Would I be happier as a teacher or a carpenter?
Clues in survey data on happiness and occupation

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ABSTRACT
Most people are looking for ways to make their life as happy as possible. Since we work a great part of our life time, it is worth knowing which occupations will bring us the most happiness and which will bring the least. This requires information on how happy people are in different occupations and in particular, what kinds of people are the happiest in what kinds of occupation. We sought answerers to these questions using data taken from the WageIndicator for 2006 to 2014 for the Netherlands. The large dataset of 160.806 respondents made it possible to assess differences in happiness levels in 130 occupations and to split the results across 4 personal characteristics. The occupation in the Netherlands with the highest life satisfaction was ship, aircraft controller and technician working in this field. The occupation in the Netherlands with the lowest life satisfaction was forestry and related work. The occupation giving the most life satisfaction for women was creative and performing artist, for men it was keyboard operator.

Key words: Happiness, Life-satisfaction, Occupational choice

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1   Introduction

Call for greater happiness
Most people are looking for ways to lead a satisfying life. This pursuit of happiness seems to be universal, but is particularly pronounced in modern society. Our heightened interest in happiness has several reasons. One reason is our greater awareness that a satisfying life is possible today, since surveys have shown repeatedly that most people are happy, at least in contemporary developed nations. Another reason for the keener interest in happiness is that our happiness is not just a matter of fate, but also something we have considerable control of. Lyubomirsky (2008) estimates that about 50% of our happiness is in things we have in our own hands, again at least in developed nations. A third reason for the enhanced interest in happiness is that we now live in societies in which we have a lot of choice, for example, where we go to work and whether we have children or not, and prospects for our happiness figure largely in such decisions. All this is creating a growing demand for information about happiness (Veenhoven, 2015).

Relevance of work
In the first quarter of 2016, the population in the Netherlands of 15 to 75-year olds comprised 12.7 million. Of this group, 8.3 million were in work.[4] In 2011 the average working hours for the labour force in the Netherlands was 31 hours a week.[5]. Hence, work is an important factor for people, especially now the government expects us to continue working until the age of 67 in the Netherlands or even longer.

Need for information on effect of occupation on happiness
Nowadays young Dutch students make their first choices with respect to their career paths at the age of 12, when choosing their high schools, and at approximately 14 years old the Dutch students chooses their school specialization. This choice of specialisation will influence the rest of their academic careers and their future type of job.

The Dutch expect their children to make a good choice for their future, at a very young age. They are told to pick something they like, that they're good at. What we cannot tell them is the impact their decision will have on their future happiness.

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[4] Statistics Netherlands (CBS) Bevolking 15 tot 75 jaar in 2016
[5] Statistics Netherlands (CBS) StatLine working population; working time, 2017

Occupational choice is a major life choice, which influences where we live (environment), what we do and with whom. When making an occupational choice we can probably estimate how much money we will earn and what the working hours will be, but not what our happiness level will be.

1.1 Research aim

We seek to meet this need for information by charting how happy working people are in different occupations. We expect that this will allow individuals in the Netherlands to make better informed choices with respect to their future work lives.

1.2 Research questions

1. How happy are people in different occupations?
2. In which occupations are people most and least happy?
3. What kinds of people are happiest in what kinds of occupations?
4. How large is the variation among these averages? Which cases provide the best basis for choice, which the least?

2 Approach

A descriptive cross-sectional analysis was done on the rich data gathered in the context of the WageIndicator in the Netherlands over the years 2006-2014. This database provides information on the happiness of 160.806 respondents working in 130 different occupations and is large enough to make far reaching breakdowns.

The analysis was performed in two steps. In the first step we investigated if there were differences in happiness in different occupations and how happy people were in this occupation. In the second step we investigated to what extent these differences differ across age, gender, education and family situation. In both steps we listed the top 10 and bottom 10 occupations. This approach is visualized in scheme 1.

Scheme 1: variable model
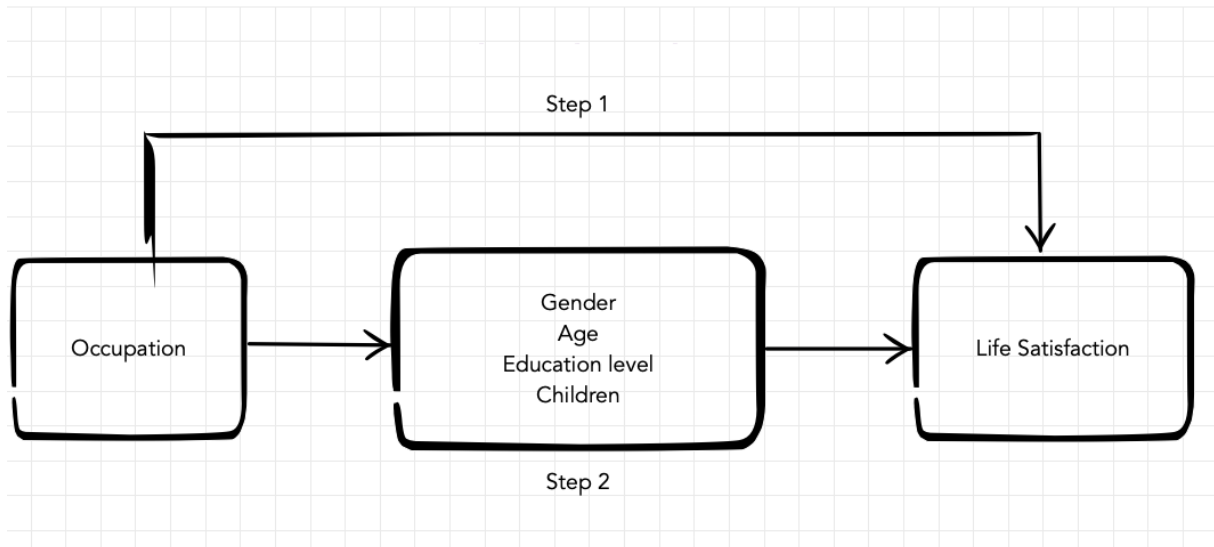
2.1   Concepts

Key concepts in this paper are 'happiness' and 'occupation'. *Happiness* is here defined as the subjective satisfaction of a person with his or her life as a whole, also called 'life-satisfaction'. *Occupation* is used here to refer to the job done to earn money to live on. Below we discuss these concepts in more detail.

Happiness
The word 'happiness' has many connotations in common language. In this paper we use the term happiness to denote satisfaction with one's life as a whole, in other words, how much someone likes the life he or she lives (Veenhoven, 2008). A synonym is 'life-satisfaction'.

The word happiness is often used in a broader sense as a generic for all 'satisfaction', yet not all satisfaction is 'life-satisfaction' as shown in scheme 2 below. Particularly important for this paper is the difference between job-satisfaction and life-satisfaction. One can be satisfied with one's work, but not with one's life as a whole, as is often the case with workaholics. Likewise, one can dislike work, but still enjoy life as a whole, as in the case of people who find sufficient compensation in private life. This difference is quite relevant when it comes to occupational choice; it is easier to estimate how satisfying work will be in a particular occupation than to estimate the wider effects of an occupation on one's life-satisfaction.

Scheme 2: Four kinds of satisfaction

	Passing	*Enduring*
Life aspects	Pleasure (Instant utility)	Domain-satisfaction (i.e. **Job-satisfaction**, marital satisfaction)
Life as a whole	Top experience	**Life satisfaction** (Happiness)

Source: Veenhoven, 2008

Occupations

The occupations recorded in the WageIndicator are classified using ISCO[6] 2008-03 and it contains 130 sets of different occupations. The dataset was large enough to make groups of occupations with 10 or more respondents to obtain breakdowns for the Dutch data based on occupations, personal characteristics and happiness levels. Occupations with fewer than 10 respondents were discarded for this study. Note: we do not consider the self-employed in this paper.

Personal characteristics

To provide tailored information on how occupation works out on the happiness of particular kinds of people, we split as far as possible by personal characteristics. The characteristics considered in this study were: gender, age, education level and having children or not.

2.2   Data source

The aim of the WageIndicator is to make the labour market transparent for the benefit of all employers, employees and workers by sharing and comparing information on wages, labour law and careers. (wageindicator.org, 2019) Worldwide 93 countries are participating in the Wage Indicator. For our analysis we used only the Dutch data for the years 2006-2014, which is gathered online at https://loonwijzer.nl. This gave us a large enough data set to form respondents groups of 10 or more for different types of occupations.

The users of the WageIndicator were self-selected, first of all by motivation to seek information on wages paid to other people and secondly by willingness to complete an optional questionnaire in which the

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[6] ISCO is the International Standard Classification of Occupations provide by the ILO: the International Labour Organization

user provided information about their job and themselves and it is on this questionnaire on which this analysis draws.

The people selected from the database of the WageIndicator were all working. The research population was not limited by age, but the most common ages were between 18 to 65 years. See scheme 6 for the age groups distinguished for this research.

The total number of respondents worldwide was, up to 2014: 3.204.456 with a total of 623.230 for the Netherlands. After losing respondents who did not fall in a group of 10 or more in the same occupation in the Netherlands the total data set consisted of 160.806 respondents, see schema 3 for more information.

Scheme 3: Chart Satisfaction with life as-a-whole in the Netherlands
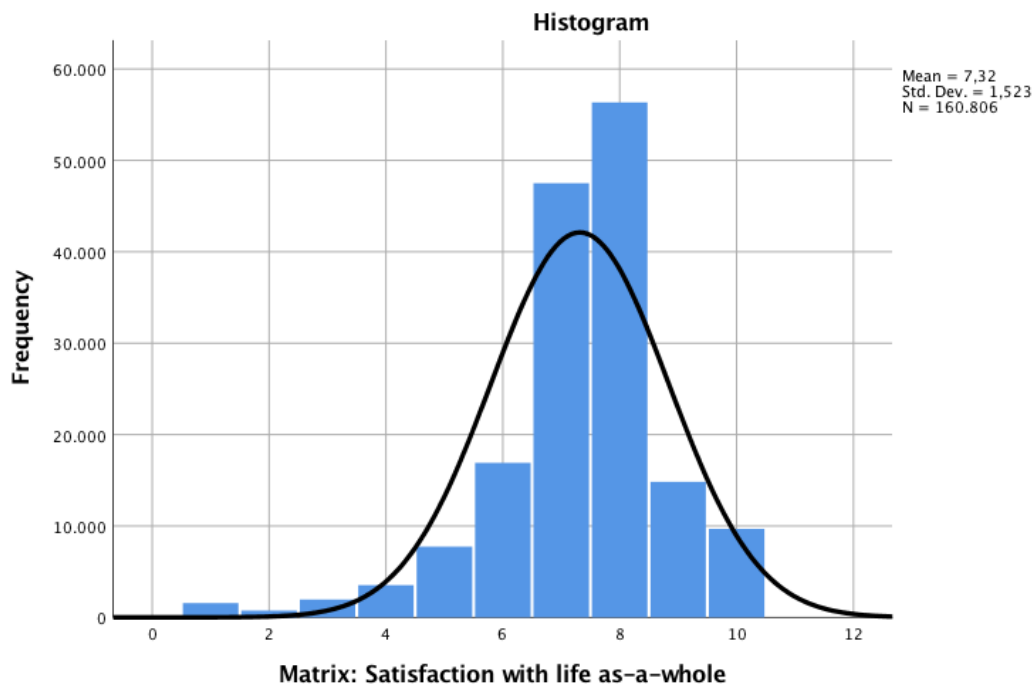
2.3   Measures

Life satisfaction is determined in the WageIndicator using a 1-10 scale and the question:

>All things considered, how satisfied are you with your life as-a-whole now?
>Where 10 is satisfied and 1 is dissatisfied.

Occupation was assessed using a decision tree for participants. This tree

helped the respondent to select the right occupation of the more than 1700 available occupations in the WageIndicator (WageIndicator.org). These occupations are classified based on the Internarial Standard Classification of Occupations (ISCO) provided by the International Labour Organisation (ILO). The occupations can be classified into smaller and lager occupation groups. We have classified the responses using the international ISCO-2008-03 classification of occupations and obtained 130 occupational groups with 10 or more respondents.

2.4 Descriptives

Happiness
The mean life satisfaction of the participants was 7,32 see scheme 4. This is lower than the mean happiness of the population in the Netherlands in 2006 when it was 7,7 and 2014 when it was 7,9. See scheme 5 for a list of the mean happiness's in the Netherlands from 2006 to 2014, this data was taken from the World Database of Happiness (Veenhoven, World Database of Happiness, 2019).

Scheme 4 Average happiness in the Netherlands 2006-2014

Year	Mean life-satisfaction
2006	7,7
2007	7,6
2008	7,8
2009	7,7
2010	7,8
2011	7,8
2012	7,6
2013	7,7
2014	7,9

Source: Veenhoven 2018

Occupations
The numbers of respondents and occupations fluctuated between the analyses performed to answer different research questions, however every occupation considered had at least 10 respondents working in that occupation. These occupations are presented in online appendix A. When personal characteristics were combined, more occupations and respondents dropped out because of the requirement to have 10 respondents in every group.

2.5 Differences with earlier research on happiness and occupation

To date (January 2019), the Bibliography of happiness lists 63 publications in which the relationship between happiness and occupation has been considered [(Veenhoven 2019),](#) 34 of these publications report an empirical study in which an acceptable measure of happiness has been used. The studies differ from the research reported here in the following respects:

- The number of occupational categories distinguished quite limited, mostly no more than 20, whereas in this study we distinguish 130 occupations. An exception is the study of [Zapf](#) (1994) who has categorist 23 occupations.
- The number of respondents used in earlier studies is also smaller, typically no more than a few thousands, whereas this study covers 160.806 respondents. As a result, earlier studies cannot break down to particular kinds of people. An exception is the study of Inglehart & Rabier (1984) who had 77.434 respondents in their longitudinal study.
- Earlier studies aim typically to show in what occupations people are *generally* the most or least happy, while in this study we focus on what *kinds* of people feel happiest in particular occupations. Consequently, earlier studies use information on personal characteristic as *control* variables, not necessary to identify a 'pure' effect of occupation, while we use such variables for *specification*. In this case there is also one exception, the study of [Winkelmann & Winkelmann](#) (2008).

3   Results

We computed average happiness (M) and dispersion of happiness (SD) for all 130 occupations and repeated this analysis for subgroups, first for subgroups separately, e.g. males/females, young/middle/old, and next for combinations, e.g. young males, middle aged females. We were able to break down the data into 36 such subgroups of at least 10 people. These lengthy tables cannot be printed in this paper, but are available online at https://werkkeuzewijzer.nl/publicatie-bijlages. In this paper we restrict to reporting the Dutch occupations in which the most and least happy people are found.

3.1 How happy are people in different paid occupations?

There were substantial differences in average life satisfaction in the 130 occupations. The highest average was 8,14 and the lowest average 6,62. The observed difference was thus 1,52, which is 15% of the 0-10 life satisfaction scale. See online appendix A.

3.2 In which occupations are people most and least happy?

Life-satisfaction was highest among ship, aircraft controllers and technicians working in this field. The occupation with the lowest life satisfaction was observed in forestry and related work.

3.3 What kinds of people are happiest in what kinds of occupations?

We first looked into the differences in happiness in occupations based on single personal characteristics. After studying the respondent's personal characteristic separately, we combined the characteristics to get a personal profile that would be recognisable for different types of people. For example: What is the happiest job for a 30-34-year-old, highly educated man with children? The answer to this question would be, for the Netherlands: Ship, aircraft controller and technician working in this field.

3.3.1 *Is there a difference in happiness between men and women in different paid occupations?*

The occupation giving the most life satisfaction for women was creative and performing artist, while refuse worker was the least satisfying. The differences between these women's occupations were 7,85 – 5,7 = 2,15.

The occupation with the most life satisfaction for men differed from of the occupation with the most life satisfaction for women; for men it was keyboard operator. The occupations with the least life satisfaction for men was also different from that for women and were building and housekeeping supervisors. The differences between occupations with the highest and the lowest score on life satisfaction for men was 8 - 6,52=1,48

Taking a deeper look in the differences between men and women, we found only 5 occupations where man and women experienced an equal level of life satisfaction. These occupations were:

- Mining and mineral processing plant operators   7,78
- Legal professionals   7,65
- Software and applications developers and analysts   7,34
- Artistic, cultural, culinary, associate professional   7,23
- Sport and fitness workers   7,17

We show the top ten occupations for men in relation to women in table 1. Sizable differences appear, for example among medical doctors, we find a higher mean of happiness among men (7,98) than among women (7,5). All the male/female differences in happiness across occupations are presented in online appendix B.

Table 1
Top 10 happiest occupations among men

Rank	Occupation	Men Mean	N	Std.	Women Mean	N	Std.	Men - Women
1	Keyboard operators	8	11	1,732	6,98	90	1,86	1,02
2	Medical doctors	7,98	129	1,253	7,5	137	1,506	0,48
3	Mining and mineral processing plant operators	7,78	36	1,174	7,78	36	1,174	0
4	Garment and related trades workers	7,72	57	1,8	7,35	46	1,716	0,37
5	Professional services managers	7,7	224	1,535	7,39	155	1,518	0,31
6	Other services managers	7,68	257	1,246	7,26	101	1,718	0,42
7	Legislators and senior officials	7,67	166	1,433	7,52	89	1,407	0,15
8	Legal professionals	7,65	342	1,308	7,65	446	1,205	0
9	Sales, marketing and development managers	7,64	1269	1,179	7,44	371	1,385	0,2
10	Business services and administration managers	7,61	1720	1,271	7,49	1112	1,342	0,12

Conclusion: Gender is a personal characteristic that should be taken into account when making an occupational choice. Men were the happiest working as a keyboard operator and women were better of working as creative and performing artists.

3.3.2 *Is there a different in happiness in different paid occupations between high-educated people and low-educated people?*

The most life satisfying jobs for those with a *low* educational level were mining, manufacturing and construction supervisor, while the job with the lowest life satisfaction was information and communications technology device manager. The difference between the occupation with the most and the least life satisfaction was 7,9 – 6,4 = 1,5

In the group of *middle* educated people, working as creative and preforming artists brought the most life satisfaction. Building workersand housekeeping supervisors experienced the least life satisfaction. The difference was 7,67 – 6,69 = 0,98

Among the *high*-educated people, electrical equipment installers and repairers experienced the most life satisfaction. Textile, fur and leather products machine operators reported the lowest life satisfaction level. The difference between the occupations was 7,75 – 6,27 = 1,48

There were not many similarities in the life satisfaction of low, middle and high-educated people working in the same occupation. Similar life satisfaction of low and middle educated people was observed in only 2 occupations: building frame and related trade workers (7,36) and electronics and telecommunications installers (7,22). We found similar happiness levels among middle and high educated workers for only one occupation; animal procures (7,3). There were no occupations in which we found similar levels of happiness among high and low educated people.

Table 2
Top 10 happiest occupations among the low educated

rank	Occupation	Low Mean	N	Std.	Middle Mean	N	SD	High Mean	N	Std.
1	Mining, manufacturing and construction supervisors	7,9	72	1,247	7,47	286	1,352	7,55	312	1,166
2	Creative and performing artists	7,85	13	1,625	7,67	24	1,167	7,68	73	1,508
3	Non-commissioned armed forces officers	7,76	25	1,3	7,22	83	1,848	7,39	74	1,497
4	Sales, marketing and development managers	7,76	90	1,084	7,55	363	1,294	7,59	1180	1,217
5	Secondary education teachers	7,7	20	1,129	6,9	39	1,619	7,32	313	1,544
6	Retail and wholesale trade managers	7,62	21	1,83	7,53	77	1,046	7,71	49	1,323
7	Telecommunications and broadcasting technicians	7,6	19	1,661	7,18	111	1,484	7,3	167	1,329
8	Primary school and early childhood teachers	7,57	28	1,451	7,35	159	1,337	7,3	950	1,395
9	Medical and pharmaceutical technicians	7,56	61	1,544	7,26	368	1,471	7,33	233	1,429
10	Business service agents	7,56	134	1,489	7,37	734	1,43	7,51	1240	1,187

All the data on the happiness of low/middle and high educated people in different occupations are presented in online appendix C.

3.3.3 Is there a difference in happiness in different paid occupations across age groups?

We classified workers into 5-year age groups, because of the small number of workers above age 55, those of 56 and above were not considered.

Scheme 5: Happiness in age groups

Age	Code	Mean
15-19	1	7,52
20-24	2	7,35
25-29	3	7,33
30-34	4	7,32
35-39	5	7,27
40-44	6	7,25
45-49	7	7,23
50-54	8	7,26
55-59	9	7,39
60-64	10	7,60
65-	11	7,66

Age 15- 19

In age group 1 engineering professionals, excluding electro technology, had the jobs giving the most life satisfaction with a mean of 8,7. The job providing the least life-satisfaction in that age group was blacksmiths, toolmakers and related trades workers, with a mean of 6.

Age 20-24

In age group 2 there was no difference in the job with the most life satisfaction, it was still engineering professionals, excluding electro technology, but the mean was different, 7,76. The job with the least life satisfaction in this group was domestic, hotel and office cleaners and helpers, with a mean 6,97.

Age 25-29

In age group 3 the job with the most life satisfaction was still engineering professionals, excluding electro technology. The jobs with the least life-satisfaction for this age group were building and housekeeping supervisor, mean 5,77.

30-34 age

In age group 4 a different occupation group gave the most life-satisfaction, sales, marketing and public relations professionals, mean 7,62, while the job group with the least life-satisfaction in this group was vehicle, window, laundry and other hand-cleaning work.

35-39 age

In age group 5, other health professionals experienced the most life

satisfaction, mean 7,64, while the least was found for food preparation assistants, mean 6,25.

Age 40-44
In age group 6 again the health associate professionals' group was the occupation with the most life satisfaction, mean 7,58 while the least was sport and fitness workers, mean 6,72.

Age 45-49
In agegroup 7, mining and construction labours experienced the most life-satisfaction, with a mean of 7,76. In this group building and housekeeping supervisors had the lowest life satisfaction, mean 6,62.

Age 50-54
In the age group 8 the highest mean of life-satisfaction was mobile plant operators, mean 7,57, with the lowest life-satisfaction among vehicle, window, laundry and other hand-cleaning worker.

The job giving the most life-satisfaction was found in group one, engineering professionals excluding electro technology. The job giving the least life-satisfaction was found in age group 3, building workers and housekeeping supervisors.

Taking a deeper look at the occupations with high scores on life-satisfaction in all age groups we saw the following.

- Occupations 8 times in top 10
    - Business service and administration managers

- Occupations 6 times in top 10
    - Administration professionals
    - Nursing and midwifery professionals

- Occupations 5 times on top 10
    - Engineering professionals, excluding electro-technology
    - Sales, marketing and public relations professionals
    - Mobile plant operators

- Occupations 4 times on top 10
    - Other health associate professionals

- Occupations 3 times on top 10
    - Medical and pharmaceutical technicians
    - Administrative and specialized secretaries
    - Business service agents
    - Child care workers and teachers' aides

- Occupations 2 times on top 10
    - Travel attendants conductors and guides
    - Building frame and related trades workers
    - Nursing and midwifery associate professionals
    - Wood traders cabinet-makers and related trades workers
    - Social and religious professionals
    - Financial and mathematical associate professionals
    - Other health professionals
    - Mining and construction labourers
    - Blacksmiths, toolmakers and related trades workers
    - Life science technicians and related associate professionals
    - Electronics and telecommunications installers and repairers
    - Cashiers and tickets clerks

In many cases life-satisfaction in occupations was different for different ages, but for some occupation's life satisfaction was almost always in the top 10 occupations regardless of age. These occupations can be classified as occupations that give the most life-satisfaction over a lifetime.

Full data is presented in online appendix D

3.3.4 Is there a different in happiness in different occupations for people with or without children?

For people with or without children the number one job with the highest life satisfaction was ship, aircraft controllers and technicians in this field. The level of happiness was not quite the same, people with children were a little bit happier, the difference was 0,02.

People without children experienced the least life satisfaction working doing vehicle, window, laundry and other hand-cleaning work. The difference with the occupation with the highest life satisfaction was 8,18 - 6,68=1,50.

People with children experience the least life satisfaction doing forestry and related work. The difference in this case was larger: 8,2 – 6,17= 2,03.

When taking a deeper look at the differences between people with and without children we saw that there are only 5 occupations with the same level of life satisfaction for both groups.

- Mining, manufacturing and construction supervisors   7,57
- Regulatory government associate professionals   7,47
- Client information workers   7,14
- Other elementary workers   7,05
- Assemblers   6,93

Table 3
Top 10 happiest occupations among the childless

Nr	Occupation	No			Yes			No-Yes
		Mean	N	SD	Mean	N	SD	
1	Ship and aircraft controllers and technicians	8,18	83	1,231	8,2	74	1,424	-0,02
2	Mining and mineral processing plant operators	8	15	1,558	7,56	18	0,856	0,44
3	Chemical and photographic products plant and machine operators	7,78	18	1,353	7,16	32	2,112	0,62
4	Veterinary technicians and assistants	7,71	24	0,955	7,73	11	1,191	-0,02
5	Database and network professionals	7,7	303	1,292	7,28	301	1,348	0,42
6	Commissioned armed forces officers	7,67	24	1,049	8	29	0,886	-0,33
7	Other services managers	7,66	122	1,341	7,7	170	1,422	-0,04
8	Creative and preforming artists	7,62	58	1,554	7,9	29	1,291	-0,28
9	Legislators and senior officials	7,61	89	1,23	7,63	113	1,422	-0,02
10	Retail and wholesale trade managers	7,6	60	1,304	7,55	60	1,254	0,05

Conclusion: There was a different between the experienced happiness in occupations between people with and without children, but for both groups working as ship, aircraft controllers and technicians in this field brought the most happiness.

For all the differences in happiness see online Appendix E

3.4 Combining personal characteristics to define what kinds of people are happiest in what kinds of occupations.

To answer this question the variable age was computed in three groups to get 36 personal characteristic combinations. Average happiness in all these cases in all occupations online Appendix F.

Here we will only work out two cases: The first case was based on young males, 15 – 30 years old, without children, with a low-education level. The second case was mid-career woman, 30-45 years old, with children and a high-education level. For both groups we had full information on life-satisfaction, but in the first subgroup we found only 48 occupations with at least 10 respondents and in the second cases only 58 occupations.

Case 1: Male, no child, low education, age 15-29
The top 10 occupations for life-satisfaction are presented in the table 4 below

Table 4a
Top 10 happiest occupations among young, low education, childless males

Rank	Occupation (ISCO 2008-03)	Mean	N	SD
1	Refuse workers	8,09	11	1,64
2	Travel attendants conductors and guides	8	13	1,472
3	Software and applications developers and analysts	7,83	12	1,467
4	Sport and fitness workers	7,76	21	0,995
5	Market gardeners and crop growers	7,64	66	2,102
6	Vehicle, window, laundry and other hand cleaning workers	7,64	25	2,099
7	Shop sales persons	7,62	134	1,434
8	Car, van and motorcycle drivers	7,61	18	1,29
9	Heavy truck and bus drivers	7,59	73	1,58
10	Artistic, cultural and culinary associate professionals	7,58	19	1,261

The bottom 10 in this case

Bottom 10 unhappiest occupations among young, low educated childless males

Rank	Occupation (ISCO 2008-03)	Mean	N	SD
39	Numerical clerks	7,08	12	1,676
40	Cooks	7,02	48	1,345
41	Financial and mathematical associate professionals	7	13	2,283
42	Printing trades workers	6,92	13	1,038
43	Client information workers	6,89	27	1,739
44	Ships deck crews and related workers	6,77	13	2,555
45	Sales and purchasing agents and brokers	6,69	35	2,04
46	Electronics and telecommunications installers and repairers	6,55	11	1,916
47	Other stationary plant and machine operators	6,37	72	2,21
48	Managing directors and chief executives	6,31	13	1,437

Case 2: Female, child, High education, age 2 30-44
In this case the top 10 occupations for life-satisfaction are presented in the table 8 below.

Table 5a

Top 10 happiest occupations among 30-44 aged high educated women with children

Rank	Occupation (ISCO 2008-03)	Mean	N	SD
1	Professional services managers	7,75	16	1,125
2	Car, van and motorcycle drivers	7,75	12	1,96
3	Managing directors and chief executives	7,73	15	1,1
4	Primary school and early childhood teachers	7,7	23	1,521
5	Architects, planners, surveyors and designers	7,68	19	1,493
6	Other teaching professionals	7,67	12	0,65
7	Other health professionals	7,65	20	1,348
8	Legal professionals	7,64	11	1,286
9	Cooks	7,61	31	1,308
10	Other health associate professionals	7,6	263	1,231

The bottom 10 in this case, table 9 below.

Bottom 10 unhappiest occupations among 30-44 aged high educated women with children

Rank	Occupation (ISCO 2008-03)	Mean	N	SD
49	Software and applications developers and analysts	7,11	19	2,052
50	Waiters and bartenders	7,1	62	1,657
51	Material-recording and transport clerks	7,08	59	1,512
52	Travel attendants conductors and guides	7	16	1,506
53	Domestic, hotel and office cleaners and helpers	6,95	103	1,87
54	Other services managers	6,91	11	2,212
55	Physical and engineering science technicians	6,84	25	1,375
56	Hotel and restaurant managers	6,63	16	2,156
57	Finance professionals	6,6	15	1,724
58	Building and housekeeping supervisors	6,47	19	2,412

These two cases let us see that it is possible to give tailored advice on occupational choice to people based on multiple personal characteristics. These two cases also showed us that personal characteristics made a difference when making a happiness based occupational choice. The cases also illustrate that it is possible to give tailored advice on the basis of survey data. As we collect more data from the WageIndicator we will be able to provide better and increasingly broad advice for the different types of people seeking accurate happiness-based career advice based on a broader range of knowledge about different occupations.

3.5   How large is the variation around these averages?

The standard deviation is still quite large for the different occupations. This can be a problem in one wants to give accurate career advice to young people or those wishing to change occupations. The relationship between jobs with the most life-satisfaction and the least life-satisfaction are higher than most of the standard deviations, so it is possible to see the differences, but this level of deviation means it is not yet possible to give very specific advice.

Taking a look into the cases it is possible to give the *safest* choice based on the top 10 in both cases. In case one, young, low education, childless

males, the most save choice based on life satisfaction is sport and fitness workers. The mean in this occupation is 7,77 and the standard deviation is 1,0. This means that in this occupation the life satisfaction will at least be 6,77.

The *least safe* choice in occupation for life satisfaction for young low educated childless males is other stationary plant and machine operator. The lowest life satisfaction for this group possible in this occupation with 4,16. The mean life satisfaction in this occupation is 6,37 and the standard deviation is 2,21.

In the second case of high educated women aged 30-34 with children, the *safest* choice is other teaching professionals. The mean for this occupation is 7,67 and the standard deviation is 0,65. This means that in this occupation the life satisfaction will be 7,02 or higher. This is only 0,3 lower than the mean of all respondents.

The *least safe* choice in this case is building workers and housekeeping supervisors. The lowest life satisfaction for this group is possible in this occupation with 4,058. The mean life satisfaction in this occupation is 6,47 and the standard deviation is 2,412. It is possible to experience 3,262 less life satisfaction in this occupation for this group than the mean of all the respondents.

Full data on the standard deviations of happiness among different kinds of people on different occupations is presented in online Appendix F.

4   Discussion

Our aim was to allow people to make more informed occupational choices by gathering information on the happiness of people working in different occupations. We showed that this is possible and have provided a first chart of happiness in different occupations in the online appendix to this article at https://werkkeuzewijzer.nl/publicatie-bijlages. People and their advisors can use this source to estimate how happy they will be in different occupations; however, it must be noted that at present, this tool is not without its limitations.

4.1   Limitations

Representativeness
The users of the WageIndicator are self-selected. The mean happiness of the selected group of this study is 7,32 and this is lower than the mean happiness of the Dutch population reported in the World Database of Happiness with a mean of 7,73 in the same period (see scheme 4 on page 7), because of the purpose of the WageIndicator (salary comparison) it is

possible that the people in this study are less happy because they are dissatisfied with their income.

Coverage of occupations
Only 130 sets of occupations according to the ISCO 2008-03 are split out. These sets give us no view on job-characteristics, such as the effect of part-time work, working conditions and secondary employment conditions.

Coverage of kinds of people
In this study we have only split out 36 demographic categories. We have not taken into account people's personality, preferences and capacities. Personality and personal preferences can have a major influence on how work is experienced.

Time-bounded
In this study we have used data from 2006-2014. Jobs are subject to changes over time. In this specific period, there was a financial crisis in the Netherlands, which may have affected life satisfaction more in some occupations than others.

Causality
This research does not provide insight into the causality. Observed differences in average happiness in occupations can be due to selectiveness in occupational choice, e.g. happy people choosing more often for care sector, rather than effects of occupation on happiness.

4.2 **Further research along this line**

Replication on a more representative dataset
This research can be repeated with more recent data and with a more representative data set e.g. using the workforce survey of Statistics Netherlands (CBS, Dutch Labour Force Survey (LFS), 2019) This will reduce the effect of self-selection and remove the effects of the economic recession.

Replication on a larger dataset
The WageIndicator provides not only data for the Netherlands but has information for 93 countries (WageIndicator, 2019). Pooling data obtained in other developed countries will produce a much larger dataset than used here, which will allows us to consider more specific kinds of people.

Subsequent research can provide insights into cross-national differences in happiness across occupations around the world.

Replicate on job-satisfaction
It is also possible to investigate job-satisfaction in the same way we have investigated life-satisfaction in this study. Job-satisfaction in the case of the data of the WageIndicator needs to be transform to an equal scale with life-satisfaction, to make it possible to investigate its cohesion, or lack of, with life-satisfaction. In the case of job-satisfaction we also need to investigate further personal scales next to personal characteristics, in combination with the scales needed for each occupation.

Assess difference between job-satisfaction and life-satisfaction
Above in section 2.1, we noted that it is easier to estimate the degree of job-satisfaction one will experience in a particular occupation than to predict how that occupation will affect one's wider life-satisfaction. It is therefore worth getting a view on the differences that exist between job-satisfaction and life-satisfaction in occupations. Are there substantial differences? If so, which occupations provide more job-satisfaction than life-satisfaction and which more life-satisfaction than job-satisfaction?

A specific group to be considered in this context, are the people who work as entrepreneurs. Of course, a distinction can be made between various types of entrepreneurship. For example, self-employed entrepreneurs and family entrepreneurs. This group of workers has not been examined, but would be a good topic for future research, that is to look at the life-satisfaction and job-satisfaction of different entrepreneurs.

Assess effect of job characteristics
Receiving direct feedback from peers, customers, patients, students or engineered devices might lead to a higher life satisfaction compared to a more indirect feedback when actions taken do not provide feedback and one would have to rely on one's own judgement of the quality of the output delivered. Besides, the variation of this effect over the course of one's career could also be assessed.

Assess effect of pay
Based on the results presented here it is possible to look at occupations in a differed way, we can now look both at income-based results of work and, importantly at the effect of types of occupation on life-satisfaction. This means that it becomes possible to see payment as a compensation for lower life satisfaction, a new way to look at our working lives'.

5   Conclusions

There are substantial differences in average happiness of workers in differed paid occupations and for an informed occupational choice it is worth acknowledging these. This study provides a first chart of differences in happiness across occupations in contemporary Netherlands. This map can and should be improved in the future.

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SCHEMES

TABLES

ONLINE APPENDICES
https://werkkeuzewijzer.nl/publicatie-bijlages