



Deception in Everyday Life:

A one-day diary study about effects of deception, gender and type of deception on feelings and emotions.



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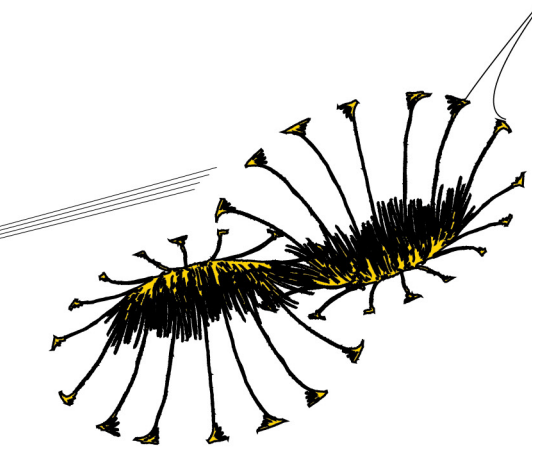
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Abstract

This research is focused on the effects of deceiving in daily life. In a one-day diary study the consequences of feelings and emotions after deception in everyday life were tested ($N = 259$). The one-day diary, completed by the participants at the end of the day, examined to determine the effects of deception (versus truth telling), gender and type of deception on experienced feelings and emotions, regarding guilt, shame, stress, fear, comfort and duping delight. Participants were asked if they deceived that day and what the possible deception was about. Hereafter the deceivers, but also the truth tellers have to score different statements about feelings and emotions. Results showed that, deceivers feel more guilt, shame and comfort, compared to truth tellers. In addition self-oriented deceivers who feel more duping delight compared to other-oriented deceivers. There is no difference in feelings and emotions between men and women after deception and there is no difference between self-oriented deceivers and other-oriented deceivers in the feelings and emotions guilt, shame, stress, fear and comfort.

Keywords: deception; guilt; shame; stress; fear; comfort; duping delight.

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How will you respond if someone asks you how much money you earn? How will you respond if you are ashamed of your test result answer? How will you respond if you cannot afford to go out with your friend? There are several options and two of those options are: you tell the truth or you deceive. Deception can be defined as intentionally sending a false message or making a misleading statement to others (DePaulo, Kashy, Kirkendol, Wyer & Epstein, 1996; Ekman, 1997; Ennis, Vrij & Chance, 2008; Harada et al., 2009). The verbal and non-verbal expressions differ from what deceivers really think and what really happens. Deception can be used to avoid criticism or to avoid certain feelings, such as guilt for telling the truth to another person (DePaulo et al., 1996).

Everyday people deceive at least once during two social interactions (DePaulo & Kashy, 1998). Research from Feldman, Forrest and Happ (2002) suggest that 60% of their research participants ($N = 242$) deceive on average three times during a ten minutes social conversation. DePaulo, Lindsay, Malone, Muhlenbruck, Charlton and Cooper (2003) mention that most of these everyday deceptions are about feelings, attitudes and opinions.

What are the consequences of deception on experienced feelings and emotions? This research focused on effects of deception (versus truth telling), gender and type of deception on experienced feelings and emotions.

Deception versus truth telling

After deception, people can experience both negative as well as positive feelings and emotions. DePaulo et al. (2003) and Ekman (1988) conclude that people experience the negative feelings of guilt. In addition, deceivers experience more stress, shame, fear of getting caught and experience discomfort and apprehensive feelings (DePaulo et al. 2003; Cohen, 2010; Ekman, 1988). Ekman (1985/1992) suggests in DePaulo et al. (2003) that deceivers can have the positive feelings of ‘duping delight’; in other words, the deceiver experiences positive feelings of joy and pleasure in deception.

Men versus women

Examined literature has not focused on the differences between guilt, shame, stress, fear, comfort and duping delight between men and women after deception. Nevertheless, men

and women may differ in feelings and emotions after deception, because men and women process their emotions in different ways (Nolen-Hoeksema & Aldao, 2011; Zimmerman & Iwanski, 2014). The distinction in processing might be caused by the stereotyping and social roles of men and women, the effects of nature, e.g. different levels of hormones and nurture (Eagly & Wood, 1991 in Brebner, 2003).

In addition, Brebner (2003) concludes that women, compared to men, experience emotions more intensively. They also regulate emotions differently. Women seek more social support, dysfunctional rumination and they have a more adaptive regulation behaviour compared to men (Nolen-Hoeksema & Aldao, 2011; Zimmerman & Iwanski, 2014). Men avoid emotions, regulate emotions more passively, suppress their feelings more often and they are more aggressive in their behaviour. These differences between men and women can cause a disparity in feelings and so a difference in experiencing guilt, shame, stress, fear, comfort and duping delight after deception.

Self-oriented deceivers versus other-oriented deceivers

A distinction can be made between self-oriented deceivers and other-oriented deceivers. The self-oriented lies in everyday life make deceivers feel good and feel more presentable and these lies protect them from being punished or to get affection (DePaulo & Kashy, 1998). Other-oriented lies are told to benefit others or someone's interests, to avoid conflicts, protect others or discredit another person (Boltz, Dyer & Miller, 2010; DePaulo et al., 1996; DePaulo & Kashy, 1998; Feldman et al., 2002). In addition, research suggests that men in particular deceive self-oriented; on the other hand, women deceive more other-oriented (DePaulo et al, 1996; Tyler & Feldman, 2004).

It could be reasoned that there is a difference between self-oriented deceivers and other-oriented deceivers. There is a difference between men and women in experiencing and regulating feelings and emotions (Brebner, 2003; Nolen-Hoeksema & Aldao, 2011; Zimmerman & Iwanski, 2014). As men deceive more self-oriented and women deceive more other-oriented, it is likely there is also a difference between these types of deception on feelings and emotions.

Therefore the focus in this research is on the effects of deception, gender and type of deception on experienced feelings and emotions regarding a) guilt and shame, b) stress and fear, c) comfort and duping delight.

Guilt and shame

Guilt can be defined as a moral duty and people can experience this emotion in case of failure, for example when they believe that they are doing something wrong or believe that

others may think that they are doing something illegal or wrong (Baumeister, Stillwell & Heatherton, 1994 in DePaulo et al., 2003). The deceiver shows guilt for misleading the other (DePaulo et al., 1996; Ekman, 1988; Kowalski, Walker, Wilkinson, Queen & Sharpe, 2003). People could feel guilt in a form of feelings of shame (Sabini & Silver, 2001). Shame can be defined as the feeling in shy and uncomfortable, humiliated and disgraced caused by of public disapproval (Baumeister et al., 1994 in DePaulo et al., 2003; Lewis, 1971 in Tangney, Miller, Flicker, Barlow, 1996). People feel shame when they fail to meet their own personal moral standards (Tangney et al. 1996). The difference between guilt and shame is that guilt could be more public and shame could be more privately experienced.

Research suggests that next to deceivers, truth tellers can also feel guilt and most likely shame (Cohen, 2010; DePaulo et al., 1996; Ekman, 1997). An example is that people feel guilt because their honesty can hurt someone else's feelings. Beside the fact that truth tellers can also feel guilt and shame, I expect that deceivers experience guilt and shame on a higher level compared to truth tellers. Because when people deceive, there is a conflict in the moral duty and personal standards, therefore feelings of guilt and shame increase (Baumeister et al., 1994 in DePaulo et al., 2003; Tangney et al. 1996). This is not the case when you tell the truth.

H1a: after deception, deceivers feel more guilt and shame compared to truth tellers.

Previous studies of deception on guilt and shame did not focus to investigate differences between men and women after deception. Still, there could be differences between gender, because of the difference in processing and expressing their emotions and feelings (Nolen-Hoeksema & Aldao, 2011; Zimmerman & Iwanski, 2014). Women are more emotional and have a higher emotional expression (Simon & Nath, 2004). They experience negative emotions more intense and remember the negative emotions more (Canli, Desmond, Zhao, Gabrieli, 2002). In addition, Brebner (2003) suggests that women feel guilt and most likely shame more frequent and intensive, compared to men. This led to the following hypothesis:

H1b: after deception, women feel more guilt and shame compared to men.

In the examined literature there is no information about difference between self-oriented deceivers and other-oriented deceivers concerning guilt and shame. Nevertheless, there could be a difference between the level of guilt and shame among self-oriented deceivers and other-oriented deceivers. On the one hand, one could expect that other-oriented deceivers feel more guilt and shame, because; when people deceive for other people they did not include these others in their choice to deceive. On the other hand, when people deceive for

other people they could feel less guilt and shame, because; they deceive to benefit others, which can make it more acceptable to deceive. In addition, it is assumed that women deceive more other-oriented which can indicate a higher expected level of guilt and shame. So I explore in this case:

H1c: after deception, there is an difference between people who told an self-oriented lie or people who told an other-oriented lie regarding the feelings and emotions of guilt and shame.

Stress and fear

Stress can be defined as an intensive feeling and pressure to a perceived threat that involves psychological, cognitive and behavioural components (Cohen, Kessler & Underwood- Gordon, 1997). This would be relevant while or after deception. Ekman (1992) and Vrij (2000) state in Gozma, Vrij and Bull (2001) that there is a close relation between stress and fear. Fear of getting caught, can be defined as the negative emotion connected with uncertainty, insecurity and/ or the feeling of tightness, in combination with the idea that you may be caught for misleading another with a high level of arousal (DePaulo et al. 2003; Witte & Allen, 2000).

Deceivers can have the idea of not being credible. The impression of not being credible results in stress and fear and ensures insecurity in behaviour and verbal interaction (DePaulo et al., 1996; Vrij, Granhag & Mann, 2010). DePaulo and Kashy (1998) argue that stress influences the conversation in a negative way between the deceiver and the person who they interact with. Next to deceivers, truth tellers also feel stress and fear, but on a lower level (Vrij et al., 2010). The level is lower for truth tellers, because people think that they respond in the right moral way (Levine, Schweitzer, 2014). This led to the following hypothesis:

H2a: after deception, deceivers feel more stress and fear compared to truth tellers.

Research suggests that men and women react differently when they are confronted with stress and fear (situations) (Byrd-Craven & Geary, 2007; Giebels & Yang, 2009; Matud, 2004). These different reactions are created by the sex hormones that influence the brain, the cognition and behaviour of people (Byrd-Craven & Geary, 2007). Compared to men, women think more negative in stress situations and remember the negativity longer (Canli et al., 2002; Matud, 2004; Simon & Nath, 2004). So I expect:

H2b: after deception, women experience more stress and fear compared to men.

If people have a close relation with the other person, interact frequently and talk with the same gender, they are more likely to tell other-oriented lies (Kashy & DePaulo, 1996; Ennis et al., 2008; Whitty & Carville, 2008). When this occurs the probability of getting

caught will be higher, what indicates more fear according to Nezlek (1995) in DePaulo and Kashy (1998). People deceive more self-oriented if they do not know the person well or they do not have a close relationship with them (Ennis et al., 2008; Whitty & Carville, 2008). When this occurs the probability of lie detection will be lower (Nezlek, 1995 in DePaulo & Kashy, 1998). Overall, deceivers try to avoid communication if there is any possibility of lie detection (Zuckerman, DePaulo & Rosenthal, 1981). This made the following hypothesis:

H2c: after deception, people who tell an other-oriented lie feel more stress and fear compared to people who tell a self-oriented lie.

Tyler and Feldman (2004) suggest that the differences between men and women become clear because women can take a better perspective and they are more focused on the other person's feelings in social interactions. This makes women deceive more other-oriented instead of self-oriented. Also, deceivers in a close relationship or interacting frequently with someone are less confident in being credible and fear more the detection of the lie (DePaulo & Kashy, 1998; Whitty & Carville, 2008). The reason is that the probability of getting caught will be higher (Nezlek, 1995 in DePaulo & Kashy, 1998). If I assume that women deceive more other-oriented and that people who deceive other-oriented experience more stress and fear, the following result is expected:

H2d: After deception, the feeling of stress and fear will be higher when the deceiver is a woman and she deceives other-oriented compared to men who deceive other-oriented.

Comfort and duping delight

Comfort is the first positive affect and it can be defined as a feeling of pleasantness without stress or fear, with a good sense of well-being (Richard, 1980 in Kuijt- Evers, 2007). When you feel comfort, you can also feel the second positive feeling, namely duping delight. Duping delight can be defined as the feeling of challenge and the joy of successful deception, which also refers to pleasure, satisfaction, glee or/ and exhilaration (Ekman, 1981/1988; Gozma et al., 2000). Duping delight creates lies pure for pleasure and not for instance protection. These deceivers feel the need for challenge and they feel proud when they have deceived successfully.

People feel less comfort because of the idea they will deceive and after deception itself (DePaulo et al. 1996). Also, the interaction will be less pleasant, after deception (DePaulo et al., 1996; DePaulo et al., 2003; Ekman, 1988). This could mean that feelings of comfort will be lower if you deceive, compared to the situation in which you tell the truth. People can experience comfort when they are professional deceivers and if they think they can handle the

lie better than the truth (DePaulo et al., 1996; Gozna et al., 2001). Based on the assumption that deceivers feel more guilt, shame, stress and fear, the following hypothesis is drafted:

H3a: after deception, deceivers feel less comfort compared to truth tellers.

In the examined literature there is no information about gender differences in comfort feelings and in the feelings of duping delight after deception. Nevertheless, it is assumed that men and women process and express their emotions and feelings in a different way (Brebner, 2003; Nolen-Hoeksema & Aldao, 2011; Simon & Nath, 2004; Zimmerman & Iwanski, 2014). Men are more aggressive in behaviour, more self-focused, less social oriented and are more pride in general (Brebner, 2003). Men are also more positive (Simon & Nath, 2004). Women report negative emotions on a higher level compared to men, they experience negative emotions more intense and remember the negatives longer (Brebner, 2003; Canli et al., 2004). Because comfort and duping delight are both positive emotions, I expect the following result:

H3b: after deception, men feel more comfort and duping delight compared to women.

Reviewed research has not focused on the differences between self-oriented deceivers and other-oriented deceivers in the feelings of comfort. According Kashy and DePaulo (1996) and Whitty and Carville (2008) people deceive more other-oriented when they interact frequently and if they have a close relationship with the other. As a result, the deception probability will be higher. If the deceiver releases this, the level of stress and fear will be increase and the comfort level will lessen (DePaulo et al., 2003; DePaulo & Kashy, 1998). So, this let to the following hypothesis:

H3c: after deception, people who tell an other-oriented lie feel less comfort compared to people who tell a self-oriented lie.

As mention before, Tyler and Feldman (2004) assume that men deceive more self-oriented and women deceive more other-oriented. In addition, the probability of lie detection and getting caught will be higher when you deceive other-oriented, which indicates negative feelings such as stress and fear (DePaulo & Kashy, 1998; Nezlek, 1995 in Depaulo & Kashy, 1998; Whitty & Carville, 2008). Stress and fear do not match these positive feelings of comfort. If I assume that men deceive more self-oriented and that people who deceive self-oriented experience more comfort feelings, the following result is expected:

H3d: After deception, the feeling of comfort will be higher when the deceiver is a male and he deceive self-oriented compared to women who deceive self-oriented.

Current study

The above mentioned hypotheses will be measured with a one-day diary method,

which people fill out at the end of the day and this (one-day diary) method measures the feelings and emotions after deceiving and after telling the truth.

Method

Participants

In this study participated 84 men, 168 women and seven unknown ($N = 259$). Their ages ranged from 18 years to 80 years old ($M = 32.73$ $SD = 2.83$). In the study only participants older than eighteen years were accepted for participation¹. There were 104 participants who did not finish the one-day diary study. These participants were excluded from analysis, which resulted in a number of 259 participants. Besides, four participants did not accept the ethical considerations or the minimal age requirement of 18 years and they did not participate with the survey. Participants were recruited using snowball sampling via Facebook and email. Initially, receivers of the message were asked to place a copy of the participation request on their Facebook timeline or send the email to other persons to raise the number of participants.

Dependent variables and independent variables

The depending variables are: the feelings and emotions of deception, namely guilt, shame, stress, fear of getting caught, comfort and duping delight. These depending variables were measured on a scale from 1 (*‘Totally disagree’*) up until 7 (*‘Totally agree’*). In the measuring instruments the measurements are explained and in Appendix A (page 28) the questionnaire about the different statements about guilt, shame, stress, fear, comfort and duping delight can be found.

The independent variables are: deceivers versus truth tellers, gender (men and women) and type of deception (self-oriented lies and other-oriented lies). This was measured with closed and open questions and the researcher coded the open questions.

Procedure

All participants participated voluntary in this study. To prevent possible miscommunications due to the language barriers the questionnaire was in Dutch. First, I introduced the ethical considerations of this study. The participants were informed about the anonymity, the confidentiality and the maximum duration of the study. After agreement on the ethical considerations and the age check, participants received detailed information about

¹ There were three participants that accepted the requirement of the minimal age of 18 years old, at the beginning of the survey. Later, they coded a specific age lower than 18 years.

the goal of this study. Furthermore, they received the definition of a lie in general and the definitions of self-oriented and other-oriented lies. Examples were provided for self-oriented deception and other-oriented deception.

Afterwards, participants were asked to fill out a one-day diary; this one-day diary consisted of a questionnaire about that day. The first question was if the participant told a lie that day. If the participant would answer ‘yes’ they answered questions about the lie they told. These questions were: which lie they told, if the lie was planned and if the lie was more self-oriented or other-oriented. After these questions, participants were asked if they had told another lie and if this was the case then the participants would receive the same set of questions again about the second lie.

After the briefly described lie or lies, participants got questions about statements of feelings and emotions: how they felt at that moment when filled out the questionnaire, in the range from 1 (*‘Totally disagree’*) up until 7 (*‘Totally agree’*). The same set of statements was used for the participants, who only spoke the truth that day. These statements of feelings and emotions measured guilt, shame, stress, fear, comfort and duping delight. Examples of statements are: *‘I am ashamed’*, *‘I am sorry’*, *‘I feel exhilarated’* and *‘I am nervous’*. Two specific statements, *‘I hoped someone stopped me from telling a lie’* and *‘I share norms and values with the person I lied to’* are changed to *‘I hoped someone stopped me from telling the truth’* and *‘I share norms and values with the person I told the truth’* between the group who deceived and the group who did not deceived. After the questionnaire, the participants were thanked for their assistance and they got the opportunity to give feedback.

Measurement instruments

The emotions, guilt and fear, were both measured per construct with four items from Stel, van Dijk and Olivier (2009). The scale questions of guilt were showed the emotions remorseful, regretful, guilty and repentant, with a reliability in this study of $\alpha = .78$. The scale questions of fear indicated these feelings frightened, fearful, anxious and nervous, with a reliability in this study of $\alpha = .82$. Both constructs were measured on a scale from 1 (*‘totally disagree’*) to 7 (*‘totally agree’*).

The construct of stress was measured with seven items from the DASS-21 scale (Antony, Bieling, Cox, Enns, Swinson, 1998). The scales questions of stress were about: the feeling of restlessness, the feeling of relaxation (recoded), the feeling of nervousness, the tendency to overreact the hope that another person stopped them and light touchy. This construct is measured on a scale from 1 (*‘totally disagree’*) to 7 (*‘totally agree’*) and had a

reliability in this study of $\alpha = .76$.

The construct of comfort was measured with two items in total. The scale of the questions was ranged from 1 ('*totally disagree*') to 7 ('*totally agree*') and the statement of this construct was about how comfortable people feel. Both questions were recoded and the correlation between both items is $r = .568, p < 0.01$.

The construct of shame was measured with five items. These items are created from the definition of shame based on Baumeister et al. (1994) and DePaulo et al. (2003) and Lewis, (1971) in Tangney et al. (1996). The scale questions were about the feelings of shame, humiliation, disgrace, shyness and comfort (recoded). The construct shame is measured with scales from 1 ('*totally disagree*') to 7 ('*totally agree*') and it had in this study a reliability of $\alpha = .71$.

The last construct, duping delight, was measured with four items. These items were based on the definition of duping delight from Ekman (1981) and Gozma et al. (2001). The scale questions of duping delight were about: exhilaration, satisfaction, glee and pleasure. The scale went from 1 ('*totally disagree*') to 7 ('*totally agree*') and were all recoded. After deleting item '*I feel exhilaration*' the reliability in this study was $\alpha = .85$.

The researcher, per deceiving participant, ($n = 49$), coded the open questions about the deception. The researcher read each response and whether the deception was self-oriented ($n = 22$), other-oriented ($n = 17$) or both ($n = 10$). The researcher also checked what participants answered on the question whether the deception was more self-oriented or other-oriented². The lies that were coded both self-oriented and other-oriented are not used in the analyses and hypotheses concerning self-oriented lies and other-oriented lies.

Results

Demographic results

In this data analysis, 210 participants of the total 259 participants recorded that they only told the truth on the day they filled out the questionnaire. In addition, 49 participants indicated they deceived the day they filled out the questionnaire and four of them even deceived more than once. In the deception group there were 15 men and 34 women. The lies in this group were coded in three categories: self-oriented deception ($n = 22$), other-oriented deception ($n = 17$) and both self-oriented and other-oriented deception ($n = 10$). Interactive

² The researcher coded three lies differently from the participants. In the analysis, the opinion of the researcher is used.

tests were not used because there were not enough participants per category, if the categories were split in gender and type of deception (see Table 1). This means that hypothesis 2d agrees with the prediction there is an interaction effect between gender and type of deception in the emotions of stress and fear and hypothesis 3d with the prediction that there is an interaction effect between gender and type of deception of the effects of comfort are not performed.

The Kolmogorov-Smirnov tests of normality reveal that there is not a normal distribution in total score³, per feelings and emotions in these data. There is also a variation in equality between groups (deceivers versus truth tellers, men versus women and self-oriented deceivers versus other-oriented deceivers), per feelings and emotions, which is tested with the one-way test of homogeneity of Variances. This means that the non-parametric Mann-Witney U test is used.

Out of the one-way test of homogeneity of Variances it becomes clear that the equality between deceivers and truth tellers regarding the feelings and emotions of guilt, shame and comfort is equal and the equality is not equal for the feelings and emotions fear and stress (see Table 2). The equality between men and women is unequal for all the feelings and emotions. At last the equality between self-oriented deceivers and other-oriented deceivers is equal for the feelings of comfort and duping delight. But unequal for feelings and emotions of guilt, shame, stress and fear.

Table 1

Demographic Results

Characteristics		N	%
Gender	Men	84	32.40
	Women	168	64.90
Total Truth		210	81.10
Total lie	Self-oriented	22	8.50
	Other-oriented	17	6.60
	Both	10	3.90
Women's lies	Self-oriented	14	63.60
	Other-oriented	13	76.50
	Both	7	70.00
Men lies	Self-oriented	8	36.40
	Other-oriented	4	23.50
	Both	3	30.00
Women's truth		134	66.00
Men truth		69	34.00

³ There are in total three outliers: one for guilt, one for comfort and one for duping delight. These outliers do not change the results and are not removed from analysis.

Table 2

The F and P Values of the One-way Test of Homogeneity of Variances between Deceivers and Truth tellers, Between Men and Women, and between Self-Oriented Deceivers and Other-Oriented Deceivers Concerning the Feelings and Emotions Guilt, Shame, Stress, Fear, Comfort and Duping Delight

Characteristics	Emotion	F	P
Deceivers Versus Truth Tellers	Guilt	22.55	.01**
	Shame	6.04	.02*
	Stress	0.04	.84
	Fear	1.14	.29
	Comfort	15.18	.01**
Men Versus Women After Deception	Guilt	0.00	.98
	Shame	1.64	.20
	Stress	0.06	.81
	Fear	0.20	.65
	Comfort	1.02	.31
Self-Oriented Deceivers Versus Other-Oriented Deceivers	Duping Delight	2.28	.13
	Guilt	0.91	.35
	Shame	1.00	.33
	Stress	1.44	.24
	Fear	1.35	.25
	Comfort	4.23	.05*
	Duping Delight	4.21	.05*

Note. N= 259. * & ** means the groups are equal to each other.

* $p < .05$. ** $p < .01$.

Guilt and shame

Hypothesis 1a predicted that deceivers experience more guilt and shame compared to truth tellers. These feelings and emotions ($N = 259$) have a range score of guilt between 1.00- 5.75 ($M = 2.14$, $SD = 1.12$) and of shame between 1.00- 5.20 ($M = 1.97$, $SD = 0.82$) (see Table 3). A Mann-Whitney U test is preformed; there is significant evidence that deceivers ($n = 49$, $Mdn = 169.10$) compared to truth tellers ($n = 210$, $Mdn = 120.88$) feel more guilt ($U = 3229.00$, $z = -4.09$, $p = < .001$, $r = .12$) after deception. There is significant evidence that deceivers ($Mdn = 150.59$) compared to truth tellers ($Mdn = 125.20$) feel more ashamed ($U = 4136.00$, $z = -2.15$, one side $p = .02$, $r = .12$).

Table 3

Total Scores of Mean, Standard Deviation of the Different Feelings of Guilt, Shame, Comfort, Stress, Fear and Duping Delight, between Deceivers and Truth tellers (N =259)

Characteristics	Deceivers (N= 49)		Truth tellers (N= 210)		Combined (N=259)	
	Mean	SD	Mean	SD	Mean	SD
Guilt	2.80	1.32	1.99	1.01	2.14	1.12
Shame	2.23	.95	1.91	.78	1.97	.82
Comfort	2.89	1.40	2.22	1.00	2.34	1.12
Stress	2.57	1.07	2.54	.95	2.55	.97
Fear	2.03	1.07	1.87	0.90	1.90	.93
Duping Delight	3.10	1.36	2.29	1.04	2.44	1.15

Hypothesis 1b predicted that women compared to men feel more guilt and shame after deception. These feelings and emotions ($n = 49$) have a range score for guilt between 1.00- 5.75 ($M = 2.78$, $SD = 1.32$) and for shame between 1.00- 4.20 ($M = 2.23$, $SD = 0.95$) (see Table 4). A Mann-Whitney U test is applied; there is no significant variation between men ($n = 15$, $Mdn = 23.07$) and women ($n = 34$, $Mdn = 25.85$) concerning the feeling of guilt ($U = 284.00$, $z = 0.63$, one side $p = .26$, $r = .29$) after deception. Also, there is no significant disparity between men ($Mdn = 21.17$) and women ($Mdn = 26.69$,) regarding the effect of shame ($U = 312.50$, $z = 1.25$, one side $p = .11$, $r = .29$) after deception.

A Mann-Whitney U test is used; there is no significant evidence that truth telling men ($n = 69$, $Mdn = 103.05$) feel less guilt compared to truth telling women ($n = 134$, $Mdn = 101.46$) who told the truth ($U = 4550.50$, $z = -0.19$, one side $p = .43$, $r = .14$). In contradiction, for shame there is significant evidence that men ($Mdn = 113.35$) experience more shame compared to women ($Mdn = 96.16$) ($U = 3840.00$, $z = -1.99$, one side $p = .03$, $r = .14$) when they told the truth.

Table 4

Total Scores of Mean, Standard Deviation of the Feelings and Emotions Guilt, Shame, Comfort, Stress, Fear and Duping Delight, between Men and Women (n =49)

Characteristics	Men (N= 15)		Women (N= 34)		Combined (N=49)	
	Mean	SD	Mean	SD	Mean	SD
Guilt	2.57	1.11	2.90	1.41	2.78	1.32
Shame	1.97	.88	2.34	.97	2.23	.95
Comfort	2.57	1.03	3.03	1.53	2.89	1.40
Stress	2.36	.86	2.66	1.15	2.57	1.07
Fear	1.93	.94	2.07	1.14	2.03	1.07
Duping Delight	2.93	1.03	3.17	1.49	3.09	1.36

Hypothesis 1c predicted that there is a difference after deception between self-oriented deceivers and other-oriented deceivers in relation with feelings of guilt and shame. These feelings and emotions ($n = 39$) have a range score of guilt between 1.00- 5.50 ($M = 2.59$, $SD = 1.28$) and of shame between 1.00- 4.20 ($M = 2.17$, $SD = 0.96$) (see Table 5). I also applied a Mann-Whitney U test; as a result, there is no evident difference between the two kinds of deceivers (self-oriented; $n = 22$, $Mdn = 21.41$ versus other-oriented; $n = 17$, $Mdn = 18.18$) of the feeling of guilt ($U = 218.00$, $z = 0.88$, $p = .39$, $r = .32$) after deception. Additionally, I did not find any contrasts between self-oriented deceivers ($Mdn = 22.02$) and other-oriented deceivers ($Mdn = 17.38$) regarding the feeling of shame ($U = 331.50$, $z = 1.27$, $p = .21$, $r = .32$) after deception.

Table 5

Total Scores of Mean, Standard Deviation of the Feelings and Emotions Guilt, Shame, Comfort, Stress, Fear & Duping Delight, between Self-Oriented Deceivers and Other-Oriented Deceivers (n = 39)

Characteristics	Self-Oriented (N= 22)		Other-Oriented (N= 17)		Combined (N=39)	
	Mean	SD	Mean	SD	Mean	SD
Guilt	2.76	1.30	2.37	1.25	2.59	1.28
Shame	2.31	.94	2.00	.99	2.17	.96
Comfort	3.18	1.48	2.32	.98	2.81	1.36
Stress	2.72	1.01	2.31	1.12	2.54	1.07
Fear	2.16	1.04	1.76	1.07	1.99	1.06
Duping Delight	3.39	1.30	3.03	1.24	3.03	1.33

Stress and fear

As hypothesis 2a predicted, deceivers feel more stress and fear compared to truth tellers. These feelings ($N = 259$) have range score of stress between 1.00- 5.43 ($M = 2.55$, $SD = 0.97$) and of fear between 1.00- 5.00 ($M = 1.90$, $SD = 0.93$) (see Table 3). A Mann-Whitney U test is performed; there is no significant difference between deceivers ($n = 49$, $Mdn = 129.48$) and truth tellers ($n = 210$, $Mdn = 130.12$) of the feeling of stress ($U = 5170.50$, $z = 0.05$, one side $p = .48$, $r = .12$) after deception. Also, there is no evident difference between deceivers ($Mdn = 135.26$) and truth tellers ($Mdn = 128.77$) of the feeling of fear ($U = 4887.50$, $z = -0.56$, one side $p = .29$, $r = .12$) after deception.

According to our prediction 2b, women experience more stress and fear compared to men after deception. The feelings and emotions stress and fear ($n = 49$) have a range score of stress between 1.00- 4.71 ($M = 2.57$, $SD = 1.07$) and for fear between 1.00- 4.50 ($M = 2.03$, $SD = 1.07$) (see Table 4). A Mann-Whitney U test is applied; there is no significant difference between the genders (men; $n = 15$, $Mdn = 22.77$ versus women; $n = 34$, $Mdn = 25.99$) for the feeling of stress ($U = 288.50$, $z = 0.73$, one side $p = .23$, $r = .29$) after deception. The same goes for fear; this feeling has also no evident differences between men ($Mdn = 24.27$) and women ($Mdn = 25.32$) ($U = 266.00$, $z = 0.24$, one side $p = .40$, $r = .29$), after deception.

A Mann-Whitney U test again shows that there is no significant difference between men ($n = 69$, $Mdn = 104.28$) and women ($n = 134$, $Mdn = 100.83$) on stress when they told the truth ($U = 4466.00$, $z = -0.40$, one side $p = .35$, $r = .14$). The feeling of fear between truth telling men ($Mdn = 104.17$) and truth telling women ($Mdn = 100.88$) also show no difference ($U = 3473.50$, $z = -0.39$, one side $p = .35$, $r = .14$).

Hypothesis 2c predicted, people who deceived other-oriented feel more stress and fear compared to people who deceived self-oriented. The feelings and emotions stress and fear ($n = 39$) have a range score of stress between 1.00- 4.57 ($M = 2.54$, $SD = 1.07$) and for fear between 1.00- 4.50 ($M = 1.99$, $SD = 1.06$) (see Table 5). Furthermore, there is no variation between the two kinds of deceivers, which was shown by a Mann-Whitney U test (self-oriented deceivers; $n = 22$, $Mdn = 21.84$ versus other-oriented deceivers; $n = 17$, $Mdn = 17.62$) of the affect stress ($U = 277.50$, $z = 1.15$, one side $p = .13$, $r = .32$). For the feeling of fear there is a certain trend towards significance between self-oriented deceivers ($Mdn = 22.32$) and other-oriented deceivers ($Mdn = 17.00$) ($U = 238.00$, $z = 1.48$, one side $p = .08$, $r = .32$).

Comfort and duping delight

Hypothesis 3a predicted that deceivers feel less comfort compared to truth tellers. The affect of comfort ($N = 259$) has a range score for comfort between 1.00- 6.50 ($M = 2.34$, $SD = 1.12$) (see Table 3). A Mann-Whitney U test is preformed; there is significant evidence that deceivers ($Mdn = 160.07$) feel more comfort compared to truth tellers ($Mdn = 122.98$) ($U = 3671.50$, $z = -3.20$, $p = < .001$, $r = .12$).

Hypothesis 3b is that men experience more comfort and duping delight, compared to women after deception. The feelings and emotions comfort and duping delight ($n = 49$) have a range score for comfort between 1.00- 6.50 ($M = 2.89$, $SD = 1.40$) and for duping delight between 1.00- 6.00 ($M = 3.10$, $SD = 1.36$) (see Table 4). The results show that in feelings of comfort that there is no significant difference between men ($n = 15$, $Mdn = 23.13$) and women ($n = 34$, $Mdn = 25.82$) ($U = 283.00$, $z = 0.61$, one side $p = .27$, $r = .29$) after deception. Duping delight has the same no significant results between genders after deception (men; $Mdn = 24.13$ versus women; $Mdn = 25.38$) ($U = 268.00$, $z = 0.28$, one side $p = .39$, $r = .29$).

However, the test provides significant evidence that there is a difference between men ($n = 69$, $Mdn = 112.50$) and women ($n = 134$, $Mdn = 96.59$) for the feelings of comfort when telling the truth ($U = 3898.50$, $z = -1.89$, one side $p = .03$, $r = .14$). Also, there is an apparent difference that there is a difference between truth telling men ($Mdn = 115.23$) and truth telling women ($Mdn = 95.19$) for the items of duping delight ($U = 3710.00$, $z = -2.34$, one side $p = .01$, $r = .14$).

The last prediction, Hypothesis 3c, states that people who deceived other-oriented feel less comfort compared to people who deceived self-oriented. The affect comfort ($n = 39$) has a range score between 1.00- 6.50 ($M = 2.81$, $SD = 1.35$) (see Table 5). The last results of the Mann-Whitney U test show a margin of statistical significance regarding the affect comfort between self-oriented deceivers ($n = 22$, $Mdn = 22.41$) and other-oriented deceivers ($n = 17$, $Mdn = 16.88$) ($U = 240.00$, $z = 1.52$, one side $p = .07$, $r = .32$) after deception. Nonetheless, people who deceived self-oriented ($Mdn = 23.27$) feel more duping delight comprised to people who deceived other-oriented ($Mdn = 15.76$, $U = 259.00$, $z = 2.05$, one side $p = 0.02$, $r = .32$).

Discussion

In this research, I investigated the effects of deception (versus truth telling), gender and type of deception on experienced feelings and emotions. The expectations were that deceivers felt more guilt, shame, stress, fear and discomfort compared with truth tellers. The results indicate that deceivers feel more guilt, shame and comfort, compared to truth tellers. There are no differences between deceivers and truth tellers in the feelings of stress and fear.

Furthermore, I expected that women felt more guilt, shame, stress and fear and that men felt more comfort and duping delight after deception. Results show that there is no difference between men and women in the feelings and emotions after deception. Nevertheless, truth telling men, compared to truth telling women, feel more shame, comfort and “duping delight”.

Lastly, it was predicted there was a difference between the two types of deception of deceivers in the feelings of guilt and shame and that other-oriented deceivers felt more stress, fear and discomfort, compared to self-oriented deceivers. There is no evidence found for the difference between self-oriented deceivers and other-oriented deceivers in the feelings and emotions guilt, shame, stress, fear and comfort. On the other hand, it can be concluded that self-oriented deceivers feel more duping delight, in comparison to people who deceived other-oriented.

Deception versus truth telling

Results in regard to the difference between deceivers and truth tellers showed that deceivers feel more guilt, shame and comfort. On the other hand, there is no evidence found that deceivers feel more stress and fear, which is not in agreement with early research from DePaulo et al. (1996), DePaulo and Kashy (1998), Ekman (1987), Gozna et al. (2001), Kowalski et al. (2003) and Zuckerman et al. (1981), because research suggests that people who deceive feel more guilt, shame, stress, fear and discomfort, in comparison with truth tellers. Also, I proved that deceivers feel more comfort instead of the predicted discomfort. However, it is notable, that there is no contrast between deceivers and truth tellers on stress and fear and that those deceivers feel more comfort instead of discomfort.

There could be a change in the reason and the way of deception because the current community has changed; for example, the social media has increased vastly in contemporary society. People who deceive via phone or email have less detection probability, which indicates less fear of getting caught (Whitty & Carville, 2008). This is not apparent from the

frequency indicated in this study, since a small number of participants indicated that they deceive that day. Additionally, the types of deception and the possible consequences could influence the degree of stress and fear (DePaulo et al., 1996; Ekman, 1988; Gozna et al., 2001). A decrease in the feelings of stress and fear, increase the feeling of comfort, because people do not have the belief being scrutinized (Richard, 1980 in Kuijt- Evers, 2007; Rimmele & Lobmaier, 2011). DePaulo et al. (1996) and DePaulo and Rosenthal (1979) also suggest that there was a variation in the seriousness of the lie: whether the lie was planned or improvised, which also could influence the degree of stress and fear. If the lie was planned and the probability of detection was low, people felt more comfort and less fear for discovery.

The observed differences between the expectations and results could also be caused by the fact that it concerns low stake lies (DePaulo et al., 1996). These low stake lies do not have major consequences compared to the deceiving behaviour in, for example, police interrogation. But this could also been the case in similar earlier dairy studies about the effects of deception in daily life.

Men versus women after deception

There are no general differences between men and women after deception. This is in contrast with the prediction that women feel more guilt, shame, stress and fear and that men feel more comfort and duping delight after deception. These results are also not in agreement with the assumption that men and women process, express and feel themselves in a different way because of nature and nurture (Eagly & Wood, 1991 in Brebner, 2003; Giebels & Yang, 2009; Matud, 2004; Nolen- Hoeksman & Aldao, 2011; Zimmerman & Iwanski, 2014). Apparently, even if there was a difference in processing and expressing, results seem to show that men and women both pay the consequences of misleading behaviour (Brebner, 2003).

The difference between men and women in the truth condition shows that men feel more shame, comfort and ‘‘duping delight’’ compared to women. Deceivers can only experience duping delight, because it is about pleasure and joy of successful deceiving. Although ‘‘duping delight’’ is only used for deceivers the questions were asked to truth tellers as well. The current research indicates a global difference between men and women in the positive feelings of satisfaction, glee and pleasure also with truth tellers. These results are in line with earlier research that men are more positive compared to women (Brebner, 2003; Canli et al., 2004; Simon & Nath, 2004). However, shame does not match these positive feelings of comfort and ‘‘duping delight’’.

Self-oriented deceivers versus other-oriented deceivers

There are no differences found between self-oriented deceivers and other-oriented deceivers in the feelings of guilt, shame, stress, fear and comfort. This is not in line with the expectations that other-oriented deceivers should feel more stress and fear, which is based on the idea that women feel more stress and fear and that women deceive more other-oriented instead of self-oriented (Boltz et al. 2010; DePaulo, 1996; DePaulo & Kashy, 1998; Matud, 2004; Tyler & Feldman, 2004). The findings of previous studies showing that women deceive more other-oriented than self-oriented were not obtained in this study (respectively, $n = 13$ versus $n = 14$).

Results also showed, that people who deceived self-oriented felt more duping delight, compared to other-oriented deceivers. This is in line with the expectations, that self-oriented deceivers feel more positive. This grounding was based on the idea that men deceived more self-oriented and feel more comfort and duping delight, compared to women (Blotz et al., 2010; DePaulo et al., 1996; Feldmann et al., 2002). After deception, there was no evidence for gender differences in the feelings of comfort and duping delight.

The contrast between current results and the expectations could arise from a possible relation between type of deception and gender. This could unfortunately not be tested in current study.

Strengths, limitations and further research

In this research, only a small group of the participants coded that they had lied that day, which makes it impossible to perform interactive tests, which might have influenced the results. This small group of deceivers is in contrast with the research, where it is indicated that everyone tells a lie, even during a bilateral social interaction (DePaulo et al., 1996; Feldman et al., 2002; Kashy & DePaulo, 1996). Why the number of deceivers is low, is not clear. It is possible that in the current study most of the interaction partners had the same gender or they interact frequently with the person. This indicates less deceiving behaviour, according research from Kashy and DePaulo (1996). The low number is also connected to the idea that women lie less because they have more frequent social interaction and a greater intimacy compared to men (Childs, 2012; Moskowitz, 1993 in DePaulo et al., 1996). And in this study, the participation of women was much higher compared to the participation of men (women; 168 versus men; 84).

Next to this, there is the possibility, although the one-day diary was anonymous, that people answered in a socially desirable way (Dreu, de & Vianen, 2001). Because bystanders in general reject deceiving behaviour, it is possible that socially desired answers will be

higher in the case of these kinds of studies. People have to reflect on own behaviour and they could be confronted with generally ‘‘rejected’’ behaviour. This could, however, not explain why in this study a smaller percentage of participants lied compared to the study of DePaulo et al., (2016) as the study of DePaulo should have had the same social desirability problems.

The main point of this research is that current research is based on a valid method. Previous research has used the diary method earlier, with the same sort of population and in the same context (study 2 from DePaulo et al., 1996; Kashy & DePaulo, 1996). The differences were the length of the study because the participants of the study from DePaulo et al. (1996) and Kashy and DePaulo (1996) had to record their social interactions for one week.

On the other hand DePaulo et al. (1996) and Kashy and DePaulo (1996) also took more time to explain in detail the concepts of deception to the participants. In this (current) study participants are given one clear example about the concept deception, self-oriented lie and other-oriented lie; Kashy and DePaulo (1996) took more than dozen of examples and also explained the concept social interaction. These more detailed examples make people understand the concepts better and they can compare them with their own behaviour which could cause more reported deceiving behaviour, compared to this study.

To improve this study, following studies should use more time for concept explanations so that there could be no mistakes about concepts of deceiving and their definitions. There could also be more focus on investigating the interaction partner, who was lying too, in terms of gender and the intimacy. Since this also influenced deceiving behaviour (Childs, 2012; DePaulo & Kashy, 1998; Moskowitz, 1993 in DePaulo et al., 1996)

Another strength is that the used methods for measuring the statements guilt, stress and fear, comfort are based on existing measurements (Antony et al., 1998; Stel et al. 2009). The created constructs for current study about shame and duping delight are made out of the definitions of Baumeister et al., 1994 in DePaulo et al., 2003, Ekman, 1981, Gozma et al., 2000 and Lewis, 1971 in Tangney et al., 1996. All the constructs, including the created constructs for this study, had a great reliability.

There is hardly any research done on the effects of deception, gender and type of deception in everyday life deception, especially in the feelings and emotions of guilt, shame, stress, fear, comfort and duping delight. Further research is needed and it has to focus on the different feelings and emotions after deception.

It is important and relevant to know what the psychological effects are of deception. Because my conclusion in current study is that people who lied feel negative feelings of guilt and shame. People also feel positive feelings of comfort and they enjoy deceiving. This last

one, the enjoyment of deception, is in particular for self-oriented deceivers. Further research is necessary to investigate this phenomenon because in daily life, the pressure for people to perform will increase continually. People have to perform faster, be more productive, do their best and the competition will be higher, due the globalisation of the world. When we know the effects of deceiving behaviour in daily life, we could prevent or give guidance to people in order to deal with deceiving behaviour and its consequences in daily life.

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References

- Antony, M.M., Bieling, P.J., Cox, B.J., Enns, M.W. & Swinson, R.P. (1998). Psychometric Properties of the 42- items and 21- items Versions of the Depression Anxiety Stress Scales in Clinical Groups and a Community sample. *Psychological assessment*, 10 (2), 176- 181. doi:10.1037/1040-3590.10.2.176.
- Boltz, M.G., Dyer, R.L. & Miller, A.R. (2010). Are you lying to me? Temporal Cues for Deception. *Journal of language and social Psychology*, 29 (4), 458- 466. doi:10.1177/0261927x10385976.
- Brebner, J. (2003). Gender and emotions. *Personality and individual differences*, 34, 387- 394. doi:10.1016/j.adolescence.2015.06.001.
- Canli, T., Desmond, J.E., Zhao, Z. & Gabrieli, J.D.E. (2002). Sex Differences in the Neural Basis of Emotional Memories. *National Academy of Sciences*, 99 (16), 10789- 10794.
- Childs, J. (2012). Gender differences in lying. *Economic letters*, 14, 147- 149. doi: 10.1016/j.econlet.2011.10.006.
- Cohen, S., Kessler, R.C. & Underwood- Gordon, L. (1997). *Measuring Stress, A Guide for Health and Social Scientists*. New York: Oxford University Press, Inc.
- Cohen, T.R. (2010). Moral Emotions and Unethical Bargaining: The Differential Effects of Empathy and Perspective Taking in Deterring Deceitful Negotiation. *Journal of Business Ethics*, 94, 569- 579. doi:10.1007/s10551-009-0338-z.
- Byrd-Craven, J. & Geary, D. (2007). Biological and evolutionary contributions to developmental sex differences. *Reproductive Biomedicine Online*, 15. doi:101016/S1472648310605457.
- DePaulo, B.M. & Rosenthal, R. (1979). Telling Lies. *Journal of Personality and Social Psychological*, 37(10), 1713- 1722. doi:10.1037/0022-3514.37.10.1713.
- DePaulo, B.M., Kashy, D.A., Kirkendol, S.E., Wyer, M.M. & Epstein, J.A., (1996) lying in Everyday Life. *Journal of Personality and Social Psychology*, 70(5), 979- 995. doi:10.1037/0022-3514.70.
- DePaulo, B.M. & Kashy, D.A. (1998), Everyday lies in close and casual relationships. *Journal of personality and social psychological association*, 74(1), 63- 79. doi:10.1037/0022-3514.74.1.63.
- DePaulo, B.M., Lindsay, J.J., Malone, B.E., Muhlenbruck, L., Charlton, K. & Cooper, H.

- (2003), Cues to Deception. *Psychological Bulletin*, 29(1), 74- 118. doi:10.1037/0033-2909.129.1.74.5.979.
- Dreu, de C.K.W.D.E. & Vianen, A.E.M. (2001). Managing relationship conflict and the effectiveness of organization teams. *Journal of applied Psychology*, 22(3), 309- 328. doi: 10.1002/job.71.
- Ekman, P. (1981). Mistakes When Deceiving. *Annals New York Academy of Science*, 364, 269- 278. doi:10.1111/j.1749-6632.1981.tb34479.x.
- Ekman, P. (1988). Lying and nonverbal behavior, theoretical issues and new findings. *Journal of nonverbal behavior*, 12(3). doi:10.1007/BF00987486.
- Ekman, P (1997). *Lying and deception*. Memory for everyday and emotional events. (Edit by Stein, N.L., Ornstein, P.A., Tversky, B. & Brainerd, C.) New York: Psychological Press
- Ennis, E., Vrij, A. & Chance, C. (2008), Individual differences and lying in everyday life. *Journal of social and personal relationships*, 25(1), 105- 118. doi:10.1177/0265407507.
- Feldman, R.S., Forrest, J.A. & Happ, B.R. (2002), Self-presentation and verbal deception: Do self presenters lie more? *Basic and applied social psychology*, 24(2), 163- 70. doi:10.1207/S15324834BASP2402_8.
- Giebels, E. & Yang, H. (2009). Preferences for third-party help in workplace conflict: A cross-cultural comparison of Chinese and Dutch employees. *Negotiation and Conflict Management Research*, 2, 344- 362. doi:10.1111/j.1750-4716.2009.00044.x.
- Gozna, L.F., Vrij, A. & Bull, R. (2001). The impact of individual differences on perceptions of lying in everyday life and in a high stake situation. *Personality and individual differences*, 31, 1203- 1216. doi:10.1016/50191-8869(00)00219-1.
- Harada, T., Itakura, S., Xu, F., Lee, K., Nakashita, S., Saito, D.N. & Sadato, N., (2009), Neural correlates of the judgment of lying: A functional magnetic resonance imaging study. *Neuroscience Research*. 24- 34. doi:10.1016/j.neures.2008.09.010.
- Kowalski, R.M., Walker, S., Wilkinson, R., Queen, A. & Sharpe, B. (2003). lying, cheating, complaining and other aversive interpersonal behaviors: a narrative examination of the darker side of relationships. *Journal of social and personal relationships*, 20(4), 471- 490. doi:10.1177/02654075030204003.
- Kashy, D.A. & DePaulo, B.M. (1996) Who lies?. *Journal of Personality and Social Psychology*. 70 (5), 1037- 1051. doi: 10.1037/0022-3514.70.5.1037.
- Kuijt- Evers, L.F.M. (2007). Comfort in Using Hand Tools, Theory, Design and Evaluation.

- TNO kwaliteit van leven Arbeid*. Amsterdam: Printin PlantijnCasparie.
- Levine, E.E. & Schweitzer, M.E. (2014). Are deceivers ethical? On tension between benevolence and honesty. *Journal of experimental social psychology*, 53, 107- 117. doi:10.1016/j.jesp.2014.03.005.
- Matud, P. M. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences*, 37, 1401- 1415. doi:10.1016/j.paid.2004.01.010.
- Nolen- Hoeksema, S. & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and individual differences*, 51, 704- 708. doi:10.1016/j.paid.2011.06.012.
- Rimmele, U. & Lobmaier, J.S. (2011). Stress increases the feeling of being looked at. *Psychoneuroendocrinology*, 37, 292- 298. doi: 10.1016/j.psyneuen.2011.06.013.
- Sabini, J. & Silver, M. (2001). In Defense of Shame: Shame in the Context of Guilt and Embarrassment. *Journal for the theory of social behaviour*, 27, 10021- 8308. doi:10.1177/0146167201271009.
- Simon, R.W. & Nath, L.E. (2004). Gender and Emotion in the United States: Do men and Women Differ in Self-Reports of Feelings and Expressive Behavior? *American Journal of Sociology*, 109 (5), 1137- 1176. doi: 10.1086/382111.
- Stel, M., Dijk van E. & Olivier, E. (2009). You want to know the Truth? Then don't Mimic! *Psychological science*, 20 (6), 693-699. doi: 10.1111/j.1467-9280.2009.0235.x.
- Tangney, J.P., Miller, R.S., Flicker, L. & Barlow, D.H. (1996). Are shame, guilt, embarrassment distinct emotions? *Journal of personality and social psychology*, 70(6), 1256- 1269. doi:10.1037/0022-3514.70.6.1256.
- Tyler, J.M. & Feldman, R.S., (2004), Truth, Lies and Self-presentation: How gender and anticipated future interaction relate to deceptive behaviour. *Journal of applied social psychology*, 34(12), 2602- 2615. doi:10.1111/j.1559-1816.2004.tb01994.x.
- Vrij, A., Granhag, P.A. & Mann, S. (2010). Good liars. *The Journal of Psychiatry & Law*, 38, 77- 99. doi:10.1177/009318531003800105.
- Whitty, M.Y. & Carville, S.E. (2008), Would I lie to you? Self-serving lies and other-oriented lies told across different media. *Computers in Human behavior*, 24, 1021- 1031. doi: 10.1016/j.chb.2007.03.004.
- Witte, K. & Allen, M. (2000). A Meta- Analysis of Fear Appeals: Implications for Effective Public Health Campaigns. *Health Education & Behavior*, 27(5), 591- 615. doi: 10.1177/109019810002700506.
- Zimmermann, P. & Iwanski, A. (2014). Emotion regulation from early adolescence to

emerging adulthood and middle adulthood: age difference, gender difference and emotion- specific development variation. *International journal of behavioral development*, 38(2), 182- 194. doi:10.1177/0165025413515405.

Zuckerman, M., DePaulo, B. M., & Rosenthal, R. (1981). Verbal and nonverbal communication of deception. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, 14, 1– 59. New York: Academic Press.

Appendix

Appendix A: One-day dairy questionnaire about the statements of feelings and emotions

Statement	Feelings and Emotion
1. Ik voel me schuldig	Guilt
2. Ik voel me prettig	Duping Delight
3. Ik voel me tevreden	Duping Delight
4. Ik voel me comfortabel	Comfort/ Shame
5. Ik voel me onrustig	Stress
6. Ik voel me vernederd	Shame
7. Ik voel me ontspannen	Stress
8. Ik voel me blij	Duping Delight
9. Ik voel me licht geraakt	Stress
10. Ik voel me berouwvol	Guilt
11. Ik voel me angstig	Fear
12. Ik voel me bang	Fear
13. Ik voel me bezwaard	Guilt
14. Ik voel me vreesachtig	Fear
15. Ik voel me verlegen	Shame
16. Ik voel me onteerd	Shame
17. Ik voel me nerveus	Fear/ Stress
18. Ik voel me opgewonden	Duping Delight
19. Ik heb spijt	Guilt
20. Ik schaam me	Shame
21. Ik kan me lastig relaxen	Stress
22. Ik heb de neiging om in situaties overdrijven te reageren	Stress
23. Ik had gehoopt dat iemand mij had tegen gehouden om te liegen/ waarheid te vertellen	Stress
24. Ik voel me op mijn gemak	Comfort