snelle wrap met zalm is ook een heerlijke maaltijd!

Anna ...

... zou niet kunnen leven zonder haar tostiapparaat

... bevindt zich als ze niet aan het koken is het liefste op de bank met een goede film

... haar favoriete eten is pasta

... haar favoriete drankje is warme chocolademelk met slagroom (zie foto hieronder)