rijksuniversiteit groningen

What to do with your spare time?

A study of structured and formal leisure time in the Netherlands.

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Abstract:

Leisure time is widely associated with quality of life and personal satisfaction. This study was done to ascertain the relation between two different types of leisure time activity and its effect on the life satisfaction of the Dutch population. The first type of leisure we studied was structured leisure time which relates to activities that are performed weekly and with emphasis on skill development. The second type of leisure is formal leisure time which relates to activities done at formal organisations or institutions. We performed our analysis using stepwise multiple regression. We controlled for domestic situation, general health and age. No evidence of a relationship between either form of leisure and personal satisfaction were found, contrary to previous studies. We checked for gender interaction to learn if these types of leisure influence men and women differently. The results indicated that this is not the case which implies relatively well-developed gender equality relating to leisure experience in the Netherlands.

Contents

1. Introduction

On average, people in the Netherlands spent 40 of their 168 hours per week on leisure activities in 2017 (Roeters, 2017a). In 2020 Dutch people spent 91,2 billion euros on tourism and leisure activities (Klijs et al., 2021). Not only does leisure play an increasingly important economic role, leisure engages people and enforces communities and social fabric (Newman et al., 2014). Studying leisure is not only important because the markets for leisure and tourism are rather big. If we want to know how to make our lives more satisfactory and enhance our quality of life it becomes necessary by extension to understand how certain kinds of leisure shape our life satisfaction. According to Kelly and Godbey (1992) quality of life can be defined in terms of the satisfaction we find in doing things that we don't have to do to survive. Humans like to be engaged in activities of their choosing and performing leisure activities is known to increase our happiness and wellbeing (Brajša-Žganec et al., 2011; Newman et al., 2014).

In this study, we will look into how certain forms of leisure influence our satisfaction in life. In general, researchers agree that leisure time enhances quality of life through an increase in life satisfaction (Brajša-Žganec et al., 2011; Diener et al., 1999; Newman et al., 2014). We will look into structured leisure time activity and formal leisure time activity and how these kinds of leisure influence life satisfaction. Structured leisure time activities are activities with a regular scheduling, rule-based engagement and an emphasis on skill development (Mahoney & Stattin, 2000). Formal leisure time activities are activities performed within formal organizations or groups (Adams et al., 2011). We will elaborate more on these kinds of leisure in the next paragraph. We will also inquire into how these kinds of leisure activities might influence the life satisfaction of men and women differently.

According to feminist leisure studies (Henderson, 1989; Wearing, 1999) men and women experience leisure differently and have excess to leisure in different ways. Women are presumed to have additional duties (Henderson, 1989; Wearing, 1999). Besides their working commitments they are still responsible for most of the household tasks and care tasks (Henderson, 1989; Wearing, 1999). This form of unpaid labour next to paid labour has also become known as the second shift (Hochschild & Machung, 2012). When looking into the Netherlands we see that this second shift takes less rigorous forms due to the large amount of part-time working women in the Netherlands (Roeters, 2017a). It is interesting to study the Netherlands because it provides us with an opportunity to study men and women within a

society in which they have by and large the same amount of time for leisure. This research will be able to provide us with answers as to how women and men experience their leisure differently when there is no apparent second shift.

Studying different kinds of leisure and how they influence our satisfaction in life is important because it can provide us with insight in how people orchestrate their lives and what kinds of activities, they find worth pursuing. The Netherlands provides us with an interesting case study to asses differences between men and women due to a small second shift. This leads us to the following research question:

"What is the influence of formal leisure time activities and structured leisure time activities on personal satisfaction within the Dutch population? Are there differences between men and women?"

2. Theory

In this section we first show a graphic description of the model we wish to research. Secondly, we will elaborate more on the concepts and definitions used in this research. Thirdly we elaborate on the mechanisms and relations in which leisure might influence personal satisfaction. Based on this we will put forth our first two hypotheses. Fourthly, we argue that the experience of leisure is different for men and women. From this difference in experience, we will derive our third and fourth hypotheses. Lastly, we will introduce the concepts, we wish to control for in our model and we will elaborate why it is important to control for these variables within this model.

2.1. Conceptual model and definitions

In figure 1 we have outset our conceptual model that we wish to study. Our main focus is the characteristics of structured leisure time activity and formal leisure time activity and how this influences the personal satisfaction of the Dutch. We will first introduce the concept of life satisfaction and provide a formal definition. We then elaborate on the concept of leisure and what kind of definition we use and why.

Figure 1: Conceptual model

Life or personal satisfaction is a subjective concept which refers to how people evaluate their lives or quality of life based on their cognitive and affective assessment of how they feel about their lives or existence itself (Diener & Suh, 2003). In less technical terms, this means

that life satisfaction is the overall evaluation of one's life (Newman et al., 2014). It answers the questions of how we perceive our lives. We believe that psychological mechanisms like detachment from work, relaxation, meaning and affiliation are ways trough which leisure positively influences the life satisfaction of the Dutch population. Psychological mechanisms are in the most inclusive sense, a type of causal explanations of mental states and behaviour (Koch & Cratsley, 2020). They explain how participating in leisure activities increases satisfaction in life.

Leisure is not an unambiguous concept and can be defined in many different ways. In this research we are mainly interested in leisure as an activity and we want to distinguish it as such. We therefore use the definition of leisure as 'activity apart from the obligations of work, family and society, to which the individual turns voluntarily for either relaxation, diversion, or broadening his knowledge and spontaneous social participation, the free exercise of his creative capacity' (Kelly & Godbey, 1992). Leisure from this perspective is purposive activity, chosen for ends that in some way enhances the self. We will not encompass household tasks, childcare and volunteering as leisure time, even though they can all be regarded as voluntary pass time. They are activities which are not free from the obligations of work, family and society. They are forms of unpaid labour and will be treated as such.

According to Mahoney & Stattin (2000), structured leisure time relates to activities which are performed through regular participation scheduling, emphasize skill development and require sustained active attention. Examples of this kind of leisure time are playing a musical instrument and exercise. This form of leisure can positively influence personal satisfaction in several ways.

Formal leisure time is leisure time which is performed in formal groups or through a formal organisation (Adams et al., 2011) . This form of leisure time might be best explained through its antonym, which is informal leisure time. This is leisure time involving friends and family and other informal contacts. Formal leisure activities are activities performed at organisations, clubs or other organisations one can join on a voluntary basis.

In the coming paragraph we will argue that spending more time on structural and formal leisure time activity increases personal satisfaction and derive our first hypotheses. Thereafter we will argue that leisure has different outcomes on life satisfaction for men and women and introduce our last two hypotheses.

2.2. Leisure and life satisfaction

The first relation we will elaborate on is structured leisure time activity and how it influences life satisfaction. We believe that structured leisure time activity can positively influence life satisfaction through mastery and flow experiences (Newman et al., 2014). Mastery experiences relate to the honing of skills and achieving a new level of success in a leisure activity. Mastery can provide people with a sense of accomplishment but also promote self-actualisation and trough this mechanism increases satisfaction in life. An example can be someone who has been practicing a new song for weeks and finally succeeds in playing it flawlessly. This can give individuals feeling of achievement and success, which enhances personal satisfaction but also might affirm someone's self-image as a player of said instrument.

Furthermore, research has shown that people who enter a flow state during leisure activities report higher levels of positive feelings (Pinquart & Silbereisen, 2010). A flow state has been described as a state of being or consciousness where everything in life recedes to the background and people find themselves fully engaged with the activity in which they are participating (Csikszentmihalyi & Csikzentmihaly, 1990). This kind of engagement has been described as one of the most pleasurable and in itself enjoyable experiences (Csikszentmihalyi & Csikzentmihaly, 1990).

Another way in which structured leisure time might positively influence personal satisfaction is through detachment-recovery (Newman et al., 2014). Recovery refers to the process during which an individual's functioning returns to the level it was before experiencing stress. This has also been described as the process of replenishing depleted resources (Korpela & Kinnunen, 2010). To prevent exhaustion of resources, individuals need to regulate how they put effort and energy into their work. An important aspect of such regulation is that from time to time people get the opportunity to replenish their resources (Sonnentag & Zijlstra, 2006). Leisure activities don't impose additional demands on people and are known to stimulate recovery from stressors in working life (Sonnentag & Zijlstra, 2006).Through this recovery process leisure activities are able to promote life satisfaction by averting possible depletion and exhaustion of mental and physical resources. Based on these

mechanisms we hypothesize that: *"Structured leisure time activity has a positive influence on personal satisfaction."*

Formal leisure activities are done through formal organisations and formal groups (Adams et al., 2011). These organisations can range from religious communities to trade unions and many other kinds groups. Formal leisure activities can be activities like attending church can be categorized as formal leisure activities. Such an activity is inherently social. Where structured leisure time activities can be performed individually, formal leisure time activities need to happen within a social context. This social component can promote personal satisfaction trough affiliation. Formal leisure time activities build social relationships, encourage positive emotions and ultimately improve quality of life (Brajša-Žganec et al., 2011; Rook, 1987). Social leisure activities are also known to inhibit negative emotions as they have been shown to decrease loneliness and sadness by creating a shared experience among participants (Waters & Moore, 2002).

Another way in which formal leisure time activities can enhance personal satisfaction is by providing meaning. This entails that people gain something important or valuable in life trough leisure activities (Iwasaki, 2008). We can easily see this when we assessing formal leisure in for instance, churches or other houses of worship. But also, unions, cultural organisations, societies or immigrant organisations might provide people with meaningful leisure activities. Meaningful leisure activities reduce negative emotions while promoting life satisfaction (Newman et al., 2014). Furthermore, meaningful leisure activities have been known to affirm self-worth (Wearing, 1999) and help one cope in response to difficult life circumstances (Waters & Moore, 2002). This leads us to our second hypothesis: *"formal leisure time activity has a positive influence on personal satisfaction."*

2.3. Gendered experiences

In the former paragraphs we have outlined our main relations between the two forms of leisure time activity and life satisfaction. We believe that both forms of leisure time will influence personal satisfaction in a positive way. We are also interested to see if these forms of leisure will influence the life satisfaction of men and women differently. In the coming paragraph we will elaborate on why we believe that structured leisure time activities and

formal leisure time activities will have different effects on the life satisfaction of men and women.

Historically, the context in which leisure developed for men and women is quite different. Leisure for women often formed as an outgrowth of a household task, a part of social encounter, a function of family interactions or a concept of time that was attached to status and class (Henderson, 1989). When looking into leisure, especially from a historical point of view, it becomes evident that activities often defined as leisure were not necessarily leisure experiences for women (Henderson, 1989). Think of having family and friends over for a nice evening. Women are often still responsible for doing the groceries, cooking and entertaining. This means that women have to spend more time on care tasks and household tasks (more people over mean more groceries to buy, more food to cook and more dishes to wash). This is one way in which women can have very different leisure experiences than men. One could seriously question if the experience described relates to leisure at all for women even though in this example the couple was 'having friends and family over'. This example illustrates well how male and female leisure experience may differ whilst participating in the 'same' activities. If this is the case for having friends over, we are going to assume it is also the case for other forms of leisure. We are going to assume that these cultures of leisure participation still influence and differentiate male and female leisure experiences and how these experiences influence personal satisfaction. We argue that because of different historical developments of gendered leisure the effect that leisure has on life satisfaction will also be different. In this sense, the participating in leisure activity will have different effects on personal satisfaction for men and women.

Another argument for differences in leisure experience is the socialization of sex-appropriate recreation that occurs. Socialization is the process through which an individual acquires an understanding of ideas, beliefs and values, shared cultural symbols and codes of conduct (Shtarkshall et al., 2007). There are certain situations in which gender stereotypes perpetuate themselves through socialization, which could impact the way in which men and women perceive and experience certain leisure differently (Henderson, 1989). You are probably less likely to enjoy a certain kind of activity if you were taught not to pursue such an activity or have seen none of your peers pursue such an activity. Socialization and ingrained gender roles might very well steer women towards leisure activities which relate to caring and family activities rather than towards activities which focus more on self-enhancement. Think

of little girls who are encouraged to play house and little boys who are encouraged to pursue sports and compete. This could entail that woman experience leisure differently because they were taught to pursue and enjoy other kinds of leisure such as home-based leisure. Formal leisure can by definition not be home-based. It could be related to some structured leisure time activities. Based on these arguments and examples we will assume that formal and structured leisure time activities will have different effects on personal satisfaction for men and women. We derive the following hypotheses:

"Women will experience less of the relationship between structured leisure time activity and life satisfaction" and

"Women will experience less of the relationship between formal leisure time and personal satisfaction"

2.4.   Control variables

Apart from structured leisure time activity, formal leisure time activity, gender and life satisfaction we will control for several other variables in our model. We do this so we can analyse the influence of formal and structured leisure time on personal satisfaction without the interference of these concepts. Age is included in the model because of the fact that older adults with high participation in social and leisure activities report greater life satisfaction which might lead us to misinterpret results (Rook, 1987).

We also control for general health in this study. Health is known as a great influencer of life satisfaction and we want to keep general health from influencing the effects that formal and structured leisure time might have on personal satisfaction (Grant et al., 2009). Lastly, we control for domestic situation. We control for domestic situation because we believe the domestic situation of an individual can influence what kind of leisure they choose to participate in and as such may influence how structured leisure and formal leisure time activities influence personal satisfaction.

3. Methods

3.1. Data

In this research the Longitudinal Internet studies for the Social Sciences dataset [13th wave] will be used. The LISS is indented for scientific and socially relevant research specifically. To establish the LISS panel a traditional random sample was drawn from the population registers in collaboration with the statistics Netherlands ["Centraal Bureau voor de Statistiek"]. This study consists of 6680 respondents. There was a non-response of a 10.6%. Respondents can belong to the same household which entails that not all data is completely independent of each other. The LISS panel consists of about 5000 households. We believe there are still enough independent respondents to make generalizations over the entire Dutch population but we cannot be certain that some respondents have not influenced others.

3.2. Procedure

This study was done by internet survey on people within the Dutch population. A computer was made available to people within the panel who did not have excess to one. All panel members which responded to this survey were either 16 or older. The data was collected within two-time intervals. The survey involved a questionnaire which included questions about leisure and social integration. Participation was voluntary but the LISS panel members are paid for every completed questionnaire. Questionnaires are not supposed to take up more than half an hour of someone's time. The survey asks questions about membership of voluntary organisations, voluntary work and informal care, leisure activities, social contacts, social networks and some general questions (age, education, work status etc.).

We will not incorporate all people from the dataset. I will exclude every respondent which indicates that they have spent more than 44 hours on structured leisure time activities. On average this is the entire amount that the Dutch spent on leisure per week in total. This includes watching tv, online activity, vacation and all other possible forms of leisure. If people claim to spent more than this on structured leisure time activities, we will assume it to be a bad estimate or that the respondent performs a leisure activity in a professional way (for instance a choir director, will possibly spent more than 44 hours on choir practice and singing)

which excludes them from leisure activity. There was one case. which indicated that he or she spent more than 44 hours on a structured leisure time activity. The people who have not responded to the personal satisfaction item will also not incorporated in the study for they only skew the data whilst giving no information on how structured and formal leisure time influence personal satisfaction.

3.3.   Operationalisations

In this research, several variables were used to model the effect of structured and formal leisure time activity on personal satisfaction. In the next paragraph I will elaborate on how these variables where measured and how they were recoded for further analysis. Personal satisfaction (mean: 6,98, Std. dvt.: 2,522) was measured trough the question: "*how satisfied are you with the life you live at the moment?"* Respondents could answer on a scale of zero to ten, to which a ten meant completely satisfied and a zero meant not at all satisfied.

The variable of structured leisure time activity (mean: 2,070; std. dvt.: 3,3815) was operationalised through several steps [appendix]. In the end structured leisure time activity was calculated by adding all the hours that people spent on structured leisure time activity throughout the week. This was measured by several questions such as: "*how many hours do you spent on sports per week?" (cs20m105)* The average number of hours per week was also calculated for other structured activities such as: playing a musical instrument, singing/choir/singing group, handwork, handicrafts (such as painting, sculpting), acting and dancing. This was calculated by multiplying the indicated number of days per week that a respondent spends time on such an activity with the average number of hours the respondent spends on the activity when he spends time on the activity. We then added all the items together to come to the variable of structured leisure time activity.

Formal leisure time activity (mean: 0,48; std. dvt.: 0,970) was measured by several questions within the dataset. Respondents could indicate for several different kinds of vorganisations of which one can become a member voluntarily if they had performed an activity there in the past year. The respondents could indicate yes [coded as 1] or no [coded as zero]. They could indicate this for several different kinds of organisations such as: a sports club [cs20m005], a cultural association or hobby club [cs20m010], a union [cs20m015], a consumer's organisation or automobile club [cs20m025], a human rights or humanitarian organisation [cs20m030], a migrant organisation [cs20m525], an organisation for the

environment, peace or animal rights [cs20m035], a political party [cs20m040], a religious or church group [cs20m045], a science- education- teacher or parent association [cs20m050], a society; a club for pensioners, youth, women or friends [cs20m055] and other associations of which you can become a voluntary member [cs20m060]. We then added al the scores on these variables where a higher score [max:11] indicates a larger number of formal organisations that the respondent performed activities at.

The variable 'geslacht' (sex) was measured within the household box of the survey. They measured it by asking the head of the households what their gender is and what the genders are of everybody within the household. The head of household is the person with his or her name on the deed of the house or renting contract. If there are multiple names on the contract or deed the person with the highest income functions as head of the household. I recoded gender from values one [male] and two [female] to values zero [male] and one [female] to make it a usable dummy variable.

Domestic situation was measured by asking the head of household "what is your living situation"? To which the head of household could respond: single [24,6%]; (un)married co-habitation without children [34,4%]; (un)married co-habitation with children [32.1%]; single with children [6,1%] or other [2,8%]. This variable was recoded in four separate dummy variables which indicate what type of living situation someone has. The dummy variables were named single; cohab_child; single_child and other. The option 'cohabitation no child' will be taken as the reference variable in further analysis.

Age (mean: 50,40; std. dvt.: 18,826) was measured by asking the head of household age directly and the ages of all subsequent household members. The minimum age someone needs to participate in the LISS is sixteen.

General health was measured by asking respondents: "how would you describe your health generally speaking"? To which respondents could answer: poor (1,6%); moderate (15,6%); good (55,2%); very good (22,4%) and excellent (5.2%). This variable was recoded into four dummy variables being: poor_health; moderate_health; very_good_health; excellent_health. All these dummies indicate how good the general health is of the respondent. The option good health will be taken as the reference variable.

3.4.   Analysis outline

The analysis is done via multiple regression analyses in SPSS. We modelled several models to test the hypotheses. In the first model we added personal satisfaction as the depended variable and the control variables age, general health and domestic situation. In the second model we added structured leisure time activity and formal leisure time activity. Through this model we were able to test our first two hypotheses. In the third model we added the variable gender. In the fourth model we added two interaction variables. The first interaction variable was the interaction between gender and structured leisure time activity. The second interaction variable was the interaction between formal leisure time activity and gender. Through this model my final two hypotheses could be tested.

4. Results

In this paragraph we will present the results of the study. First, we will present the univariate statistics to give the reader an idea of how the variables used in the regression analyses are distributed. Second, we will present an overview of the bivariate statistics to show how all the variables relate to each other. Thirdly, we will elaborate on the quality of the models we used and the model fit. Lastly, we give an overview of the analysis and the models that were used to test the hypotheses. We will also show if we were able to refute the null hypotheses.

4.1 Descriptive statistics

4.1.1. univariates

Here we'll the discuss the variables that we will use to test the hypotheses and how they are distributed. If the variable is a continuous variable the mean and the standard deviation will be given. If the variable is a categorical variable the sample proportions of the categories will be given. An overview is visible in table 1.

Personal satisfaction with an average of 6,98 and a standard deviation of 2,522 is distributed relatively normally. Both formal leisure time activity (mean: 0,4754; standard deviation: 0,97) and structural leisure time (mean: 2,073; standard deviation : 3,383) are skewed positively to a rather large extent. A large proportion of the sample has the score zero. This could mean that the variation within this group in personal satisfaction is not explained by the performance of structured or formal leisure time activities. The variable age has an average of 50,40 years and a standard deviation of 18,626 with the youngest person in the dataset being sixteen and the oldest one-hundred and three years old. The variable gender has a distribution which relatively deviates from the fifty-fifty distribution we assume it to have. Men make up 45,7% of the data and women 54,3%.

Table 1: Descriptive statistics

Variable	Mean (std. dvt.)	Minimum	Maximum	Kurtosis	Skewness
Personal Satisfaction	6,98 (2,522)	1	10	2.746	-1.216
Structured leisure time activity	2,07 (3,383)	0	40	11,217	1,646
Formal leisure time activity	0,475 (0,97)	0	11	22,278	3,668
Gender*	45.7% Male 54.3% Female	0	1	-	-
Age	50,40 (18,827)	16	103	-0.965	-0.247
Domestic Situation*	24,6% Single 34.4% Co-habitation without children 32.1% Co-habitation with children 6.1% Single with children 2.8% Other	1	5	-	-
General Health*	1.5% Poor 15.6% Moderate 55.3% Good 22.4% Very good 5.2% Excellent	1	5	-	-

*With the binomial variables the distribution is noted in percentages. N between 4940 and 5278

The variable health is a categorical variable where respondents were able to indicate whether they have poor (1,6%), moderate (15,6%), good (55,3%), very good (22,4%) or excellent (5,2%) health. The variable domestic situation was measured in a way that people could indicate if they are single (24,6%), cohabiting without children (34,4), cohabiting with children (32,1%), single with children (6,1%) or other (2,8%).

4.1.2. Bivariate relations

In table two we have assembled all correlations between all the variables which are we use in the multiple regression analysis. Correlations between two continuous variabels are Pearson correlations. Correlations between two categorical variables are based on Cramer's V and the correlations between a continuous and categorical variable are based on ANOVA's. We will now in short discuss the associations between variables.

Table 2: Bivariate relations

	1.	2.	3.	4.	5.	6.	7
1. Personal satisfaction	-						
2. Age	**0,090(a)	-					
3. Health	**0,104(c)	**0,055(c)	-				
4. Living situation	0,032(c)	0,000(c)	0,025(b)	-			
5. Structured leisure time activity	**-0,052(a)	-0,14(a)	0,032c	0,000(c)	-		
6. Formal leisure time activity	-0,026(a)	**-0,036(a)	0,032(c)	0,032(c)	**0,092(a)	-	
7. Sex	0,008(a)	**-0,071(a)	0,017(b)	0,020(b)	**-0,068(a)	0,002(a)	-

**Correlation significant with p<0,01; * Correlation significant with p<0,05; a Pearson correlation; b Cramer's V;
c correlation based on ANOVA.

We can see that personal satisfaction has the strongest correlation with health (r=0,104; p<0,01). This implies that healthier people are also more satisfied with their lives which seems fairly straight forward. What is also noteworthy is that there seems to be negative associations between personal satisfaction and structured (r= -0,026; p>0,005) and formal leisure time activity. This would imply that the more time people spend on structured leisure time activities the less satisfied they become and the more organisations people perform formal leisure time activities at the less satisfied they become.

All other associations are relatively small. Health and personal satisfaction and formal and structured leisure time seem to have the strongest associations. These relations are themselves still relatively small. Other noteworthy bivariate associations we have found are the associations between age and living situation and domestic and structured leisure time activity. The means of structured leisure time activity do not differ from each other in a significant way when grouping people according to how good their health is. The range of these means is 1,91 for people with poor health and people with moderate health reporting that they on average spent 2,31 hours on structured leisure time. The only differentiating category found is that people with poor health report less than two hours of structured leisure time per week on average. Having poor health seems to have a negative influence on the number of hours of structured leisure time but people with moderate, good, very good

and excellent health report around the same amount of structured leisure time per week (moderate: 2,31; good: 2,28; very good: 2,23; excellent: 2,14). All categories of domestic situation average around the age of 52 (single: 52,51; living together without children: 52,28; living together with children: 52,06; single with children: 52,86 and other: 53,21) which explains the lack of association.

4.2 Modelfit and assumptions

We used a stepwise regression analysis to test our four hypotheses. The control variables (age, health and domestic situation) and the dependent variable (personal satisfaction) were added in step 1. The independent variables (formal leisure time activity and structured leisure time activity) were added in step 2. gender was added in step 3 and the interaction terms were added in step 4 (gender*FLTA and gender*SLTA).

We found an R^2adjusted of 0,156. This means that about 15% of the variation in personal satisfaction is explained by our model. This is relatively little and would indicate that our model is not very good in predicting the value of personal satisfaction based on our variables. Table 3 show only a significant change in the R^2 when we add gender. The adding of our independent variables and interaction variables added very little explanatory power to our model.

We control for multicollinearity trough the VIF-scores in table 3. A score higher than 4 would imply that the variable could be collinear with another variable. No VIF-scores exceeded this line of 4. The highest VIF-score in the table is 2,042. We can therefore conclude that there is no multicollinearity within the model used.

There are 4 assumptions which need to be met when conducting a stepwise regression analysis. These assumptions are linearity, normality, independent measurements and homoscedasticity. We found that the assumption of independent measurements had not been met. This is due to the fact the people from the same households were able to participate. We still have enough independent households to make generalizations for the entire Dutch population. We cannot however be sure that there has been no reciprocal influence within households. This may have impacted the data.

The assumption of linearity seems to has not been. There were some influential data points. We have run the analysis without these points and found no significantly different

results. The assumption of normality has been met. The assumption of homoscedasticity has not been met. For further elaboration on the testing of the assumptions see appendix 3.

There were several influential points (518 exceeding leverage values, 219 exceeding Cooks distance) within the data which might have impacted the results. These points where removed from the dataset to check if they altered the outcome of the stepwise regression analyses. We removed cases with a cook's distance higher than 4/N and leverage values which were bigger than two times the mean leverage. This did not increase the prediction power of the model which actually shrank after deleting these cases. Based on this decrease in explained variance we decided to keep the cases with high leverage values and cook's distances.

We removed all cases with a predicted residual value lower smaller then -3, to see if it would improve our model. This did not increase our R^2adjusted. It actually lowered our R^2adj. to 0,123. Based on this decrease in explained variance we did not remove cases for further analysis.

4.3 Analysis results

We used a stepwise regression analysis to test our four hypotheses. The control variables (age, health and domestic situation) were added in step 1. The independent variables (formal leisure time activity and structured leisure time activity) were added in step 2. The gender was added in step 3 and the interaction terms were added in step 4 (gender*FLTA and gender*SLTA). We centred structured leisure time activity and formal leisure time activity to control for multicollinearity.

We found an R^2 of 0,156. This means that about 15% of the variation in personal satisfaction is explained by our model. This is relatively little and would indicate that our model is not very good in predicting the value of personal satisfaction based on our variables. Table 3 show only a significant change in R^2 when we add gender to the model. The adding of our independent variables and interaction variables added very little explanatory power to our model.

In table 3 we see the models used to test our hypotheses. We hypothesized that formal leisure time and structured leisure time would have a positive effect on personal satisfaction. To test this, we used the following null hypotheses:

"Formal leisure time activities have no effect on personal satisfaction."

And:

"Structured leisure time activities have no effect on personal satisfaction."

By refuting these hypotheses, we would then be able to conclude that formal leisure time activities and structured leisure time activities would have a positive (or negative) effect personal satisfaction. In table 3 it is visible that we were not able to refute these null hypotheses. When looking at model three, the model used to test the first two hypotheses, it becomes clear the formal leisure time (b=-0,007; P=0,740) and structured leisure time (b=0,009; P=0,144) have a very small effect on life satisfaction. Even more noteworthy is that formal leisure time activity seems to have a very small negative effect on life satisfaction which is an effect in the reversed direction which was hypothesized. Neither of these effects where significant with an alpha of 0,05. This entails that the probability that we would find these values whilst our null hypotheses are true is rather big. So, based on the data, operationalisations and analysis, we can't conclude that formal leisure time and structured leisure time have a positive effect on life satisfaction.

Table 1: Results from a stepwise regression with personal satisfaction as dependent variable, Formal and structured leisure time activity as independent variables and gender as moderating variable (N=4653).

Variable	model 1 b(SE)	p	model 2 b(SE)	p	model 3 B(SE)	P	model 4 b(SE)	p	VIF
Constant	6,350 (0,077)	<0,001	6,349 (0,077)	<0,001	6,282 (0,082)	<0,001	6,282 (0,082)	<0,001	
Age	0,017 (0,001)	<0,001	0,017 (0,001)	<0,001	0,017 (0,001)	<0,001	0,017 (0,001)	<0,001	1.099
health (poor)	-2,603 (0,174)	<0,001	-2,594 (0,174)	<0,001	-2,593 (0,174)	<0,001	-2,594 (0,174)	<0,001	1,014
Health (moderate)	-0,985 (0,059)	<0,001	-0,980 (0,059)	<0,001	-0,980 (0,059)	<0,001	-0,981 (0,059)	<0,001	1,091
Health (Very good)	0,495 (0,053)	<0,001	0,488 (0,054)	<0,001	0,493 (0,054)	<0,001	0,493 (0,054)	<0,001	1,151
Health (Excellent)	0,930 (0,099)	<0,001	0,916 (0,100)	<0,001	0,923 (0,100)	<0,001	0,923 (0,100)	<0,001	1,079
Domestic situation (Lives alone)	-0,021 (0,054)	0,698	-0,024 (0,054)	0,652	-0,026 (0,054)	0,628	- 0,026 (0,054)	0,630	1,254
Domestic situation (Lives with partner and with children)	0,035 (0,084)	0,488	0,036 (0,050)	0,476	0,034 (0,050)	0,493	0,034 (0,050)	0,496	1,263
Domestic situation (Lives without a partner but with children)	0,039 (0,151)	0,663	0,038 (0,090)	0,670	0,039 (0,089)	0,655	0,037 (0,090)	0,679	1,096
Other (living situation)	0,080 (0,126)	0,523	0,079 (0,126)	0,530	0,080 (0,126)	0,524	0,080 (0,126)	0,524	1,002
Structured leisure time activity (centered)			0,008 (0,006)	0,195	0,009 (0,006)	0,144	0,011 (0,008)	0,163	2,035
Formal leisure time activity (centered)			-0,007 (0,022)	0,760	-0,007 (0,022)	0,744	-0,016 (0,031)	0,608	1,936
Gender					0,100 (0,042)	0,017	0,101 (0,042)	0,015	1,016
Gender*Structured leisure time activity(centered)							-0,006 (0,012)	0,632	1,893
Gender*Formal leisure time activity (centered)							0,018 (0,044)	0,685	2,042
R^2 adjusted	0,153		0,152		0,153		0,153		
F change/p	94,046	0,000	0,857	0,414	5,709	0,017	0,180	0,836	

We also hypothesized that gender would moderate the effect that structured and formal leisure time activity have on life satisfaction. We tested this in the fourth model by adding two interactions to our model whilst using the following null hypotheses of no interaction:

"The effect that structured leisure time activity has on personal satisfaction is the same for men and women."

And:

"The effect that formal leisure time activity has on personal satisfaction is the same for men and women."

Table 3 shows, model 4, shows very small interaction effects for gender and structured leisure time activity (b=-0,006; P=0,632) and gender and formal leisure time activity (b=0,018; P=0,685). Based on these results we were not able to refute the null hypotheses. We found no indications of interaction between gender and formal and structured leisure time activity. This means that there is in all likelihood no difference in how formal and structured leisure time influence personal satisfaction for men and women. What we can de deduct from the effects, is that women seem to have a very small increased effect in personal satisfaction trough formal leisure time activities. Men seem to gain more personal satisfaction trough structured leisure time activities. When interpreting these effects, it is important to keep in mind that these effects are very small (negligible) and could be found trough coincidence. We found that general health was the best indicator of life satisfaction within this sample where people with poor health had on average a lower score on life satisfaction (b=-2,594;p<0,001) and people with excellent health had on average the highest score on life satisfaction, all other things being equal(b=0,923; p<0,001). Our first model had the biggest F-change indicating that this is the model where the most prediction power was added. This is confirmed by the slope of the health-dummy variables which all have rather big significant effects. We also found that age had a tiny but significant effect (b=0,017; p<0,001). This means that the older people get the more satisfied in life they become.

5.   Conclusion and discussion

5.1.   Conclusion

Through this study we wanted to contribute to leisure research and determine how certain kinds of leisure relate to the satisfaction in the lives of people in the Netherlands. We found that structured leisure time activity and formal leisure time activity have no noteworthy influence on the life satisfaction of the Dutch population. We also found no indication that there is a difference between men and women and how their experience of formal and structured leisure time activities influences their satisfaction in life. We hypothesized that engaging in formal and structured leisure time activity would have a positive influence on the life satisfaction of the Dutch population. Contrary to previous findings, our research showed no indication that these kinds of leisure have a positive influence on the life satisfaction of people in the Netherlands. Based on our findings, it is likely that the Dutch derive their satisfaction in life from other kinds of leisure. This could mean that informal leisure activities, such as spending time with family and friends, or home-based leisure activities such as, reading or watching television are more related to the satisfaction in life of Dutch people. But further research would have to verify this.

It could also mean that the Dutch depend on other things then their leisure for satisfaction in life. We found that general health was one of the better indicators for predicting satisfaction in life. This means that people with poor health are less satisfied in life and people in excellent health are the most satisfied in their lives, all other things being equal. We also found that the older people get, the more satisfied in life they become. There are probably many other things we did not account for. According to research by Diener et al, (1999) leisure only becomes a robust indicator of life satisfaction when all other basic needs are met. This leads us to conclude that within the sample used, people might have different priorities relating to leisure because they have other important needs not yet met.

We also argued that, due to historically different developments of leisure and different socialization processes, men and women might enjoy formal and structured leisure time in different ways. We reasoned that if they could experience these kinds of leisure differently, the effect it could have on the satisfaction in life could also be different. Based on these differences in experience, we hypothesised that women would experience less of the positive effects that formal and structured leisure time activity have on life satisfaction. We

found no results that support these hypotheses. Formal and structured leisure time activity do not seem to influence the life satisfaction of women in the Netherlands differently. The Netherlands was an interesting case due to the large proportion of part-time workers in the female Dutch workforce. Women have been known to work a second shift (Hochschild & Machung, 2012). This second shift consists of household and caring tasks which women need to perform next to their labour duties. We wanted to see what the effects of leisure on satisfaction in life were when this second shift is small. In a broader context this implies that when women have a part-time job next to their other responsibilities instead of a full-time job, formal and structured leisure time activities influence satisfaction in life in the same way as with men.

5.2.   Discussion

We found no indication of the relations we hypothesised in the theory. The reason why we might not have found any indication that structured leisure time activity has a positive influence on the life satisfaction of people in the Netherlands could be because of the way we defined and operationalised this variable. We defined structured leisure time activity as leisure time with regular scheduling, an emphasis on skill development and sustained active attention (Mahoney & Stattin, 2000). There has also been research which defined structured leisure time as leisure time which is just structured in time (Newman et al., 2014). When taking this definition into account, a structured leisure time activity is merely an activity which is performed on a regular basis. We decided on a narrower definition of structured leisure time because such a broad definition would have left us with no distinctive category to base our selection of activities on. A broader definition of structured leisure time could have provided us with a more powerful predictor.

Formal leisure time activity was measured within a subset of items where respondents could indicate if they felt connected to the formal organisation, if they were a member of the organisation and if they had volunteered at the organisation. We did not include these items within the variable 'formal leisure time activity' because we were specifically interested in the performance of formal leisure time activities and how this would influence life satisfaction. This might have as consequence that our model explained less than we expected it to. It enabled us to isolate the effect of performing formal leisure activity but we may have lost valuable contextual information within the process. In future research we would therefore

recommend to study formal leisure time activity in the context in which it takes place to get a more complete view of how this kind of leisure influences personal satisfaction. This would also provide a better overview to what extent mechanisms, such as affiliation, occur in performing formal leisure time activity.

Another critical note regarding this research relates to the dataset and matter of analysis. We performed a normal multiple regression analysis even though some observations were not independent of each other. The cases were nested in households. We continued with our multiple regression due to the fact that there were enough households independent of each other and we were not interested in making statements about Dutch households but Dutch people. We do however want to note this in our discussion so people can take note of this whilst evaluating our research.

6.   Literature

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Appendix 1: operationalisations.

In this appendix we have outlined how all variables in the model originally looked, what transformations and computations we performed on each of these items and variables and how the final variable looks which was used in the model.

Personal satisfaction,

Personal satisfaction was left completely the same as it was found in the dataset. No transformations where needed to incorporate this variable in further analysis.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
How satisfied are you with the life you lead at the moment?	5361	1	10	6,98	2,522
Valid N (listwise)	5361				

Structured leisure time.

Structured leisure time activity was calculated by adding the number of hours per week respondents spend on sports, playing an instrument, singing/choir/singing groups, handicrafts (painting, drawing, sculpting), handwork (knitting, crocheting, needlepoint), acting, dancing. These were calculated for all these activities and transformed to make it available for analysis.

The first transformation I performed was the one on number of hours per week spent on sports. I turned all the system missing's into zeroes. People only needed to respond to the question how many hours on average per week do you spent on sport (cs20m105) if they had responded yes to the question: do you participate in sports. This implies that all the system missing's in this item spent zero hours on sports. we transformed this as follows:

```
RECODE cs20m105 (SYSMIS=0) (MISSING=0) (ELSE=Copy) INTO HOURS_SPORT.
VARIABLE LABELS  HOURS_SPORT 'number of hours people on average spent on sports per week '+
   'sysmis=0 hours '.
EXECUTE.
```

For all the other activates different transformations had to be made to get to hours per week spent on activity x. we will elaborate this for one example activity but these transformations apply to all activities except sport.

example 1:

The number of hours per week spent on playing a musical instrument was computed by transforming several items in several ways. To get to this I first transformed the item: cs20m160. This was the question: *"in the past twelve months how many days per week on average did you play a musical instrument?"* Here the value 99 meant never, I transformed this to 0 meaning 0 days a week. Note that 0 also indicates less than one day per week which we assumed to be not regular enough to let these score participate. 0 is meant to mean 0 days per week. The transformation was done as follows:

```
RECODE cs20m160 (99=0) (ELSE=Copy) INTO average_instrument.
VARIABLE LABELS  averagedays_instrument 'average number of days someone spents
playing a muscial '+
   'instrument '.
EXECUTE.
```

Hereafter we transformed the amount of time indicated by respondent from minutes to hours. This was done by transforming the answers to the question: *"on days that you play a musical instrument how much time do you spent playing a musical instrument?"* The item indicating the total number of minutes spent on playing a musical instrument (cs20m381) was divided by 60 to turn minutes into hours. This transformation was done as follows:

```
COMPUTE average_hours_Instrument=cs20m381 / 60.
VARIABLE LABELS  average_hours_Instrument 'average number of hours that respondent
spends on '+
   'playing a musical instrument on days that he play a musical instrument'.
```

```
EXECUTE.
```

The last computation that needed to be performed to get to average number of hours per week spent on playing a musical instrument was multiplaying the average number of days per week that an instrument was played in the past twelve months with the number of hours that this activity is performed when it is performed. This computation was done as follows:

```
COMPUTE Instrument_average_Hoursperweek=average_instrument * Hours_Instrument.
VARIABLE LABELS  Instrument_average_Hoursperweek 'number of hours per week spent
on playing an '+
   'instrument'.
EXECUTE.
```

By doing this for all activities we were able to construct the number of hours per week spent on average on structured leisure time activities. This was done as follows:

```
COMPUTE structured_Leisure_time_activity=Dancing_average_Hoursperweek +
Acting_average_Hoursperweek
   + handwork_average_Hoursperweek + handicrafts_average_Hoursperweek +
   Instrument_average_Hoursperweek + singing_average_Hoursperweek + HOURS_SPORT.
VARIABLE LABELS  structured_Leisure_time_activity 'number of hours spent on structured
leisure '+
   'time activities'.
EXECUTE.
```

Histogram

Mean = 2,07
Std. Dev. = 3,383
N = 6.597

number of hours spent on structured leisure time activities
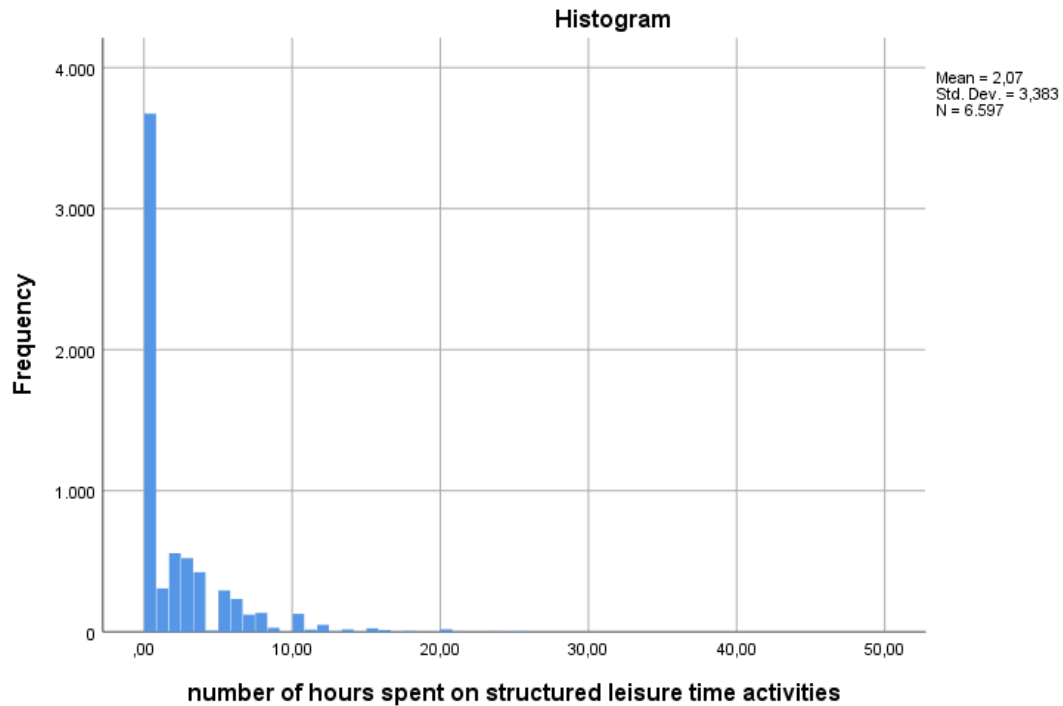
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
number of hours spent on structured leisure time activities	6597	,00	40,00	2,0703	3,38317
Valid N (listwise)	6597				

Other computations and transformations performed for structured leisure time activity.

```
RECODE cs20m161 (99=0) (ELSE=Copy) INTO averagedays_singing.

VARIABLE LABELS  averagedays_singing 'average number of days people spent

singing/choir/singing '+

   'group'.

EXECUTE.
```

```
RECODE cs20m164 (99=0) (ELSE=Copy) INTO averagedays_handicrafts.
VARIABLE LABELS  averagedays_handicrafts 'average number of days per week respondent
performs '+
   'handicrafts'.
EXECUTE.
```

```
RECODE cs20m167 (99=0) (ELSE=Copy) INTO averagedays_handwork.
VARIABLE LABELS  averagedays_handwork 'average number of days per week respondent
performs '+
   'handwork'.
EXECUTE.
```

```
RECODE cs20m173 (99=0) (ELSE=Copy) INTO averagedays_acting.
VARIABLE LABELS  averagedays_acting 'average number of days per week respondent
spents on acting '.
EXECUTE.
```

```
RECODE cs20m185 (99=0) (ELSE=Copy) INTO averagedays_dancing.
VARIABLE LABELS  averagedays_dancing 'average number of days per week that
respondent dances'.
EXECUTE.
```

```
COMPUTE hours_singing=cs20m382 / 60.
VARIABLE LABELS  hours_singing 'number of hours spent on singing/choir/singing group on
days '+
   'that time is spent on this activity'.
EXECUTE.
```

```
COMPUTE Hours_handicrafts=cs20m385 / 60.
VARIABLE LABELS  Hours_handicrafts 'number of hours spent on handicrafts group on days
that time '+
   'is spent on this activity'.
EXECUTE.
```

```
COMPUTE Hours_handwork=cs20m388 / 60.
VARIABLE LABELS  Hours_handwork 'number of hours spent on handwork on days that time
is spent on '+
   'this activity'.
EXECUTE.
```

```
COMPUTE Hours_acting=cs20m394 / 60.
VARIABLE LABELS  Hours_acting 'number of hours spent on acting on days that time is
spent on '+
   'this activity'.
EXECUTE.
```

```
COMPUTE Hours_dancing=cs20m406 / 60.
VARIABLE LABELS  Hours_dancing 'number of hours spent on dancing on days that time is
spent on '+
   'this activity'.
EXECUTE.
```

```
COMPUTE singing_average_Hoursperweek=Hours_singing * averagedays_singing.
VARIABLE LABELS  singing_average_Hoursperweek 'number of hours per week spent on
singing'.
EXECUTE.
```

```
COMPUTE handicrafts_average_Hoursperweek=averagedays_handicrafts *
Hours_handicrafts.
VARIABLE LABELS  handicrafts_average_Hoursperweek 'number of hours per week spent
on handicrafts'.
EXECUTE.
```

```
COMPUTE handwork_average_Hoursperweek=Hours_handwork * averagedays_handwork.
VARIABLE LABELS  handwork_average_Hoursperweek 'number of hours per week spent on
playing an '+
   'handwork'.
EXECUTE.
```

```
COMPUTE Acting_average_Hoursperweek=averagedays_acting *  Hours_acting.
VARIABLE LABELS  Acting_average_Hoursperweek 'number of hours per week spent on
acting'.
EXECUTE.
```

```
COMPUTE Dancing_average_Hoursperweek=averagedays_dancing * Hours_dancing.
VARIABLE LABELS  Dancing_average_Hoursperweek 'number of hours per week spent on
dancing'.
EXECUTE.
```

Formal leisure time activity.

Formal leisure activity consists of various items added together. These are the items by which respondents could indicate if they had performed an activity at certain formal organisations. The could respond by yes or no to the question if they had participated in an activity in the past twelve months at: a sports club [cs20m005], a cultural association or hobby club [cs20m010], a union [cs20m015], a consumer's organisation or automobile club [cs20m025], a human rights or humanitarian organisation [cs20m030], a migrant organisation [cs20m525], an organisation for the environment, peace or animal rights [cs20m035], a political party [cs20m040], a religious or church group [cs20m045], a science- education- teacher or parent association [cs20m050], a society; a club for pensioners, youth, women or friends [cs20m055] and other associations of which you can become a voluntary member [cs20m060].

	No Count	Yes Count
other organizations that you can freely join, participated in an activity	5782	168
a social society; an association for youth, pensioners/senior citizens, women; o	5684	266
a cultural association or hobby club, participated in an activity	5461	489
a sports club, participated in an activity	5220	730
a trade union, participated in an activity	5877	73
a consumers organization or automobile club, participated in an activity	5874	76
a political party, participated in an activity	5830	121
a religious or church organization, participated in an activity	5572	378
an organization for humanitarian aid or human rights, participated in an activit	5821	129

All these items were added together to create the variable formal_leisure_time_activity. This was done in the following way:

```
COMPUTE Formal_leisure_time_activity=cs20m005 + cs20m010 + cs20m015 + cs20m025 +
cs20m525 +
    cs20m035 + cs20m040 + cs20m045 + cs20m050 + cs20m055 + cs20m060.
VARIABLE LABELS  Formal_leisure_time_activity 'number of organisations participant has '+
    'participated in activities over the past year'.
EXECUTE.
```

number of organisations participant has participated in activities over the past year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	4204	61,9	70,7	70,7
	1,00	1112	16,4	18,7	89,4
	2,00	413	6,1	6,9	96,3
	3,00	119	1,8	2,0	98,3
	4,00	44	,6	,7	99,0
	5,00	28	,4	,5	99,5
	6,00	10	,1	,2	99,7
	7,00	8	,1	,1	99,8
	8,00	6	,1	,1	99,9
	9,00	1	,0	,0	99,9
	11,00	4	,1	,1	100,0
	Total	5949	87,5	100,0	
Missing	System	846	12,5		
Total		6795	100,0		

Statistics

number of organisations participant has participated in activities over the past year

N	Valid	5949
	Missing	846
Mean		,4754
Std. Deviation		,96993
Minimum		,00
Maximum		11,00

Gender

The dataset consists for 45,75% out of males and 54,3% out of females.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	3107	45,7	45,7	45,7
	Female	3688	54,3	54,3	100,0
	Total	6795	100,0	100,0	

This variable was recoded into a working dummy variable.

```
RECODE geslacht (2=1) (1=0).
EXECUTE.
```

Age

the variable age was left virtually unchanged. No transformation or computations were done to make it ready for further analysis.

38
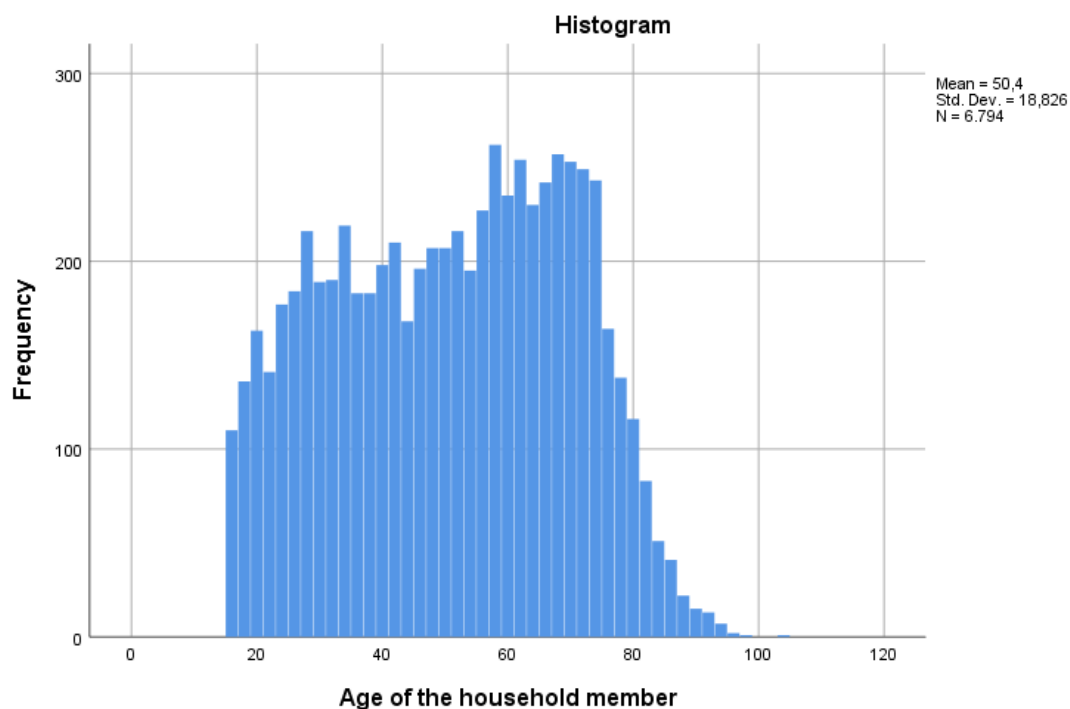
Statistics

Age of the household member

N	Valid	6794
	Missing	0
Mean		50,40
Median		52,00
Mode		62
Std. Deviation		18,826
Minimum		16
Maximum		103

General health

How would you describe your health, generally speaking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Poor	89	1,3	1,6	1,6
	Moderate	892	13,1	15,6	17,1
	good	3169	46,6	55,3	72,4
	very good	1283	18,9	22,4	94,8
	excellent	297	4,4	5,2	100,0
	Total	5730	84,3	100,0	
Missing	System	1065	15,7		
Total		6795	100,0		

General health (item: ch20m004) was recoded into four dummy variables (variable names: poor_health, moderate_health, very_good_health and excellent_health) to make the categorical variable usable in multiple regression analysis. This was done as follows:

RECODE ch20m004 (1=1) (2 thru Highest=0) INTO poor_health.

VARIABLE LABELS poor_health 'respondent has poor health'.

EXECUTE.

RECODE ch20m004 (1=0) (2=1) (3 thru Highest=0) INTO moderate_health.

VARIABLE LABELS moderate_health 'respondent has moderate health'.

EXECUTE.

RECODE ch20m004 (4=1) (5=0) (Lowest thru 3=0) INTO very_good_health.

VARIABLE LABELS very_good_health 'respondent has very good health'.

EXECUTE.

RECODE ch20m004 (5=1) (Lowest thru 4=0) INTO excellent_health.

VARIABLE LABELS excellent_health 'respondent has excellent health'.

EXECUTE.

respondent has poor health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	5641	83,0	98,4	98,4
	1,00	89	1,3	1,6	100,0
	Total	5730	84,3	100,0	
Missing	System	1065	15,7		
Total		6795	100,0		

respondent has moderate health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	4838	71,2	84,4	84,4
	1,00	892	13,1	15,6	100,0
	Total	5730	84,3	100,0	
Missing	System	1065	15,7		
Total		6795	100,0		

respondent has very good health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	4447	65,4	77,6	77,6
	1,00	1283	18,9	22,4	100,0
	Total	5730	84,3	100,0	
Missing	System	1065	15,7		
Total		6795	100,0		

respondent has excellent health

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	5433	80,0	94,8	94,8
	1,00	297	4,4	5,2	100,0
	Total	5730	84,3	100,0	
Missing	System	1065	15,7		
Total		6795	100,0		

Domestic situation

Domestic situation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	1671	24,6	24,6	24,6
	(Un)married co-habitation, without child(ren)	2336	34,4	34,4	59,0
	(Un)married co-habitation, with child(ren)	2184	32,1	32,1	91,1
	Single, with child(ren)	413	6,1	6,1	97,2
	Other	191	2,8	2,8	100,0
	Total	6795	100,0	100,0	

Domestic situation (item: woonvorm) was transformed into four dummy variables as to make the categorical variable viable for multiple regression analysis (variable names: single, cohabit_nochild, cohab_child, single_child). This was done as follows:

```
RECODE woonvorm (1=1) (ELSE=0) INTO single.
VARIABLE LABELS  single 'respondent lives alone'.
EXECUTE.
```

```
RECODE woonvorm (3=1) (ELSE=0) INTO cohab_child.
VARIABLE LABELS  cohab_child 'respondent lives toghether with a partner and children'.
EXECUTE.
```

```
RECODE woonvorm (4=1) (ELSE=0) INTO single_child.
VARIABLE LABELS  single_child 'respondent lives without a partner with children'.
EXECUTE.
```

```
RECODE woonvorm (5=1) (ELSE=0) INTO other.
VARIABLE LABELS  other 'respondent lives within other living situation'.
EXECUTE.
```

respondent lives alone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	5124	75,4	75,4	75,4
	1,00	1671	24,6	24,6	100,0
	Total	6795	100,0	100,0	

respondent lives together with a partner and children

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	6604	97,2	97,2	97,2
	1,00	191	2,8	2,8	100,0
	Total	6795	100,0	100,0	

respondent lives together with a partner and children

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	6382	93,9	93,9	93,9
	1,00	413	6,1	6,1	100,0
	Total	6795	100,0	100,0	

respondent lives within other living situation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	,00	5133	65,6	65,6	65,6
	1,00	2336	34,4	34,4	100,0
	Total	6795	100,0	100,0	

Appendix 2.

All univariate distributions, and variable syntax can be found in appendix 1.

2.1 Bivariate analysis.

Al pearson's correlation of all the continuous variables.

```
CORRELATIONS
  /VARIABLES=leeftijd geslacht cp21m011 Formal_leisure_time_activity
    structured_Leisure_time_activity
  /PRINT=TWOTAIL NOSIG
  /MISSING=PAIRWISE.
```

Correlations

		Age of the household member	Gender	How satisfied are you with the life you lead at the moment?	number of organisations participant has participated in activities over the past year	number of hours spent on structured leisure time activities
Age of the household member	Pearson Correlation	1	-,071**	,090**	-,036**	-,014
	Sig. (2-tailed)		,000	,000	,005	,256
	N	6794	6794	5361	5948	6597
Gender	Pearson Correlation	-,071**	1	,008	,002	-,068**
	Sig. (2-tailed)	,000		,534	,869	,000
	N	6794	6794	5361	5948	6597
How satisfied are you with the life you lead at the moment?	Pearson Correlation	,090**	,008	1	-,026	,052**
	Sig. (2-tailed)	,000	,534		,069	,000
	N	5361	5361	5361	5064	5185
number of organisations participant has participated in activities over the past year	Pearson Correlation	-,036**	,002	-,026	1	,092**
	Sig. (2-tailed)	,005	,869	,069		,000
	N	5948	5948	5064	5948	5751
number of hours spent on structured leisure time activities	Pearson Correlation	-,014	-,068**	,052**	,092**	1
	Sig. (2-tailed)	,256	,000	,000	,000	
	N	6597	6597	5185	5751	6597

**. Correlation is significant at the 0.01 level (2-tailed).

2.2 All Cramer's V correlation.

The Cramer's v of domestic situation and general health.

```
CROSSTABS
  /TABLES=woonvorm BY ch20m004
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ PHI CORR
  /CELLS=COUNT
  /COUNT ROUND CELL.
```

Symmetric Measures

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Phi	,051			,537
	Cramer's V	,025			,537
Interval by Interval	Pearson's R	-,004	,013	-,296	,767[c]
Ordinal by Ordinal	Spearman Correlation	-,009	,013	-,652	,514[c]
N of Valid Cases		5730			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Cramer's v of sex and general health

```
CROSSTABS
  /TABLES=geslacht BY ch20m004
  /FORMAT=AVALUE TABLES
  /STATISTICS=CHISQ PHI CORR
  /CELLS=COUNT
  /COUNT ROUND CELL.
```

Symmetric Measures

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Phi	,017			,803
	Cramer's V	,017			,803
Interval by Interval	Pearson's R	-,007	,013	-,555	,579[c]
Ordinal by Ordinal	Spearman Correlation	-,007	,013	-,563	,573[c]
N of Valid Cases		5729			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Cramer's V domestic situation and gender.

```
CROSSTABS

  /TABLES=geslacht BY woonvorm

  /FORMAT=AVALUE TABLES

  /STATISTICS=CHISQ PHI CORR

  /CELLS=COUNT

  /COUNT ROUND CELL
```

Symmetric Measures

		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Phi	,020			,608
	Cramer's V	,020			,608
Interval by Interval	Pearson's R	-,007	,012	-,604	,546[c]
Ordinal by Ordinal	Spearman Correlation	-,008	,012	-,644	,520[c]
N of Valid Cases		6794			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

2.3 All correlations based on ANOVA's

Correlation based on ANOVA general health and life satisfaction

UNIANOVA cp21m011 BY ch20m004

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(0.05)

/DESIGN=ch20m004.

Tests of Between-Subjects Effects

Dependent Variable: How satisfied are you with the life you lead at the moment?

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	353,119[a]	4	88,280	12,091	,000
Intercept	60590,122	1	60590,122	8298,842	,000
ch20m004	353,119	4	88,280	12,091	,000
Error	32117,245	4399	7,301		
Total	251160,000	4404			
Corrected Total	32470,364	4403			

a. R Squared = ,011 (Adjusted R Squared = ,010)

Correlation based on ANOVA, age and general health

UNIANOVA leeftijd BY ch20m004

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/CRITERIA=ALPHA(0.05)

/DESIGN=ch20m004.

Tests of Between-Subjects Effects

Dependent Variable: Age of the household member

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	6308,354[a]	4	1577,088	4,352	,002
Intercept	3914439,850	1	3914439,850	10803,176	,000
ch20m004	6308,354	4	1577,088	4,352	,002
Error	2074043,179	5724	362,342		
Total	16801386,00	5729			
Corrected Total	2080351,533	5728			

a. R Squared = ,003 (Adjusted R Squared = ,002)

Correlation based on ANOVA, domestic situation and life satisfaction.

UNIANOVA cp21m011 BY woonvorm

  /METHOD=SSTYPE(3)

  /INTERCEPT=INCLUDE

  /CRITERIA=ALPHA(0.05)

  /DESIGN=woonvorm.

Tests of Between-Subjects Effects

Dependent Variable: How satisfied are you with the life you lead at the moment?

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	42,947[a]	4	10,737	1,688	,150
Intercept	104988,853	1	104988,853	16510,070	,000
woonvorm	42,947	4	10,737	1,688	,150
Error	34059,230	5356	6,359		
Total	295072,000	5361			
Corrected Total	34102,178	5360			

a. R Squared = ,001 (Adjusted R Squared = ,001)

Correlation based on ANOVA, domestic situation and age

UNIANOVA leeftijd BY woonvorm

  /METHOD=SSTYPE(3)

  /INTERCEPT=INCLUDE

  /CRITERIA=ALPHA(0.05)

  /DESIGN=woonvorm.

Tests of Between-Subjects Effects

Dependent Variable: Age of the household member

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	477,283[a]	4	119,321	,337	,853
Intercept	6966381,324	1	6966381,324	19647,591	,000
woonvorm	477,283	4	119,321	,337	,853
Error	2407153,221	6789	354,567		
Total	19668542,00	6794			
Corrected Total	2407630,504	6793			

a. R Squared = ,000 (Adjusted R Squared = ,000)

Correlation based on ANOVA, general health and structured leisure time activity.

UNIANOVA structured_Leisure_time_activity BY ch20m004

 /METHOD=SSTYPE(3)

 /INTERCEPT=INCLUDE

 /CRITERIA=ALPHA(0.05)

 /DESIGN=ch20m004.

Tests of Between-Subjects Effects

Dependent Variable: number of hours spent on structured leisure time activities

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	51,424[a]	4	12,856	1,092	,359
Intercept	5949,205	1	5949,205	505,173	,000
ch20m004	51,424	4	12,856	1,092	,359
Error	65195,085	5536	11,777		
Total	89155,431	5541			
Corrected Total	65246,509	5540			

a. R Squared = ,001 (Adjusted R Squared = ,000)

Correlation based on ANOVA for structured leisure time and domestic situation.

```
UNIANOVA structured_Leisure_time_activity BY woonvorm

 /METHOD=SSTYPE(3)

 /INTERCEPT=INCLUDE

 /CRITERIA=ALPHA(0.05)

 /DESIGN=woonvorm.
```

Tests of Between-Subjects Effects

Dependent Variable: number of hours spent on structured leisure time activities

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12,476[a]	4	3,119	,272	,896
Intercept	11948,945	1	11948,945	1043,497	,000
woonvorm	12,476	4	3,119	,272	,896
Error	75484,078	6592	11,451		
Total	103772,361	6597			
Corrected Total	75496,554	6596			

a. R Squared = ,000 (Adjusted R Squared = ,000)

Correlation based on ANOVA for Formal leisure time activity and domestic situation

```
UNIANOVA Formal_leisure_time_activity BY woonvorm

 /METHOD=SSTYPE(3)

 /INTERCEPT=INCLUDE

 /CRITERIA=ALPHA(0.05)

 /DESIGN=woonvorm.
```

Tests of Between-Subjects Effects

Dependent Variable: number of organisations participant has participated in activities over the past year

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3,209[a]	4	,802	,853	,492
Intercept	488,084	1	488,084	518,701	,000
woonvorm	3,209	4	,802	,853	,492
Error	5592,207	5943	,941		
Total	6940,000	5948			
Corrected Total	5595,416	5947			

a. R Squared = ,001 (Adjusted R Squared = ,000)

Correlation based on ANOVA for Formal leisure time activity and general health.

UNIANOVA Formal_leisure_time_activity BY ch20m004

 /METHOD=SSTYPE(3)

 /INTERCEPT=INCLUDE

 /CRITERIA=ALPHA(0.05)

 /DESIGN=ch20m004

Tests of Between-Subjects Effects

Dependent Variable: number of organisations participant has participated in activities over the past year

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5,393[a]	4	1,348	1,385	,237
Intercept	292,814	1	292,814	300,704	,000
ch20m004	5,393	4	1,348	1,385	,237
Error	4838,620	4969	,974		
Total	6003,000	4974			
Corrected Total	4844,013	4973			

a. R Squared = ,001 (Adjusted R Squared = ,000)

2.4 syntax and output multiple regression analysis.

Syntax command analysis.

All regression analysis were performed with only valid scores on the personal satisfaction variable. We used the following command to select these cases.
USE ALL. COMPUTE filter_$=(cp21m011 ~= - 9). VARIABLE LABELS filter_$ 'cp21m011 ~= - 9 (FILTER)'. VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'. FORMATS filter_$ (f1.0). FILTER BY filter_$. EXECUTE.

Syntax command for the regression analysis used for the model containing results and the models without residuals and the model without cook's distances and leverages.
DATASET ACTIVATE DataSet1. REGRESSION   /MISSING LISTWISE   /STATISTICS COEFF OUTS CI(95) R ANOVA COLLIN TOL CHANGE   /CRITERIA=PIN(.05) POUT(.10)   /NOORIGIN   /DEPENDENT cp21m011   /METHOD=ENTER leeftijd poor_health moderate_health very_good_health excellent_health single   cohab_child single_child other   /METHOD=ENTER Formal_leisure_time_activity structured_Leisure_time_activity   /METHOD=ENTER geslacht   /METHOD=ENTER gender_X_SLTA gender_X_FLTA.

Output multiple regression analysis.

Documentation of analysis, output and syntax.

For this thesis we ran several stepwise regression analyses. We have added the relevant output of this analysis below. In step one we added our control variables health, age and domestic situation. In our second step we added our independent variables formal leisure time activity and structured leisure time activity. In our third step we added gender. In the fourth and final step we added the interaction terms of gender and structured leisure time activity and gender and formal leisure time activity. The first output is of the regression used.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	,393ᵃ	,154	,153	1,413	,154	94,046	9	4643	,000
2	,393ᵇ	,155	,152	1,413	,000	,857	2	4641	,424
3	,394ᶜ	,156	,153	1,412	,001	5,709	1	4640	,017
4	,394ᵈ	,156	,153	1,412	,000	,180	2	4638	,836

a. Predictors: (Constant), respondent lives within other living situation, Age of the household member, respondent lives alone, respondent has poor health, respondent lives toghether without a partner and with children, respondent has excellent health, respondent has moderate health, respondent has very good health, respondent lives toghether with a partner and children

b. Predictors: (Constant), respondent lives within other living situation, Age of the household member, respondent lives alone, respondent has poor health, respondent lives toghether without a partner and with children, respondent has excellent health, respondent has moderate health, respondent has very good health, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities

c. Predictors: (Constant), respondent lives within other living situation, Age of the household member, respondent lives alone, respondent has poor health, respondent lives toghether without a partner and with children, respondent has excellent health, respondent has moderate health, respondent has very good health, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities, Gender

d. Predictors: (Constant), respondent lives within other living situation, Age of the household member, respondent lives alone, respondent has poor health, respondent lives toghether without a partner and with children, respondent has excellent health, respondent has moderate health, respondent has very good health, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities, Gender, gender_X_SLTA, gender_X_FLTA

Model	Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	6,350	,077		82,767	,000	6,199	6,500		
	Age of the household member	,017	,001	,204	14,513	,000	,015	,020	,919	1,088
	respondent has poor health	-2,603	,174	-,204	-14,987	,000	-2,943	-2,262	,988	1,012
	respondent has moderate health	-,985	,059	-,234	-16,609	,000	-1,101	-,868	,920	1,087
	respondent has very good health	,495	,053	,134	9,292	,000	,391	,600	,881	1,136
	respondent has excellent health	,930	,099	,130	9,353	,000	,735	1,125	,939	1,065
	respondent lives alone	-,021	,054	-,006	-,388	,698	-,127	,085	,800	1,251
	respondent lives toghether with a partner and children	,035	,050	,011	,694	,488	-,063	,132	,792	1,262
	respondent lives toghether without a partner and with children	,039	,089	,006	,436	,663	-,136	,215	,914	1,095
	respondent lives within other living situation	,080	,126	,009	,639	,523	-,166	,327	,998	1,002
2	(Constant)	6,335	,079		80,559	,000	6,181	6,489		
	Age of the household member	,017	,001	,205	14,524	,000	,015	,020	,918	1,090
	respondent has poor health	-2,594	,174	-,203	-14,924	,000	-2,934	-2,253	,986	1,014
	respondent has moderate health	-,980	,059	-,233	-16,514	,000	-1,097	-,864	,917	1,090
	respondent has very good health	,488	,054	,132	9,112	,000	,383	,594	,871	1,148
	respondent has excellent health	,916	,100	,128	9,155	,000	,720	1,112	,928	1,078
	respondent lives alone	-,024	,054	-,007	-,452	,652	-,131	,082	,798	1,254
	respondent lives toghether with a partner and children	,036	,050	,011	,713	,476	-,062	,133	,792	1,263
	respondent lives toghether without a partner and with children	,038	,090	,006	,427	,670	-,137	,214	,913	1,095
	respondent lives within other living situation	,079	,126	,008	,629	,530	-,168	,326	,998	1,002
	number of organisations participant has participated in activities over the past year	-,007	,022	-,004	-,306	,760	-,050	,036	,989	1,011
	number of hours spent on structured leisure time activities	,008	,006	,018	1,297	,195	-,004	,019	,955	1,047

|		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
3	(Constant)	6,266	,084		74,751	,000	6,101	6,430		
	Age of the household member	,017	,001	,208	14,688	,000	,015	,020	,910	1,099
	respondent has poor health	-2,593	,174	-,203	-14,927	,000	-2,933	-2,252	,986	1,014
	respondent has moderate health	-,980	,059	-,233	-16,520	,000	-1,097	-,864	,917	1,090
	respondent has very good health	,493	,054	,133	9,203	,000	,388	,599	,870	1,150
	respondent has excellent health	,923	,100	,129	9,227	,000	,727	1,119	,927	1,079
	respondent lives alone	-,026	,054	-,007	-,485	,628	-,133	,080	,798	1,254
	respondent lives toghether with a partner and children	,034	,050	,010	,685	,493	-,063	,132	,792	1,263
	respondent lives toghether without a partner and with children	,039	,089	,006	,433	,665	-,137	,214	,913	1,095
	respondent lives within other living situation	,080	,126	,009	,637	,524	-,166	,327	,998	1,002
	number of organisations participant has participated in activities over the past year	-,007	,022	-,004	-,327	,744	-,050	,036	,989	1,011
	number of hours spent on structured leisure time activities	,009	,006	,020	1,462	,144	-,003	,020	,950	1,053
	Gender	,100	,042	,032	2,389	,017	,018	,182	,986	1,014
4	(Constant)	6,264	,085		73,445	,000	6,097	6,431		
	Age of the household member	,017	,001	,208	14,676	,000	,015	,020	,910	1,099
	respondent has poor health	-2,594	,174	-,203	-14,929	,000	-2,935	-2,253	,986	1,014
	respondent has moderate health	-,981	,059	-,233	-16,527	,000	-1,098	-,865	,917	1,091
	respondent has very good health	,493	,054	,133	9,185	,000	,388	,598	,868	1,151
	respondent has excellent health	,923	,100	,129	9,218	,000	,726	1,119	,926	1,079
	respondent lives alone	-,026	,054	-,007	-,482	,630	-,132	,080	,798	1,254
	respondent lives toghether with a partner and children	,034	,050	,010	,680	,496	-,064	,131	,792	1,263
	respondent lives toghether without a partner and with children	,037	,090	,006	,413	,679	-,139	,212	,912	1,096
	respondent lives within other living situation	,080	,126	,009	,638	,524	-,166	,327	,998	1,002
	number of organisations participant has participated in activities over the past year	-,016	,031	-,010	-,512	,608	-,077	,045	,492	2,035
	number of hours spent on structured leisure time activities	,011	,008	,026	1,397	,163	-,005	,027	,516	1,936
	Gender	,101	,042	,033	2,405	,016	,019	,183	,985	1,016
	gender_X_SLTA	-,006	,012	-,009	-,479	,632	-,029	,017	,528	1,893
	gender_X_FLTA	,018	,044	,008	,406	,685	-,068	,104	,490	2,042

a. Dependent Variable: How satisfied are you with the life you lead at the moment?

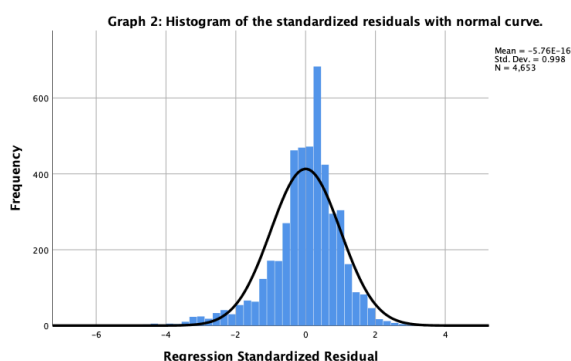**Appendix 3, modelfit and influential points.**

There are 4 basic assumptions which need to be met to perform a good regression analysis. The first assumption is that of independent cases. All observations should be made independently of each other and should not influence each other. The second assumption is that of linearity. The regression function should be linear. This assumption entails that the conditional distribution of should be normally distributed. The fourth and last assumption is that pf homoscedasticity. In this appendix I will elaborate shortly on if these assumptions where met.

The first assumptions of independent observations were not met. The LISS panel asks households to fill in questionnaires. this means that we can't eliminate the possibility of certain cases influencing each other i.e., people from the same household influence each other. Even though not all observations are independent of each other there are still about 5000 independent households. This number of independent households provides a large enough sample of independent observations to still make generalizations over the population.

The second assumption of linearity has not been met, when looking at the first graph the first graph we can see clear that the graph points are not randomly distributed. This is due to the fact that our dependent variable had 11 possible categories of answering [0-10]. There is a certain group with very high predicted values. The group on the left of the of the stripes. We can see three distinct groups within the scatterplot. Further inspection of the data gave us no insight as to which categories these groups differentiated on except their predicted residuals. The assumption of linearity has not been met which means we are careful when interpreting the results since the prediction based on this model could be off since there is no linear regression equation.

Scatterplot
Dependent Variable: How satisfied are you with the life you lead at the moment?
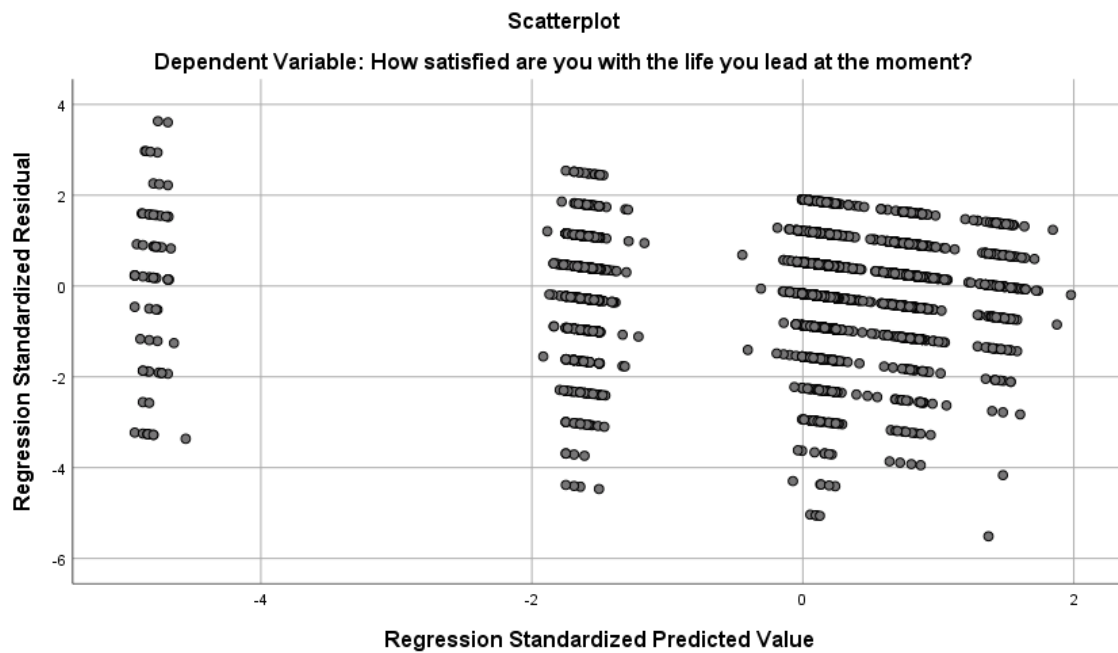
The third assumption relates to the conditional distribution of the variable of life satisfaction. This condition distribution should be distributed normally. When looking at our second graph we can see that this distribution looks rather normal. When looking at the P-P plot in graph three we can see that the distribution is not distributed as normal as the histogram would lead us to expect. It is still however normal in such a way that we can reasonably have said to have fulfilled this assumption.

Graph 2: Histogram of the standardized residuals with normal curve.

Mean = −5.76E-16
Std. Dev. = 0.998
N = 4,653

Graph 3: Normal P–P Plot of Regression Standardized Residual
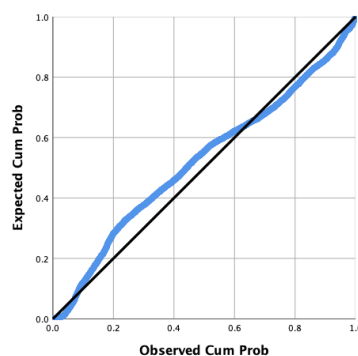
The last assumption is the assumption of homoscedasticity. As we have mentioned earlier there are three separate clouds to see in the residual plot. Looking at the residual plot there seem to be various influential point which influence our data and maybe even our analysis. To be certain we worked with a good model we ran the regression analyses two more times. The

first time we ran it without all cases which had a predicted residual lower than -3. Below is the model summary of this model. It has an R² of 0,125 which is lower than the R² of our initial model. Removing the cases with high predicted residuals seems to worsen our model.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	,353[a]	,125	,123	1,384	,125	81,558	8	4576	,000
2	,354[b]	,125	,123	1,384	,000	,949	2	4574	,387
3	,355[c]	,126	,124	1,383	,001	3,746	1	4573	,053
4	,355[d]	,126	,123	1,383	,000	,200	2	4571	,819

a. Predictors: (Constant), Age of the household member, respondent lives within other living situation, respondent lives toghether without a partner and with children, respondent lives alone, respondent has moderate health, respondent has excellent health, respondent has very good health, respondent lives toghether with a partner and children

b. Predictors: (Constant), Age of the household member, respondent lives within other living situation, respondent lives toghether without a partner and with children, respondent lives alone, respondent has moderate health, respondent has excellent health, respondent has very good health, respondent lives toghether with a partner and children, FLTA_centered, SLTA_centered

c. Predictors: (Constant), Age of the household member, respondent lives within other living situation, respondent lives toghether without a partner and with children, respondent lives alone, respondent has moderate health, respondent has excellent health, respondent has very good health, respondent lives toghether with a partner and children, FLTA_centered, SLTA_centered, Gender

d. Predictors: (Constant), Age of the household member, respondent lives within other living situation, respondent lives toghether without a partner and with children, respondent lives alone, respondent has moderate health, respondent has excellent health, respondent has very good health, respondent lives toghether with a partner and children, FLTA_centered, SLTA_centered, Gender, gender_X_SLTA, gender_X_FLTA

We also checked for other influential points. We removed cases with a leverage value higher than twice the mean leverage. This is a leverage 0,0051884. We removed 518 cases this way. We also removed cases with a Cook's distance larger then 4/N or 4/4585. There were 290 cases with larger cook's distances.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	,357[a]	,127	,126	1,153	,127	82,962	7	3981	,000
2	,358[b]	,128	,126	1,153	,001	1,358	2	3979	,257
3	,358[c]	,128	,126	1,153	,000	,618	1	3978	,432
4	,358[d]	,128	,126	1,153	,000	,381	2	3976	,683

a. Predictors: (Constant), respondent lives toghether without a partner and with children, respondent has very good health, respondent has excellent health, respondent lives alone, respondent has moderate health, Age of the household member, respondent lives toghether with a partner and children

b. Predictors: (Constant), respondent lives toghether without a partner and with children, respondent has very good health, respondent has excellent health, respondent lives alone, respondent has moderate health, Age of the household member, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities

c. Predictors: (Constant), respondent lives toghether without a partner and with children, respondent has very good health, respondent has excellent health, respondent lives alone, respondent has moderate health, Age of the household member, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities, Gender

d. Predictors: (Constant), respondent lives toghether without a partner and with children, respondent has very good health, respondent has excellent health, respondent lives alone, respondent has moderate health, Age of the household member, respondent lives toghether with a partner and children, number of organisations participant has participated in activities over the past year, number of hours spent on structured leisure time activities, Gender, gender_X_SLTA, gender_X_FLTA

Above you can see the model summary of the regression performed without these cases. In this model the R^2 also does not increase in relation to our initial model. Based on this we decided not to remove any of these cases.