

The Influence of Avoidant Personality Disorder-traits on Emotional Eating

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Course	Master's thesis Clinical and Health Psychology, track Clinical Psychology (201500819)
Date	31-10-2016
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Abstract

Emotional eating is described as the tendency to eat unhealthy foods in response to a range of negative emotions in order to cope with this negative affect. The current study focuses on emotional eating in individuals with traits of an avoidant personality disorder (APD-traits), since emotional eating is linked to several eating disorders, which in turn are consistently associated with APD. Furthermore, following the considerable overlap between avoidance as the main coping mechanism of individuals with APD and the escape theory explaining emotional eating, it could be that individuals with APD avoid or escape their negative emotions by emotional eating. In this study, emotional eating was regarded as unhealthy eating when negative emotions were reported. To explore the influence of APD-traits on emotional eating, APD-traits were operationalized as the schema-constructs Defectiveness/Shame- and Social Undesirability and measured with the Young Schema Questionnaire (YSQ), negative emotions were measured using single items and unhealthy eating was measured using a self-developed task. A total of $n = 130$ participants took part in this study, consisting of 113 women and 17 men. It was hypothesized that individuals with an increased amount of APD-traits who report negative emotions score higher on unhealthy eating than individuals with a low amount of APD-traits reporting negative emotions. Results showed that the hypothesis had to be rejected. This study did not provide evidence for a link between APD and emotional eating.

Key features: Emotional eating, Avoidant Personality Disorder, Negative emotions, Unhealthy eating

Introduction

Besides the regulation by metabolic needs (Elmquist, Coppari, Balthasar, Ichinose, & Lowell, 2005; Manning & Batterham, 2014), food intake is also affected by emotional states (Treasure, Cardi, & Kan, 2011). Physiological reactions to negative emotions or stress mimic the internal sensations associated with feeding-induced satiety. Thus, the loss of appetite and decrease of food intake seem natural physiological responses to negative emotions (Schachter, Goldman, & Gordon, 1968). In fact, an increase in food intake in response to negative emotions has considered to be an 'inapt' response (Heatherton, Herman, & Polivy, 1991). Yet, there are individuals that do show an increase of appetite or food intake in reaction to emotional stress. Thirty percent of the respondents of several surveys demonstrated this 'inapt' response (Macht, 2008).

The tendency to eat in response to a range of negative emotions - such as anxiety, depression, anger, and loneliness - to cope with this negative affect is described by the term *emotional eating* (Arnow, Kenardy, & Agras, 1995). Typical aspects of emotional eating are overeating (Masheb & Grilo, 2006), a shift in choice towards more sweet and fatty foods and eating despite feelings of hunger (Meerveld, 2011; Zellner et al., 2006). Emotional eating, a form of disordered eating, is considered a maladaptive strategy used to cope with difficult feelings. Interestingly, Bennett, Greene, and Schwartz-Barcott (2013) found that emotional distress sometimes is not reduced, but rather enhanced by emotional eating. This is due to feelings of intense guilt after an emotional eating session. Besides this adverse effect, emotional eating is associated with a number of other negative consequences. For example, emotional eating has been identified as a risk factor for bulimia nervosa, anorexia nervosa, binge eating disorder, and obesity (Engelberg, Steiger, Gauvin, & Wonderlich, 2007; Hays & Roberts, 2008; Masheb & Grilo, 2006; Ricca et al., 2009; Ricca et al., 2012; Stein et al., 2007; Zeeck, Stelzer, Linster, Joos, & Hartmann, 2011). These eating disorders are all associated with an elevated mortality ratio (Arcelus, Mitchell, Wales, & Nielson, 2011; Crow et al., 2009). Seeking help from a dietician is nowadays discouraged for emotional eaters, because the failure of a diet will cause negative feelings, which in turn will lead to even more emotional eating (Former, 2013).

There are several theories that try to explain emotional eating. *Restraint theory* posits that emotional eating occurs in individuals who normally restrain their eating. Though these individuals typically limit what they eat, when they have to deal with negative emotions they cope by emotional eating (Spoon, Bekker, Strien, & Heck, 2007). The *inadequate affect*

regulation theory suggests emotional eating is caused by the believe of certain individuals that eating alleviates negative feelings (Spoor et al., 2007). Building upon this theory, *escape theory* posits that certain individuals not only eat to cope with negative emotions, but also that eating diverts attention away from stimuli that is a threat to their self-esteem to focus on pleasurable stimuli like food. Thus, according to this theory, emotional eating is an attempt to escape or shift attention away from ego-threatening stimuli that causes aversive self-awareness (Heatherton & Baumeister, 1991; Wallis & Hetherington, 2004).

Besides these theories, it is suggested that emotional eating is influenced by particular characteristics of an individual (Greeno & Wing, 1994; Schachter et al., 1968). In fact, high neuroticism and low altruism were found to predict more emotional eating (Brenning, 2008). Emotional eating was also linked to lower levels of the personality trait extraversion (Elfhag & Morey, 2008). Furthermore, emotional eating was found to be associated with low self-esteem (Canetti, Berry, & Elizur, 2009; Hoare & Cosgrove, 1998), low self-efficacy, depression, and anxiety (Heaven, Mulligan, Merrilees, Woods, & Fairouz, 2001). Taking these features of emotional eaters together, they seem to resemble the definition of an *Avoidant Personality Disorder (APD)*.

APD is characterized in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) by impairments in two domains: self functioning and interpersonal functioning. With respect to self functioning, people with APD have a low self-esteem and a negative self-appraisal, which may provide excessive feelings of shame. They have unrealistic standards for interpersonal contact, i.e. they exaggerate the potential social costs, which makes them feel inadequate. With respect to interpersonal functioning, people with APD are characterized by a preoccupation with, and a hypersensitivity to, others' negative evaluations or criticism. People with APD show detachment and negative affectivity, recognized by intimacy avoidance, anhedonia, and social anxiety. They worry about the negative effects of past experiences, and they worry about possible negative future experiences. They feel threatened by uncertainty, and they fear embarrassment (American Psychiatric Association, 2013). Individuals afflicted with the disorder tend to describe themselves as socially inept or personally unappealing and avoid social interaction for fear of being ridiculed, humiliated, rejected, or disliked. As the name suggests, the main coping mechanism of those with APD is avoidance of feared stimuli (International Statistical Classification of Diseases and Related Health Problems 10th revision, 1992).

The resemblance between features of emotional eaters and the definition of APD is noticeable. For example, low self-efficacy and low self-esteem are very similar to the feelings

of inadequacy, inferiority, social ineptness, and the idea of being personally unappealing. The observed anxiety in emotional eaters may well overlap with the fear of being ridiculed, humiliated, rejected, or disliked seen in APD. If there is a relationship between APD(-traits) and emotional eating, this would have clinical implications. For example, in individuals struggling with emotional eating, attention should be paid to possible underlying personality traits. Clients in therapy for APD that cope with their negative emotions by emotional eating should be taught other, healthier coping mechanisms. Additionally, there are two other reasons to investigate the relationship between APD-traits and emotional eating. Firstly, bulimia nervosa, binge eating disorder and obesity are consistently associated with APD (Becker & Grilo, 2015; Gartner, Marcus, Halmi, & Loranger, 1989; Powers, Coovert, Brightwell, & Stevens, 1988; Specker, Zwaan, Raymond, & Mitchell, 1994). As previously described, different studies have identified emotional eating as a risk factor for bulimia nervosa, binge eating disorder and obesity (Engelberg et al., 2007; Hays & Roberts, 2008; Masheb & Grilo, 2006; Ricca et al., 2009; Ricca et al., 2012; Stein et al., 2007; Zeeck et al., 2011). Since APD and emotional eating are both associated with these eating disorders (including obesity), it could be true that there is also a link between APD and emotional eating. Secondly, the avoidance of feared stimuli – in APD that is the stimuli of being ridiculed, humiliated, rejected, or disliked – closely resembles escaping from ego threatening stimuli seen in the escape theory explaining emotional eating. The expectation of being ridiculed, humiliated, rejected or disliked are ego threatening stimuli, which can lead to aversive self-awareness and negative affect. It could be that individuals with APD avoid these negative emotions by emotional eating.

The current study focuses on the relationship between APD and emotional eating. Following the escape theory (Heatherton & Baumeister, 1991; Wallis & Hetherington, 2004), the previously described relationship between emotional eating and multiple eating disorders (Engelberg et al., 2007; Hays & Roberts, 2008; Masheb & Grilo, 2006; Ricca et al., 2009; Ricca et al., 2012; Stein et al., 2007; Zeeck et al., 2011), and the consistent association between these eating disorders and APD (Becker & Grilo, 2015; Gartner et al., 1989; Powers et al., 1988; Specker et al., 1994), it might be true that APD influences emotional eating. In this study, emotional eating is regarded as unhealthy eating when negative emotions are reported. Therefore, it is hypothesized that individuals with an increased amount of APD-traits who report negative emotions score higher on unhealthy eating than individuals with a low amount of APD-traits reporting negative emotions.

Methods

Participants

Participants were recruited using an ad on Facebook and on a website where undergraduate Psychology students of the Utrecht University could receive half a credit hour for their participation. A total of $n = 130$ participants took part in this study, consisting of 113 women ($M = 20.80$ years; $SD = 3.68$ years) and 17 men ($M = 22.94$ years; $SD = 7.21$ years). For sixty-one participants (47%), university (WO) was the highest completed educational level they had and for fifty participants (39%), this was pre-university secondary education (VWO). The other participants were divided over MBO, HAVO and HBO. Nineteen participants were not included in the analysis due to missing data.

Measures

APD-traits

APD-traits were measured using the *Defectiveness/Shame-* and the *Social Undesirability* subscales of the Dutch Young Schema Questionnaire (YSQ; Sterk & Rijkeboer, 1997), since these schemas seem the most adequate for measuring APD-traits. Individuals with a high score on these schemas suffer from low self-esteem and are very anxious to fail in social contact. They feel vulnerable and worry about the terrible things that can happen. Also, these individuals are very sensitive to the opinion of others (Rijkeboer, 2010). The Defectiveness/Shame subscale is a 15-item self-report measure using a 6-point Likert-scale, ranging from 1 (completely untrue) to 6 (completely true). An example of one of the items is: 'I do not let anyone see who I really am'. The subscale showed good internal consistency in a nonclinical sample ($\alpha = .83$) and excellent internal consistency in a clinical sample ($\alpha = .92$; Rijkeboer & Bergh, 2006). The Social Undesirability subscale is a 9-item self-report measure, also using a 6-point Likert-scale, ranging from 'completely untrue' to 'completely true'. An example of one of the items is: 'I am ugly'. The subscale showed adequate internal consistency in a nonclinical sample ($\alpha = .73$) and good internal consistency in a clinical sample ($\alpha = .81$; Rijkeboer & Bergh, 2006). To convert the continuous schema-scores into a dichotomous variable, two groups were made: (1) individuals without the Defectiveness/Shame- and Social Undesirability schemas and (2) individuals with these schemas. According to Rijkeboer (2010), a mean of 2 is the cut-off score for the presence of these schemas. So, only individuals that scored an average of 2 or greater on the 24 items representing these schemas were placed in the 'increased APD-traits group'.

Negative emotions

Negative emotions were assessed using two questions. In the first question, participants saw a picture of a smiley with a slider beneath it. Above the picture was the question: 'If you must indicate how you feel right now, how would you let the smiley look? Move the slider to the place that is closest to your feelings right now.' Participants could set the slider on one of five points, respectively: sad, a bit sad, neutral, a bit happy and happy. The second question was: 'How are you feeling at the moment?'. Participants could click on the following options: angry, lonely, sad, stressed, scared, bored, disappointed, happy, jealous, desperate, proud and guilty. It was possible to select multiple answers. Although no data is available for the reliability and validity of this instrument, using single items seemed the best and fastest way to assess current negative emotions. Additionally, multiple studies prove that single-item measures are equally reliable and valid as detailed questionnaires (Elo, Leppänen, & Jahkola, 2003; Robins, Hendin, & Trzesniewski, 2001). Participants were regarded as having negative emotions when they set the smiley on sad or a bit sad, and when they clicked on one or multiple negative emotions in the second question. All emotions except 'happy' and 'proud' were regarded as negative.

Unhealthy eating

Unhealthy eating was measured using a self-developed task. The task consists of sixty pictures containing different types of food. Thirty of these pictures concerned healthy food products, such as vegetables (cucumber, carrots), fruits (banana, apple) and other products such as rice cakes and nuts. The other half of these pictures concerned unhealthy, sweet and fatty foods. For example, these pictures showed sweet products such as donuts and candy, salty products such as chips and fast-food products such as French fries and egg rolls. The pictures of unhealthy foods were presented in larger portions. Terms such as 'chips' and 'french fries' were used to find pictures on Google Images. A criterion for all the pictures was that they had a white background. The pictures were offered in pairs: healthy-unhealthy, healthy-healthy or unhealthy-unhealthy. The healthy-healthy and unhealthy-unhealthy pairs were used as a distraction, so that the goal of choosing between a healthy and an unhealthy product was not too obvious for the participant. In total, 20 healthy-unhealthy, 5 healthy-healthy and 5 unhealthy-unhealthy pairs were offered. The order in which the picture-pairs were offered was randomized. The question 'Right now, if you could choose to eat one of these two products, what would you eat?' was presented above all picture-pairs. Although no data is available of the reliability and validity of this instrument because it is newly

developed, pictures are commonly used in reality decision tasks (Barbarotto, Laiacona, Macchi, & Capitani, 2002). Also, the current study tried to simulate eating as actual behavior as best as possible. Therefore, terms as ‘right now’ and ‘what would you eat?’ were used in the question instead of ‘which picture do you choose?’. The frequency of unhealthy eating was assessed by adding up all the unhealthy choices made in the healthy-unhealthy picture-pairs. The healthy-healthy and unhealthy-unhealthy picture-pairs were not taken into account because they were only used as a distraction and cancelled each other out. Participants could achieve a minimum of zero and a maximum of twenty with regard to unhealthy food choices.

Procedure

On Facebook and on the credit hour website, participants could click on the publicly visible URL-link that redirected them to the online study conducted in the program ‘Qualtrics’. After written information about the procedure was given, written consent was obtained from participants (appendix 1) in where they gave permission to take part in the study. In order to give permission, they had to click on the continue button. Next, participants had to answer simple questions assessing general information such as age, gender and level of education. In the following part, answers to the Defectiveness/Shame- and Social Undesirability subscales were conducted. After answering the questions regarding (negative) emotions, the unhealthy eating task was conducted. Participants had to select the product of their choice by clicking on the picture. In the debriefing (appendix 2), participants were thanked for participating and informed about the purpose of the study.

Data analyses

Analyses were conducted using the 22nd version of the Statistical Package for the Social Sciences (SPSS). See appendix 3 for the syntax. A factorial between groups ANOVA was used to compare the frequency of unhealthy eating in individuals with a low or an increased amount of APD-traits who reported negative or no negative emotions. Kolmogorov-Smirnov and Levene’s tests were used to evaluate the assumptions of normality and homogeneity of variance respectively. Neither was violated.

Results

There was no statistically significant effect of APD-traits on the frequency of unhealthy eating, $F(1, 126) = 1.90, p = .171$. There was also no statistically significant effect of

negative emotions on the frequency of unhealthy eating, $F(1, 126) = 0.08, p = .773$. Finally, in contrast with the expectation, there was no interaction effect between APD-traits and negative emotions, $F(1, 126) = 0.51, p = .477$. See Table 1 for the mean frequencies of unhealthy eating for individuals with low and increased amounts of APD-traits who reported negative, respectively no negative emotions. See Figure 1 for the corresponding graph.

Table 1. *Frequencies of unhealthy eating for individuals with low and increased amounts of APD-traits and negative, respectively no negative reported emotions.*

APD-traits	<i>n</i>	Negative emotions	Mean	SD
Low amount	27	No	9.74	3.69
	64	Yes	10.03	3.07
	91	Total	9.95	3.25
Increased amount	14	No	9.29	3.32
	25	Yes	8.60	3.81
	39	Total	8.85	3.61
Total	41	No	9.59	3.53
	89	Yes	9.63	3.34
	130	Total	9.62	3.38

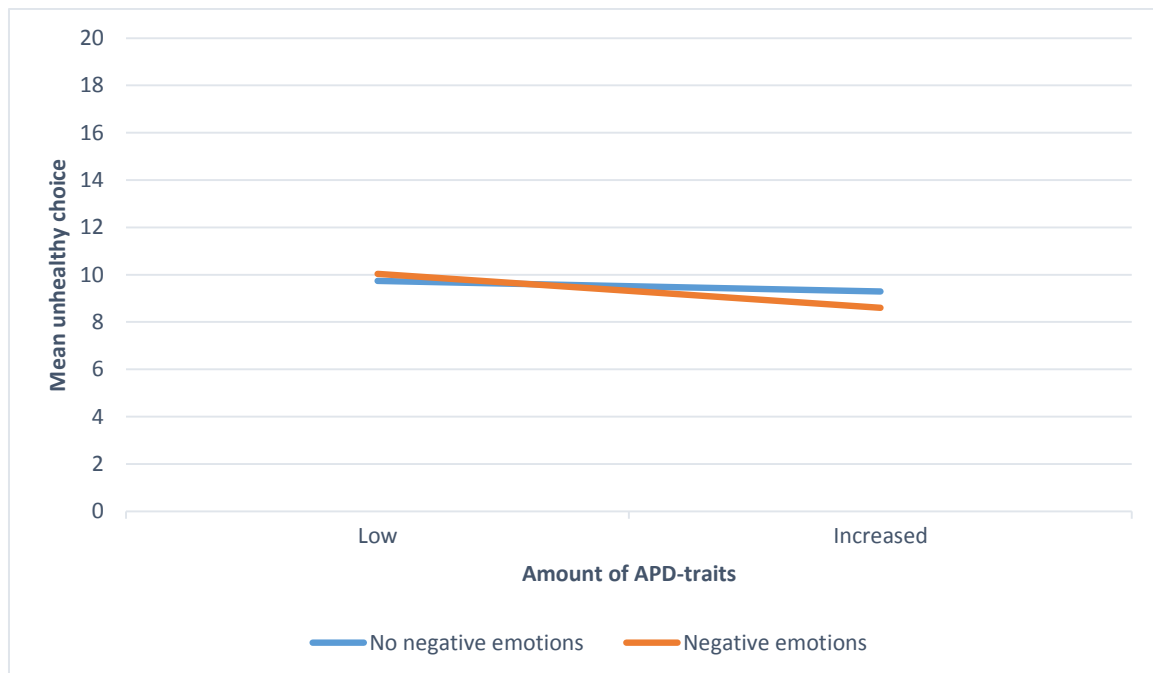


Figure 1. Means of unhealthy choices for low and increased amounts of APD-traits and negative, respectively no negative reported emotions.

Discussion

The current study focused on emotional eating in individuals with APD-traits, since emotional eating is linked to several eating disorders (Engelberg et al., 2007; Hays & Roberts, 2008; Masheb & Grilo, 2006; Ricca et al., 2009; Ricca et al., 2012; Stein et al., 2007; Zeeck et al., 2011), which in turn are consistently associated with APD (Becker & Grilo, 2015; Gartner et al., 1989; Powers et al., 1988; Specker et al., 1994). Following the considerable overlap between avoidance as the main coping mechanism of individuals with APD and the escape theory explaining emotional eating (Heatherton & Baumeister, 1991; Wallis & Hetherington, 2004), it could be that individuals with APD avoid or escape their negative emotions by emotional eating (and thus unhealthy eating).

Contrary to the expectation, it was found that individuals with an increased amount of APD-traits who reported negative emotions did not score higher on unhealthy eating than individuals with a low amount of APD-traits reporting negative emotions. This finding is not in line with what was expected from the consistent association between APD and several eating disorders, which in turn are linked to emotional eating. This result is also not in line with what was expected following the escape theory.

There are multiple possible explanations for the result of this study. One of the most likely explanations is that the coping mechanism ‘emotional eating’ is only demonstrated by a small part of the used sample. In all likelihood, the current study used a predominantly ‘healthy sample’ that did not cope with their negative feelings by unhealthy eating. After all, Macht (2008) calculated that emotional eating was seen in only thirty percent of all the survey respondents. This prevalence could also apply to individuals with increased APD-traits. Another explanation for the result of this study is that no clinical sample of individuals with APD was used. It is possible that a clinical sample, suffering from more APD-traits, would show (more) emotional eating.

Some limitations, which simultaneously could count as explanations for the result of this study, need to be acknowledged. As said before, the reliability and validity of the single-items measuring negative emotions and the self-developed unhealthy eating task are unknown. Therefore, it is uncertain whether negative emotions and unhealthy eating, which combined were intended to measure emotional eating, were assessed appropriately. Furthermore, although an attempt was made to simulate actual eating behavior as best as possible, observation of actual choice would have been the most accurate way to assess

emotional- or unhealthy eating (Köster, 2009). Secondly, this study worked with an unevenly balanced sample with regard to age, gender and level of education, which also could have led to invalid results. For example, restrictive eating is known to be a serious mental problem among adolescent and young adult women (Golden et al., 2003). Restrictive eating or dieting could have led to less emotional eating in this sample that consisted mostly of adolescent women. Additionally, almost all participants in this study were highly educated. Van Dorsselaer et al. (2010) state that higher educated individuals eat healthier than lower educated individuals, which also could have led to less emotional eating in this sample. Finally, this study may have been affected by participants who were inclined to respond socially desirable. Hebert, Clemow, Pbert, Ockene and Ockene (1995) observed a large downward bias in reporting food intake due to social desirability, especially in women (Hebert et al., 1997). Again, in the present study, this could have led to less observed emotional eating.

Further research

In follow-up research, it could be tested if the outcome of this study would be different when emotional eating is measured with different, more reliable and valid instruments. The most accurate way would be if emotional eating is assessed with an observation of actual eating behavior (Köster, 2009). Furthermore, follow-up studies should use a clinical sample of individuals with APD that is evenly balanced concerning age, gender and educational level. Finally, in future research it is recommended to control for socially desirable answers.

Conclusions and clinical implications

This study did not show that individuals with increased APD-traits cope with their negative emotions by unhealthy eating. These findings do not provide evidence for the role of APD in emotional eating. However, it seems worthwhile to further investigate the coherence between these constructs. Recent research (Etkin, Bowker, & Scalco, 2016) shows that shyness and social anxiety are related to emotional eating, both of which are characteristics of APD (American Psychiatric Association, 2013). If future studies do provide evidence for a relationship between APD and emotional eating, this would have clinical implications. For example, in individuals struggling with emotional eating, attention should be paid to possible underlying personality traits. Clients in therapy for APD that cope with their negative emotions by unhealthy eating should be taught other, healthier coping mechanisms.

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Appendices

Appendix 1: Information letter

Beste deelnemer,

Alvast hartelijk dank voor je deelname aan dit onderzoek, dat zal gaan over jouw kijk op jezelf en je leefgewoonten. Er zal van je gevraagd worden om twee korte vragenlijsten in te vullen. Tot slot zal een simpele en korte gedragstaak volgen.

De twee onderzoeken samen zullen ongeveer 20 minuten duren. Als bachelorstudent Psychologie aan de UU kan je met deelname aan deze onderzoeken een half proefpersoonuur ontvangen.

Je mag op ieder moment met de onderzoeken stoppen, zonder dat hiervoor een reden opgegeven hoeft te worden. Bij vragen of een klacht over (één van) de onderzoeken kun je contact opnemen met Marijke van Daalen (m.i.vandaalen@students.uu.nl) of Lot Sternheim (l.c.sternheim@uu.nl).

Met vriendelijke groet,

Marijke van Daalen

Als je akkoord gaat met deelname aan deze onderzoeken, klik dan op het pijltje rechts onderin.

Appendix 2: Debriefing

Beste deelnemer,

Hartelijk dank voor je medewerking aan dit onderzoek. Ben je bachelorstudent Psychologie aan de UU en wil je een half proefpersoonuur ontvangen, vul dan onderaan deze pagina je e-mailadres en studentnummer in.

Graag verstrekken wij nog enige informatie. Het eigenlijke doel van het onderzoek is om gevoelens van minderwaardigheid en sociale ongewenstheid te onderzoeken in relatie tot emotioneel eetgedrag. Het werkelijke doel van het onderzoek is in eerste instantie niet vermeld omdat dit invloed zou kunnen hebben op de onderzoeksresultaten. Wij hopen dat je hier begrip voor hebt. Er zal vertrouwelijk met de door jou verstrekte informatie omgegaan worden en de gegevens zullen niet aan je teruggekoppeld worden. Het is mogelijk om je deelname alsnog terug te trekken. Mocht je hier gebruik van willen maken kun je dit melden bij de dienstdoende onderzoeker.

Er wordt vriendelijk verzocht geen informatie over dit onderzoek aan anderen te verstrekken. Mocht je nog vragen willen stellen of mocht je interesse hebben in de uitkomsten van het onderzoek, mail dan naar m.i.vandaalen@students.uu.nl of l.c.sternheim@uu.nl.

Met vriendelijke groet,

Marijke van Daalen

Appendix 3: Syntax

```
DATASET ACTIVATE DataSet1.  
SORT CASES BY APD_traits.  
SPLIT FILE SEPARATE BY APD_traits.
```

```
EXAMINE VARIABLES=Unhealthy_eating BY Negative_emotions  
/PLOT NPLOT  
/STATISTICS DESCRIPTIVES  
/CINTERVAL 95  
/MISSING LISTWISE  
/NOTOTAL.
```

```
UNIANOVA Unhealthy_eating BY APD_traits Negative_emotions  
/METHOD=SSTYPE(3)  
/INTERCEPT=INCLUDE  
/PLOT=PROFILE(APD_traits*Negative_emotions)  
/EMMEANS=TABLES(APD_traits) COMPARE ADJ(LSD)  
/EMMEANS=TABLES(Negative_emotions) COMPARE ADJ(LSD)  
/EMMEANS=TABLES(APD_traits*Negative_emotions) COMPARE(APD_traits)  
/EMMEANS=TABLES(APD_traits*Negative_emotions) COMPARE(Negative_emotions)  
/EMMEANS=TABLES(APD_traits*Negative_emotions)  
/PRINT=ETASQ DESCRIPTIVE HOMOGENEITY  
/CRITERIA=ALPHA(.05)  
/DESIGN=APD_traits Negative_emotions APD_traits*Negative_emotions.
```