ON A QUEST FOR HAPPINESS:
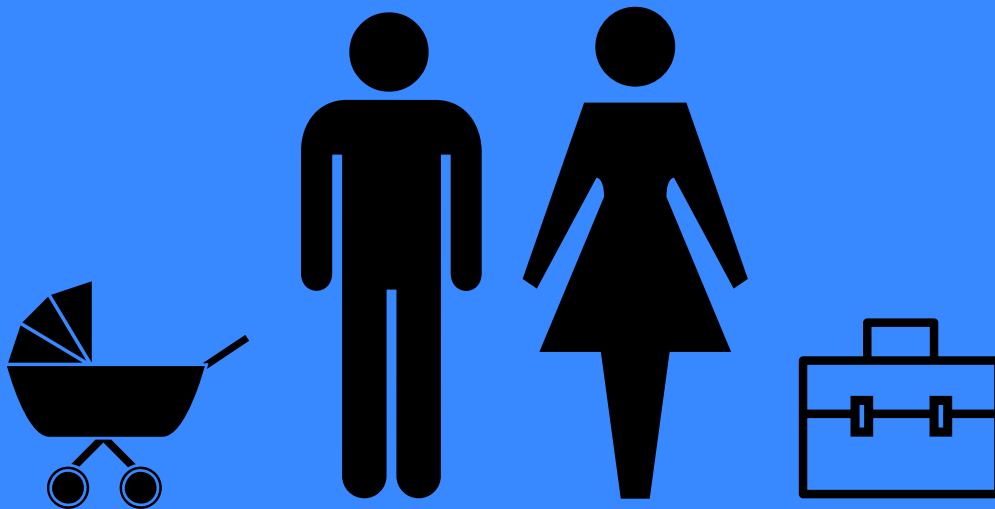
Gender Disparities in the Optimal Work-Life Balance

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ABSTRACT

This study explores the relation between an individual's labor market participation and job and life satisfaction, considering heterogeneity in this relationship between gender and within those groups of men and women. The empirical analysis, based on the Dutch Labor Supply Panel, provides evidence for a difference in the effect of employment and different forms of labor participation on the life satisfaction of men and women. In general, men are happiest when participating in the labor market and have highest life satisfaction when working full-time, while for women in general, no differences in life satisfaction are found between the unemployed, part-time and full-time workers. Having the responsibility for the informal care of someone else, children living at home, or a partner, are found to moderate the work-happiness relationship. When men have informal care giving responsibilities, life satisfaction turns out to be lower when participating in the labor market than when being unemployed. Furthermore, men having children at home are happier working part-time than when not participating, while this difference is not found for men without children at home. When comparing women with and without a partner, it is found that women with a partner are happiest working full-time, while women without a partner seem to be happiest when not working at all.

1. Introduction

A human worker spends an average of about 90,000 hours at work in his or her lifetime (Pryce-Jones, 2011). That is the equivalent of 3,750 days, or more than ten full years. Whether an individual voluntarily chooses to work this many hours or not; for most people this means that working constitutes a significant part of their lives. It is easy to find reasons that explain why people work this many hours. Firstly, and most importantly, working provides people with a salary that enables them to pay for a living for themselves and for their families. Furthermore, participating in the labor market has been shown to provide people with a feeling of belonging, can give people a feeling of purpose, and increases social connection (Fisher, 2010). But does working actually lead to a higher overall life satisfaction? And where lies the optimal balance between spending time at work versus other activities, such as family, friends, hobbies or the household, often referred to as the 'work-life balance' (Tausig & Fenwick, 2001)? In the end, being happy is seen by many as the ultimate goal in life. Although the relation between work-life balance and life satisfaction has been studied before, as will be discussed later, preferences and circumstances may change. Therefore, it remains relevant to investigate whether wellbeing can be improved by policies enabling people to achieve their desired work-life balance.

In this paper, happiness is defined as a person's satisfaction of overall life at a specific moment in time, often referred to as subjective well-being (SWB)[1] (Veenhoven, 2015a). Over time, the concept of happiness has been most extensively researched by philosophers and historians, and the discussion around the determinants of happiness has been around for over 2000 years in philosophical and religious thinking. Happiness nowadays seems to be discussed more than it ever has been. Just typing the word "happiness" when searching for books on Amazon will return a choice of approximately 66,000 books on the topic. And, as a topic gains importance in our personal lives, conversations and thoughts, it unavoidably spills over to research and policy. Since the 1990's, the concept has therefore also been increasingly examined in the field of economics. This combination of research topics, often referred to as 'happiness economics', attempts to measure happiness and its determinants in a quantitative manner (Johns & Ormerod, 2007).

As a result of the findings of happiness economics and the increased interest in the field, policy makers have been rethinking the way they measure the prosperity of their countries. A well-known example is Bhutan, that since 1971 has not only been using the gross domestic product (GDP) as a measurement for the country's development, but has also been looking at the country's gross national happiness (GNH). Its policy making is structured around maximizing both measures simultaneously, by looking at factors such as the environment, culture and economic equality (Adler, 2009). Another

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[1] The terms happiness, life satisfaction and subjective well-being, though not perfectly identical, will be used interchangeably.

more recent example of political interest in happiness measurement is the 2010 announcement of David Cameron, at that time the prime minister of the United Kingdom, stating that he would start measuring the progress of the country not only by looking at the growth of the economy, but also by looking at the improvement of the quality of life (Weijers & Jarden, 2013). Furthermore, Stiglitz, Sen and Fittousi (2009) wrote a report initiated by the French government, arguing that current measures of economic performance, among which GDP, are incomplete indicators of the development of the society. According to them, self-reported wellbeing should also be among those measures.

In order to design government policies that aim to improve people's happiness, one needs to know the factors that have a significant, causal relationship with happiness and the direction and magnitude of those relationships. An extensive number of researchers studied these relevant determinants, their differences across people and cultures, and upon what these differences are based. As spending time at work constitutes such a significant part of human lives, work is one of the determinants that has received close interest. Previous research into the relationship between happiness and labor participation can be divided into two areas of interest; one focusing on any labor participation versus no labor participation, and the other focusing on the number of hours a week that an individual participates in the labor market. The significance of the evidence found for the relationship between happiness and work between these two categories differs. While unemployment has repeatedly been shown to significantly decrease an individual's level of happiness, the results for the number of working hours (i.e. part-time versus full-time work) have not been so straightforward (Dolan, Peasgood, & White, 2008).

The relationship between work-life balance and happiness has especially gained interest over recent years, as an increasing share of the part-time working people in Western countries is voluntarily choosing to work part-time[2] (Appendix A: Table A1) (Shierholz, 2014; Eurostat, 2018; United States Department of Labor, 2018). One such country for which this has been a topic of discussion is the Netherlands. The Netherlands is specifically interesting because in European rankings, it scores high both on happiness and on the percentage of people working part-time. The country was ranked sixth on the latest world happiness ranking of the OECD in 2016 and was the absolute winner in terms of the relative number of people working part-time in Europe in 2014 (Helliwell, Layard, & Sachs, 2017; Central Bureau for Statistics (CBS), 2016). Furthermore, the Dutch have been scoring relatively high on job satisfaction according to a study by European's largest independent employee survey provider Effectory (2017), with a work-balance score of 69% compared to the European average of 66%. These simultaneous incidences of a relatively high job and life satisfaction and a high rate of part-time workers

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[2] Voluntary part-time work is defined as part-time work by choice, meaning that an individual does not have the desire to work more hours. Reasons can for example be education, taking care of children or family, or hobbies. Involuntary part-time workers are those that are working part-time because full-time work could not be found or because of economic slack (OECD, 2014).

might point at a relationship between the lower labor market participation and happiness, as also highlighted in a recent feature in the Economist (2015). Whereas there have been studies examining this relationship for countries as the United Kingdom and Germany (examples are: Gash, Mertens, & Romeu Gordo, 2010 and Camp, Trzcinski, & Resko, 2016), the Netherlands has not yet been the matter of subject as often.

The fact that the Netherlands is ranked so highly in terms of their number of part-time workers is mainly caused by the proportion of women working in a part-time job. With 75% of jobs filled by women in the Netherlands being part-time, compared to 33% of jobs filled by men, there is a large gender gap in terms of labor participation. This leads to believe that there is a difference in preference for labor participation or the level of satisfaction that men and women get out of spending their time working. Related evidence has indeed been found by Booth and van Ours (2013), who did not find a direct relationship between part-time working women and life satisfaction but did find results suggesting that working part-time is what most Dutch women with a partner prefer. In addition, and possibly as a result of the high rate of part-time working women when compared with European countries, the Netherlands is also one of the countries with the smallest ratio of women in management positions (CBS, 2016). Therefore, the result from this study could be interesting as input for the lately more frequently emerging debate regarding the equal gender split within management positions of companies.

The aim of this study is to find further evidence for the relationship between labor participation and happiness in the Netherlands. More specifically, this study investigates whether it can support the repeatedly found relationship between employment and happiness and further examines the relationship between the extent of labor participation, life satisfaction and job satisfaction. Finally, this paper studies the role of gender in these relationships and examines if and how being responsible for children, the informal care of someone else and having a partner moderate these relationships for men and women.

The approach in this study differs from previous papers that have examined the influence of working hours on happiness and the role of gender in this influence in several ways. First of all, this paper uses data from the last three waves (2010, 2012 and 2014) of the longitudinal biennial Labor Supply Panel of the Netherlands. As described above, the Netherlands is one of the leaders in terms of the proportion of people working part-time. Whereas Booth and van Ours (2013) also used Dutch data, they were forced to combine several different datasets, as the life satisfaction question was not yet included in the Labor Supply Panel at that time and was only added in 2010. This paper will further explore their findings, using more recent data from a single dataset. Considering that the Netherlands was recovering from a crisis after 2010 and the labor market has changed quite a lot since, it is interesting to see if their findings can be replicated. Furthermore, the use of longitudinal data gives an advantage over cross-sectional data since part-time and full-time employees are likely to differ in terms of their individual preferences and characteristics. Panel data allows the analysis to control for unobserved heterogeneity and to explore causality in the relationship.

This paper is structured as follows. The next section presents information on working behavior in the Netherlands and gives a background to the existing literature regarding working hours, job satisfaction and happiness in general. The third section presents a fixed effects model, testing for a relationship between working hours, life satisfaction and job satisfaction. The fourth section discusses the results of the analysis presented in section three. Section five discusses the findings of this paper, its limitations and recommendations for future research, policy making and management. Finally, section six presents a conclusion.

2. Background

2.1 Working behavior in the Netherlands

In 2017, 12.87 million people in the age between 15 and 74 years were living in the Netherlands, of which 8.58 million people were amongst the employed labor force[3] and 438,000 people represented the unemployed labor force. From 2007 to 2017, the number of available jobs increased, leading to an increase in the number of employed people during this period. A substantial proportion of these jobs, 54% in 2016, is filled part-time[4], meaning that the agreed working time is below the hours that are normally needed for a full day or week task (CBS, 2017). Since 2017, there have been more part-time than full-time employees in the Netherlands and in recent years, the country has seen a steep increase in the number of these part-time jobs.

The proportion of both men and women working part-time (33% and 75%) is considerably higher in the Netherlands than in the rest of Europe (Appendix B: Figure B1). In the sectors; hospitality, recruiting and culture, recreation and other services, the number of jobs filled by men that are part-time is even higher than 50%. It is interesting to see the large gap between the proportion of men and women that work part-time in the Netherlands versus the proportion of men and women that have a place in management[5] (Appendix B: Figure B1). Working women in the Netherlands are two and a half times less likely to be in management than men. According to the CBS (2016), the latter can be explained by the large proportion of women working part-time, because the relative difference is much smaller when

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[3] The CBS (2017) defines employed people as anyone working in a paid job at a company, institution or private household in the Netherlands, regardless of the number of hours. This is also the definition that will be used throughout this paper.

[4] The CBS (2018) defines a full-time work week as a work week of 35 hours or more. Anything less, but more than 0 hours, is considered as a part-time work week. This study will use the same definitions of part-time and full-time work.

[5] The CBS (2018) defines a manager as someone who is leading the whole company or a department within a company.

just looking at the full-time male and female managers. Apparently, working part-time makes it harder for employees to achieve a place in management in today's business environment.

2.2 The measurement of happiness

Happiness is a very broad concept and can be used as the overarching term for all that is perceived as good (Veenhoven, 2015a). However, to be able to objectively measure happiness as is pursued in happiness economics, one needs a more strictly defined concept of happiness. As previously mentioned, this study defines happiness as a person's self-perceived satisfaction of overall life at a specific moment in time. In the World Database of Happiness (2018), several other measurements and accompanying definitions are explained and evaluated. One can tap into different types of happiness, depending on the phrasing of the question. Different phrasing can for example lead to answers regarding different periods in life. On question could for example refer to one's current mood while another question could refer to overall life happiness.

Besides the research on the measurement of happiness itself, there is a considerable amount of research available on the determinants of happiness. While findings show that relationships between happiness and other factors, both internal and external, are often not very straightforward, there are several variables that research needs to consider when looking for a causal relationship between a certain independent variable and life satisfaction (Dolan et al., 2008). In their extensive review of happiness research, Dolan et al. (2008) argue that researchers should at least consider the impact of income, relative income, personal and community relationships, marital status and employment status in their analysis.

While these previous studies are important guidelines in terms of the recommended determinants, one needs to be careful comparing different happiness studies, as it has been proven that in some cases a small change in the happiness measurement questions can lead to a significantly different answer (DeJonge, Veenhoven, Arends, 2015).

2.3 Past findings on job satisfaction and life satisfaction

Just as with happiness, job satisfaction has also seen many different definitions. The most widely used and accepted definition is that of Locke (1976), who expressed job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences." When examining the relationship between working hours and life satisfaction, one cannot neglect the role that job satisfaction plays in this interaction. In the past decades, many researchers have looked into this relationship, which has resulted in three main hypotheses that are all based on a different theory; spillover, compensation and segmentation (Newman, Nielsen, Smyth & Hooke, 2015). The spillover effect can be explained as the positive spillover of happiness from the work domain to the non-work domain (Newman et al., 2015). The compensation hypothesis on the other hand views work and life satisfaction as two opposing spheres of life, suggesting an inverse relationship. Finally, the

segmentation hypothesis is based upon the belief that work and non-work life are not significantly related and are viewed as separate (Rice, Near & Hunt, 1980).

Most evidence has shown that the relationship between job and life satisfaction is positive. In their review, covering more than 350 job/life satisfaction relationships in 23 different studies, Rice et al. (1980) found that for more than 90% of the cases the relationship was positive. Furthermore, they found that the correlation between job satisfaction and overall life satisfaction is often modest, ranging on average around .35 for men and .25 for women. Rain, Lane and Steiner (1991) also reviewed this relationship and found an extensive amount of support, both for a positive relationship and a possible spillover effect. In addition, Tait et al. (1989) reviewed decades of empirical evidence and concluded a modest correlation of on average .33 to .44 between the two variables.

2.4 Past findings on labor market participation and job and life satisfaction

The evidence on the relation between employment and life satisfaction is mainly pointing in the same direction. In their review about the determinants of happiness, Dolan et al. (2008) argued that in terms of life satisfaction, most studies showed that employment is better than unemployment. Veenhoven (2015b) agreed that life satisfaction tends to be higher for individuals with paid work but added that research suggested that house wives and retirees are not less happy. The findings on the relationship between working hours and life satisfaction are however a bit more ambiguous (Dolan et al., 2008; Veenhoven, 2015b). While a study using German data from the GSOEP panel suggested that an increase in working hours leads to an increase in life satisfaction and evidence from the United Kingdom showed higher life satisfaction for full-time than for part-time working men (Weinzierl, 2005; Schoon, Hansson, & Salmela-Aro, 2005), other studies found opposing results. Data from the NSHF showed a negative relationship between the log of working hours and life satisfaction (Luttmer, 2005). Another study using the GSOEP panel even found an inverse U-shaped curve, meaning that they found a positive relationship up until a certain point, where after the relationship became negative (Meier & Stutzer, 2008) (in: Dolan et al., 2008). In a more recent study, Rudolf (2014) examined the effect of an exogenous reduction in working hours from Korean longitudinal data, due to the Korean five-day working reform. While he did find a positive relationship between the reduction of working hours and working hours satisfaction, he did not find an effect on job and life satisfaction. Valente and Berry (2015) suggested that there might be differences in the relationship across cultures. They found a difference between Latin American and U.S. males. When compared, U.S. males are happier when they work more, whereas Latin American males are happier when they work less. Finally, Russo (2012) argued that in some cases, the relationship depends on the discrepancy between actual and desired

working hours or the effort of trying to integrate multiple 'identities'[6]. He found that, in the case where workers actually want to work part-time, life satisfaction is higher but found lower life satisfaction for women that have a discrepancy in desire and outcome (i.e. working full-time when they actually want to work part-time) and men that face conflicting identities.

The evidence of the relationship between job satisfaction and working hours is also mixed. While several studies found a negative relationship between working hours and job satisfaction, others found a positive or even no significant relationship at all (Gallie et al., 2016). Clark (1996) for example found that British people working longer hours have a lower level of job satisfaction, which was supported by Bardasi and Francesconi (2004) who also found that for part-time working British people, job satisfaction is higher. Russo (2012) argued that, just as in the relation with working hours and life satisfaction, the effect depends on the discrepancy between desired and actual working hours or identity. He found that women working part-time while desiring a full-time job have a lower job satisfaction and that job satisfaction decreases when work and non-work activities are perceived as opposing, especially among men. Booth and van Ours (2008) found that British women have a higher job satisfaction in part-time jobs than in full-time jobs, while men have a higher satisfaction with work when they are working full-time (excluding over hours).

A study worth discussing more in detail is the study of Booth and van Ours (2013) that examined Dutch data in order to study the relationship between working hours and life- and job-satisfaction. Using two combined datasets, the Labor Supply Panel of the Netherlands and CentER data, they specifically focused on women living with a partner. According to their study, partnered women in part-time jobs have higher levels of job-satisfaction, live in relationships in which household chores are highly based on gender roles and have a low desire to adjust their working hours. They argued that their results suggest that most Dutch women want part-time jobs. Booth and van Ours (2013) used data up until 2006 and needed to combine two datasets, as the life satisfaction question was not yet incorporated in the Labor Supply Panel back then. As mentioned, the labor market has changed quite a bit since 2006. Hence, this study will try to build upon the results of their study and try to find additional explanations for the large proportion of part-time employment in the Netherlands.

It would be interesting to see if there is a difference in the effect of the shift of working hours on job satisfaction and life satisfaction. While Russo (2012) found that if workers voluntarily choose to work part-time, this leads to higher job satisfaction, one could intuitively expect to see a decrease in job satisfaction when working hours decrease as conditions of part-time jobs are often considered to be inferior to those of full-time jobs (McGovern, Smeaton & Hill, 2004; Booth & van Ours, 2010). Several studies have been based upon the assumption that part-time work results in a worse person-organization

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[6] Identities are defined here as a person's sense of self and to carry prescriptions of what matters in someone's life. A woman with children for example has a role as a mother and a wife, and needs to balance these identities appropriately and effectively (Russel, 2012).

fit, resulting in i.e. less training, lower pay, variable hours and lower benefits (Krausz, Sagie & Bidermann, 2000). On the contrary, working part-time gives people the opportunity to spend time on other activities than work, i.e. family or leisure. Time is limited, and different priorities in life are competing for this time. The choice between work and other activities in life, and its resulting job and life satisfaction, depends on personal preferences and priorities. Therefore, the optimal balance between these activities, also does. This study focuses on the relationship between the time people decide to spend at work and the way in which this influences their job and life satisfaction. Specifically, it looks at the difference of this relationship for men and women.

2.5 The gender gap

As mentioned in the previous section, several studies have found differences in the work-happiness relationship in terms of gender (Booth & van Ours, 2008; 2010; Russo, 2012). Furthermore, according to Hoon, Lam and Keizer (2016), happiness from part-time or full-time work is dependent on people's gender. Although the exact results found by these studies vary, the evidence does point in a certain direction. Some find higher levels of life satisfaction for full-time working men (Montero & Rau, 2014; Booth & van Ours, 2008; Hoon, Lam & Keizer, 2016) and others found higher life satisfaction for part-time working women (Gschwandtner, Jewell, & Kambhampati, 2016; Booth & van Ours, 2008; Hoon, Lam & Keizer, 2016), but none of the reviewed studies found higher levels of life satisfaction for full-time working women or for part-time working men[7]. This suggests that, if a significant difference between men and women in terms of the relation is to be found, it is expected that a change from working part-time to working full-time positively influences the life satisfaction of men and/or negatively influences the life satisfaction of women.

Findings in previous research give several explanations for these differences. Hoon, Lam and Keizer (2016) found evidence for the effect of parental roles and the working hours of the partner. Furthermore, Iseke (2013) found that part-time employees that have higher demanding family roles suffer less from worse working conditions. She argued that individuals that put more weight on their family roles might suffer less from the downsides of part-time work and benefit more from the time they win while working part-time. If women put more weight on family roles than men do, this might explain the difference in the effect that part-time work has on their job and life satisfaction. Booth and van Ours (2013) found support for a significant difference in the division of labor within the household. In households where the male works full-time, an increase in the hours worked in the market by his female partner leads to a disproportionally low decrease of her housework, whereas the housework of the male partner stays almost the same. This suggest stereotyping in the role of gender within housework

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[7] Valente and Berry (2015), find that life satisfaction goes up for Latin American men when working less, but only when compared to men from the United States.

and market work. Furthermore, Cram, Alkadry, and Tower (2016) argued that in the private domain, women are still expected to take care of both the younger and the older men of the family and that the public domain (i.e. organizations) has been slow in developing workplaces that suit individuals that want a more balanced life in terms of pursuing career opportunities and time with their families. Mencarini and Seroni (2010) found that gender inequality within a relationship in terms of the division of housework negatively influences women's happiness, especially for those women that work more than 30 hours a week. These examples suggest that the different (family) roles that men and women have, such as taking care of children or other family members in need of care, might be an explanation for the differences found in the relationship between labor market participation and life and job satisfaction. Finally, the possibility of sharing these family or financial responsibilities with a partner, might also influence the labor participation-happiness relationship.

2.6 Hypotheses

Building upon the results of the above summarized background literature, this paper seeks to find answers to the following hypotheses:

1. *There is a (positive) relationship between labor market participation and life satisfaction[8].*
2. *There is a difference in the relationship between labor market participation and life satisfaction for men and women.*
a) *The difference between this relationship for gender is affected by the responsibility for informal care tasks [9].*
b) *The difference between this relationship for gender is affected by the responsibility for children.*
c) *The difference between this relationship for gender is affected by living together with a partner.*
3. *The direction of the above mentioned effects are similar for job satisfaction.*

All hypotheses are tested both for employment versus unemployment in general (only on life satisfaction) and for part-time employment versus full-time employment.

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[8] A positive direction is only expected for employment versus unemployment. The past results for part-time versus full-time work have been too ambiguous to expect a certain direction.
[9] Using the definition of the CBS (2018), informal care is here defined as being responsible for the unpaid care for people in need in the near environment. This includes personal care and tasks in the household related to illness, handicap or aging of relatives, friends, acquaintances or other people in the near environment. It excludes care of own children.

3. Data and Methodology

3.1 Data Description

The dataset used for this study is the Labor Supply Panel, a long-term questionnaire ranging from 1985 to 2014, concerning the labor situation of the Dutch population. It was set up by the Organization for Strategic Labor Market Research and has been managed by the Social Plan Bureau since 2010. A life satisfaction question was only included as of 2010. Therefore, the analysis of this study is restricted to the last three waves of the panel, being 2010, 2012 and 2014. Respondents with missing values for one of the dependent or explanatory variables of interest were deleted from the sample[10]. To account for the missing values of household income and at the same time prevent losing valuable data, an imputation method was used. As only less than 5% of the household income data was missing, a straightforward method was chosen[11], combining the variables; individual income, individual labor market situation, partner and partner working hours as a proxy for household income. In order to inspect for selection bias resulting from the removal of certain respondents, the final sample was compared to the original data minus the students, using gender, age and education (Appendix A: Table A2). No abnormalities were found. This finally resulted in a balanced sample of 7,011 observations from 2,337 unique respondents, meaning that all respondents were present in all three waves.

Of the sample, 1,079 (46%) is male and 1,258 (54%) is female, aged 18 to 66. In terms of their labor market situation over these three years, on average 74% was employed on payroll, 5% was self-employed, 0.3% was cooperating with his or her partner, 4% was looking for a job and 17% was unemployed. In this paper, participating in the labor market is defined as either being employed on payroll, being self-employed or cooperating with a partner, whereas not participating is defined as being either unemployed or looking for a job, meaning that an average of 79% was participating versus 21% that was not participating. When looking at the type of employment, an average of 46% of the labor participants was working part-time and the other 54% was working full-time[12]. This large number of part-time employees mainly stems from the female part of the sample. Figure 1 shows the ratios of the labor participation categories by gender. An obvious difference can be seen between the extent of labor

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[10] All students were removed from the sample as they are expected to have different priorities in terms of work than non-students. Further, missing observations for the variables indicating *life satisfaction*, *job satisfaction* and *working hours* were removed from the data. If possible, missing observations for education were substituted by using the older education coding variable. After dropping missing observations, only respondents that answered all variables of interest for each year were kept in the data, resulting in a balanced panel.

[11] For individuals without a partner, *household income* was substituted by *individual income* of that same year. If *Individual income* was also missing and *household income* was missing for only one of the three waves, *household income* was substituted by previous or subsequent wave if the individual *labor market situation*, *partner*, and the *labor market situation of the partner* were equal to that previous or subsequent wave.

[12] Full-time employment is defined as either being employed on payroll with a contract of at least 35 hours a week or being cooperator or self-employed for at least 35 hours a week. If respondents indicated that they were having two or more part-time jobs, the hours of these jobs were added to conclude if they were part-time or full-time employees.

participation of men and women. Where 72% of the men in the sample works full-time, only 17% of women does.

Labor Participation by Gender
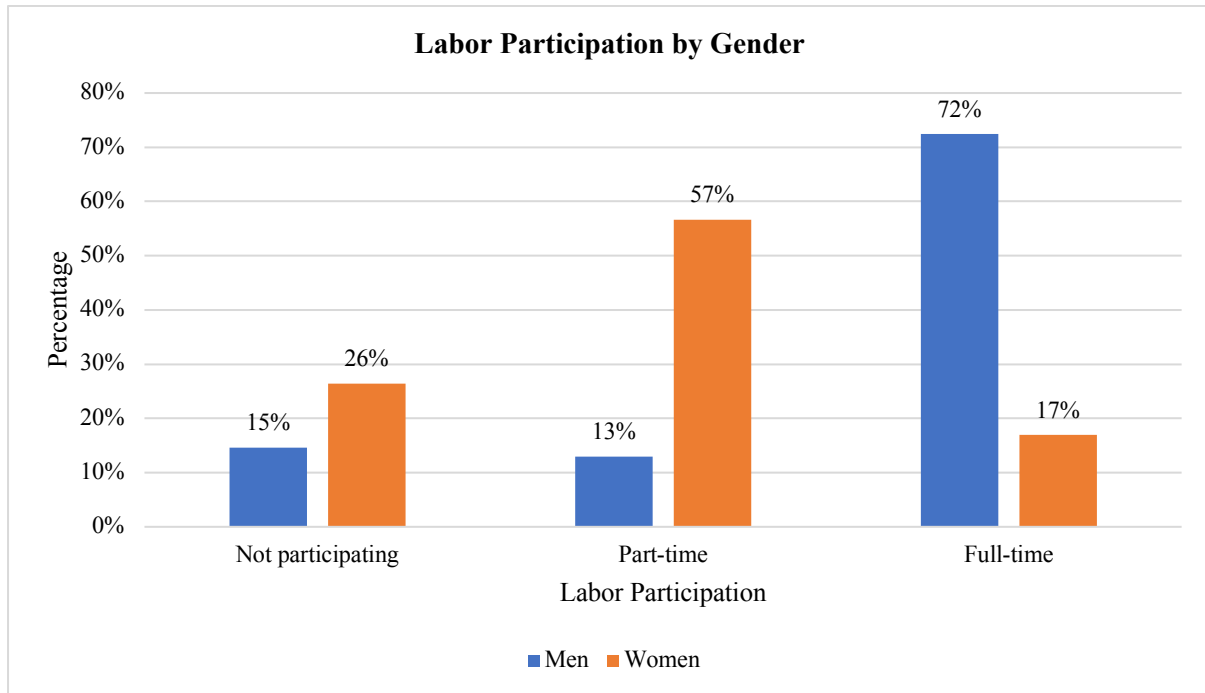
Figure 1. Relative division of labor participation categories by gender

3.2 Dependent and Explanatory Variables

The two dependent variables used in this study are self-reported measures of job and life satisfaction. Happiness is measured with the following question: "To what extent are you satisfied with the life that you are leading at the moment?", to which respondents provided an answer on a five-point scale, ranging from very unsatisfied to very satisfied[13]. As only a very low percentage of the sample (.67%) responded with "very unsatisfied", the respondents answering "very unsatisfied" and "unsatisfied" were merged for estimation purposes, resulting in a four-category variable. Job satisfaction is measured with the question: How satisfied are you, taking everything into account, with your job?, with a four-point answer scale ranging from very unsatisfied to very satisfied. Using the same reasoning as for life satisfaction, the groups that answered "very unsatisfied" and "a little unsatisfied" were merged, resulting in a three category variable.

Figure 2 shows the relation between labor market participation and life and job satisfaction over the three waves for men and women. While the graph shows a higher life satisfaction for employed people than for unemployed people in general, one can see a difference in the life satisfaction trend for men compared to women. Men seem to be happier when working full-time while women report a slightly higher life satisfaction when working part-time. For job satisfaction, the relationship does not

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[13] Appendix C: Figure C1, shows the actual Dutch questions used in the questionnaire to measure happiness, job satisfaction and perceived health.

seem to differ in terms of gender, but reported average job satisfaction is higher both for full-time working men and women than for part-time working men and women (Figure 3).
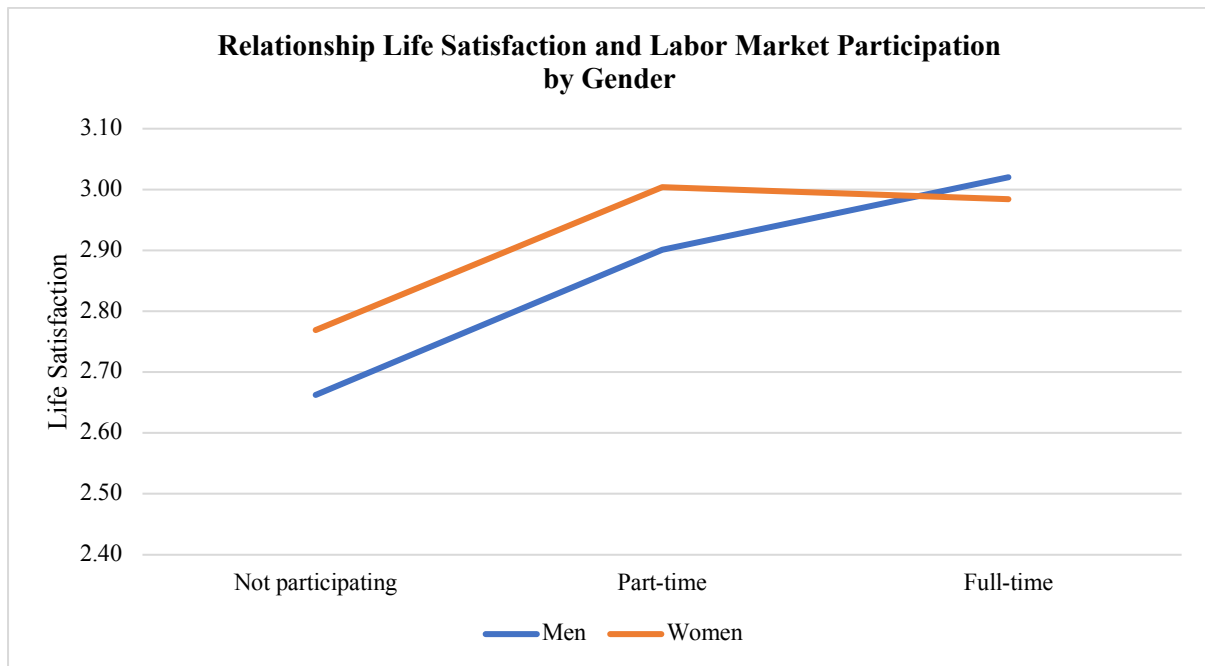
Figure 2. Life Satisfaction and Labor Market Participation by Gender
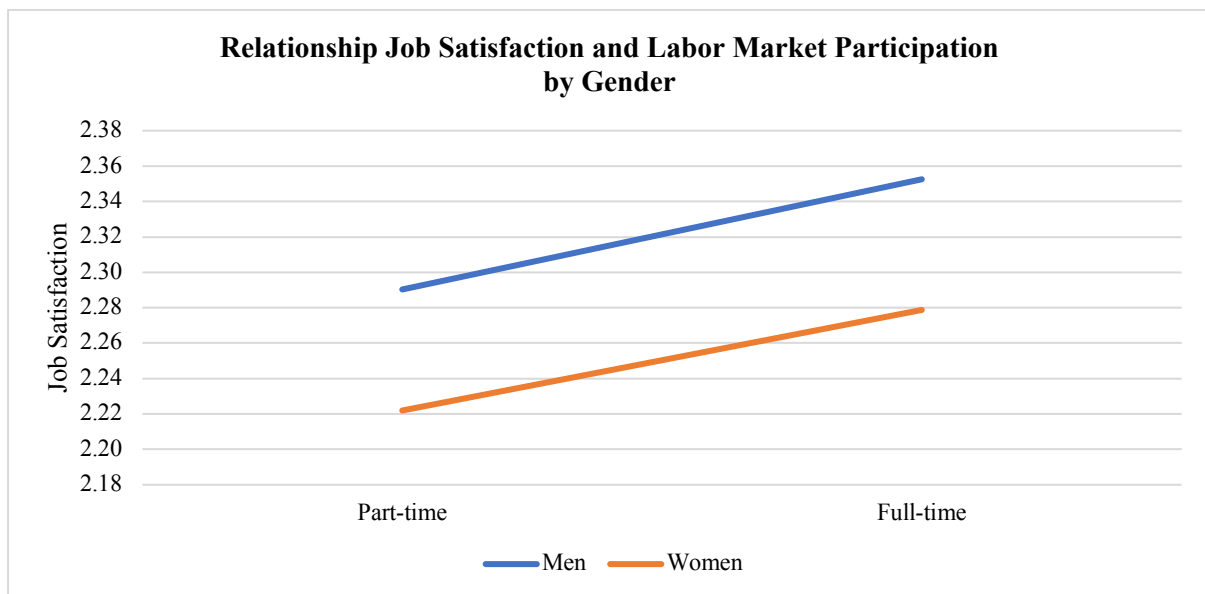
Figure 3. Job Satisfaction and Labor Market Participation by Gender

3.3 Control variables

The control variables included in the analysis are based on Dolan et al. (2008), who, as previously mentioned, wrote an extensive review on the determinants of happiness. Furthermore, several previous articles concerning work and happiness were reviewed. Considering the limits of the available data, the following control variables are included for individual characteristics: level of

highest achieved education ranging from primary school to university, relationship status distinguishing between having a partner or not having a partner, age and age squared and a binary variable for the responsibility of informal care and self-reported health. The latter is measured with the question: "How is your health in general?", to which respondents could answer on a four-point scale ranging from very bad to very good. As for life satisfaction, the last two categories (very bad and bad) were merged to create a more evenly distributed variable. In addition, a binary variable indicating if children are living in the household and the log of household income[14] are included. In order to test hypotheses 2A, 2B, and 2C, three interaction terms were created, combining labor participation with the binary variables informal care giving, children living at home and having a partner. Table 1 provides a descriptive overview of all variables of interest by gender.

Table 1. Summary Statistics by Gender, aged 18-66

	Total	Women	Men
Age	48.90	47.98	49.99
Life satisfaction			
Unsatisfied	5.13	5.56	4.63
Not unsatisfied, not satisfied	14.33	15.00	13.56
Satisfied	61.67	59.67	64.01
Very satisfied	18.86	19.77	17.79
Job satisfaction[a]			
Unsatisfied	8.58	8.45	8.72
A little satisfied	54.08	52.63	55.55
Very satisfied	37.33	38.92	35.73
Health			
Very good	16.59	16.08	17.18
Good	56.81	55.64	58.17
Okay	21.89	22.92	20.70
Bad	4.71	5.35	3.95
Monthly household income	3,157	3,113	3,209
Log (household income)	7.00	6.72	7.35
Children living at home			
At least 1	57.10	56.89	57.34
No	42.90	43.11	42.66
Number of children living at home	1.13	1.12	1.14
Partner			
Yes	84.28	80.60	88.57
No	15.72	19.40	11.43
Labor market Participation			
Not participating	20.91	26.34	14.58
Part-time	36.49	56.68	12.94

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[14] To account for the values of household income that were equal to zero, a very small number was added to the log function (0.000000000000000000001). As a robustness check, the hyperbolic sine transformation was also applied, which did not lead to different estimation results.

Table 1. continued from page 16

Full-time	42.60	16.98	72.47
Labor market Participation # Informal care			
Not participating # Informal care	5.65	7.98	2.93
Part-time # Informal care	9.76	15.66	2.87
Full-time # Informal care	6.53	2.78	10.91
Labor market Participation # Children at home			
Not participating # Children at home	8.67	12.51	4.20
Part-time # Children at home	23.79	38.29	6.89
Full-time # Children at home	24.63	6.09	46.25
Labor market Participation # Partner			
Not participating # Partner	16.82	21.09	11.83
Part-time # Partner	31.61	49.05	11.28
Full-time # Partner	35.86	10.47	65.46
Education			
Primary	1.84	1.70	2.01
Lower secondary	20.55	21.60	19.34
Higher secondary	38.64	40.20	36.82
College	27.80	27.48	28.17
University	11.17	9.04	13.65
Number of observations	7,011	3,774	3,237

Age, life satisfaction, job satisfaction, health, household income and number of children as means, partner, labor market participation and education as percentages.
[a] The average for job satisfaction only includes those observations that are participating in the labor market (2780 women and 2765 men).

3.4 Estimation Strategy

The relationship between the explanatory variable labor market participation and the dependent variables job satisfaction and life satisfaction is estimated using a fixed effects model, which was found to outperform a random effects model using a Hausmann test. While the dependent variables life satisfaction and job satisfaction are both ordinal, most previous literature has been treating these dependents as cardinal. However, the life satisfaction and job satisfaction questions used in this sample are only relying on a four-point scale, making a cardinal interpretation suboptimal. This is supported by Dickerson, Hole and Munford (2014), who compare cardinal and ordered fixed effects models for the estimation of life satisfaction and argue that ordered models are more appropriate as those do not require researchers to make the assumptions necessary for cardinality. A fixed-effects ordered logit model is therefore used for analysis, which is formulated as follows:

$$y^*_{it} = x'_{it} + \alpha_i + \varepsilon_{it} \quad \text{with} \quad i = 1, \ldots, N \text{ and } t = 1, \ldots, T \tag{1}$$

Here, y_{it}^* is defined as the latent dependent variable for individual i at time t, which is related by the model to an index of observed characteristics x_{it}' and unobservable characteristics α_i and ε_{it}. The related variable is tied to the observed ordered variable y_{it}, in this case life satisfaction or job satisfaction, as follows:

$$y_{it} = k \text{ if } \tau_k < y_{it}^* \leq \tau_{k+1} \quad \text{with} \quad k = 1,\dots,K \tag{2}$$

Several methods for the estimation of a fixed ordered logit have been proposed in previous research (Chamberlain, 1980; Das & van Soest, 1999; Ferrer-I-Carbonell & Frijters). These methods all categorize the dependent variable as a binary one, after which a fixed-effects binary logit is performed. The cutoff point chosen to divide the dependent variable varies between these methods, but is in all determined as a function of the outcome of the dependent variable. However, in a more recent study, Beatschmann, Staub, and Winkelmann (2011), showed evidence that in general, these estimations are inconsistent as choosing the cutoff point based on the outcome produces a form of endogeneity. They propose the Blow-Up and Cluster (BUC) estimator, which is shown to remain unbiased, even in very small samples. The BUC method uses the Chamberlain estimator[15] by replacing every observation in the sample by K-1 copies of itself, "blowing" up the sample size. Then, every K-1 copy is dichotomized at a different cutoff point, "clustering" the standard errors at the individual level. Beatschmann, Staub, and Winkelmann (2011) furthermore showed that, when the ordered dependent variable is skewed and shows extremely low responses for some of the categories, the BUC method is the preferred one. In the sample used in this paper, both the job and life satisfaction variables show this low response rate in the lower categories. Therefore, in order to find answers to the set hypotheses, a BUC estimation is performed. It should be noted that as a consequence of this methodology, it is not possible to determine marginal effects from the individual coefficients. It is however possible to interpret the sign, significance and relative size of the coefficients (Brown & Gray, 2016). As gender is a fixed characteristic over time, and is therefore omitted by the fixed effects estimation, the sample is split by gender to observe the different effects for men and women.

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[15] For more information on the Chamberlain estimator and the Stata code used for the BUC estimation, see Baetschmann, G., Staub, K. E., & Winkelmann, R. (2011). Consistent estimation of the fixed effects ordered logit model. *Journal of the Royal Statistical Society: Series A (Statistics in Society), 178*(3), 685-703.

4. Results

4.1 Hypothesis 1 – Life Satisfaction, Job Satisfaction and Labor Participation

In order to verify Hypothesis 1; there is a (positive) relationship between employment in general and life and job satisfaction, and this relationship differs between full-time and part-time work, a fixed effects ordered logit was estimated using the whole sample. Table 2 presents the parameter estimates of the fixed effect ordered logit estimates.

Table 2. Life satisfaction and Job satisfaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Coeff.	SE	Coeff.	SE	Coeff.	SE
Participating	0.30*	(0.17)	-	-	-	-
Labor participation						
Not participating	Base	Base	-0.10	(0.18)	-	-
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.51***	(0.17)	0.27	(0.19)
Age	-0.06	(0.11)	-0.05	(0.11)	-0.04	(0.11)
Age^2	0.00	(0.00)	0.00	(0.00)	-0.00	(0.00)
Log household income	-0.00	(0.01)	-0.00	(0.01)	-0.01	(0.01)
Education						
Lower secondary school	0.02	(0.38)	0.04	(0.38)	-0.34	(0.72)
Higher secondary school	0.05	(0.41)	0.08	(0.41)	-0.21	(0.71)
College	-0.31	(0.46)	-0.28	(0.47)	-0.39	(0.74)
University	-0.02	(0.60)	0.01	(0.60)	-0.65	(0.80)
Partner	0.90***	(0.33)	0.90***	(0.33)	0.42	(0.30)
Children living at home	0.15	(0.17)	0.16	(0.17)	0.12	(0.19)
Health						
Good health	-1.30***	(0.14)	-1.32***	(0.14)	-0.62***	(0.15)
Average health	-3.00***	(0.20)	-3.04***	(0.20)	-1.18***	(0.21)
Bad health	-4.53***	(0.32)	-4.58***	(0.32)	-1.74***	(0.40)
Giving informal care	-0.16	(0.12)	-0.16	(0.12)	-0.07	(0.14)
Observations	4,377		4,377		3,008	

Note: number of observations is based on regression samples.
Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

The results support the previous evidence that participating in the labor market compared to not participating in the labor market increases overall life satisfaction. It should however be noted that in this study, individuals looking for work are viewed as unemployed, whereas this is not always the case in previous research. This might be an explanation for the weak significance compared to results from previous studies. A more surprising result can be seen when full-time work is compared to part-time work. On average, changing from unemployment or a part-time job to a full-time job apparently significantly increases happiness. Later, this effect is further explored by looking at the role gender plays in this relationship. Job satisfaction on the other hand, seems not to be significantly affected by labor participation or the choice of part-time versus full-time work. From the control variables, one can

see a very significant positive effect of both good health and having a partner on life satisfaction, supporting previous research into the determinants of life satisfaction.

4.2 Hypothesis 2 – Life Satisfaction, Job Satisfaction and Labor Participation by Gender

To be able to verify hypothesis two, the sample was split by gender, resulting in one sample only including men and the other only including women. Table 3 shows the results of the fixed ordered logit models with life satisfaction and job satisfaction as dependent variables.

Table 3. Life satisfaction and Job satisfaction by Gender; parameter estimates of fixed effects ordered logit models

	Life satisfaction		Job satisfaction			
	Women	Men	Women	Men	Women	Men
Participating	0.10	0.56**	-	-	-	-
	(0.22)	(0.27)				
Labor participation						
Not participating	Base	Base	-0.06	-0.05	-	-
			(0.22)	(0.31)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.25	0.74***	0.42	0.19
			(0.23)	(0.28)	(0.26)	(0.27)
Giving informal care	-0.18	-0.11	-0.17	-0.13	-0.01	-0.16
	(0.16)	(0.19)	(0.16)	(0.20)	(0.20)	(0.21)
Children living at home	-0.04	0.46*	-0.03	0.42	0.24	0.04
	(0.23)	(0.27)	(0.23)	(0.28)	(0.26)	(0.27)
Partner	0.87**	1.01	0.87**	1.00	0.83**	-0.08
	(0.35)	(0.80)	(0.35)	(0.82)	(0.40)	(0.45)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Controls included are age, age^2, log household income, level of education and health, for which the effects are similar to those shown in Table 2. See Appendix A: Table A3 for a full output table of the regression.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

It becomes evident from the above results that the significant effect found in the overall sample stems from the men in the sample. For men, there is a significant positive effect of both participating in general and working full-time versus working part-time and not participating on life satisfaction. For women however, such a significant relationship is not found. Job satisfaction does not show a significant relationship with labor participation for men nor for women.

4.2.1 Hypothesis 2A – Effect of Informal Care Giving

Table 4 shows the parameter estimates of the fixed ordered logit when the interaction for informal care with labor market participation was added to the model. In the first model, an interaction between participating and informal care giving was added. In the second model, three interaction

dummies were added; one interaction between not participating and informal care giving, one between part-time work and informal care giving and one between full-time work and informal care giving (with part-time work serving as the base). In order to support the interpretation of the following models with interaction effects, Appendix A: Table A9 shows a summary of the results in this study by subgroup.

Table 4. Life satisfaction and Job satisfaction by Gender with Informal Care Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	0.07	0.81***	-	-	-	-
	(0.24)	(0.29)				
Labor participation						
Not participating	Base	Base	-0.03	-0.29	-	-
			(0.24)	(0.34)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.25	0.73**	0.45*	0.07
			(0.24)	(0.30)	(0.27)	(0.29)
Participating # Informal care	0.11	-1.10***	-	-	-	-
	(0.33)	(0.42)				
Labor participation # Informal care						
Not participating # Informal care	Base	Base	-0.12	0.97**	-	-
			(0.32)	(0.49)		
Part-time # Informal care	-	-	Base	Base	Base	Base
Full-time # Informal care	-	-	0.03	-0.10	-0.22	0.51
			(0.52)	(0.44)	(0.41)	(0.50)
Giving informal care	-0.25	0.79**	-0.13	-0.25	0.03	-0.59
	(0.28)	(0.39)	(0.18)	(0.40)	(0.21)	(0.48)
Children living at home	-0.04	0.50*	-0.03	0.45	0.24	0.05
	(0.23)	(0.28)	(0.23)	(0.28)	(0.26)	(0.27)
Partner	0.87**	1.04	0.87**	1.02	0.83**	-0.05
	(0.35)	(0.88)	(0.35)	(0.89)	(0.40)	(0.45)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Controls included are age, age^2, log household income, level of education and health, for which the effects are similar to those shown in Table 2. See Appendix A: Table A4 for a full output table of the regression.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Now, job satisfactions seems to be higher for full-time working women (p-value changed from 0.109 in previous regression to 0.099 in above regression), which is probably caused by the addition of the interaction to the model. As this effect was not significant in the previous model, it is however considered too uncertain to interpret. Furthermore, being responsible for the informal care of someone does not change the relationship between labor participation and life satisfaction for women. Men on the other hand, are affected by the responsibility of informal care. Individually, labor participation and informal caregiving both have a positive effect on life satisfaction. However, when a man is both participating and informal care giver, life satisfaction is on average lower than when he does either one.

In addition, informal caregiving men are happier working full-time than part-time, but have highest life satisfaction when not participating, while men who do not have the responsibility for informal care are happiest working full-time. It should be noted that the coefficients of this regression should be interpreted with cause however, as some of the subgroups (such as non-participating informal care giving men; see Table 1) only represent a very low percentage of the sample.

4.2.2 Hypothesis 2A – Effect of Children Living at Home

Table 5 shows the estimates of the fixed ordered logit when including the interaction terms for children living at home and labor market participation in the regression. It should be noted that, in contrast to informal care, this variable does not measure if the individual is actually taking care of the children, but only if the individual has children living at home. It is assumed this poses some form of role responsibility distinct from not having children living at home, but the type or size of this responsibility is unknown and can vary between respondents.

Table 5. Life satisfaction and Job satisfaction by Gender with Children living at home Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	-0.17	0.20	-	-	-	-
	(0.30)	(0.37)				
Labor participation						
Not participating	Base	Base	0.23	0.62	-	-
			(0.30)	(0.39)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.29	1.25***	0.14	0.31
			(0.31)	(0.37)	(0.36)	(0.36)
Participating # Children at home	0.53	0.75	-	-	-	-
	(0.40)	(0.47)				
Labor participation # Children at home						
Not participating # Children at home	Base	Base	-0.56	-1.51***	-	-
			(0.41)	(0.57)		
Part-time # Children at home	-	-	Base	Base	Base	Base
Full-time # Children at home	-	-	-0.02	-1.10**	0.55	-0.23
			(0.39)	(0.49)	(0.45)	(0.46)
Children living at home	-0.46	-0.19	0.09	1.39***	0.11	0.25
	(0.43)	(0.50)	(0.25)	(0.49)	(0.28)	(0.48)
Giving informal care	-0.18	-0.13	-0.18	-0.15	0.00	-0.16
	(0.16)	(0.20)	(0.16)	(0.20)	(0.20)	(0.21)
Partner	0.84**	1.03	0.84**	1.00	0.79**	-0.08
	(0.35)	(0.84)	(0.35)	(0.83)	(0.40)	(0.45)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Controls included are age, age^2, log household income, level of education and health, for which the effects are similar to those shown in Table 2. See Appendix A: Table A5 for a full output table of the regression.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Job satisfaction and the different forms of labor participation seem unaffected by children living at home for both men and women, and it does not affect life satisfaction for women either. For men however, the relation between the different forms of labor participation and life satisfaction does vary depending on the presence of children in the household. First of all, the coefficient of children turned significant, implicating that the presence of children at home does have an effect on life satisfaction, when adjusted for different forms of labor participation. Men with children at home significantly have the lowest life satisfaction when not participating in the labor market, while for those men, life satisfaction is highest when working full-time. Men without children at home are happiest when working full-time, but do not show a significant difference in life satisfaction between working part-time or not participating. Overall, men, both with and without children, are happiest when working full-time.

4.2.3   Hypothesis 2A – Effect of Having a Partner

In order to further explore the difference between men and women in terms of the relationship between labor participation and life and job satisfaction, using the same methodology as for the previous interactions, interactions with the partner dummy were created. Including these interactions in the model, resulted in the output displayed in Table 6 on the next page.

Table 6. Life satisfaction and Job satisfaction by Gender with Partner Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	-1.02**	1.29	-	-	-	-
	(0.46)	(1.01)				
Labor participation						
Not participating	Base	Base	0.80*	-1.43	-	-
			(0.48)	(1.10)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	-0.85*	-0.19	0.68	-0.94
			(0.45)	(0.70)	(0.45)	(0.79)
Participating # Partner	1.34***	-0.83	-	-	-	-
	(0.49)	(1.03)				
Labor participation # Partner						
Not participating # Partner	Base	Base	-1.01**	1.57	-	-
			(0.51)	(1.13)		
Part-time # Partner	-	-	Base	Base	Base	Base
Full-time # Partner	-	-	1.46***	1.07	-0.36	1.31
			(0.51)	(0.72)	(0.49)	(0.84)
Partner	0.01	1.60	0.96**	0.03	0.98**	-1.21
	(0.51)	(0.98)	(0.39)	(1.03)	(0.41)	(0.85)
Giving informal care	-0.16	-0.11	-0.14	-0.13	-0.01	-0.14
	(0.16)	(0.19)	(0.16)	(0.19)	(0.20)	(0.22)
Children living at home	-0.07	0.47*	-0.02	0.42	0.23	0.03
	(0.23)	(0.27)	(0.23)	(0.28)	(0.26)	(0.27)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Controls included are age, age^2, log household income, level of education and health, for which the effects are similar to those shown in Table 2. See Appendix A: Table A6 for a full output table of the regression.
Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

When including this interaction in the model, the coefficients of the predicting variables for men all turned insignificant. On the contrary, a significant effect for women was found. Women living with a partner have higher life satisfaction when participating in the labor market than when unemployed. On the other hand, participating while not having a partner is shown to significantly decrease life satisfaction for women. It seems that, in the previous regression, these effects cancelled out. Furthermore, women having a partner are happiest working full-time and are happier when working part-time than when not participating in the labor market. Women without a partner show an opposite pattern, being happiest when not participating while being least happy when working full-time. Again, these effects seemed to cancel out in the main effect as presented Table 3. Finally, the results in Table 6 show a positive significant effect of having a partner on job satisfaction.

4.3 Combining Effect Responsibility for Children and Partner

The results from the interaction with children and partner raised questions regarding the combined effect of having children and a partner. Therefore, an additional analysis was conducted, including the interactions for children at home and having a partner with labor market participation and an interaction for both having children at home and a partner[16]. Only the model testing for the effect of different forms of labor participation on life satisfaction was tested, as previous results did not show any significant effect for job satisfaction. The results from this regression are presented in Table 7.

Table 7. Life satisfaction and Job satisfaction by Gender with Partner and Children at home Interactions; parameter estimates of fixed effects ordered logit models

| | Life satisfaction | | | |
| | Women | | Men | |
	Coeff.	SE	Coeff.	SE
Labor participation				
Not participating	1.06*	(0.49)	-0.87	(0.90)
Part-time	Base	Base	Base	Base
Full-time	-0.74	(0.47)	0.05	(0.58)
Labor participation # Children at home				
Not participating # Children at home	-0.55	(0.41)	-1.94***	(0.60)
Part-time # Children at home	Base	Base	Base	Base
Full-time # Children at home	-0.43	(0.42)	-1.46***	(0.51)
Labor participation # Partner				
Not participating # Partner	-0.96*	(0.52)	2.01**	(0.97)
Part-time # Partner	Base	Base	Base	Base
Full-time # Partner	1.66***	(0.55)	1.66**	(0.68)
Partner	0.70	(0.47)	0.19	(0.74)
Children living at home	-0.08	(0.44)	3.66***	(1.10)
Children at home # Partner	0.32	(0.46)	-2.06**	(1.00)
Giving informal care	-0.15	(0.16)	-0.15	(0.20)
Observations	4,377		4,377	

Note: number of observations is based on regression samples.
Controls included are age, age^2, log household income, level of education and health, for which the effects are similar to those shown in Table 2. See Appendix A: Table A8 for a full output table of the regression.
Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

When adding the interaction effects to the model, one can see that the combining effect of children and having a partner does not provide any new insights compared to previous results in this study for women. For men however, it becomes evident that, when having both a partner and children, the effect of not participating, working part-time or working full time on life satisfaction does not differ much, with a slightly higher life satisfaction when working full time. Men with children but no partner on the other hand, are shown to be significantly happiest when working part-time and least happy when not participating in the labor market. Men with no children but with a partner have highest life

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[16] Adding the additional interactions: Partner # Children at home # Not participating and Partner # Children at home # Full-time, lead to non-convergence of the regression. Therefore, it was decided to exclude these from the model.

satisfaction when not participating, and have lowest life satisfaction when working part-time, whereas for men without children or partner, no significant results were found. The coefficients from these regressions should however be interpreted with care, as some of the combined subgroups are a very low representation of the sample, as can be seen in Appendix A: Table A7. Further research should turn out if these results can be generalized.

5. Discussion

5.1 Findings

The aim of this research was to find further support for the relationship between labor market participation and happiness, both in life and at work. More specifically, it investigated the role of gender in this relationship and studied if being responsible for the informal care of someone else, having children living at home or living together with a partner moderates this relationship.

As expected, participating in the labor market was found to positively influence life satisfaction, supporting previous research on this subject (Dolan et al., 2008). However, when the sample was split by gender, it was found that this positive effect of labor participation mainly came from the men in the sample, whereas women in general did not show a significant difference in life satisfaction from working versus not working. This might be explained by the findings of Veenhoven (2015b), who found that housewives are not less happy than individuals with paid work. While the data did not specify if a woman was a housewife, 27% of the unemployed women in the sample answered they were not working because of meaningful work at home or because of family reasons (Appendix C: Table C2). Assuming that those women qualify as housewives, it is possible that they contributed to a higher overall life satisfaction for the unemployed group of women. However, as these assumptions were too uncertain and there was too much noise in the data regarding this information, it was considered inappropriate to test this.

The finding that full-time employees are happier than part-time employees in the Netherlands, is in line with some of the previous research (Weinzierl, 2005; Schoon, Hansson, & Salmela-Aro, 2005). However, it is quite surprising considering the large proportion of people in the Netherlands voluntarily working part-time. When studying men and women separately however, the results suggest that this difference mainly stems from the men in the sample, who are shown to be significantly happier when working full-time, while for women in general, no difference in life satisfaction was found between working part-time, full-time or working at all. The large proportion of the part-time working people in the Netherlands being women might explain this difference.

When testing for a moderating effect of different individual life characteristics, some additional clarifying results were found. While the responsibility for a child or the responsibility for the informal care of another individual did not change the insignificance of the coefficients for women, men were found to be affected by both these types of responsibilities. Men responsible for giving informal care were shown to have highest life satisfaction when not participating, while men not responsible for this

type of care were happier participating and working full-time. The theory suggesting that high demanding family roles decrease the satisfaction women get out of working full-time compared to working part-time (Iseke, 2013), might also be an explanation for the reduction in life satisfaction men experience when both participating in the labor market and having this demanding role as informal caregiver.

Interesting is that for men with children at home, being unemployed compared to working part-time negatively affects life satisfaction, which was not found for men in general. This indicates that, when having the responsibility for children, even a part-time job is better than no job at all. An explanation could be the necessity of having a job in terms of financial resources when providing for children. Overall however, working full-time still leads to the highest level of life satisfaction for men in general, regardless of their responsibility for children.

The final moderator added to the model was having a partner or not. While having a partner did not change any of the estimates for men, the estimates for women changed significantly. Apparently, women with a partner are significantly happier when participating in the labor market, whereas women without a partner on the contrary are significantly happier when not participating in the labor market. Partnered women are also shown to be happiest when working full-time and happier working part-time than not working at all, while for single women, the opposite was found. This contradicts the results of Booth and van Ours (2013), who found that partnered women prefer to work part-time. However, their study was based on an earlier sample, combined datasets and did not find any significant direct relationship between working hours and life satisfaction for partnered women. These could be reasons for the difference in findings. Another explanation could be one highlighted in the study of De Hoon, Lam, and Keizer (2016), who found that women with a part-time working partner are happier when they earn more than their partner. This could partly explain why full-time working women with a partner are happier than part-time working women and non-participating women with a partner. Furthermore, adapting to working preferences of a full-time working partner, the satisfaction of living in line with a partner, being able to share responsibilities with a partner or being able to buy off role responsibilities or housework (i.e. hiring a nanny or cleaner), could lead to higher life satisfaction for full-time working women. Unfortunately, the data was too limited in terms of the labor participation of the partner and contained too much noise to reliably test this. Finally, it is not evident what contributes to the decrease in happiness for working women without a partner, as most previous research on the relationship between working and happiness examined partnered women. Therefore, looking more into the explanations for these differences between women with and without a partner is interesting for further research.

The interesting results found for the effect of having a partner and children living at home, lead to an additional analysis combining these models. While for women, this did not lead to new insights, for men it did show significant differences when combining the effect of having children and a partner. Men with both a partner and children have the highest life satisfaction when working full-time whereas

men with children but without a partner seem to be happiest while working part-time. This difference could be explained by the fact that this first group is able to share the responsibility of the care for their children with a partner, while the latter are living alone with their kids and are thus carrying this responsibility on their own. However, due to the low proportion of men in the sample belonging to this group, the results are unreliable (Appendix A: Table A7). It is therefore interesting to explore this group using a larger sample with more time periods in the future. Men with a partner but without children are the only group that seem to be happiest when not participating in the labor market. This might have several reasons; they could for example be retired, feel less financial distress in terms of caring for others or they could have a partner that works.

Finally, this study did not find any significant results in the relation between different forms of labor participation and job satisfaction, implying that overall, working conditions at part-time jobs do not differ significantly from those at full-time jobs. This hints that the findings related to life satisfaction in this study do not stem from the satisfaction at work. Presumably, they stem from the satisfaction from other aspects in life affected by different forms of labor participation.

5.2 Limitations and Implications for Future Research

Several limitations regarding this study should be noted. First of all, while using panel data increases the possibility of exploring causal relationships, it also comes at the cost of losing observations. As this study used a fixed effects estimation and hence was dependent on the within variation of individuals over only three waves, variation was low. Furthermore, no year dummies were added to the model. While some researchers do so to account for unobserved yearly shocks, this comes with the risk of unnecessarily eliminating valuable variation, especially for a study using data with a short time frame. Although intuitively, no yearly shocks are expected to influence the data, not including these year dummies comes with the small risk of generating biased estimates. Another measurement issue is related to the measurement of job and life satisfaction, which are both subjective single item measures. While research has shown that reliability is usually high for measuring life and job satisfaction with these types of questions, validity tends to be lower than for multiple-item scales (Cheung & Lucas, 2014). Further, while a fixed effects estimates controls for unobserved time-unvarying effects, it does not control for unobserved time-varying effects. Although the known determinants of happiness were included in the regression and therefore the chance for omitted variable bias is low, the possibility remains. In terms of the interpretation of the results, the possibility of reverse causality should not be neglected, as in some cases happiness exhibits a potential source of behavior. Whereas most research is focused on the drivers of labor market behavior on happiness, studies have also found significant effects of happiness as a driver of labor market changes, especially of reemployment (Krause-Pilates, 2014). Furthermore, one could expect happier and possibly more confident people to be more successful in finding a partner. Hence, the result that women with a partner are happier when participating in the labor market, might also be caused by those women priory being

happier. Finally, one should be cautious interpreting the results of this study, as it has been found from previous research that only 15% of happiness can be explained by micro-social conditions, whereas on average 35% comes from genetics, 40% is determined by learned skills and behavior and 10% by pure luck (Veenhoven, 2015b).

Previous research on the relation between work and happiness mainly focused on women when looking at the moderating effect of children living at home. As this study showed that instead of women, men were significantly affected by children living at home, it would be interesting to find further explanations for this effect. Hence, information about one's actual role in terms of the care for children and the size of one's caregiving responsibility would be useful for further research. Furthermore, the negative effect of participating in the labor market that was found for women without a partner was surprising, but the low variety in the data did not allow to explore this finding further. As most previous research has focused on partnered women (because this group is usually overrepresented in datasets), it would be interesting for future research to explore why the effects found differ so much between women with and without a partner. In addition, while beyond the scope of this study, it would be interesting to see how satisfaction of work, and specifically happiness as a result of changing working hours differs between sectors. A recent research by Kaplan and Schulhofer-Wohl (2018) has shown that men and women often feel different about the same occupations. This suggests that they also might get different overall life satisfaction from these different occupations. Finally, this present study and other studies before, have shown that the relationship between life satisfaction and work cannot be viewed as similar between and among gender and other subgroups, such as parents and individuals without a partner. It is recommended that future researchers account for this heterogeneity between and within groups and possibly explore further explanations for these differences. Individuals with a handicap or single moms might for example be willing to work, but do not have the option, while other people have the option, but are not willing to work. Insights in these differences is valuable in order to support policymakers and management. Using a longitudinal study with a large sample size would allow testing for these subgroups.

5.3 Recommendations for Policy and Management

The results of this study suggest that the working behavior that leads to optimal happiness is different for men and women, and more specifically, is affected by different life choices and responsibilities of those men and women. Therefore, policymakers should consider designing policies that suit these different subgroups, to support everyone in finding the optimal work-life balance. According to the results, most men are happiest working full time. However, when they have the individual responsibility of the informal care of someone else, participating in the labor market leads to lower life satisfaction. Surprisingly, partnered women also seem to be happiest when working full-time. As the largest share of women does live together with a partner, this means that policy should be designed such as to give both partners the opportunity to pursue a full-time career. The fact that such a

large proportion of Dutch women is working part-time, while a large proportion of them seem to be happier working full-time, suggests that policymakers should find ways to enable or encourage women to work full-time and close this gap. More full-time working women might create a more equal division in terms of men and women in management, as this inequality is currently explained by the large proportion of women working part-time (CBS, 2016). It is therefore interesting for future research to find what drives women to work part-time and what withholds them from working full-time. Furthermore, as care tasks are found to have a significant effect on the life satisfaction resulting from working, at least for men, both policymakers and managers could enforce family-friendly laws and regulations to improve happiness. For example, in Sweden, both parents are entitled to a 480-day parental leave when a child is born or adopted and parents at Netflix can take as much paid time off as they want after the first year their child is born (Haas, Allard, & Hwang, 2002; Netflix, 2015). In general, despite the fact that we do not find any significant results in relation to job satisfaction, the results from this study can still be interesting for management, as it has been found that increased overall happiness leads to improved productivity at work (Oswald, Proto, & Sgroi, 2015).

Finally, one should be careful using these results for policymaking or management in countries with substantially different cultures than the Netherlands, as several studies have found the relationship between work and happiness to differ depending on differences in cultures between countries (De Hoon, Lam, & Keizer, 2016; Valente & Berry, 2016).

6. Conclusion

Happiness economics has been looking into the determinants of happiness for decades now, and the significant findings have lead policy makers to believe in measuring and guiding the prosperity of their countries with more than just economic measures based on financials (i.e. GDP). This study aimed to find more evidence for the relationship between what many of us spend most of our conscious time doing, working and pursuing happiness. The used dataset included important questions both on life and job satisfaction and information on two important role responsibilities, children and informal caregiving, as well as the presence of a partner to share these responsibilities with. Furthermore, as the data included three biennial waves spread over four years, with many of the respondents present in each wave, this study had the advantage of exploring causal relationships. It was found that in general, working positively influences life satisfaction, and that heterogeneity between and within subgroups, based on dependents such as gender and different role responsibilities, leads to differences in the optimal work-life balance. This is an important implication for policy making and management, as it provides evidence that individuals should not be treated as homogenous in terms of policy making and guidance related to labor participation. Furthermore, it provides interesting implications for future research to further explore these and more of the heterogeneities between individuals. Finally, this might support individuals finding the optimal work-life balance in the quest for happiness.

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APPENDIX A

Additional Tables and Figures

Table A1. Change in ratio of involuntary part-time workers out of total part-time workers 2012-2017 by Gender.[a]

Country[b]	Females		Males		Total	
	Absolute change	**Change in %**	**Absolute change**	**Change in %**	**Absolute change**	**Change in %**
Estonia	-10,9	-60%	-11,3	-58%	-11	-59%
Czech Republic	-9,6	-49%	-2	-23%	-7,8	-46%
Ireland	-17,1	-49%	-20,6	-35%	-18,7	-44%
Malta	-5,3	-45%	-7,2	-28%	-6,4	-40%
Hungary	-17,1	-41%	-14,7	-32%	-16,4	-38%
Poland	-10,2	-33%	-10	-33%	-10,1	-33%
United Kingdom	-3,9	-26%	-11,6	-30%	-5,7	-28%
Germany	-4	-29%	-6,4	-26%	-4,3	-28%
Iceland	-3,8	-21%	-6,3	-38%	-4,4	-25%
Denmark	-5,4	-27%	-2,4	-16%	-4,5	-25%
Belgium	-2,1	-25%	-0,9	-7%	-1,7	-18%
Netherlands	-2	-24%	-0,9	-7%	-1,6	-16%
Latvia	-2,6	-6%	-13,9	-35%	-6,2	-15%
European Union	-2,8	-11%	-3,7	-9%	-2,9	-10%
Sweden	-3,5	-12%	-0,8	-3%	-2,7	-9%
Lithuania	-2	-6%	-2,2	-7%	-2,1	-6%
Bulgaria	-11,4	-19%	6,2	9%	-3,1	-5%
Spain	-2,6	-4%	-1,6	-2%	-2,2	-3%
Portugal	-3,6	-7%	2,1	5%	-1,3	-3%
Slovakia	-2,9	-9%	2,8	8%	-0,8	-2%
Italy	-1,5	-3%	2,3	3%	-0,3	0%
Romania	-0,8	-2%	-0,4	-1%	-0,1	0%

Source of data: Eurostat (2017)

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[a] Involuntary and voluntary part-time work are mutually exclusive, meaning that, when the share of involuntary part-time workers goes down, the share of voluntary part-time workers grows.

[b] Only the European countries for which the ratio of involuntary part-time work decreased are shown in this table.

Table A2. Comparing original data and sample, by gender, age, education, life satisfaction and job satifaction.

	2010			2012			2014		
	Data	Sample	Diff	Data	Sample	Diff	Data	Sample	Diff
Women	54.33	53.85	-0.5	54.33	53.85	-0.5	54.33	53.85	-0.5
Age	47.01	46.92	-0.1	49.01	48.92	-0.1	51.01	50.92	-0.1
Education									
Not applicable	0.24	0	-0.2	0	0	0.0	0.24	0	-0.2
-2	0	0	0.0	0	0	0.0	0.76	0	-0.8
No code	0.16	0	-0.2	0.12	0	-0.1	0	0	0.0
Primary school	2.13	2.26	0.1	1.65	1.62	0.0	1.69	1.62	-0.1
Lower secondary school	21.53	21.01	-0.5	20.93	20.28	-0.6	21.25	20.62	-0.6
Higher secondary school	38.27	38.22	-0.1	38.4	39.8	1.4	37.71	37.75	0.0
College	26.6	27.18	0.6	27.16	27.61	0.4	27.04	28.42	1.4
University	11.07	11.33	0.3	10.3	10.69	0.4	11.31	11.59	0.3
Life satisfaction									
-2	0		0.0	0.04		0.0	0.24		0.2
Unsatisfied	5.35	5.35	0.0	4.79	4.71	0.1	5.40	5.35	0.1
Not unsatisfied, not satisfied	14.41	14.59	0.2	13.80	13.86	0.1	14.49	14.55	0.1
Satisfied	62.37	62.22	0.2	61.61	61.79	0.2	60.60	61.02	0.4
Very satisfied	17.87	17.84	0.0	19.76	19.64	0.1	19.28	19.08	0.2
Job satisfaction									
-2	0		0.0	0.05		0.1	0.05		0.1
Unsatisfied	8.06	8.18	0.1	7.87	8.12	0.3	9.41	9.52	0.1
A little satisfied	54.50	54.46	0.0	52.55	52.22	0.3	55.43	55.67	0.2
Very satisfied	37.43	37.36	0.1	39.54	39.66	0.1	35.11	34.81	0.3
Observations	2485	2338		2485	2338		2485	2338	
Max difference			0.6			1.4			1.4

Note: the column data shows the original data, whereas sample stands for the sample used for the analysis of this study. The original data is representative for the Dutch population.

Only employed people are considered when calculating the percentages for job satisfaction (5876 observations in original data and 5545 observations in sample)

Table A3. Life satisfaction and Job satisfaction by Gender; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	0.10	0.56**	-	-	-	-
	(0.22)	(0.27)				
Labor participation						
Not participating	Base	Base	-0.06	-0.05	-	-
			(0.22)	(0.31)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.25	0.74***	0.42	0.19
			(0.23)	(0.28)	(0.26)	(0.27)
Age	-0.08	-0.03	-0.07	-0.03	0.02	-0.08
	(0.14)	(0.17)	(0.14)	(0.17)	(0.15)	(0.16)
Age^2	0.00	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Log household income	-0.00	-0.01	-0.00	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education						
Lower secondary school	0.33	-0.27	0.34	-0.27	-0.07	-0.54
	(0.57)	(0.55)	(0.57)	(0.56)	(1.48)	(0.85)
Higher secondary school	0.26	-0.14	0.28	-0.12	-0.08	-0.31
	(0.61)	(0.58)	(0.61)	(0.59)	(1.49)	(0.82)
College	-0.25	-0.16	-0.23	-0.15	-0.51	-0.24
	(0.69)	(0.65)	(0.69)	(0.66)	(1.51)	(0.89)
University	0.20	0.01	0.22	0.01	-0.94	-0.45
	(0.84)	(0.88)	(0.85)	(0.88)	(1.64)	(0.95)
Partner	0.87**	1.01	0.87**	1.00	0.83**	-0.08
	(0.35)	(0.80)	(0.35)	(0.82)	(0.40)	(0.45)
Children living at home	-0.04	0.46*	-0.03	0.42	0.24	0.04
	(0.23)	(0.27)	(0.23)	(0.28)	(0.26)	(0.27)
Health						
Good health	-1.16***	-1.46***	-1.16***	-1.52***	-0.62***	-0.60***
	(0.18)	(0.22)	(0.18)	(0.22)	(0.21)	(0.22)
Average health	-2.84***	-3.23***	-2.85***	-3.30***	-1.21***	-1.13***
	(0.26)	(0.32)	(0.26)	(0.32)	(0.29)	(0.31)
Bad health	-4.46***	-4.65***	-4.48***	-4.75***	-1.72***	-1.74***
	(0.44)	(0.46)	(0.44)	(0.48)	(0.59)	(0.55)
Giving informal care	-0.18	-0.11	-0.17	-0.13	-0.01	-0.16
	(0.16)	(0.19)	(0.16)	(0.20)	(0.20)	(0.21)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A4. Life satisfaction and Job satisfaction by Gender with Informal Care Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	0.07	0.81***	-	-	-	-
	(0.24)	(0.29)				
Labor participation						
Not participating	Base	Base	-0.03	-0.29	-	-
			(0.24)	(0.34)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.25	0.73**	0.45*	0.07
			(0.24)	(0.30)	(0.27)	(0.29)
Participating # Informal care	0.11	-1.10***	-	-	-	-
	(0.33)	(0.42)				
Labor participation # Informal care						
Not participating # Informal care	Base	Base	0.03	0.97**	-	-
			(0.52)	(0.49)		
Part-time # Informal care	-	-	Base	Base	Base	Base
Full-time # Informal care	-	-	-0.13	-0.10	-0.22	0.51
			(0.18)	(0.44)	(0.41)	(0.50)
Giving informal care	-0.25	0.79**	-0.07	-0.25	0.03	-0.59
	(0.28)	(0.39)	(0.14)	(0.40)	(0.21)	(0.48)
Age	-0.08	-0.02	0.00	-0.02	0.03	-0.08
	(0.14)	(0.17)	(0.00)	(0.17)	(0.15)	(0.16)
Age^2	0.00	0.00	-0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)
Log household income	-0.00	-0.01	0.03	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.52)	(0.01)	(0.01)	(0.01)
Education						
Lower secondary school	0.33	-0.29	0.33	-0.28	-0.07	-0.54
	(0.57)	(0.57)	(0.57)	(0.57)	(1.48)	(0.86)
Higher secondary school	0.26	-0.21	0.28	-0.19	-0.08	-0.29
	(0.62)	(0.60)	(0.62)	(0.60)	(1.49)	(0.83)
College	-0.25	-0.20	-0.23	-0.19	-0.51	-0.23
	(0.69)	(0.67)	(0.69)	(0.67)	(1.51)	(0.90)
University	0.19	0.01	0.20	0.01	-0.94	-0.39
	(0.85)	(0.88)	(0.86)	(0.89)	(1.64)	(0.95)
Partner	0.87**	1.04	0.87**	1.02	0.83**	-0.05
	(0.35)	(0.88)	(0.35)	(0.89)	(0.40)	(0.45)
Children living at home	-0.04	0.50*	-0.03	0.45	0.24	0.05
	(0.23)	(0.28)	(0.23)	(0.28)	(0.26)	(0.27)
Health						
Good health	-1.16***	-1.45***	-1.16***	-1.51***	-0.62***	-0.61***
	(0.18)	(0.23)	(0.18)	(0.22)	(0.21)	(0.22)
Average health	-2.84***	-3.22***	-2.85***	-3.28***	-1.21***	-1.14***
	(0.26)	(0.32)	(0.26)	(0.33)	(0.29)	(0.31)
Bad health	-4.47***	-4.67***	-4.49***	-4.76***	-1.72***	-1.77***
	(0.44)	(0.47)	(0.44)	(0.49)	(0.59)	(0.56)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A5. Life satisfaction and Job satisfaction by Gender with Children Living at Home Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	-0.17	0.20	-	-	-	-
	(0.30)	(0.37)				
Labor participation						
Not participating	Base	Base	0.23	0.62	-	-
			(0.30)	(0.39)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	0.29	1.25***	0.14	0.31
			(0.31)	(0.37)	(0.36)	(0.36)
Participating # Children at home	0.53	0.75	-	-	-	-
	(0.40)	(0.47)				
Labor participation # Children at home						
Not participating # Children at home	Base	Base	-0.56	-1.51***	-	-
			(0.41)	(0.57)		
Part-time # Children at home	-	-	Base	Base	Base	Base
Full-time # Children at home	-	-	-0.02	-1.10**	0.55	-0.23
			(0.39)	(0.49)	(0.45)	(0.46)
Children living at home	-0.46	-0.19	0.09	1.39***	0.11	0.25
	(0.43)	(0.50)	(0.25)	(0.49)	(0.28)	(0.48)
Age	-0.05	0.01	-0.04	-0.01	0.01	-0.08
	(0.14)	(0.17)	(0.14)	(0.17)	(0.15)	(0.16)
Age^2	0.00	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Log household income	-0.00	-0.01	-0.00	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education						
Lower secondary school	0.34	-0.28	0.35	-0.27	-0.07	-0.54
	(0.61)	(0.55)	(0.62)	(0.55)	(1.48)	(0.85)
Higher secondary school	0.23	-0.19	0.25	-0.16	-0.09	-0.31
	(0.65)	(0.58)	(0.65)	(0.58)	(1.49)	(0.82)
College	-0.28	-0.22	-0.26	-0.22	-0.53	-0.26
	(0.72)	(0.65)	(0.72)	(0.65)	(1.51)	(0.89)
University	0.19	-0.03	0.21	-0.06	-0.93	-0.46
	(0.88)	(0.86)	(0.88)	(0.88)	(1.64)	(0.95)
Partner	0.84**	1.03	0.84**	1.00	0.79**	-0.08
	(0.35)	(0.84)	(0.35)	(0.83)	(0.40)	(0.45)
Health						
Good health	-1.15***	-1.44***	-1.15***	-1.48***	-0.64***	-0.60***
	(0.18)	(0.22)	(0.18)	(0.22)	(0.21)	(0.22)
Average health	-2.83***	-3.20***	-2.84***	-3.23***	-1.22***	-1.13***
	(0.26)	(0.32)	(0.26)	(0.32)	(0.29)	(0.32)
Bad health	-4.44***	-4.62***	-4.46***	-4.67***	-1.74***	-1.73***
	(0.43)	(0.46)	(0.43)	(0.48)	(0.59)	(0.55)
Giving informal care	-0.18	-0.13	-0.18	-0.15	0.00	-0.16
	(0.16)	(0.20)	(0.16)	(0.20)	(0.20)	(0.21)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A6. Life satisfaction and Job satisfaction by Gender with Partner Interaction; parameter estimates of fixed effects ordered logit models

	Life satisfaction				Job satisfaction	
	Women	Men	Women	Men	Women	Men
Participating	-1.02**	1.29	-	-	-	-
	(0.46)	(1.01)				
Labor participation						
Not participating	Base	Base	0.80*	-1.43	-	-
			(0.48)	(1.10)		
Part-time	-	-	Base	Base	Base	Base
Full-time	-	-	-0.85*	-0.19	0.68	-0.94
			(0.45)	(0.70)	(0.45)	(0.79)
Participating # Partner	1.35***	-0.83	-	-	-	-
	(0.49)	(1.03)				
Labor participation # Partner						
Not participating # Partner	Base	Base	-1.01**	1.57	-	-
			(0.51)	(1.13)		
Part-time # Partner	-	-	Base	Base	Base	Base
Full-time # Partner	-	-	1.46***	1.07	-0.36	1.31
			(0.51)	(0.72)	(0.49)	(0.84)
Partner	0.01	1.60	0.96**	0.03	0.98**	-1.21
	(0.51)	(0.98)	(0.39)	(1.03)	(0.41)	(0.85)
Age	-0.08	-0.04	-0.09	-0.04	0.03	-0.08
	(0.14)	(0.17)	(0.14)	(0.17)	(0.15)	(0.16)
Age^2	0.00	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Log household income	0.00	-0.01	0.00	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education						
Lower secondary school	0.09	-0.29	0.07	-0.28	-0.07	-0.52
	(0.47)	(0.55)	(0.46)	(0.56)	(1.48)	(0.85)
Higher secondary school	0.04	-0.15	0.02	-0.14	-0.08	-0.31
	(0.53)	(0.58)	(0.52)	(0.59)	(1.49)	(0.82)
College	-0.42	-0.17	-0.45	-0.16	-0.52	-0.22
	(0.61)	(0.65)	(0.61)	(0.66)	(1.51)	(0.89)
University	0.10	0.04	0.07	-0.02	-0.96	-0.49
	(0.80)	(0.89)	(0.79)	(0.88)	(1.64)	(0.95)
Children living at home	-0.07	0.47*	-0.02	0.42	0.23	0.03
	(0.23)	(0.27)	(0.23)	(0.28)	(0.26)	(0.27)
Health						
Good health	-1.17***	-1.47***	-1.20***	-1.54***	-0.61***	-0.63***
	(0.18)	(0.22)	(0.19)	(0.22)	(0.21)	(0.22)
Average health	-2.87***	-3.23***	-2.89***	-3.32***	-1.20***	-1.16***
	(0.26)	(0.32)	(0.27)	(0.32)	(0.29)	(0.31)
Bad health	-4.51***	-4.64***	-4.54***	-4.78***	-1.71***	-1.78***
	(0.45)	(0.46)	(0.45)	(0.48)	(0.60)	(0.56)
Giving informal care	-0.16	-0.11	-0.14	-0.13	-0.01	-0.14
	(0.16)	(0.19)	(0.16)	(0.19)	(0.20)	(0.22)
Observations	2,421	1,956	2,421	1,956	1,540	1,468

Note: number of observations is based on regression samples.
Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A7. Distribution of subgroups

	Not participating		Part Time		Full Time	
	Women	Men	Women	Men	Women	Men
No children at home and no partner	4.00	2.56	3.95	1.54	5.72	6.49
No children at home and partner	9.83	7.82	14.44	4.51	5.17	19.74
Children at home and no partner	1.25	0.19	3.68	0.12	0.79	0.53
Children at home and partner	11.26	4.02	34.61	6.77	5.30	45.72
Number of observations	3,774	3,237	3,774	3,237	3,774	3,237

Table A8. Life satisfaction and Job satisfaction by Gender with Partner and Children at home Interactions; parameter estimates of fixed effects ordered logit models

	Life satisfaction			
	Women		Men	
	Coeff.	SE	Coeff.	SE
Labor participation				
Not participating	1.06*	(0.49)	-0.87	(0.90)
Part-time	Base	Base	Base	Base
Full-time	-0.74	(0.47)	0.05	(0.58)
Labor participation # Children at home				
Not participating # Children at home	-0.55	(0.41)	-1.94***	(0.60)
Part-time # Children at home	Base	Base	Base	Base
Full-time # Children at home	-0.43	(0.42)	-1.46***	(0.51)
Labor participation # Partner				
Not participating # Partner	-0.96*	(0.52)	2.01**	(0.97)
Part-time # Partner	Base	Base	Base	Base
Full-time # Partner	1.66***	(0.55)	1.66**	(0.68)
Partner	0.70	(0.47)	0.19	(0.74)
Children living at home	-0.08	(0.44)	3.66***	(1.10)
Children at home # Partner	0.32	(0.46)	-2.06**	(1.00)
Giving informal care	-0.15	(0.16)	-0.15	(0.20)
Age	-0.06	(0.14)	-0.05	(0.16)
Age^2	0.00	(0.00)	0.00	(0.00)
Log household income	0.00	(0.01)	-0.01	(0.01)
Education				
Lower secondary school	0.12	(0.50)	-0.29	(0.55)
Higher secondary school	0.04	(0.55)	-0.22	(0.59)
College	-0.40	(0.64)	-0.24	(0.66)
University	0.13	(0.82)	-0.10	(0.89)
Health				
Good health	-1.20***	(0.19)	-1.53***	(0.22)
Average health	-2.89***	(0.27)	-3.32***	(0.33)
Bad health	-4.55***	(0.45)	-4.77***	(0.48)
Observations	2,421		1,956	

Note: number of observations is based on regression samples.

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A9. Overview of Results

	Women			
	Participating vs. Not participating	Not participating	Part time	Full time
General	/	/	/	/
Informal care giver	/	/	/	/
No informal care giver	/	/	/	/
Children at home	/	/	/	/
No children at home	/	/	/	/
Partner	+	-	+/-	+
No partner	-	+	+/-	-
Children and partner	N/A	+/-	-	+
Children and no partner	N/A	+	/	/
No children and partner	N/A	+/-	-	+
No children and no partner	N/A	+	/	/

	Men			
	Participating vs. Not participating	Not Participating	Part time	Full time
General	+	/	/	+
Informal care giver	+	+	-	+/-
No informal care giver	+	/	/	+
Children at home	/	-	+/-	+
No children at home	/	/	/	+
Partner	/	/	/	/
No partner	/	/	/	/
Children and partner	N/A	+/-	-	+
Children and no partner	N/A	-	+	+/-
No children and partner	N/A	+	-	+/-
No children and no partner	N/A	/	/	/

Note: A + means that this was the labor participation level with the highest life satisfaction, +/- means that it was the middle level and a – represents the lowest level. A / means that no significant difference could be found compared to the other / categories in that row.

APPENDIX B

Additional Figures

The Netherlands on the European scale.
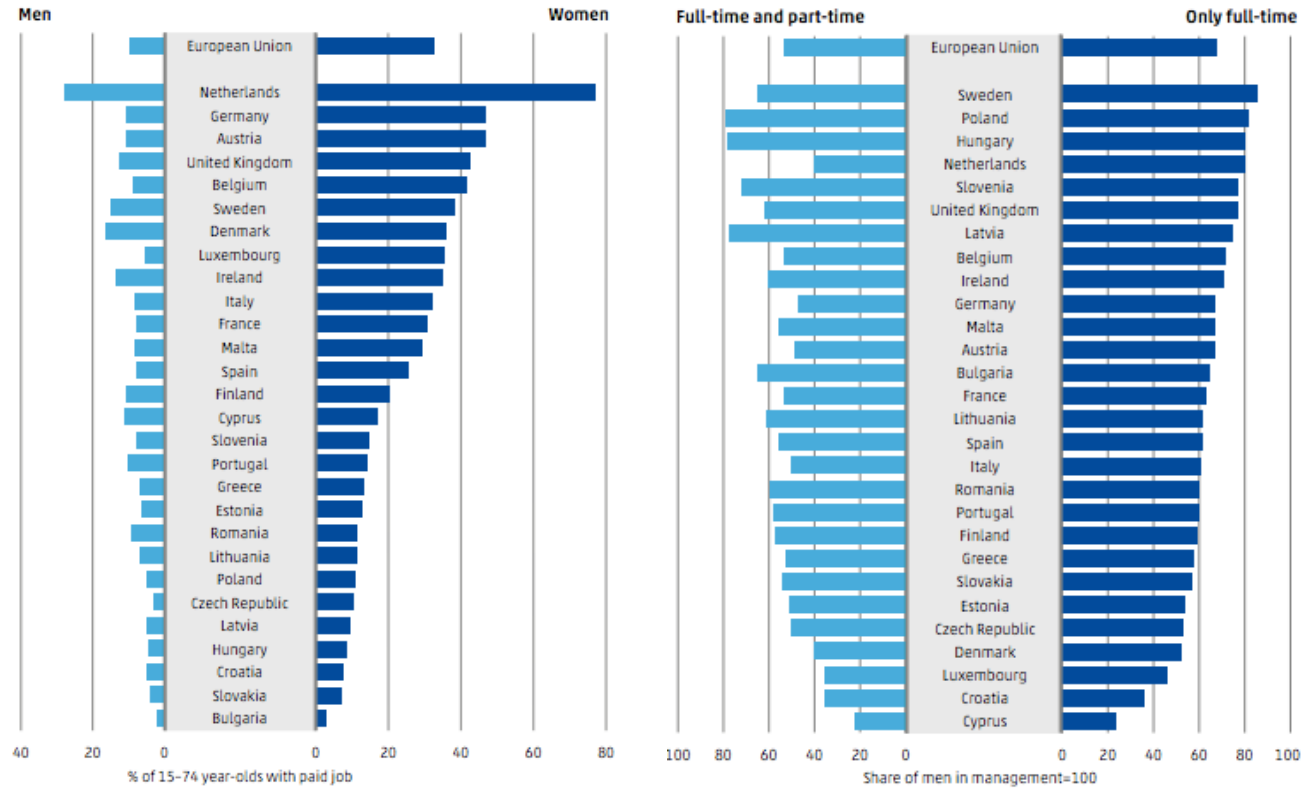
Figure B1. *Left: % of 15-74 year-olds with a paid part-time job. Right: share of women in management jobs (share of men in management = 100) (CBS, 2016).*

APPENDIX C

Questionnaire Questions Variables of Importance

Figure C1. Questions based on self-perceived answers – Life satisfaction, job satisfaction and health

In welke mate bent u tevreden met het leven dat u op dit moment leidt?

☐1 zeer tevreden

☐2 tevreden

☐3 niet tevreden, niet ontevreden

☐4 ontevreden

☐5 zeer ontevreden

Survey Question 1. Life satisfaction

Hoe tevreden bent u, alles bijeengenomen, met uw baan?

☐1 zeer tevreden

☐2 wel tevreden

☐3 niet zo tevreden

☐4 helemaal niet tevreden

Survey Question 2. Job satisfaction

Hoe is over het algemeen uw gezondheid?

☐1 heel goed

☐2 goed

☐3 gaat wel / redelijk

☐4 slecht

☐5 zeer slecht

Survey Question 3. Perceived Health

Table C1: What is the most important reason that you are not looking for a job?

	Women	Men	Total
Not applicable	139	119	258
	14%	25%	18%
Missing	2	0	2
	0%	0%	0%
Retired, renting	145	169	314
	14%	36%	21%
Health problems	315	153	468
	31%	32%	32%
Because of my family situation	95	1	96
	9%	0%	7%
There is no work anyways	35	14	49
	3%	3%	3%
I have other meaningful tasks at home	176	1	177
	18%	0%	12%
I have other meaningful tasks at outside of home	39	4	43
	4%	1%	3%
I am following an education at the moment	1	1	2
	0%	0%	0%
Other reasons	55	10	65
	5%	2%	4%
Total	1002	472	1474