Commitment as an indicator of stress?

Quantitative research into the effects of various types of commitment on self-perceived stress

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Abstract

Recent HRM literature is increasingly focused on commitment and its positive effects on organizational outcomes, such as organizational performance or behaviour. However, this perspective predominantly indicates positive effects of commitment, while research about the "dark sides" of commitment, or overcommitment, are still underexposed. This study aims to shed more light on these themes by answering the question: What is the effect of various types of commitment on self-perceived stress? Data were collected from 1,089 employees from all occupational sectors and layers of the Dutch workforce, using the Workplace Commitment Survey. Several analyses were conducted, testing for both linear and non-linear effects of commitment on dimensions of job stress (i.e. self-perceived helplessness and self-efficacy). Firstly, results revealed negative, linear relationships between age and career commitment on the one hand, and self-perceived helplessness on the other hand. Secondly, results indicated positive, linear relationships between career commitment and commitment to leader on the one hand and self-perceived self-efficacy (i.e. feel in control) on the other hand. Thirdly, evidence of a curvilinear relationship was found between organizational commitment and self-perceived helplessness; as organizational commitment increases, self-perceived helplessness decreases initially, but it plateaus and reverses again for those who reported the highest organizational commitment scores.

Keywords: Commitment, Job Stress, Self-perceived Helplessness, Self-perceived Self-efficacy, Overcommitment, Curvilinear relationship.

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1. Introduction

Current Human Resource Management (HRM) literature has an increasing focus on different forms of commitment and its effects on various outcomes (Klein, 2016). Most of these studies have associated commitment with outcomes on an organizational level, such as organizational performance, customer satisfaction and profit margins (e.g., Cameron, Bright, & Caza, 2004; Harter, Schmidt, Asplund, Killham, & Agrawal, 2010; Heavey, Holwerda, & Hausknecht, 2013). Or, on the level of the individual, as a predictor of absenteeism, turnover, individual performance, motivation, pro-social behaviour, well-being and career success (Becker, Klein, & Meyer 2009; Mathieu & Zajac 1990; Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). The consensus is clear; most research results substantiate the idea that high(er) commitment leads to more positive organizational and behavioural outcomes (Meyer & Maltin, 2010).

However, this mindset provides a biased view on a rather complex topic, for it seems to paint a predominantly positive picture, which presupposes a linear relationship between commitment and beneficial outcomes, and thus that organizations should always strive to increase commitment. This poses the question; How much commitment is enough? What about too much commitment, or even overcommitment? In his introduction to the special issue, Klein (2016) argues that there are potential "dark sides" to commitment and can even have detrimental effects on employee's professional efficacy, cynicism or emotional exhaustion (i.e. the main dimensions of burnout), not just beneficial ones. Yet, these aspects are still underexposed in current literature. Does commitment also influence feelings of stress or efficacy? Understanding these negatives aspects of commitment is essential for a better understanding of the concept of commitment, and to find the perfect balance to aid employee health and well-being, which, in turn, could aid the reduction of burnout numbers. This research aims to fill this underexposed gap in the literature and advance the existing literature to create a more developed understanding of the concept. Therefore, the research question in this thesis is: *What is the effect of various types of commitment on self-perceived stress?*

To study the research question as posed above, this thesis has first conducted an extensive literature study to investigate the various stances on commitment, types of commitment and their relationships. Other promising aspects that might shed some more light on the issue of overcommitment is the Effort-Reward Imbalance model (Siegrist, 1996; Siegrist, Starke, Chandola, Godin, Marmot, & Niedhammer, 2004). Once the theoretical framework was constructed, this study has been operationalized in the methodology section, opting for a quantitative study to test the conceptual model to the collected data. Then, this was followed

by an analysis of the results. These results were then linked back to the theory in the conclusion and discussion section, where references for future research were included. Finally, the study has been summarized in the conclusion.

This thesis aims to contribute to the current literature regarding commitment and overcommitment, and to use results to construct some generalizable data in the field. The results can also be used as a starting point for other future research to study this phenomenon in different contexts. Practical implications that this study might provide, is that it allows for a better understanding of the concept of overcommitment. In addition, it provides sound arguments against the dominant notion in the literature, that pushing organizational commitment can be used for beneficial outcomes. Instead, it has to be carefully considered and monitored, as pushing commitment past a turning point has detrimental effects. Therefore, a better understanding of (over-)commitment can help battle burnout numbers, which only stands to benefit society as a whole, as this will lead to positive effects for employers and organizations. Decreasing the burnout numbers and general feelings of stress will not only lead to better well-being in general, thus making for a happier and healthier workforce, but also decrease costs for both the organizations and healthcare, that are caused by the number of people affected by work-related stress or even burnout.

During this study there has been a collaboration with a group of students—writing theses on similar topics—in the form of a Thesis Circle, to provide support and guidance to each other and function as a sounding board. This form of supervision and cooperation has helped in broadening and deepening my perspective, with a fresh, outsider perspectives.

2. Theoretical background

2.1 Commitment

Commitment plays a prominent part in all our lives, as people daily work to fulfil their various commitments. Commitment comes in many shapes and sizes, such as to friends or family, to a partner or sometimes even pets. But not only socially, as people can also be committed to a certain goal, to their profession, or their organization or work. A person is almost inevitably committed to several causes at once, and how these all influence each other—or whether these should be studied in a multidimensional way at all—has kept the field rather occupied.

One of the most notable theoretical streams in the literature on commitment are the views of Klein, Molloy and Brinsfield (2012), who focussed their research on defining commitment as a unidimensional construct. They argue that there should be a more clear differentiation between what commitment is, and what the antecedents or consequences of commitment are (Klein, Molloy, & Brinsfield, 2012). Klein et al. (2012) define commitment as *"a volitional psychological bond reflecting dedication to and responsibility for a particular target"* (Klein et al., 2012, p. 137).

Another stream of theory opts to define commitment through the Three-Component Model (TCM) as introduced by Meyer and Allen (1991), which looks at commitment from a multidimensional approach. They propose that commitment can be experienced in three different mindsets; affective, normative and continuance commitment. *Affective commitment* is characterized by a person's emotional involvement, attachment or identification to an organization. They are committed because they *want* to (Meyer & Allen, 1991). *Normative commitment* is characterized by feelings of obligation to commit to something. People with high normative commitment feel morally obligated to stay, they feel like they *ought* to (Meyer & Allen, 1991). And third is *Continuance commitment* which is characterized by the awareness of what it could cost someone if, for example, they were to leave an organization. That it could set them back financially, or set them back on their career path. They remain committed because they feel like they *need* to (Meyer & Allen, 1991). It is important to note that, while the three models are seen as a multidimensional construct, the essence of commitment is unidimensional as well and defined as: "*an internal force that binds an individual to a target (social or non-social) and/or to a course of action of relevance to that target"* (Meyer, 2009, p. 39)

The definition from Klein et al. (2012) is different from the TMC model (Meyer & Allen, 1991) in that commitment is defined as a type of bond, instead of a binding force, and

that it is a particular bond type without a relationship to specific action or force, which eliminates the need for further support or additions, thus defining commitment as a more straight-up, unidimensional construct. The TMC model was constructed to be inclusive, to provide a way to integrate various conceptualizations of commitment. This multidimensional approach is well-suited for the psychological complexity of the ties that bind people to their organizations, their work or their social relations (Allen, 2016). However, one of the reasons to opt for a more unidimensional approach is that prior conceptualization of commitment also includes concepts such as motivation or behavioural intentions, which—according to Klein—should be viewed as consequences of commitment. He also states that many multidimensional conceptualizations are only multidimensional because the construct of commitment is drawn too broadly and includes concepts which should be part of separate dimensions (Klein & Park, 2016). Therefore, for this study, because the effect of commitment itself is to be investigated, a unidimensional approach was preferred.

Another theme within current commitment literature is about the multiple foci of commitment, which does not seek to explore commitment in multiple, interrelated dimensions, but investigates the interplay of the different commitments a single person can focus on. Becker (2016) explains that these multiple foci of commitment can comprise commitment to organizations, commitment to external foci, such as professions or careers (Vanderberghe, 2009), commitment to interpersonal foci, such as co-workers, supervisors, top-management or customers (Becker, 2009) and finally commitment to actions, such as goals and values, group norms, and organizational change (Neubert & Wu, 2009). Next to these various types of commitment, several antecedents of commitments on different levels have been identified, such as demographic variables and personality on the individual level (Bergman, Benzer, & Henning, 2009), perceived organizational support (POS), psychological contract and leader-member exchange (LMX) on the social level (Wayne, Coyle-Shapiro, Eisenberger, Liden, Rousseau, & Shore, 2009) and culture, structure and climate on the organizational level (Wright & Kehou, 2009). Other additions to antecedents of commitment include HRM practices—such as training and empowerment in decision-making—(Wasti & Can, 2008), social climate (Rice, 2009), Machiavellianism (Zettler & Solga, 2013) and self-esteem (Panaccio & Vanderberghe, 2011). The interrelationships between these antecedents and commitment once again emphasize the complexity of the concept. Furthermore, researchers investigated the relationships between multiple commitments and employee well-being, creativity and organizational outcomes such as sales volume and market share (Klein, Becker, & Meyer, 2009). Other links were also documented, like those between multiple commitments and in-role and extra-role performance

(Veurnink & Fischer, 2011), withdrawal behaviours (Askew, Taking, & Johnson, 2013), proactive behaviour (Belschak & Hartog, 2010), but also burnout (Morin, Vandenberghe, Turmel, Madore, & Maïano, 2013). All the above examples illustrate that there is a lot to be found in commitment research when considering these multiple foci. As written before, a person is never only committed to a single cause. Therefore, this research opts for the multiple foci of commitment approach, to investigate the effects of various types of commitment on self-perceived job stress. However, if the goal is investigating when commitment stops being beneficial, or when commitment transforms to overcommitment—which Klein et al. (2012) called the potential "dark sides" of commitment—the Effort-Rewards Imbalance model (Siegrist, 1996) might help us understand more about these subjects.

2.2 The Effort-Reward Imbalance Framework

In sharp contrast to the positive picture that most commitment literature paints—especially on affective commitment (for a review see Meyer & Maltin, 2010)—is the Effort-Rewards Imbalance (ERI) model introduced by Siegrist (1996). This model aims to explain how social exchanges, and the costs and gains related to that, steer people's behaviour. People invest a certain effort and thus expect some sort of reward in return (Siegrist, 1996; Siegrist et al., 2004). Effort is defined as the person's perception of the strain caused by demands and responsibilities (e.g., job demands, working overtime, obligations) and reward is defined as the opportunities that the work offers (e.g., salary, bonuses, status, career opportunities) (Siegrist, 1996; Siegrist et al., 2004). The ERI-model is based on three assumptions. First, there is the *extrinsic ERI hypothesis* which states that an imbalance between a high effort to low reward in a job generates an increased risk of reduced health. The second is the *intrinsic Overcommitment hypothesis*, or OVC, which states that overcommitted employees have an increased risk of reduced health. The third is the interaction hypothesis, or ERI x OVC hypothesis, that states that people who are both characterized by high ERI and high OVC have the highest risk of reduced health (Siegrist, 1996; Siegrist et al., 2004). Various studies show evidence that an extended imbalance in the efforts and rewards can play a part in the development of several psychosomatic, psychosocial and physical illnesses and behavioural outcomes (for a review, see Van Vegchel, De Jonge, Bosma, & Schaufeli, 2005).

ERI itself has also been associated with increased risk of cardiovascular diseases (Van Vegchel et al., 2005), high psychological distress, emotional exhaustion, and poorer general mental health (Baché, Seidler, Latza, Rossnagel, & Schumann, 2012; De Jonge, Bosma, Peter,

& Siegrist 2000; Kivimaki, Leino-Arjas, Luukkonen, Riihimaki, Vahtera, & Kirjonen, 2002; Shimazu & De Jonge, 2009; Stansfeld, Bosma, Hemingway, & Marmot, 1998). De OVC hypothesis implies that overcommitment in itself also poses a risk for employee health, even in the absence of ERI (Feldt, Huhtala, Kinnunen, Hyvönen, Mäkikangas, & Sonnentag, 2013). Overcommitted employees generally have a strong ambition, which is often combined with the need to control and the need to gain esteem or approval from others (Van Vegchel et al., 2005). Overcommitment is thought to influence the perceptions of efforts and rewards and thus (indirectly) influences employee health as well. It is also thought to influence employee health more directly, as being highly overcommitted might be exhaustive over longer periods (Van Vegchel et al., 2005). Feldt et al. (2013) substantiate this in their article, where they state that overcommitment has also been linked to increased risk of future insomnia, poorer self-rated health, higher (work)stress and increased risk of burnout, with the emphasis on emotional exhaustion as a cause (Rennesund & Saksvik, 2010; Salavecz, Chandola, Pikhart, Dragano, Siegrist, & Jöckel, 2010; Salmela-Aro, Rantanen, Hyvönen, Tilleman, & Feldt, 2011). Surprisingly, it is noted by Feldt et al. (2013) that long-term exposure to high ERI in combination with overcommitment does not necessarily harm work engagement. However, this might be explained by overcommitment counterbalancing the negative effects of the ERI on work engagement. Therefore, this is still to be avoided, if the goal is to avoid burnout (Feldt et al., 2013).

In the research from Morin et al. (2013) they seek to re-evaluate the construct of affective commitment, not as a linear relationship, but as a curvilinear relationship that can reach a "ceiling" of sorts, from which high levels of affective commitment stops being beneficial. This is based on assumptions of the ERI model (Siegrist, 1996; Siegrist et al., 2004) which they use to explain that after a certain point, increased levels of commitment can no longer be reciprocated with the proper rewards by the organization. In their study, the relationships between affective commitment, organizational citizenship behaviour (OCB) and emotional exhaustion (i.e. one of the main dimension of burnout) proved to be perfectly linear, even at extreme levels. However, some relationships between affective commitment and work outcomes (i.e. professional efficacy and in-role performance) proved to be curvilinear, meaning that certain levels of affective commitment are still beneficial for these work outcomes, but after a turning point, affective commitment is likely detrimental to these same outcomes. Thus, they propose that organizations should seek to maintain optimal levels of commitment, instead of trying to push it towards extremes (Morin et al., 2013). It would be interesting to see if this

type of curvilinear relationship also exists with commitment as a unidimensional construct and from which foci of commitment it would spring.

Following the stream of literature from the ERI-model onwards, there is also the theory about the well-known Job Demands-Resources (JD-R) model by Demerouti, Bakker, Nachreiner and Schaufeli (2001). The JD-R model works under the assumption that every occupation works with their specific risk factors, which are associated with job stress. These factors can generally be divided into two categories; job demands and job resources (Demerouti et al., 2001). Job demands mean the organizational, psychological, physical, or social aspects of a job, which requires continuous emotional or cognitive effort or skills. These are therefore associated with psychological or physiological costs (e.g., high work pressure or emotionally demanding interactions with clients). Job demands are in itself not necessarily negative, but possibly turn into job stressors when continuously requiring high effort. Job resources, on the other hand, are the psychological, physical, organizational or social aspects of an occupation that either stimulate learning, development and personal growth, or reduce job demands and their related psychological or physiological costs. Also, they are functional in achieving work goals (Bakker & Demerouti, 2007). In the JD-R model, job demands can increase feelings of strain and stress, which in turn can negatively influence well-being or performance. In the article by Bakker and Demerouti (2007), they also state that job stress can be both predictor and outcome of job demands, as higher stress results in less favourable job conditions over time. Therefore, job stress is an important factor in employee working life, with extensive influence on several aspects. This is why—in this study—I wanted to investigate possible relationships between various foci on commitment and job stress as perceived by employees themselves.

For this thesis, the following conceptual model is proposed (Figure 1), which explores the effect of commitment on self-perceived job stress. As commitment itself is a broad concept with different foci, this study opts to investigate the interrelationships of five types of different foci of commitment, namely *commitment to the organization*, *commitment to colleagues*, *commitment to leader*, *commitment to career and commitment to profession*. By choosing to distinguish between these forms of commitment, a more clear image on which types of commitment influence levels of job stress—and which do not—should emerge. Taking commitment as a single, complex variable makes it harder to explain where effects originate from. Thus, the commitment variable is split into five different foci of commitment, as seen in the conceptual model (Figure 1).

Regarding self-perceived job stress, this study used the Perceived Stress Scale (PSS) (see Chapter 3) of Cohen and Williamson (1988), which is still a widely used as a measure for

self-perceived stress. The PSS-measure is built with items around three central components of the experience of stress; which are how uncontrollable, how unpredictable and how overloaded respondents find their lives. These items each form two dimensions; *self-perceived helplessness* and *self-perceived self-efficacy* (i.e. whether you feel in control and able to cope). These feelings of helplessness and self-efficacy influence the way job stress is perceived by employees (Cohen & Williamson, 1988). As shown by the conceptual model in Figure 1, the study is already quite extensive in itself. This is why no additional moderators or variables are used to strive for model parsimony.

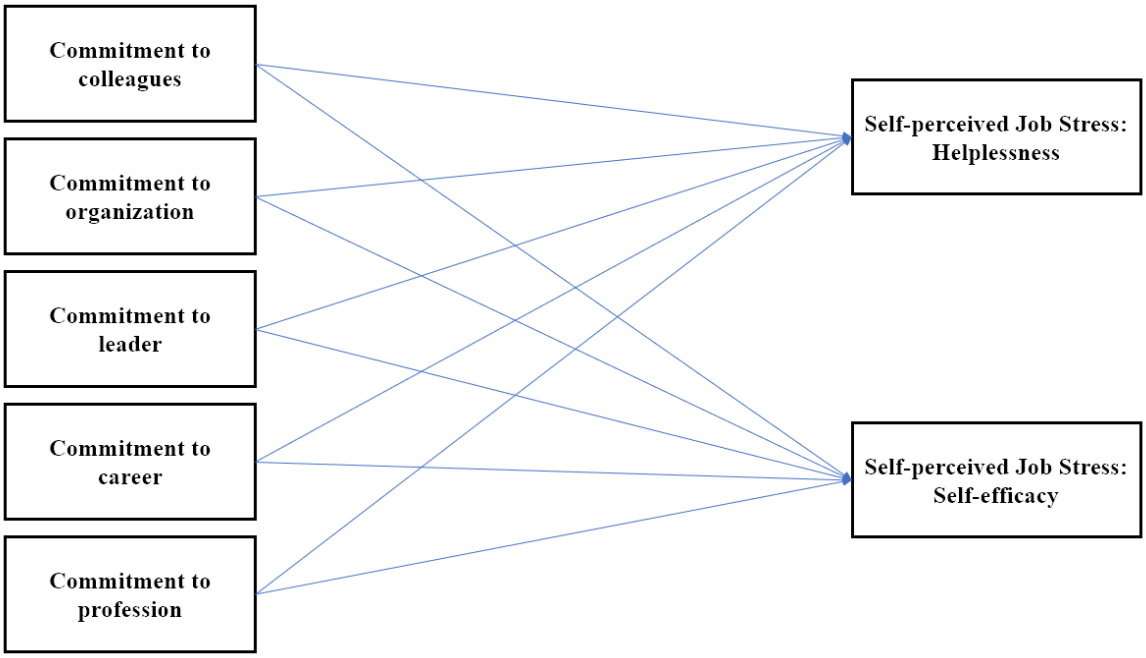

Figure 1. Conceptual model.

Following this conceptual model, the expectations of this study are visualized. As previously mentioned, the main focus of this study is to investigate the relationships between multiple foci of commitment and job stress dimensions. Expectations are that these relationships are curvilinear in nature. Thus, the first hypothesis consists of five sub-hypotheses (*Hypothesis 1a to 1e*), testing different foci of commitment on the dependent variable job stress caused by dimension *self-perceived Helplessness.* I presume that higher levels of commitment can help decrease feelings of helplessness in employees, but only up to a certain point, meaning that if the commitment is too high, self-perceived helplessness will increase again, thus indicating a curvilinear effect.

The first hypothesis of this thesis is:

Hypothesis 1: Commitment has a curvilinear effect on self-perceived helplessness.

- *H1a: Commitment to colleagues has a curvilinear effect on self-perceived helplessness.*
- *H1b: Commitment to organization has a curvilinear effect on self-perceived helplessness.*
- *H1c: Commitment to leader has a curvilinear effect on self-perceived helplessness.*
- *H1d: Commitment to career has a curvilinear effect on self-perceived helplessness.*
- *H1e: Commitment to profession has a curvilinear effect on self-perceived helplessness.*

The next hypothesis also uses these same five different foci of commitment (*Hypothesis 2a to 2e*) to test the effects of the different types of commitment on *self-perceived Self-Efficacy* (i.e. an employee's feelings of being able to cope). Expectations are that commitment also has a curvilinear effect on their feelings of self-efficacy and therefore, increased levels of self-perceived job stress. This is because their high levels of commitment possibly lead to high expectations of themselves and thus eventually leads to a negative effect on their self-efficacy and their ability to feel in control. So, the second hypothesis is:

Hypothesis 2: Commitment has a curvilinear effect on self-perceived self-efficacy.

- *H2a: Commitment to colleagues has a curvilinear effect on self-perceived self-efficacy.*
- *H2b: Commitment to organization has a curvilinear effect on self-perceived self-efficacy.*
- *H2c: Commitment to leader has a curvilinear effect on self-perceived self-efficacy.*
- *H2d: Commitment to career has a curvilinear effect on self-perceived self-efficacy.*
- *H2e: Commitment to profession has a curvilinear effect on self-perceived self-efficacy.*

3. Methodology

To investigate the concepts as outlined in the introduction above, an extensive literature study has been conducted to uncover current stance of HRM literature on the concepts of (over-) commitment, (organizational) commitment, organizational behaviour, performance, employee well-being, employee health, burnout and stress. Further research design and strategy of this thesis are outlined below.

3.1 Sample and procedures

This study has been conducted as quantitative research through the use of a survey. Data has been gathered through the use of the Workplace Commitment Survey by bachelor students and master students in 2018 and 2019. The survey was set up using Qualtrics software, and data gathered by sending participants an anonymous link to the Qualtrics survey. Students utilized their social networks to gather respondents efficiently, and to maximize the total sample in the time available. However, this type of sampling is called convenience sampling, which is a type of nonprobability sampling where participants of the survey meet certain criteria, such as easy accessibility, geographical proximity or willingness to participate. Sampling in this way is sensitive to bias (Etikan, Musa, & Alkassim, 2016). Effects of possible bias are somewhat countered because the data is gathered from the networks of a group of different students, as opposed to only a single student gathering data through this method.

The total sample of the survey is 1,089 respondents. These respondents of the Workplace Commitment Survey are employed people from all layers the Dutch workforce, working in different industries and different capacities in the Netherlands. For example, as an employee for an organization, a business owner with—or without—personnel, or employee for a detachment agency. To utilize the maximum sample size in this study, no differentiation was made in types of industry. However, to be able to compare commitment in employees, this research only uses the respondents who work as an employee for an organization, leaving out respondents who own businesses or work via an employment agency. This was done because, in essence, a business owner or someone employed through an employment agency possibly has quite different targets of commitments, than those working as an employee for an organization. Furthermore, as Qualtrics registers every time someone clicked on the link as a single respondent, the choice was made to only use respondents who finished the survey. With this selection, a sample of 684 respondents remained.

Further analysis of the data was then conducted, and data were checked for possible problematic missing data and outliers. Internal consistency of the Dutch translation of the survey was checked through a Factor Analysis and finally, the dataset was used to investigate linear and curvilinear relationships through Multiple Regression Analysis (for results, see Chapter 4).

Regarding the ethical considerations, to uphold the correct research ethics, the data collected and processed in this study has been treated with confidentiality and anonymity. As mentioned before, the gathering of the data took place through the use of sending respondents an anonymous link. So, a submitted survey cannot be traced back to the original respondent, ensuring full anonymity. At the start of the survey, the purpose and goal of this study were disclosed to readers, so that the intentional use of the data was clear. Furthermore, a description of the research was given at the start of the survey, so respondents would get a general idea of what the survey was about beforehand. Additionally, the respondents filled in the survey on a fully voluntary basis, and no form of rewards or benefits were promised to the participation in this study.

3.2 Measurements

The data used in this study has been collected through the Workplace Commitment Survey in 2018 and 2019. Dimensions of the survey comprised 148 items about (among others) organizational commitment, career commitment, collegial commitment, commitment to leader, job satisfaction, in-role performance, entrenchment and self-perceived job stress. Items from this survey are based on pre-designed concepts (e.g., on Engagement from May, Gilson, & Harter, 2004, or Organizational Identification based on Mael & Tetrick, 1992) which results in higher validity and reliability. The characteristics of the items in the survey are high-structured and close-ended questions, for which each of the items has seven-point Likert-scale answering option. The items used for this research to measure the different types of commitment are the items from the Klein et al. Unidimensional Target-free measure (Klein, Cooper, Molloy, & Swanson, 2014), which consists the following items:

1. *How committed are you to [your/the/this] [target] ?*
2. *To what extent do you care about [your/the/this] [target] ?*
3. *How dedicated are you to [your/the/this] [target] ?*
4. *To what extent have you chosen to be committed to [your/the/this] [target] ?*

The targets for these items are career, leader, profession, organization and colleagues. These items are measured on a 7-point Likert scale, with answer options ranging from *1. Not at all* up until *7. Completely.*

The second set of items used to measure levels of self-perceived job stress are from the Perceived Stress Scale with 10 items (Cohen & Williamson, 1988). Originally, created with 14 items. However, in their article, Cohen and Williamson (1988) already stated that 4 items load very low on the two factors, and the 10-item scale is therefore preferred. Various assessments have since substantiated this conclusion. The PSS14, PSS10 and PSS4 have also been assessed for validity and reliability in many studies since then (e.g., for a review, see Lee, 2012). Therefore, because it is a well-known measure which already established stable results, the measure is also used in this survey. The PSS10 measure consists of the following items:

1. *In the last month, how often have you been upset because of something that happened unexpectedly? (R)*
2. *In the last month, how often have you felt that you were unable to control the important things in your life? (R)*
3. *In the last month, how often have you felt nervous and "stressed"? (R)*
4. *In the last month, how often have you felt confident about your ability to handle your personal problems?*
5. *In the last month, how often have you felt that things were going your way?*
6. *In the last month, how often have you found that you could not cope with all the things that you had to do? (R)*
7. *In the last month, how often have you been able to control irritations in your life?*
8. *In the last month, how often have you felt that you were on top of things?*
9. *In the last month, how often have you been angered because of things that were outside of your control? (R)*
10. *In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? (R)*

The items numbered 1, 2, 3, 6, 9 and 10 ask the respondent about job stress caused by self-perceived helplessness. These items are negatively worded and are therefore reversed (as indicated by the *(R)*). Reversing items is necessary to make sure that item scores line up and indicate the same results (Magazine, Williams, & Williams, 1996). The item numbered 4, 5, 7 and 8 are items that ask the respondent about self-perceived self-efficacy (Cohen & Williamson, 1988). These items are also measured by using a 7-point Likert scale with answer options ranging from *1. Not at all* up until *7. Completely.* Using this type of answering options allows

for the data to be processed metrically, after performing Factor Analysis and the transformation into summated scales in SPSS (Hair, Black, Babin, & Anderson, 2014). As the workplace survey was conducted among employees who all work in the Netherlands, the survey was translated to Dutch by Dr Yvonne van Rossenberg.

All gathered data has been processed in SPSS. With processing the data, first Confirmatory Factor Analysis is used to check the internal consistency of the scales for this research. Furthermore, Multiple Regression Analysis is used to study further relationships of the multiple foci of commitment and self-perceived helplessness and self-efficacy. Hair et al. (2014) state that for an accurate representation of the population, a minimum of 15 to 20 respondents per variable is needed for Multiple Regression Analysis, which provides more degrees of freedom, thus improving the statistical power and generalizability (Hair et al., 2014). As the sample used for this study far exceeds this required minimum (N = 684, see Chapter 4), Multiple Regression Analysis can be used correctly.

4. Results of Data Analysis

The following chapter includes the results from processing the data in SPSS. First, the gathered data is analysed, followed by factor analysis to confirm internal consistency and finally, relationships are investigated through multiple regression analysis.

4.1 Preliminary Analysis

4.1.1 Data Descriptives

As mentioned in the Methodology chapter, the survey on workplace commitment had a total sample of 1,089 respondents. After selection procedures, a sample of 685 respondents remained. When looking at the frequencies of the demographic variables of the respondents in Table 1, we see an overrepresentation of women, as 65% of respondents are female and 34.1% are male (0.9% other or missing). This differs greatly from the working population in the Netherlands from which 53.3% is male and 46.7% is female (CBS, 2019).

Table 1. Frequencies demographic

Demographic variables		Freq.	Valid %	Cum. %
Age	18 - 25 years	255	37.8	37.8
(into groups)	26 - 35 years	144	21.4	59.2
	36 - 45 years	45	6.7	65.9
	46 - 55 years	124	18.4	84.3
	56 - 65 years	105	15.6	99.9
	66 years and up	1	0.1	100
	Total Valid N	674	100	
Education	Lower educational level	22	3.2	3.2
	Middle educational level	174	25.5	28.7
	Higher educational level	486	71.3	100
	Total Valid N	682	100	
Gender	Women	444	65	65
	Men	233	34.1	99.1
	Other	6	0.9	100
	Total Valid N	683	100	

Regarding the level of education, three groups were constructed for lower, middle and higher educational level. Lower educational level comprises education up to VMBO (pre-vocational secondary education) or up to the first three years of HAVO (senior general secondary education). Middle educational level comprises finishing HAVO or VWO (pre-university education) or MBO (secondary vocational education). Higher educational level comprises all education from HBO (Higher professional education), WO (university education) to PhD and doctorates. In the sample, 3.2% falls in the lower educational level category, 25.5% in the middle educational level category and 71.3% in the higher educational level category. Compared to the numbers of the Dutch workforce population, an overrepresentation of the higher educational level category, and a gross underrepresentation as noted in middle and lower educational level, as 20.3% of the Dutch workforce falls in the lower educational level category,

40.9% falls in the middle educational level category, and 37.6% in the higher educational level category (CBS, 2019).

Age also shows some variations when compared to the population as the youngest age category (from 18 to 25 years old) make up for 37.8% of the sample, compared to 15.2% of the Dutch workforce population (CBS, 2019). The age category of 36 to 45 years old is only 6.7% of the sample, compared to 19.7% of the population (CBS, 2019). As these numbers show, the sample is therefore not entirely representative of the Dutch workforce, and thus caution in interpreting the results is mandatory.

Finally, Table 2 also shows the scores on skewness and kurtosis in the data. Problematic skewness scores report whether the data displays non-normal, or even problematic, distribution. Kurtosis scores indicate if the data is clustered around the mean, or more spread out among all answering options. Scores in Table 2 show no problematic skewness or kurtosis scores. Skewness and kurtosis scores for the dummy variables can be ignored as the dummy variables only have two answering options, so divergent scores are to be expected.

Table 2. Descriptive statistics

	N	Min.	Max.	Mean	Std. Dev.	Skewness		Kurtosis	
						Statistic	S.E.	Statistic	S.E.
Dependent variables									
Job stress: Helplessness	684	1	7	5.246	0.902	-1.025	0.093	1.701	0.187
Job stress: Efficacy	683	1	7	4.424	0.980	-0.180	0.094	0.129	0.187
Independent variables									
Commitment to Career	679	1	7	5.114	0.964	-0.460	0.094	1.290	0.187
Commitment to Leader	525	1	7	4.889	0.970	-0.572	0.107	1.313	0.213
Commitment to Profession	682	1	7	4.869	1.129	-0.912	0.094	1.435	0.187
Commitment to Organization	684	1	7	4.908	0.867	-0.737	0.093	1.897	0.187
Commitment to Colleagues	683	1	7	4.965	0.796	-1.015	0.094	3.548	0.187
Control variables									
Age	685	18	67	37.054	14.613	0.526	0.093	-1.318	0.187
Lower educational level *(dummy)*	685	0	1	0.030	0.176	5.319	0.093	26.370	0.187
Middle educational level *(dummy)*	685	0	1	0.250	0.436	1.133	0.093	-0.719	0.187
Higher educational level *(dummy)*	685	0	1	0.710	0.454	-0.925	0.093	-1.148	0.187
Men *(dummy)*	683	0	1	0.350	0.477	0.631	0.094	-1.607	0.187
Women *(dummy)*	685	0	1	0.648	0.478	-0.622	0.093	-1.618	0.187
Valid N (listwise)	508								

4.1.2 Missing data

In the survey, all commitment types are composed of four items. When looking at the missing data, when a sample is larger than 400, the missing data per variable or scale should not exceed the 5% mark (Hair et al., 2014). Analysing the missing data from all the items mentioned above show non-problematic values, as all are below 1.3% missing data, except for the items regarding *Commitment to Leader*, which has a missing value count of 23.4%. However, this is due to the routing of the questionnaire, which skips the items regarding leadership if a respondent does not work under direct supervision. Because of this routing, the analyses are conducted with pairwise deletion, to prevent deletion of respondents without direct supervision, but who still have commitments to other targets and therefore valid answers as well.

4.1.3 Correlations

In Table 3 the relationships between the variables are measured, showing which variables correlate to one another and what the strength of that relationship is, producing a score somewhere between -1 and +1, with 1 indicating a perfect correlation between the two (Field, 2009).

Table 3. Spearman's correlations between variables

	N	1	2	3	4	5	6	7	8	9	10
1. Job Stress: Helplessness	684										
2. Job Stress: Self-efficacy	682	.514**									
3. Commitment to Career	678	.079*	.140**								
4. Commitment to Leader	524	.068	.200**	.248**							
5. Commitment to Profession	681	.005	.112**	.240**	.257**						
6. Commitment to Organization	683	.008	.155**	.197**	.444**	.455**					
7. Commitment to Colleagues	682	.048	.151**	.170**	.358**	.306**	.493**				
8. Level of education	681	-.044	.036	.280**	.056	-.012	-.011	.004			
9. Age	673	.061	-.011	-.271**	.012	.310**	.254**	.137**	-.246**		
10. Gender	682	.050	.042	.045	.045	-.014	.050	.017	-.026	.100**	

***. Correlation is significant at the .01 level (2-tailed) *. Correlation is significant at the .05 level (2-tailed)*

Table 3 shows various correlations in this study, with the strongest significant correlation being a positive correlation between *Commitment to Organization* and *Commitment to Colleagues* (r = .493, p < .01) and between *Commitment to Organization* and *Commitment to Profession* (r = .455, p < .01). This means that the two variables positively influence each other, meaning that if one variable should increase, the other will increase as well (Field, 2009). *Job Stress: Self-efficacy* also shows significant positive, but small correlations to all five of the commitment

variables, the highest being *Commitment to Leader* (r = .200, p < .01). This could indicate that feelings of self-efficacy and commitment strengthen one another.

Another significant relationship is that of *Age* and *Commitment to Career* (r = -.271, p < .01), indicating a negative correlation, which could be interpreted that when age increases, one's career commitment decreases. *Age* does have significant positive, but small correlations with *Commitment to profession* (r = .310, p < .01). *Commitment to organization* (r = .254, p < .01), *Commitment to Colleagues* (r = .137, p < .01), which could indicate that if age increases, one's professional, organizational, and collegial commitment increases. When looking at correlations from the *self-perceived Helplessness* variable, only one significant, but weakly positive correlation with any of the commitment variables is found with *Commitment to Career* (r = .079, p < .05). This could indicate that the higher one's career commitment is, feelings of helplessness decrease.

4.2 Factor analysis

The questionnaire used to collect the data consists of a priori constructed scales, such as the Perceived Stress Scale by Cohen and Williamson (1988). The factor analysis is used to confirm the validity of these scales. Items on *self-perceived Helplessness*, which are negatively worded, have been reverse-coded to ensure the answers are aligned to the other items and can be interpreted as such (Magazine et al., 1996).

The first step is looking at the Kaiser-Meyer-Olkin measure of Sampling Adequacy (KMO-test) and Bartlett's Test of Sphericity (Appendix 1). Bartlett's test of Sphericity tests for the presence of at least one correlation between items. If the test is significant *($p < .05$)* the null-hypothesis (i.e. No correlation between any of the items) can be rejected. As Table 3 shows $p < .001$, the null-hypothesis can be rejected and Hypothesis 1 (i.e. There is at least one correlation between the items) is accepted (Hair et al., 2014). The KMO-test displays the strength of the correlations between the items. Scores vary between .0 and 1, in which a score of .5 is the minimum (Hair et al., 2014). As can be seen, the KMO-test scores .877, which reveals there are strong correlations between the items. As both tests score sufficiently, further analysis of the data is allowed.

The next step is looking at the communalities (Appendix 2) to see if the items have enough in common. The guideline in interpreting the communalities is that data should score .2 or higher. If it does not surpass this threshold, the item has not much in common with the others and it can be considered for removal, which could improve interpretability in finding underlying factors. In this data no deletion is necessary, as the lowest score in communalities after extraction is .216, meaning all items have enough in common with the other items. However, this score is deemed low, which means that the item in question might have problems with loading on a specific factor later on (Hair et al., 2014).

The table *Total Variance Explained* (Appendix 3) displays data needed to determine the number of factors to use. The most common method is to determine the number of factors with an Eigenvalue > 1. This method yields 7 factors, an amount also substantiated by the Scree plot (Appendix 4), which shows the inflexion point after 7 factors. As a next step, the factors are rotated to increase the interpretability of these factors. When among the factors there is at least one correlation (> |.30|) in the Factor correlation matrix (Appendix 5), the oblique rotation technique is used (Hair et al., 2014). The Factor Correlation Matrix in Appendix 5 shows several correlations, for example between factor 1 and factor 7 of .557, and 1 and 6 of -.511. Thus, oblique rotation is applied and the pattern matrix can be used to interpret the factors.

Table 4. Results of Factor Analysis Work Commitment*

	Items	1	2	3	4	5	6	7
1.	Commitment to Organization							
	ComOrg 1	.71						
	ComOrg 2	.80						
	ComOrg 3	.78						
	ComOrg 4	.73						
2.	Job Stress: Helplessness							
	Jobstress_Perc_Help1**		.57					
	Jobstress_Perc_Help2**		.75					
	Jobstress_Perc_Help3**		.80					
	Jobstress_Perc_Help4**		.81					
	Jobstress_Perc_Help5**		.52					
	Jobstress_Perc_Help6**		.73					
3.	Commitment to Career							
	Com_Career1			.73				
	Com_Career2			.90				
	Com_Career3			.91				
	Com_Career4			.87				
4.	Commitment to Profession							
	Com_prof1				-.81			
	Com_prof2				-.95			
	Com_prof3				-.90			
	Com_prof4				-.92			
5.	Commitment to Leader							
	Com_Lead1					-.71		
	Com_Lead2					-.93		
	Com_Lead3					-.83		
	Com_Lead4					-.80		
6.	Job Stress: Self-Efficacy							
	Jobstress_Perc_Self_Eff1						.40	
	Jobstress_Perc_Self_Eff2						.74	
	Jobstress_Perc_Self_Eff3						.68	
	Jobstress_Perc_Self_Eff4						.70	
7.	Commitment to Colleagues							
	ComColl1							.53
	ComColl2							.86
	ComColl3							.90
	ComColl4							.76
Alpha		.89	.87	.91	.95	.90	.75	.88
Eigenvalue		7.74	4.42	3.00	2.45	1.78	1.36	1.16
Percentage of variance		25.79	14.74	10.00	8.17	5.92	4.52	3.85

* The extraction method = Principal Axis Factoring. The rotation method Oblimin with Kaiser Normalization. Rotation converged in 12 iterations. Cut-off point = .30.

** Reverse-coded.

Table 4 displays which items load on which factors, thus making up the general theme of a factor. As expected, the items loading on the different factors generate the same factors as mentioned in the theory. There are no double loaders present and all scores below .3 are suppressed in SPSS to make the table more interpretable. Table 4 yielded the following factors:

Factor 1: Commitment to organization

The factor of Commitment to organization consists of four items. These items all ask the respondent on how they feel towards the organization they work for, e.g., how responsible they feel or how connected they feel to the organization they work for. Thus making up the general theme of how much commitment an employee feels towards their organization, i.e., organizational commitment.

Factor 2: Self-perceived Stress: Helplessness

The second factor is composed of items that ask the respondent about job stress and if they felt a certain way of helplessness over the last month. Items asked questions like whether they felt stressed or nervous, or whether tasks piled up so high they felt unable to cope. The general theme of these items is related to job stress and self-perceived helplessness.

Factor 3: Commitment to Career

Taking the items together that score highest on the fourth factor there is a general theme of items that ask questions about how respondents feel the career commitment. Questions include how important their career is for them and how much dedication they feel towards their career.

Factor 4: Commitment to Profession

Another clear factor is composed of items that asked respondents to their commitment towards a profession, or professional commitment. Items asked about how responsible they felt for their profession or area of expertise and how connected they feel to this profession or area of expertise, thus making the scale about or professional commitment.

Factor 5: Commitment to Leader

The next set of items all ask about the commitment respondents feel towards their leader or supervisor. Items included questions that asked about how much dedication they feel towards their supervisors or how connected they feel to their leader/supervisor.

Factor 6: Self-perceived Stress: Self-Efficacy

The following items for factor six have all score on the job stress questions again. These questions asked the respondent if they felt whether things went the way they wanted to or if they felt in control of their annoyances. Making the general theme of this factor about the feeling of self-efficacy.

Factor 7: Commitment to Colleagues

The last factor is composed of items all asking the respondents about the way they feel connected to their colleagues. Questions like how respondents feel committed to their colleagues or how they feel about them. Thus, making the last variable about their feelings of commitment to their colleagues, or collegial commitment.

To conclude the factor analysis, all scales are tested for reliability, for internal consistency to be sufficient enough for research, a Cronbach's Alpha with a minimal score of > .7 is preferred, which would deem the internal consistency of the scale as strong (Hair et al., 2014). Table 5 shows that all Cronbach's Alpha scores exceed this .7 threshold. Table 5 shows that the values range between .75 and .95 therefore, make up reliable scales with strong consistency. The data were also checked for items that, if deleted, possibly dramatically increase the overall reliability scores of the scales. If this is the case, the items need further examining to explore if the scale could benefit from possible deletion (Field, 2009). However, no such items were found, so a further investigation into possible deletion of the items was not necessary.

Table 5. Cronbach's Alpha scores

Job Stress:	Helplessness	.87
	Self-Efficacy	.75
Commitment to:	Career	.91
	Leader	.90
	Profession	.95
	Organization	.89
	Colleagues	.88

4.3 Results of Multiple Regression Analysis

In analysing the data the hypotheses are that there are non-linear relationships between commitment and self-perceived job stress dimensions. To test the hypotheses, regression analyses have been conducted two times, once for each dependent job stress variable. Each regression analysis has tested three different models, the first with only the control variables, the second adding the commitment variables to test linear effects and a third with the addition of polynomials to test for quadratic effects. However, before conducting regression analyses various assumptions have to be met.

4.3.1 Assumptions

The first assumption for regression analysis is the use of metric variables. As some variables such as gender or educational level are non-metric, dummy variables were created for these variables to be suitable to use in multiple regression analysis.

The second assumption is the assumption of linearity. To check for linearity, a scatterplot is created. (Hair et al., 2014). As seen in the scatterplots in Appendix 8 the data appears to be linear, as the data points seem to be evenly distributed among a central line in the graph. As the data points do not seem to display any other shape that could indicate unequal dispersion, the data is homoscedastic, which is the third assumption. The final assumption is the assumption of multicollinearity. In regression, it is assumed that each independent variable is not highly correlated with other independent variables. If the underlying correlations between independent variables are too high, results will not yield correct interpretations. To see if there is multicollinearity, the Tolerance levels of the variables need to be equal to or higher than .25 and the VIF values must be greater than 1. Data of regression analyses for *Job stress: self-perceived Helplessness* (Appendix 9) and *Job stress: self-perceived Self-Efficacy* (Appendix 10) show that both Tolerance levels and VIF-values for the control variables and the predictors fall within that range, thus multicollinearity is not an issue. VIF-values and Tolerance levels of the polynomials are to be ignored, as it is expected that variables multiplied by itself show high collinearity.

The data is also checked for outliers to make sure no measurement errors or other types of error distort the data. In the scatterplots in Appendix 8, there seem to be some possible outliers there. After exploring the data in SPSS and using boxplots to look for outliers in the dependent variables, a couple of cases were detected as outliers. However, each outlier was

checked for extreme values or errors, but as all cases seemed to have answers within the valid answer range, no cases were deleted.

4.3.2 Regression Analysis

When further processing the data in the research, two multiple regression analyses are conducted. The first regression uses the first dependent variable *Job stress: Self-perceived Helplessness*. For both regression analyses, three models are created. The first model includes the control variables *age, lower educational level (dummy), middle educational level (dummy),* and *men (dummy).* The variables *women (dummy)* and *higher educational level (dummy)* are left out as reference categories. The second model includes the five commitment variables to test for the linear effects in the data. However, it is hypothesized that there are curvilinear effects of the independent variables on the dependent variables. To check for curvilinear effects, polynomials are created by squaring the predictor commitment variables. In the third model, the polynomials are included on both dependent variables *Helplessness* and *Self-efficacy* to look for any evidence of a curvilinear effect.

Job stress: Self-perceived Helplessness

The results of the regression analysis for *Job Stress: Self-perceived Helplessness* are summarized in Table 6. In the first model includes control variables *age, men (dummy)* and *lower educational level (dummy)* and *middle educational level (dummy)* on dependent variable *Helplessness*. The variables *women (dummy)* and *higher educational level (dummy)* are left out of the model as reference categories.

In the first model, there was some evidence that indicates a negative effect of *Age* on *Helplessness*, but the overall effect of the control variables was not significant. The data displays positive scores, but as *self-perceived Helplessness* is reverse-coded, a positive number indicates a negative effect. In the second model, the addition of the five commitment variables has a statistically significant, but small increase in the explanatory power of the model (ΔR^2 = .022, $p < .05$) with a small, negative effect of *Commitment to Career* (b = .122, $p < .01$) on *Helplessness,* which indicates that respondents that reported higher scores of career commitment, had lower feelings of helplessness. In the third model, the polynomials are added, to check if a curvilinear model better fits the data. There was some evidence that indicates a curvilinear effect of *Commitment to Organization* (b = -.098, $p < .01$) on *Helplessness*. The linear effect of *Commitment to Organization* (b = .861, $p < .01$) first indicates a negative effect

on *Helplessnes*s, but the polynomial indicates a bend, changing the direction of *Commitment to Organization* (b = -.098, p < .01) to a positive effect (as visual support of this relationship, a scatterplot was added to Appendix 11). However, the total overall effect of the third model was not significant. Therefore, Hypothesis 1 is partially supported; Hypotheses 1a to 1e are rejected, except for Hypothesis 1b, which is supported. The overall effect of the curvilinear model is rejected.

Table 6. Results of Regression Analysis for Helplessness

			Model 1			Model 2			Model 3	
Dependent variable: Helplessness		**B**	**SE B**	**Beta**	**B**	**SE B**	**Beta**	**B**	**SE B**	**Beta**
1. Control variables	Age	.006*	.003	.098	.010**	.003	.154	.010**	.003	.155
	Lower educational level *(dummy)*	.053	.233	.010	.106	.234	.021	.150	.234	.029
	Middle educational level *(dummy)*	.035	.094	.017	.079	.095	.038	.079	.095	.038
	Men *(dummy)*	.033	.083	.017	.015	.083	.008	.054	.084	.029
2. Linear effects	Commitment to Career				.122**	.047	.130	.271	.250	.289
	Commitment to Leader				.051	.047	.055	-.045	.242	-.049
	Commitment to Profession				-.057	.042	-.071	-.265	.196	-.332
	Commitment to Organization				-.044	.063	-.042	.861**	.330	.829
	Commitment to Colleagues				.074	.060	.065	-184	.300	-.162
3. Quadratic effects	Commitment to Career ²							-.015	.025	-.163
	Commitment to Leader ²							.022	.022	.249
	Commitment to Profession ²							.101	.026	.104
	Commitment to Organization ²							-.098**	.035	-.878
	Commitment to Colleagues ²							.028	.032	.232
R^2		.012			.034			.050		
Adj. R^2		.004			.017			.023		
ΔR^2		.012			.022*			.016		

* p < .05
** p < .01
*** p < .001

Job Stress: Self-perceived Self-Efficacy

The second regression analysis is with *Job Stress: Self-Efficacy* as the dependent variable. Again, three models were created; the first model with the control variables *age, lower educational level (dummy), middle educational level (dummy),* and *men (dummy).* The variables *women (dummy)* and *higher educational level (dummy)* are left out as the reference categories again. The second model includes the five commitment variables to test for the main effects, and the third model adds the polynomials to look for evidence of quadratic effects. The results of this regression analysis are summarized in Table 7 shown below.

In the first model, the control variables do not show any statistical significance, neither for any individual effects nor for the overall effect of the model. In the second model, the five

commitment variables were added, which gave the overall effect of Model 2 a significant increase in additional explanatory power ($\Delta R^2 = .062$, $p < .001$). Looking at the individual effects of the commitment variables on *Self-Efficacy*, only *Commitment to Career* ($b = .102$, $p < .05$) and *Commitment to Leader* ($b = .123$, $p < .05$) are statistically significant, which shows some evidence that feeling committed to one's career and leader has a positive, but weak linear effect on feelings of *Self-Efficacy*. The third model, which included the polynomials, is not significant; neither for the individual effects of the polynomials, as for the overall effect of the model. There is no evidence for a curvilinear effect of commitment on *self-perceived Self-Efficacy*. Therefore, Hypothesis 2 and all sub-hypotheses are rejected.

Table 7. Results of Regression Analysis for Self-Efficacy

		Model 1			Model 2			Model 3		
Dependent variable: Self-efficacy		**B**	**SE B**	**Beta**	**B**	**SE B**	**Beta**	**B**	**SE B**	**Beta**
1. Control variables	Age	.003	.003	.038	.003	.003	.042	.003	.003	.043
	Lower educational level *(dummy)*	-.416	.254	-.075	-.384	.250	-.069	-.371	.250	-.067
	Middle educational level *(dummy)*	-.043	.102	-.019	.035	.101	.016	.038	.101	.017
	Men *(dummy)*	.067	.090	.033	.037	.088	.018	.066	.090	.032
2. Linear effects	Commitment to Career				.102*	.050	.100	-.054	.268	-.053
	Commitment to Leader				.123*	.050	.122	.154	.259	.153
	Commitment to Profession				-.004	.045	-.005	-.342	.210	-.394
	Commitment to Organization				.068	.067	.060	.664	.353	.588
	Commitment to Colleagues				.101	.064	.082	-.263	.320	-.214
3. Quadratic effects	Commitment to Career ²							.015	.027	.146
	Commitment to Leader ²							.038	.023	.386
	Commitment to Profession ²							-.005	.028	-.044
	Commitment to Organization ²							-.062	.037	-.512
	Commitment to Colleagues ²							.039	.035	.293
R^2		.007			.069			.078		
Adj. R^2		-.001			.053			.053		
ΔR^2		.007			.062***			.009		

* p < .05
** p < .01
*** p < .001

5. Conclusion & Discussion

In the theoretical framework, a premise was laid for research that not only looks at the positive effects of commitment on self-perceived job stress, but also questions "what if that commitment is too high? Can those feelings even be reciprocated?" Leading back up to the research question of this study: *What is the effect of various types of commitment on self-perceived job stress?*

5.1 Reflection on the outcomes & theoretical implications

In this research a couple of results were remarkable. First of all, the data showed some evidence that both age and career commitment have a negative, linear effect on self-perceived helplessness, meaning that when age or career commitment increases, feelings of helplessness decrease. Results are explained in more detail below.

As mentioned, results showed a negative, linear effect of age on self-perceived helplessness. This could indicate that if an employee is higher in age, feelings of helplessness decrease, possibly because more experience in life can come with a certain confidence. In the theoretical framework, it was stated that especially with overcommitted employees, there is a need for approval and/or a need to gain esteem from others (Van Vegchel et al., 2005). Yet, it is possible that with increasing age, the need to gain this esteem from others becomes less prevalent, thus causing less self-perceived stress and pressure than in younger—possibly still fighting to prove themselves—employees. If younger employees do indeed struggle more with feelings of helplessness, it might be an important aspect for organizations to keep in mind. Organizations could benefit by designing HRM practices or policies that are aimed at supporting younger employees to prevent job-stress, by, for example, checking in with younger employees more often, or setting up a mentoring program.

There was also evidence of a negative, linear relationship between career commitment and self-perceived helplessness, meaning that the higher an employee's career commitment, the less helplessness they felt. In literature, it was stated that overcommitted employees typically have a strong ambition, and also a need to control (Van Vegchel et al., 2005). Thus, a possible explanation can be that employees who feel a strong commitment to their careers, also feel obliged to work harder and perform better due to this ambition, than employees who do not feel this commitment as strongly. While one could argue, that this type of behaviour could lead to feeling more pressure, this also means they have to stay on top and in control of things, which can explain the decreased perception of helplessness. This is substantiated by the findings on

self-perceived self-efficacy. Results showed a positive, linear relationship between career commitment and self-perceived self-efficacy. Again, a possible explanation is that employees who feel a strong career commitment are very ambitious. As ambitious employees are already motivated to work hard and deliver high quality in their work, this usually means being involved with what is going on and staying on top of things. If an employee indeed feels like they are in control of the situation and are able to cope (thus indicating higher self-efficacy), it would make sense that they score lower on self-perceived helplessness as well.

The second interesting find on self-perceived self-efficacy is the evidence for a linear, positive relationship between commitment to leader and self-perceived self-efficacy. Again, this could be interpreted similarly as with career commitment; employees who typically feel a stronger commitment to their supervisor could tend to put more effort in their work, or feel obliged to deliver high quality, due to the need of approval or need to gain esteem from others (Van Vegchel et al., 2005). This could mean it makes them more involved and motivated, which makes them feel more in control. Looking at the literature, commitment is defined by Klein et al. (2012) as a type of bond, rather than a binding force. Therefore, another explanation can also be that a stronger bond between employee and supervisor possibly leads to higher perceived support, explaining the increase in self-perceived self-efficacy, which Wayne et al. (2009) also called an antecedent of commitment.

As for the hypotheses on curvilinear effects, there was some evidence that indicated that there is indeed a point where commitment becomes detrimental. In the research, it became apparent that this is the case with organizational commitment on self-perceived helplessness. I noticed at first, that organizational commitment has a negative effect on feelings of helplessness, meaning employees feel less helpless. However, at a certain point, as organizational commitment scores well above average, the effect is reversed and self-perceived helplessness increases again. An explanation could be that employees who feel reasonably committed to their organization, also feel more invested and possibly perceive more organizational support, thus decreasing how helpless they feel. However, being too strongly committed to an organization could make them feel obliged to deliver the highest quality possible, which can cause so much pressure, it increases job stress—or in this case, feeling helplessness—for them again. This is in line with the theory from the theoretical framework, seen in the ERI-model (Siegrist, 1996); where if the effort becomes too high, the rewards can no longer be reciprocated, which leads to employees feeling helpless and stressed again. Therefore, organizations would do well to prevent this type of commitment, because in the long term this behaviour poses a risk to employee well-being.

So what does this is mean for current literature? The majority of research use the TCM model (Meyer & Allen, 1991), measuring commitment as a multidimensional construct, but few studies use the unidimensional approach on commitment. This study contributes to the current literature by using this unidimensional approach, providing more evidence on the relationships that commitment—as a unidimensional construct—has with other variables. This has the advantage that results that come from this study are less muddled by the possibility that revealed effects were caused by antecedents or consequences of commitment, instead of by commitment itself. This is an important factor because the less muddled conclusions are, the more accurate hypotheses and theories in future research will become.

Another advantage of opting to choose the unidimensional approach, compared to the multidimensional approach, is that the data from this study can be compared to results from research that uses a multidimensional approach. If differences in results between unidimensionality and multidimensionality should become apparent, this could provide grounds for further investigation to uncover where those differences spring from, and what causes are at the root of these differences.

Furthermore, this research provides evidence of the possible "dark" sides of commitment. It shows that there are certain relationships between commitment and job stress, which generally are positive, but can become negative if too strong. For the theory, it means that researchers must widen their perception of commitment and what commitment means to both organizations and their employees. If anything, this research poses that commitment needs to be reconceptualized and that more clear-cut definitions are needed as to where commitment ends, and overcommitment begins.

This study certainly brought some interesting points regarding commitment to light, especially as some evidence of a curvilinear relationship of organizational commitment with self-perceived helplessness was found. It emphasizes a further need to investigate the ins and outs of organizational commitment, as this thesis does indicate that commitment is not a holy grail for organizational outcomes to be increased indefinitely, but rather a complex construct of which more information is needed to find the optimal balance.

5.2 Practical Implications

As for practical means, this study provides more insight into commitment and what it can be used for, and—maybe even more importantly—what it cannot be used for. For society, the results of this study can increase knowledge of organizational behaviour. As mentioned at the

beginning of this thesis, commitment is still regarded through the predominant notion that higher commitment yields better organizational results. This thesis can be used to better understand the concept of commitment and its effects, and give a more nuanced definition of commitment. After all, as seen in this study, the focus point of commitment plays an important role in how it influences aspects of job stress.

Another point mentioned in the introduction, is that some aspects of commitment are still underexposed. This research was aimed to remedy that. Results can be used as a better understanding of commitment as a whole and links to other organizational behaviour. In turn, a better understanding might aid in battling the burnout numbers and general feelings of job-related stress. Decreasing the burnout numbers and general feelings of stress will not only lead to better well-being for all those employed, but may also aid in decreasing costs for both national healthcare and organizations, that are currently still caused by those affected by job-related stress complaints, fatigue or burnout.

For organizations, it is imperative to maintain a healthy workforce, so they need to keep the interests of their employees at heart. Results from this study can contribute to balanced HRM practices and policies, and management style in general. Managers can use this information to evaluate and monitor the commitment levels in their organizations and should be aware of the possible consequences for employees that show signs of being too committed to the organization. Furthermore, it can be used as a base for organizations and managers into the effects of the various types of commitment, as results from this study clearly show that different types of commitment do not all share similar effects. For example, if an organization aims to implement HRM practices or policies to increase employee commitment, they could opt to focus more on collegial commitment and/or career commitment, while monitoring organizational commitment for signs of overcommitment.

5.3 Limitations and recommendation for future studies

One of the limitations of this study is that the research was conducted as a major work commitment survey, combining various measures of commitment related themes into one survey (e.g., measures of Job Satisfaction, Organizational Identification, Employability, Role Conflict, etc.) However, this thesis only uses two measures (i.e., Commitment KUT and the Perceived Stress Scale, see Chapter 3), from all those commitment measures. Therefore, respondents may have answered somewhat differently, then if a survey was created which only uses those two measures, and nothing else. A possible future solution for this would be to

conduct research where its entire focus or theme of the survey is around the multiple foci of commitment alone. It would be interesting to see a more in-depth survey on related subjects.

Another limitation of this study is the disparity between men and women in the sample. As seen in Chapter 4.1.1 *Data Descriptives*, the number of men were grossly underrepresented. This should be kept in mind in the interpretation of this study, for it is possible results would have been different if both genders were more equally represented. In future research, I would recommend researchers to aim for equal dispersion among the genders. Or (if future research is conducted while adding on this dataset) to focus on finding male respondents to even out the gap.

Looking at the respondents of the survey, the research was conducted with no differentiation between different occupational fields, type of industry, organizational size or work relationships. These are all aspects that influence what an organization is like. It might be interesting for future research to differentiate more and dive deep into a specific profession or industry, certain organizational size (e.g., small vs large organizations) or specific work relationship (e.g., line managers vs employees on the 'floor').

Furthermore, even though some statistical significances were found in this study, all significant results were still weak, meaning that the explanatory power of the models as constructed probably do not tell the whole story. There may be still variables missing that explain more of the variance, or that there are underlying constructs present that have not come to light yet. With this idea in mind, it would be interesting to see future research building on Klein's theories of a unidimensional approach (Klein et al., 2012). I would also recommend the investigation of overcommitment as a standalone construct. Overcommitment is different from just scoring high on traditional commitment scales, as it comprises different dimensions than commitment. For example, someone might feel a high commitment towards a specific target, but this does not mean this person should automatically be deemed overcommitted. Existing literature could benefit from the creation of specific overcommitment measures, so a better distinction between commitment and overcommitment can be made.

In addition, future research should focus on organizational commitment, when it comes to further investigation of curvilinear effects. I would be interesting to see a more precise investigation into the threshold from which organizational commitment stops being beneficial. If generalizable results could be found regarding this aspect, it would provide a core piece of information which could prove highly beneficial organizations and HRM-literature alike, furthering the deconstruction of the black box that is HRM.

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7. Appendices

Appendix 1. KMO test & Bartlett's test of Sphericity

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,877
Bartlett's Test of Sphericity	Approx. Chi-Square	10152,906
	df	435
	Sig.	,000

Appendix 2. Communalities Table

Communalities

	Initial	Extraction
ComOrg1	,561	,559
ComOrg2	,670	,733
ComOrg3	,676	,714
ComOrg4	,642	,675
ComColl1	,479	,436
ComColl2	,689	,772
ComColl3	,699	,802
ComColl4	,637	,653
Jobstress_Perc_Help1	,478	,435
Jobstress_Perc_Help2	,521	,544
Jobstress_Perc_Help3	,624	,691
Jobstress_Perc_Help4	,638	,650
Jobstress_Perc_Help5	,449	,402
Jobstress_Perc_Help6	,520	,529
Jobstress_Perc_Self_Eff 1	,245	,216
Jobstress_Perc_Self_Eff 2	,414	,517
Jobstress_Perc_Self_Eff 3	,458	,543
Jobstress_Perc_Self_Eff 4	,473	,577
Com_Lead1	,612	,580
Com_Lead2	,754	,849
Com_Lead3	,757	,786
Com_Lead4	,690	,714
Com_Career1	,557	,553
Com_Career2	,740	,801
Com_Career3	,799	,842
Com_Career4	,749	,788
Com_prof1	,719	,713
Com_prof2	,825	,875
Com_prof3	,814	,832
Com_prof4	,843	,881

Extraction Method: Principal Axis Factoring.

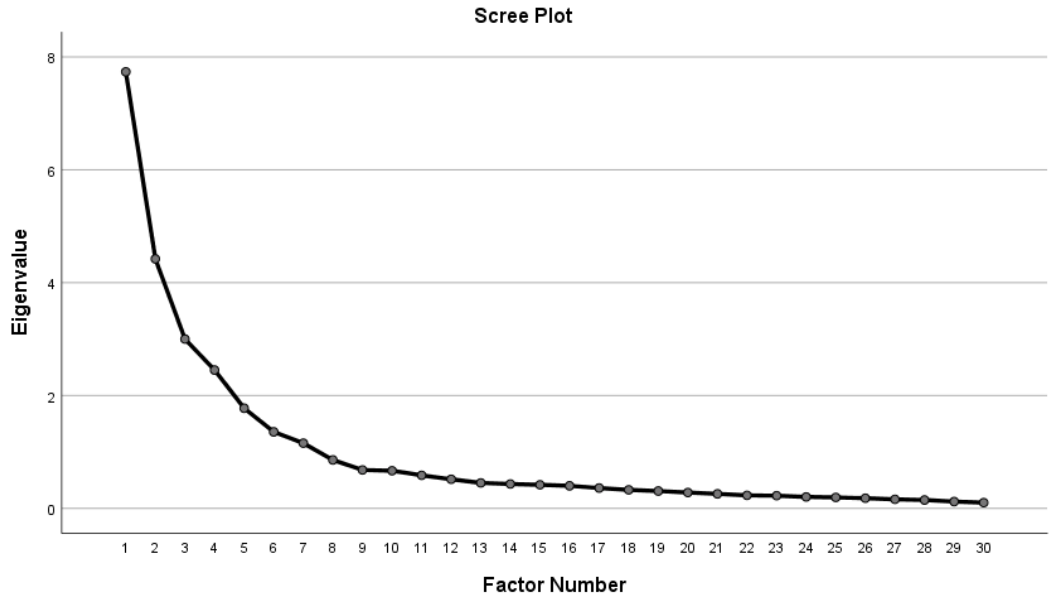
Appendix 3. Total Variance Explained

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7,736	25,787	25,787	7,449	24,830	24,830
2	4,421	14,738	40,525	3,992	13,308	38,138
3	3,000	10,001	50,525	2,758	9,194	47,332
4	2,452	8,172	58,697	2,228	7,426	54,757
5	1,775	5,916	64,613	1,502	5,008	59,765
6	1,356	4,520	69,133	,889	2,963	62,728
7	1,156	3,854	72,988	,846	2,821	65,549
8	,858	2,860	75,848			
9	,681	2,268	78,116			
10	,667	2,224	80,340			
11	,586	1,952	82,292			
12	,516	1,721	84,013			
13	,451	1,504	85,517			
14	,432	1,441	86,958			
15	,417	1,390	88,348			
16	,400	1,333	89,682			
17	,360	1,201	90,883			
18	,328	1,092	91,976			
19	,307	1,024	92,999			
20	,280	,934	93,933			
21	,257	,858	94,791			
22	,231	,770	95,561			
23	,225	,749	96,310			
24	,203	,676	96,985			
25	,194	,647	97,632			
26	,180	,600	98,232			
27	,160	,535	98,767			
28	,148	,494	99,261			
29	,120	,399	99,661			
30	,102	,339	100,000			

Extraction Method: Principal Axis Factoring.

Appendix 4. Scree plot



Appendix 5. Factor Correlation Matrix

Factor Correlation Matrix

Factor	1	2	3	4	5	6	7
1	1,000	,009	,141	-,500	-,423	,171	,557
2	,009	1,000	-,024	-,035	,047	-,511	-,122
3	,141	-,024	1,000	-,163	-,208	,080	,140
4	-,500	-,035	-,163	1,000	,228	-,107	-,315
5	-,423	,047	-,208	,228	1,000	-,197	-,376
6	,171	-,511	,080	-,107	-,197	1,000	,279
7	,557	-,122	,140	-,315	-,376	,279	1,000

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

Appendix 6. Pattern Matrix

Pattern Matrix[a]

	Factor						
	1	2	3	4	5	6	7
ComOrg1	,705						
ComOrg2	,795						
ComOrg3	,780						
ComOrg4	,721						
ComColl1							,526
ComColl2							,864
ComColl3							,903
ComColl4							,758
Jobstress_Perc_Help1		,567					
Jobstress_Perc_Help2		,749					
Jobstress_Perc_Help3		,803					
Jobstress_Perc_Help4		,812					
Jobstress_Perc_Help5		,515					
Jobstress_Perc_Help6		,731					
Jobstress_Perc_Self_Eff 1						,401	
Jobstress_Perc_Self_Eff 2						,737	
Jobstress_Perc_Self_Eff 3						,675	
Jobstress_Perc_Self_Eff 4						,695	
Com_Lead1					-,708		
Com_Lead2					-,931		
Com_Lead3					-,834		
Com_Lead4					-,802		
Com_Career1			,726				
Com_Career2			,897				
Com_Career3			,914				
Com_Career4			,873				
Com_prof1				-,814			
Com_prof2				-,952			
Com_prof3				-,903			
Com_prof4				-,915			

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.[a]

a. Rotation converged in 12 iterations.

Appendix 7. Cronbach's Alpha Scale Consistency Items

1. Commitment to Colleagues

Reliability Statistics

Cronbach's Alpha	N of Items
,882	4

2. Commitment to Organization

Reliability Statistics

Cronbach's Alpha	N of Items
,893	4

3. Job Stress: Helplessness

Reliability Statistics

Cronbach's Alpha	N of Items
,865	6

4. Job Stress: Self-Efficacy

Reliability Statistics

Cronbach's Alpha	N of Items
,748	4

5. Commitment to Leader

Reliability Statistics

Cronbach's Alpha	N of Items
,903	4

6. Commitment to Career

Reliability Statistics

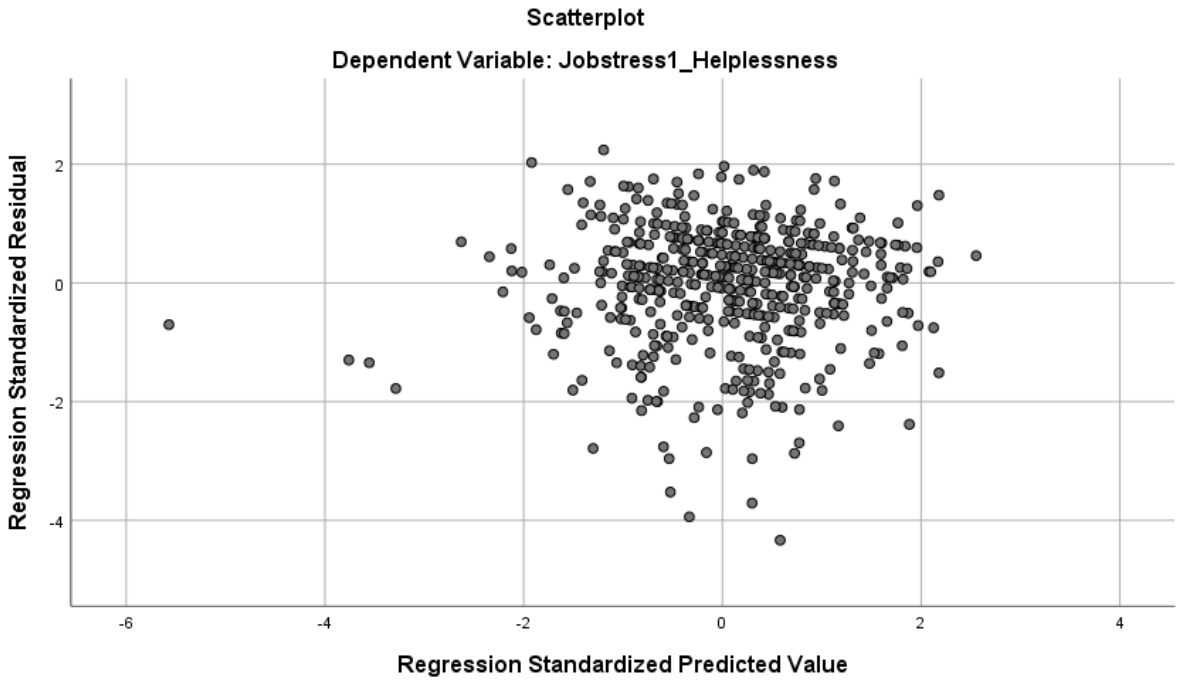
Cronbach's Alpha	N of Items
,914	4

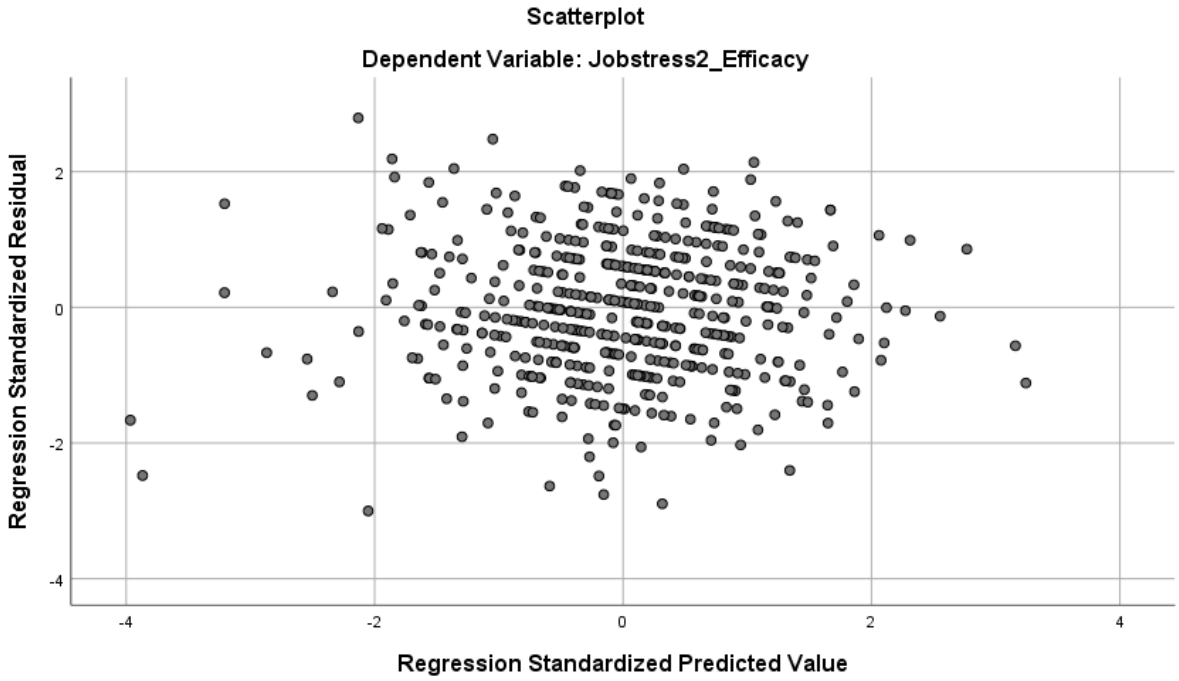
7. Commitment to Profession

Reliability Statistics

Cronbach's Alpha	N of Items
,945	4

Appendix 8. Scatterplots to check for linearity & homoscedasticity





Appendix 9. Results Regression Analysis on Job Stress: Helplessness

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,108[a]	,012	,004	,89983	,012	1,519	4	516	,195	
2	,184[b]	,034	,017	,89399	,022	2,353	5	511	,040	
3	,223[c]	,050	,023	,89103	,016	1,678	5	506	,138	2,034

a. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II

b. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale

c. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale, ComProf_scale_Sq, ComColl_scale_Sq, ComLead_scale_Sq, ComCareer_scale_Sq, ComOrg_scale_Sq

d. Dependent Variable: Jobstress1_Helplessness

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,919	4	1,230	1,519	,195[b]
	Residual	417,800	516	,810		
	Total	422,719	520			
2	Regression	14,321	9	1,591	1,991	,038[c]
	Residual	408,397	511	,799		
	Total	422,719	520			
3	Regression	20,983	14	1,499	1,888	,025[d]
	Residual	401,735	506	,794		
	Total	422,719	520			

a. Dependent Variable: Jobstress1_Helplessness

b. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II

c. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale

d. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale, ComProf_scale_Sq, ComColl_scale_Sq, ComLead_scale_Sq, ComCareer_scale_Sq, ComOrg_scale_Sq

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	5,000	,111		45,100	,000		
	Age_II	,006	,003	,098	2,097	,036	,884	1,131
	Low_Education	,053	,233	,010	,229	,819	,918	1,089
	Middle_Education	,035	,094	,017	,373	,709	,931	1,074
	Men	,033	,083	,017	,396	,692	,993	1,007
2	(Constant)	4,115	,349		11,792	,000		
	Age_II	,010	,003	,154	2,978	,003	,704	1,421
	Low_Education	,106	,234	,021	,452	,651	,901	1,110
	Middle_Education	,079	,095	,038	,837	,403	,900	1,111
	Men	,015	,083	,008	,182	,856	,983	1,017
	ComCareer_scale	,122	,047	,130	2,610	,009	,760	1,315
	ComLead_scale	,051	,047	,055	1,095	,274	,739	1,353
	ComProf_scale	-,057	,042	-,071	-1,340	,181	,675	1,481
	ComOrg_scale	-,044	,063	-,042	-,700	,485	,513	1,948
	ComColl_scale	,074	,060	,065	1,233	,218	,674	1,483
3	(Constant)	2,977	,957		3,112	,002		
	Age_II	,010	,003	,155	3,003	,003	,701	1,427
	Low_Education	,150	,234	,029	,643	,521	,895	1,117
	Middle_Education	,079	,095	,038	,831	,406	,899	1,113
	Men	,054	,084	,029	,644	,520	,946	1,057
	ComCareer_scale	,271	,250	,289	1,082	,280	,026	38,133
	ComLead_scale	-,045	,242	-,049	-,186	,852	,028	36,134
	ComProf_scale	-,265	,196	-,332	-1,350	,177	,031	32,141
	ComOrg_scale	,861	,330	,829	2,614	,009	,019	53,513
	ComColl_scale	-,184	,300	-,162	-,613	,540	,027	37,219
	ComCareer_scale_Sq	-,015	,025	-,163	-,607	,544	,026	38,299
	ComProf_scale_Sq	,022	,022	,249	1,024	,306	,032	31,438
	ComLead_scale_Sq	,010	,026	,104	,394	,694	,027	36,746
	ComOrg_scale_Sq	-,098	,035	-,878	-2,824	,005	,019	51,490
	ComColl_scale_Sq	,028	,032	,232	,877	,381	,027	37,271

a. Dependent Variable: Jobstress1_Helplessness

Appendix 10. Results Regression Analysis on Job Stress: Self-efficacy

Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,082[a]	,007	-,001	,98002	,007	,878	4	516	,477	
2	,263[b]	,069	,053	,95340	,062	6,844	5	511	,000	
3	,280[c]	,078	,053	,95332	,009	1,017	5	506	,407	2,002

a. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II

b. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale

c. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale, ComProf_scale_Sq, ComColl_scale_Sq, ComLead_scale_Sq, ComCareer_scale_Sq, ComOrg_scale_Sq

d. Dependent Variable: Jobstress2_Efficacy

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3,374	4	,843	,878	,477[b]
	Residual	495,590	516	,960		
	Total	498,964	520			
2	Regression	34,481	9	3,831	4,215	,000[c]
	Residual	464,483	511	,909		
	Total	498,964	520			
3	Regression	39,101	14	2,793	3,073	,000[d]
	Residual	459,863	506	,909		
	Total	498,964	520			

a. Dependent Variable: Jobstress2_Efficacy

b. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II

c. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale

d. Predictors: (Constant), Men, Low_Education, Middle_Education, Age_II, ComLead_scale, ComProf_scale, ComColl_scale, ComCareer_scale, ComOrg_scale, ComProf_scale_Sq, ComColl_scale_Sq, ComLead_scale_Sq, ComCareer_scale_Sq, ComOrg_scale_Sq

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4,329	,121		35,848	,000		
	Age_II	,003	,003	,038	,824	,411	,884	1,131
	Low_Education	-,416	,254	-,075	-1,635	,103	,918	1,089
	Middle_Education	-,043	,102	-,019	-,416	,677	,931	1,074
	Men	,067	,090	,033	,746	,456	,993	1,007
2	(Constant)	2,372	,372		6,375	,000		
	Age_II	,003	,003	,042	,817	,414	,704	1,421
	Low_Education	-,384	,250	-,069	-1,537	,125	,901	1,110
	Middle_Education	,035	,101	,016	,350	,727	,900	1,111
	Men	,037	,088	,018	,421	,674	,983	1,017
	ComCareer_scale	,102	,050	,100	2,046	,041	,760	1,315
	ComLead_scale	,123	,050	,122	2,459	,014	,739	1,353
	ComProf_scale	-,004	,045	-,005	-,093	,926	,675	1,481
	ComOrg_scale	,068	,067	,060	1,009	,314	,513	1,948
	ComColl_scale	,101	,064	,082	1,583	,114	,674	1,483
3	(Constant)	2,860	1,024		2,794	,005		
	Age_II	,003	,003	,043	,834	,405	,701	1,427
	Low_Education	-,371	,250	-,067	-1,481	,139	,895	1,117
	Middle_Education	,038	,101	,017	,374	,709	,899	1,113
	Men	,066	,090	,032	,732	,465	,946	1,057
	ComCareer_scale	-,054	,268	-,053	-,200	,841	,026	38,133
	ComLead_scale	,154	,259	,153	,596	,551	,028	36,134
	ComProf_scale	-,342	,210	-,394	-1,627	,104	,031	32,141
	ComOrg_scale	,664	,353	,588	1,883	,060	,019	53,513
	ComColl_scale	-,263	,320	-,214	-,822	,412	,027	37,219
	ComCareer_scale_Sq	,015	,027	,146	,552	,581	,026	38,299
	ComProf_scale_Sq	,038	,023	,386	1,612	,108	,032	31,438
	ComLead_scale_Sq	-,005	,028	-,044	-,169	,866	,027	36,746
	ComOrg_scale_Sq	-,062	,037	-,512	-1,671	,095	,019	51,490
	ComColl_scale_Sq	,039	,035	,293	1,125	,261	,027	37,271

a. Dependent Variable: Jobstress2_Efficacy

Appendix 11. Scatterplot curvilinear effect