

Cultural heritage proximity and its effect on subjective well-being: A case study in Groningen, The Netherlands



Source: Rijksdienst voor het Cultureel Erfgoed (2021)

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Word count: 6.597

11/06/2021

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Abstract

Cultural heritage and cultural heritage preservation have become an important part of urban planning. However, not much is known about the influence of cultural heritage on the well-being of residents. Therefore, this research tries to answer the question to what extent cultural heritage proximity influences subjective well-being (SWB). This study researches the city of Groningen, the Netherlands, a middle-sized city with mixed neighbourhoods containing both a sizeable amount of cultural heritage and no cultural heritage at all. This was realised by conducting a mixed methods approach, using both a questionnaire and conducting in-depth interviews. The results indicate that there is no direct relation between cultural heritage proximity and SWB. However, the in-depth interviews suggest that cultural heritage can indirectly affect the residential satisfaction of inhabitants, and therefore, can also have an effect on SWB. For future research it is, therefore, recommended to conduct more in-depth interviews to gain a greater insight into this effect.

Key words: Cultural heritage, Cultural heritage proximity, subjective well-being

1. Introduction

1.1 Background

1.1.1 Academic relevance

For a long time, researchers have researched cultural heritage and the role it plays in cities worldwide. However, these papers often focus on objective factors and benefits of cultural heritage within their surroundings (Ezeh, 2008; Deacon, 2020; Vilbrandt et al., 2004). The impact of cultural heritage on the well-being of urban residents, however, has only been looked upon for a relatively short time. Research has suggested that cultural heritage can have a great impact on the social capital within a city since it can have economic, cultural and social benefits (Bullen & Love, 2011). Cultural heritage and the preservation of cultural heritage has become an important part of urban planning (Bandarin & van Oers, 2021; Coulson & Ieichenko, 2004; Poulis, 2014). A lot of research has been conducted on how this can be executed best and what effects this will have on inhabitants, on the economy and more (Oppio & Dell'Ovo, 2020; Stephens & Tiwara, 2015; Rudokas et al., 2019). However, less research is conducted on the direct effect of cultural heritage on SWB. Therefore, this research will go further than just the socio-demographic effects cultural heritage has on residents but will also explore how this influences the SWB of urban residents.

1.1.2 Societal relevance

This research will be conducted in the municipality of Groningen. Groningen is a medium-sized city that has around 200.000 inhabitants. The city has a rich history with a sizeable amount of urban reminders. The oldest buildings in the city centre were built in the 15th century and multiple surrounding neighbourhoods have been built before the second world war (Erfgoed Groningen, 2020). Therefore, a lot of tangible immovable heritage can be found in Groningen which makes it a relevant and interesting city for this research. The municipality of Groningen has also created several documents related to their view on cultural heritage and its preservation. In a policy plan created by the municipality, the city has implemented policies to promote cultural heritage prevention since it promotes the identity of Groningen and its residents (Gemeente Groningen, 2020). This research will deepen into why and how cultural heritage can promote the identity of Groningen and how this can influence the well-being of residents of the city.

1.2 Research problem

This thesis will aim to research cultural heritage in the city of Groningen and the effect on the SWB of its residents. To be able to explore the effects on SWB, the proximity of cultural heritage in the living environment will be researched. The central research question will therefore be;

“To what extent does the proximity of cultural heritage influence the subjective well-being of residents of Groningen?”

The sub questions are:

- 1. What is subjective well-being, and which factors influence the subjective well-being of residents?*
- 2. What are the values of cultural heritage proximity that affect the subjective well-being of residents?*
- 3. How does the effect of cultural heritage proximity on subjective well-being differ between residents and residential locations?*

Through reviewing relevant literature and the collection of quantitative and qualitative data these questions will be answered.

1.3 Reading Guide

This research comprises six chapters. In chapter 1, the topic will be introduced and the research problem is stated. In chapter 2, the theoretical framework is created based on relevant literature and hypotheses are made. In chapter 3, the methodology will be explained. In chapter 4, the results of the questionnaire and the interviews will be analysed. In chapter 5, there will be a discussion based on the results related to relevant literature. In chapter 6, the conclusion and recommendations for further research will be constructed.

2. Theoretical framework

2.1 Literature review

2.1.1 Defining cultural heritage

First and foremost, the concept of cultural heritage needs to be defined. There is no clear definition of cultural heritage since it encompasses different facets. However, for this research, the definitions of UNESCO will be used. UNESCO (2017), divides cultural heritage into categories, which can be seen in figure 1. Cultural heritage can exist out of tangible heritage, which can both be movable and immovable objects such as monuments, ruins, coins, and intangible heritage which can be traditions, rituals and performances. This research will mostly focus on tangible immovable heritage, such as monuments, buildings and architectural sites.

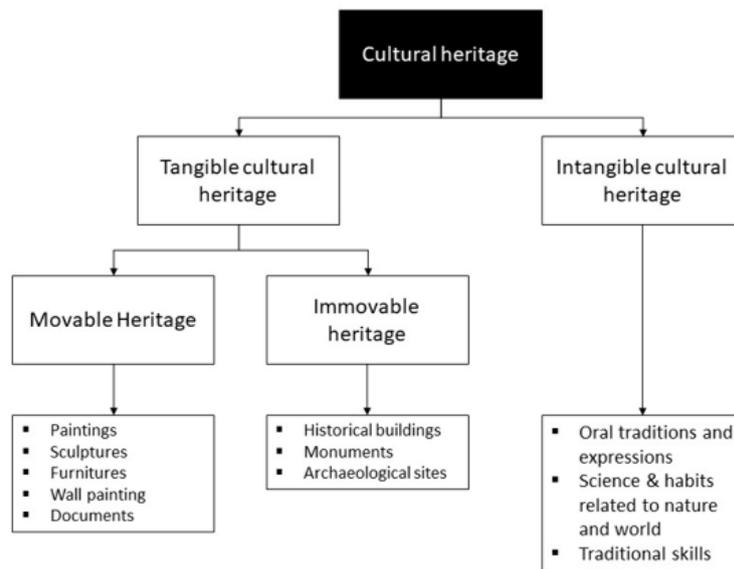


figure 1: Cultural heritage explained, Source: [Cosovic et al. \(2019\)](#) (adapted by author)

Over time, multiple charters have been created for the reason to prevent heritage decay and to promote heritage conservation and restoration (Ahmad, 2006). The most important, the Venice charter of 1964, created by the International Council on Monuments and Sites (ICOMOS), was created to protect cultural monuments for their impact on the awareness of cultural specific old-age traditions (ICOMOS, 1965).

2.1.2 Subjective well-being (SWB) indicators

Subjective well-being is a broad term used to measure happiness, life satisfaction, quality of life and more (Diener, 1994). Diener & Ryan (2009), describe SWB as an umbrella term used for the well-being people experience according to subjective evaluations of their lives. Therefore, multiple factors are incorporated in measuring SWB. Veenhoven (1984), described SWB as: “the degree to which an individual judges the overall quality of her or his life as a whole in a favourable way” (pp. 22). SWB is therefore often measured with self-assessment methods. These often indicate life satisfaction or happiness assessed by respondents themselves, through qualitative or quantitative research (Diener & Ryan, 2009). SWB is often used over objective well-being because objective indicators alone cannot

cover the diverse character of well-being since humans all have subjective interpretations of the social world. It has also been argued that subjective measurements can provide policymakers with important information about public preferences and gives people a voice (Vik & Carlquist, 2018).

SWB can be measured by assessing multiple factors. These factors can influence well-being directly, but also indirectly. SWB can, for example, be indirectly influenced by wealth. When a person is wealthy, life expectancy, health and education tend to be better, which in turn can influence the well-being of a person (Senik, 2014). When also taking into account indirect factors influencing SWB, numerous factors can influence SBW, which makes it difficult to fully measure. Helliwell (2003), mentions the importance of personality, social environment and circumstances on SWB. This paper analysed variables used to measure SWB based on numerous previous papers. The variables used to measure SWB in this paper are; Health, employment, marital status, age, religion, quality of national institutions, and income. According to Helliwell (2003), these variables all have a relationship with SWB.

2.1.3 Cultural heritage indicators for subjective well-being

In multiple articles, the importance of emotional bonds with the living place is stated (Sari et al., 2018; Lewicka, 2008). According to Lewicka (2008), having an emotional bond with a place can help to prevent and overcome identity crises and gives people a sense of stability and facilitates involvement in local activities. Therefore, the concept of place attachment is important in the well-being of citizens, because this correlates with perceived happiness, self-efficacy and active citizenship behaviour (de Azevedo et al., 2013). Place attachment can be seen as the bonds people develop with places, Lewicka (2008) mentions three ways in achieving place attachment. Place attachment can be reached through; residence length, social ties, and physical features and symbolic meanings. Sari et al. (2018), states that people will likely have more place attachment in a city with a high concentration of historical values because through these places it's easier to connect to local cultures and heritage. Historical sites can also create a sense of continuity with the past and traditions. Therefore, it has been stated that people living in historic districts with more historical traces, will show a stronger place attachment to their neighbourhood and the city than those living in modern districts (Lewicka, 2008). Another important concept to describe the influence of cultural heritage on well-being is place identity. Place identity can be described as the meaning people give to a place, which defines an individual's identity in relation to the physical environment (Sari et al., 2018; Lewicka, 2008). A city's identity is often shown through historical places with certain characteristics. Through these local identities, citizens can feel more connected with their living environment. Emotional bonds with a place can also be created through place memory. Place memory depicts historical values of places and the extent to which people are aware of these histories and stories. Lewicka (2008), gives three predictors of place memory. Firstly, socio-demographic variables, such as age, length of residence, having parents and grandparents from the region and education, affect the perceived memory of a city. Secondly, emotional bonds through knowledge of the history of a city through doing their own research can have a great impact on place memory. Lastly, urban reminders are of great importance to place memory. Remembrance of a place's past through monumental buildings, architectural style can influence the memory of place directly and indirectly through arousing curiosity and increasing motivation to discover a place's forgotten past. Some historical traces can also be intentionally produced such as monuments for local heroes, street names and plaques, however, the majority of the traces are natural, such as architectural style and building characteristics. Through place memory, people can feel more connected towards a certain place which can influence social relations and activities and eventually well-being.

During the past decades, there has been a growing attention on the cultural dimension of well-being. According to Carra (2020), well-being stresses "the creation of a favourable environment that can support physical, mental, emotional, cultural, spiritual and economic needs, in order to reach ideal

levels of human potential" (pp. 275) This definition emphasizes the importance of culture on well-being, therefore culture is also defined in this context as "a set of characteristics that are associated with a specific place of human and social development, in urban and territorial context" (Carra, 2020, pp. 275.) According to Carra (2020), cultural participation is therefore of importance to well-being. This can promote social interactions within a particular neighbourhood which can improve social relationships. Linking this to cultural heritage, it is of importance to note that culture and cultural participation is often achieved through the use of cultural heritage. Bandarin & van Oers (2012), focuses on urban heritage and its effects on cities. Nowadays, only a small part of the urban built environment can be seen as historic heritage, however, they continue to play an important role as places of national and regional identity, social value, places of memory and creation of economic and creative activity. Especially tourism is the main driver of economic growth driven forward by urban heritage (Oppio & Ovo, 2020). Therefore, it is of importance to preserve cultural heritage with help of policies and strategies integrated into urban planning. At the end of the twentieth- century new planning approaches, called cultural regionalism and the historic urban landscape approach, were created which focussed mainly on the preservation of historical buildings and to resist modern standardisation of the built environment respectively addressing the issue of urban conservation which reflects great cultural traditions in societies (Bandarin & van Oers, 2012).

2.2 Conceptual framework

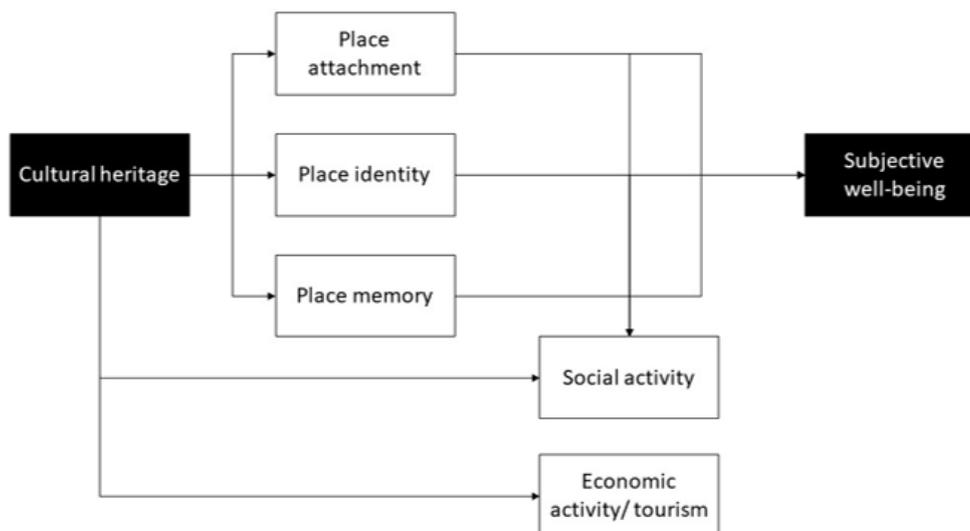


figure 2: Conceptual framework (Made by author)

Based on the literature review, the conceptual framework (figure 2) was created. This model has only included the indicators of cultural heritage influencing SWB. This model can be explained through the relationships between the concepts. As stated in the literature review, cultural heritage can influence place attachment, place identity, place memory, social activities and economic activities. Social activities can also be driven forward by place attachment and place identity due to the connectivity with a specific place. All these variables can have an impact on the SWB of residents.

2.3 Hypotheses

Based on the theoretical framework, multiple hypotheses can be constructed. The main hypothesis is;

‘There is a relationship between the proximity of cultural heritage in the neighbourhood and the subjective well-being of its residents.’

Other hypotheses based on the theoretical framework are;

- There is a relationship between cultural heritage and social participation and economic activities within a neighbourhood;
- The relationship between cultural heritage and subjective well-being differs between residents of pre-war- and post-war neighbourhoods.

Sari et al. (2018) suggested that people living in places with more historical traces will feel more connected to their living environment. Therefore, the third hypothesis has been created. As can be seen in figure 2, in the city of Groningen pre-war neighbourhoods have more historical traces and cultural heritage sites than post-war neighbourhoods. Based on the literature this will mean that residents will feel more connected to the pre-war neighbourhoods than the post-war neighbourhoods.

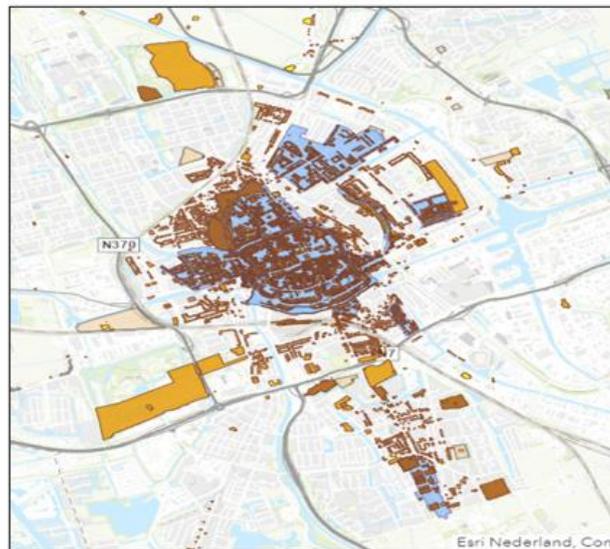


Figure 3: Cultural heritage sites in the City of Groningen,
source: Gemeente Groningen

3. Methodology

3.1 Research strategy

3.1.1 Literature review

The first step in the research process was collecting relevant information and concepts based on previous literature. Based on the literature collected during the literature review, further steps in the research process could be made by drafting an online questionnaire and an interview guide. Based on the literature, sub-question 1 has been answered and elaborated on.

3.1.2 Mixed methods approach

For the research into the effect of cultural heritage on citizen well-being, a mixed-methods approach was used. This is chosen because it prevents setbacks with the number of respondents or a lack of usable outcomes after the quantitative analysis. For this research, the explanatory design is used. This design uses qualitative data to help explain outcomes or build upon quantitative results. In this research design, the quantitative- and qualitative research are interconnected. Firstly, the quantitative data has been collected and analysed from whereon qualitative data collection and analyses have been used to support and elaborate on the quantitative results (Punch, 2014). The quantitative analysis focussed on testing the hypotheses and examine the relationships between the variables. Based on these results, sub-question 2 was answered. Thereafter, the qualitative research design was created which especially focuses on human experiences, which helped answering sub-question 3.

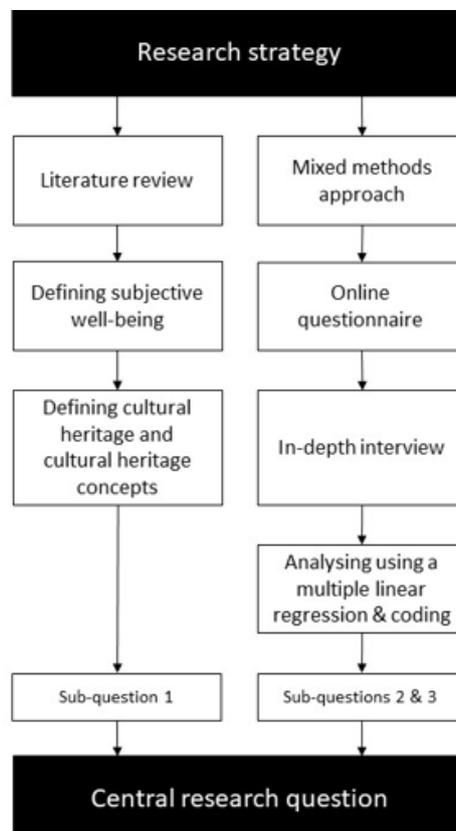


figure 4: Research strategy (Made by author)

3.2 Data collection

3.2.1 Quantitative data collection

For the quantitative data collection of this research, an online questionnaire is used. Advantages of an online questionnaire are; uncomplicated distribution of questions towards the research population (especially during the covid19 pandemic), Getting to ask multiple questions (variables) in one document, availability of converting data to excel and SPSS. Using primary data collected by the researcher can increase the validity of the research in contrast to the research questions (Punch, 2014). The questionnaire was made in Qualtrics and was distributed among the research population, residents of the city of Groningen, using both stratified random sampling and snowball sampling in the network of the researcher. Stratified random sampling is a sampling technique that aims to form classes in the population and select a simple random sample from each class (Burt et al., 2009). This sampling technique is often used to prevent non-response and to obtain a sample that is evenly distributed in the population (Varshney et al., 2012) In this research, the formed classes are the two different neighbourhood types, pre-war- and post-war neighbourhoods. To be able to collect enough responses from both neighbourhood types, the researcher targeted these groups by using Facebook groups directed at certain neighbourhoods. However, this did not result in enough responses, therefore, the own network of the researcher was used as well. The online questionnaire was placed on the own Facebook page and the question was raised to share the questionnaire. The online questionnaire can be found in Appendix 1. Eventually, the questionnaire recorded 58 respondents. Some of these responses were not complete and were manually removed from the dataset, leaving 54 useful responses in the dataset. The respondents are evenly distributed in terms of gender. However, slightly more people in their twenties and fifties have responded to the questionnaire, just as people living in 'old' pre-war neighbourhood relatively to 'new' post-war neighbourhoods.

Residential location respondents based on 4-digit zipcode

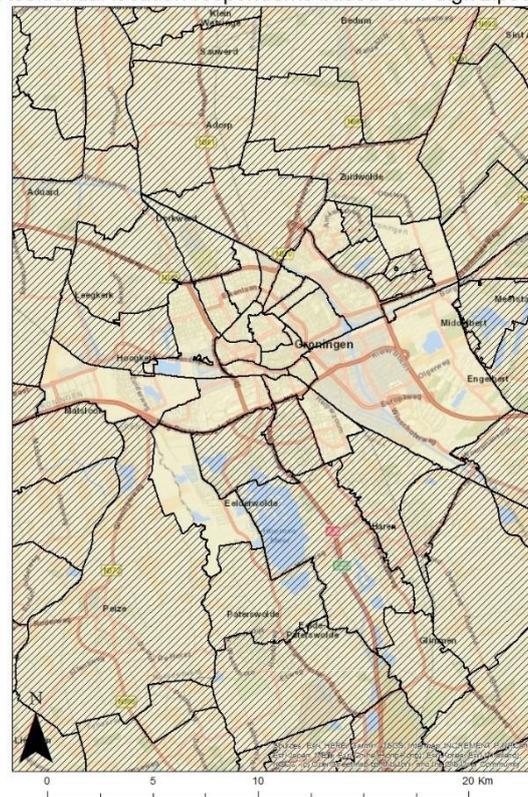


Figure 5: GIS map residential location of questionnaire respondents (Made by author in ArcGIS)

Striking is the distribution in educational level, where almost all respondents have a higher educated degree or still studying at a higher education institution. This can produce a biased result since it does not represent the total population of Groningen since 109.040 residents of the municipality have a lower- or middle education (CBS, 2019).

3.2.2 Qualitative data collection

For the qualitative data collection of this research, in-depth interviews have been conducted. In total, three interviews were conducted, which can be found in appendix 5. This number was chosen based on the research strategy, explanatory mixed methods design, where qualitative results are used to elaborate on the quantitative results (Punch, 2014). Interviewees were collected from the questionnaire dataset. These are all respondents who have indicated that they were willing to take part in the interview and therefore, listed their e-mail addresses at the end of the questionnaire. Based on the quantitative results, respondents from different neighbourhoods, gender, and residence lengths have been selected to take part in the interviews.

Respondent	Age	Gender	Neighbourhood	Residence length	Interview location
R-1	22	Female	Paddepoel	3 years	Online
R-2	75	Male	Hoogkerk	39 years	Online
R-3	54	Female	Korrewegwijk	24 years	Online

Table 1: Table of respondents in-depth interviews (Made by author)

3.3 Data analysis

3.3.1 Quantitative data analysis

For the quantitative data analysis, a multiple linear regression was conducted. The dependent variables, independent variables and control variables for the regression are depicted in table 2. The output of the regression was analysed. During the analysis, the significance level of the whole model, the significance levels of all the variables, and the regression coefficient were analysed.

Variables	Dependent variable	Control variable	Independent variable	Measurement scale
Happiness	X			Ratio/interval
Cultural heritage appreciation			X	Ratio/ interval
Cultural heritage awareness			X	Ratio/interval
Neighbourhood type			X	Binary
Residential identification			X	Ordinal
Residence length			X	Ordinal
Residential family origins			X	Binary
Perceived neighbourhood attractivity			X	Ordinal
Likeliness to move			X	Ordinal
Appreciation social participation/ economic activity			X	Ordinal
Gender		X		Binary
Age		X		Ratio/ interval
Education		X		Nominal
Income		X		Ordinal
Laugh/smile & Enjoyment & well-rested & Treated with respect & Physical pain & sadness & worry & stress & anger		X		Ordinal
Null Hypothesis	"There is no linear relationship between happiness on the one hand and cultural heritage appreciation, cultural heritage awareness, and neighbourhood type on the other hand"			

Table 2: Variables used in the Multiple linear regression (Made by author)

Furthermore, the questionnaire contained questions that are not implemented in the multiple linear regression. This data was analysed by the researcher and, when relevant, graphics were made to support the data. This data contains information about perceived important characteristics of cultural heritage and the appreciation of some cultural heritage sites in the city of Groningen related to the proximity of residents.

3.3.2 Qualitative data analysis

The interview technique used for the qualitative analysis is an in-depth interview (appendix 2). The interviewer used an interview guide, however, due to the open structure of the interviews, the interview guide was used as a guideline instead of a strict structure. After the interviews, the interviews were transcribed and thereafter, coded in Atlas.ti. The codes, as seen in the deductive code tree in figure 6, are implemented in Atlas.ti, which is a simple tool to collect and store the transcribed interviews and the codes. The codes are based on the literature review, outcomes of quantitative analysis and the sub-questions. After the coding process through Atlas.ti, the results were analysed and the most important quotes were used to back up the explanation of the results.

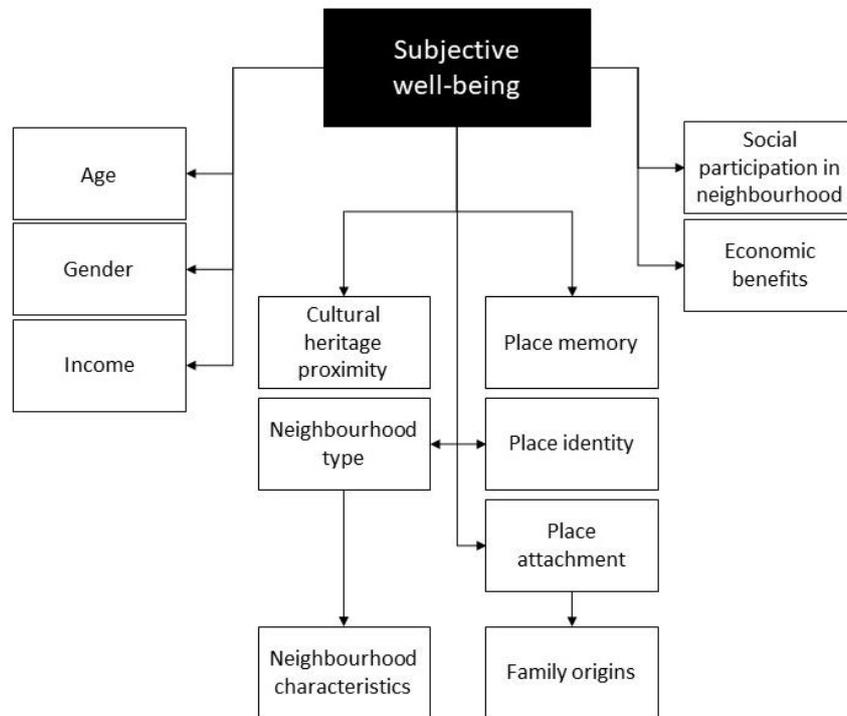


Figure 6: Deductive code tree (Made by author)

3.4 Ethics

Ethical considerations for this research can concern the relation of the researcher towards the research population since the researcher belongs to the research population and can therefore be biased. However, this risk is minimised by basing the questionnaire design and interview guide solely on academic sources, and not on personal biases. Furthermore, the questions were discussed with third parties.

For the quantitative analysis of this research, ethical considerations can concern the anonymity of the questionnaire respondents. To prevent anonymity from being harmed, the questionnaire was conducted completely anonymous and personal information such as a postal code and e-mail address for follow up interviews could be left blank, based on the personal preferences of the respondents.

Ethical consideration for qualitative research can concern the relation between interviewer and interviewee. The interviewer needs to be careful about creating a power balance. This can be prevented by conducting the interview in a neutral location and making sure the interviewee feels at ease with conducting the interview. It is of importance to let the interviewee know about the aim of the research and how the information gained in the interview will be used and who will have access to this. Therefore, before starting the interview, this will need to be clear for the interviewee and a consent form needs to be signed to prevent potential confusions.

3.5 Quality of the data

The online questionnaire raised 54 valid responses, this is less than initially aimed for, however, enough to conduct a multiple linear regression and draw a conclusion based on this data. However, it is disputable whether the sample represents the whole research population, since the majority of the respondents are higher educated, and some ages groups are missing within this research.

Because of the time constraint of this research, only 3 interviews have been conducted. When conducting more interviews, assumptions made by interviewees can be tested and can therefore improve the quality of the data. However, the answers obtained are of good quality and are representable towards the research subject.

4. Results

4.1 Multiple linear regression

A multiple linear regression was used to conduct the quantitative analysis. Based on the ANOVA table (Appendix 4), it can be concluded that the model as a whole is significant according to the 95% confidence interval.

The coefficient table (table 3) indicates that three independent variables are significant according to the 95% confidence interval and thus have a significant relationship with happiness; influence lockdown on happiness, laugh/smile and perceived neighbourhood attractiveness. The first two variables are control variables and therefore not relevant for analysing in this research. Perceived neighbourhood attractiveness has a positive and small regression coefficient. Therefore, when perceived neighbourhood attractiveness increases, happiness will increase as well. This result can be explained by Birenboim (2018), who has found that the physical environment can positively influence happiness when this is considered attractive. However, the physical environment consists out of a lot of factors such as blue and green spaces, facilities, population density and climate (Su et al., 2021). Therefore, this variable is not necessarily related to cultural heritage, but cultural heritage can influence neighbourhood attractiveness.

Coefficients a

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	5,774	1,521		3,796	,001
	Age	,015	,015	,282	,985	,333
	Income	,053	,176	,062	,300	,766
	Education	,030	,156	,391	,191	,850
	Residential identification	,045	,117	,061	,387	,702
	Likeliness to move	,134	,150	,185	,891	,380
	Living in pre-war neighbourhood	-,477	,304	-,212	-1,573	,127
	Gender	,599	,323	,295	1,857	,074
	Economic activity/ tourism	,088	,366	,035	,242	,811
	Laugh/smile	-,580	,232	-,483	-2,501	,019*
	Enjoyment	-,006	,260	-,005	-,024	,981
	Well-rested	-,212	,149	-,207	-1,429	,164
	Treated with respect	-,013	,235	-,008	-,054	,957
	Physical pain	,175	,160	,189	1,038	,308
	Sadness	-,075	,177	-,954	-,421	,677
	Worry	,008	,211	,007	,037	,971
	Stress	0,45	,205	,578	,219	,828
	Anger	0,52	,219	,031	,239	,813
	Influence lockdown on happiness	-,024	,010	-,312	-2,344	,026*
	Social participation	-,589	,311	-,250	-1,894	,069
	Cultural heritage awareness	,012	,072	,030	,165	,870
	Cultural heritage appreciation	,128	,097	,261	1,314	,199
	Residence length	,044	,136	,074	,322	,750
	Neighbourhood attractiveness	,344	,167	,349	2,065	,048*
	Family origins	-,365	,266	-,180	-1,371	,181

a. Dependent variable: Happiness rate

Table 3: Coefficients table SPSS (Made by author)

* = significant p-value according to 95% confidence interval

In this research the independent variables related to cultural heritage and cultural heritage indicators; cultural heritage appreciation, cultural heritage awareness, and living in pre-war neighbourhood, are not significantly related to happiness. This is surprising since Lewicka (2008) states that residents living in a neighbourhood with a lot of historical traces tend to be more attached to their living environment

and therefore are happier. Lauwers et al. (2021), can explain this outcome. This paper studies the effects of neighbourhood characteristics on well-being. Multiple characteristics have been found that influence well-being based on neighbourhood characteristics. These are more than just cultural heritage proximity, but also the proximity of green-blue spaces, the proximity of services, neighbourhood maintenance and design, traffic, and multiple social factors. These can all influence happiness, and therefore, can lead to an unexpected outcome when only cultural heritage has been taken into account.

4.2 Questionnaire

Based on the question; ‘Which characteristics of Cultural heritage do you appreciate?’, figure 7 is created. The results indicate that residents of Groningen especially appreciate cultural heritage due to its influence on the city image, and feeling historically connected with the city. However, the ability to socially participate in the neighbourhood/ city, and the economic benefits cultural heritage can produce seem to have less influence on the perception of cultural heritage. This deviates from the theoretical framework, in which Carra (2020) & Oppio & Ovo (2020), suggest that cultural heritage produces cultural participation and economic activities which can thereafter improve SWB. The results of the importance of economic activity can be explained by the sample. Bowitz & Ibenholt (2008) state that cultural heritage can promote cultural consumption, and can increase employment and income. However, the sample does not include respondents working in the tourism sector, which especially benefit from the economic benefits of cultural heritage.

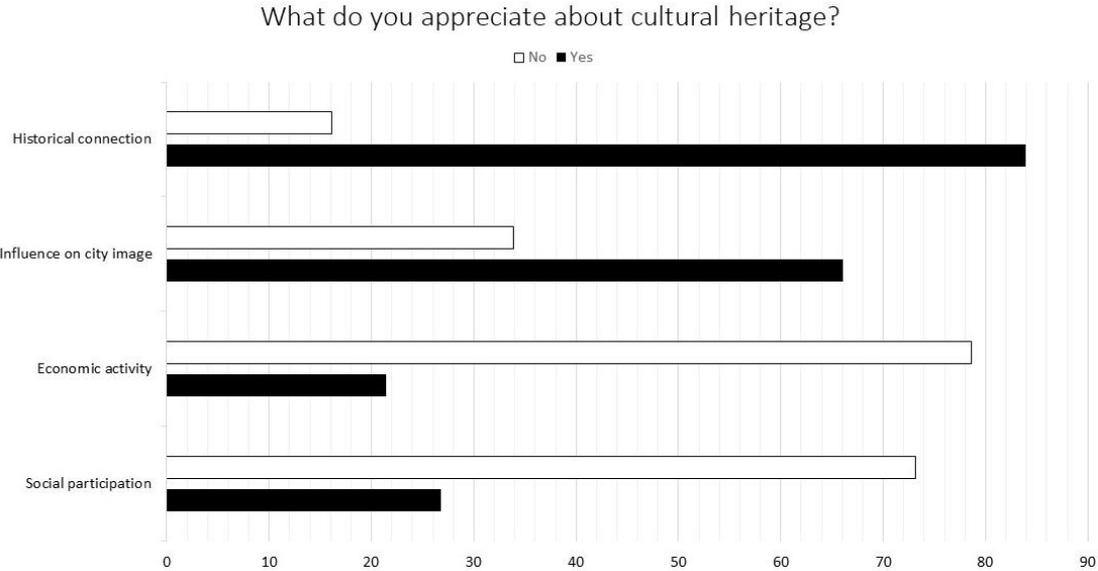


Figure 7: Why do you appreciate cultural heritage? (Made by author)

Furthermore, respondents were asked to rate popular cultural heritage sites within the city of Groningen and indicate why they gave the sites this rating. These are all popular sites, located in the city centre of Groningen. Therefore, these results were analysed by using the variable ‘living in the city centre’. The importance of the proximity to these sites can be analysed. A Spearman’s rho correlation was used. Appreciation Martinitoren, Appreciation Hoge Lage der Aa, and appreciation Noorderplantsoen produced a significant regression correlation with the dependent variable; living in the city centre.

Living in city centre	
Appreciation Martinitoren	,413
Appreciation hoge lager der Aa	,325
Appreciation Noorderplantsoen	,413

Table 4: Spearman's Rho correlation table SPSS (Made by author)

All three variables have a positive and moderate correlation with living in the city centre. Therefore, it can be concluded that, for these sites, living nearby the cultural heritage sites influences their appreciation positively.

The questionnaire asked why respondents appreciated the cultural heritage sites. Reoccurring answers included the influence of the buildings on the city image or the function it has in society. An example is the Noorderplantsoen, which was the most appreciated site, where a respondent stated:

“Lots of greenery, beautiful walking routes and the backyard of many students” (R-17, female, 22, about the Noorderplantsoen)

This indicates that not only the physical attributes of cultural heritage sites are of importance to its appreciation, but also which role it plays in society. This is not surprising, since Carra (2020) stated the importance of cultural heritage on social participation.

4.3 in-depth interviews

4.3.1 Place attachment

Literature has suggested that residence length, having social ties and physical features related to the built environment in the neighbourhood can improve place attachment (Lewicka, 2008). This has been supported by the respondents. R-1 and R-3 stated that due to their long residence length, they felt more attached towards their neighbourhood and neighbours. Furthermore, the physical features are found to be important in the appreciation of the neighbourhood, however, for R-1 and R-2 this does not have to include cultural heritage. R-3 does state that cultural heritage sites in the neighbourhood makes her appreciate a neighbourhood more and makes her feel more connected towards this neighbourhood.

Lewicka (2008), stated that living in a neighbourhood with lots of historical traces, pre-war neighbourhoods in this research, have a stronger place attachment and therefore, greater well-being. However, the results from the questionnaire and interviews show a mixed outcome. The multiple linear regression indicates that there is no relation between living in a pre-war neighbourhood and happiness. This can also be supported by the responses of R-1 and R-2. R-1 states that at the point of her life, being a student, it does not matter whether she lives in a neighbourhood with cultural heritage, however later in her life this can become more important.

“It doesn't really matter to me, I don't need contacts with my neighbours, which can be realised through cultural heritage because you can talk about it or visit it. I am not at that point in my life. I think that if I would start a family you would want to do more with the neighbourhood” (R-1)

Since the questionnaire recorded a lot of responses from students this could have influenced the results from the multiple linear regression as well. R-2 indicates that he finds cultural heritage important for the city image, however, he does not miss it in his living environment and it does not

influence his happiness. Therefore, he could have rated cultural heritage appreciation high, even when living in a post-war neighbourhood. R-3, living in a pre-war neighbourhood, states that living in a pre-war neighbourhood does influence her residential happiness.

“If I cycle through new neighbourhoods I do not feel anything to it, I feel more connected to my own neighbourhood because of the pretty houses and beautiful heritage” (R-3)

She also indicates that cultural heritage in the neighbourhood improves social participation.

“I think that when you live in a beautiful neighbourhood, people want to put more effort in maintaining this. This also comes forward in my neighbourhood, where a lot of activities are organised.” (R-3)

Having social ties in the neighbourhood can also influence place attachment and happiness. (Lewicka, 2008).

4.3.2 Place identity

In the interviews, the question was raised whether the respondents identified themselves with their neighbourhood. Both R-1 and R-2, whom both live in a post-war neighbourhood stated that they are used to and fond of their neighbourhood, however, R-1 state she does not identify herself with her neighbourhood. R-2 does identify himself to the neighbourhood because of his contacts with other inhabitants. Place identity can be driven forward by multiple variables, including cultural heritage. Belanche et al. (2021), mentions multiple domains influencing place identity at the local level. These are the social, historical, environmental, cultural and political domain. Therefore, it can be concluded that place identity can be developed through a great amount of variables. R-1 mentioned that especially the character of the other residents of a neighbourhood are of influence when identifying herself with a neighbourhood. R-3 did state that she identified herself with her neighbourhood because of the building style and the social participation within the neighbourhood.

“I always think this is my home when cycling into my street. Also because I raised my children here and I live here for a long time, I know a lot of people here and always encounter people I know when walking or cycling through the neighbourhood.” (R-3)

This quote emphasizes the importance of residence length and social participation in place identification, which can be linked to the theoretical framework. These qualitative results indicate, that for this research, residents of pre-war neighbourhood with a lot of historical traces do have a greater place identification with their neighbourhood. This is in line with the theoretical framework. Lewicka (2008), declared that historical traces can influence place identity. However, more interviews need to be conducted to draw this conclusion for the whole population.

4.3.3 Place memory

When asking about the importance of cultural heritage on knowledge of the history of the city of Groningen, respondents indicated that cultural heritage did influence their historical knowledge. When asking whether cultural heritage has a historical value for the city of Groningen, R-1 responded:

“It makes you remember where we come from and what has happened in the past” (R-1)

R-2 stated that cultural heritage more or less influenced his knowledge of the history of the city, but that especially buildings made by his father and buildings in the neighbourhood where he was born are of great value to him and also in remembering his own past. According to Lewicka (2008) having family origins in the neighbourhood can have an influence on place memory. This claim is supported by R-2.

"I remember my father helped to build some historical churches in the city, these buildings speak to me more and of course the cultural heritage in the neighbourhood where I was born" (R-2)

The respondents indicate that cultural heritage influences place memory. According to Lewicka (2008), place memory can influence the connection of residents towards their neighbourhood. This is confirmed by the respondents, since they stated that cultural heritage reminds them of the history of the city, which makes them feel more connected to their neighbourhood and the city in general.

4.3.4 Influence cultural heritage proximity on happiness

The importance of cultural heritage proximity on the well-being of the respondents is existing. However, the respondents have stated that there are factors that have much more effect on their well-being. This came forward in the quantitative analysis as well (Lauwers et al., 2021). R-2, states that his immediate living environment has a great impact on his happiness, however, the presence of cultural heritage does not have an influence on his happiness related to the living environment. The other respondents indicated that they would like to have cultural heritage in the neighbourhood because of its influence on the image of the neighbourhood. However, R-1 responded that living in a nice newly built neighbourhood, with lots of greenery and a big house would just as well make her happy with the living environment as a neighbourhood with lots of cultural heritage. R-3, who lives in a pre-war neighbourhood with a lot of cultural heritage, indicated that the presence of cultural heritage does influence her happiness because it has an important impact on the immediate living environment. A silver lining for all three respondents, is the importance of social contacts with neighbours. Therefore, it can be said that this is the most important neighbourhood characteristic influencing SWB. This claim can be supported by Greenfield & Reyes (2015), who found that having a lack of contact with neighbours has a negative relation with well-being.

5. Discussion

According to the MLR, residential identification, which can be achieved through cultural heritage, does not have a linear relationship with happiness (Lewicka, 2008). Cheng et al. (2018), conducted research on cultural identification in China and found that identification was often achieved through the use of public spaces, such as cultural heritage sites. However, the size of this place matters, just as the use of it. Cultural identification often appears when these are being used as a meeting place, or even just as a corridor. This research did not make a differentiation between cultural heritage as a public space, or as a private place, which could have influenced the results regarding residential identification.

The variables related to place attachment; Likeliness to move and residence length do not have a significant relationship with happiness. Kirkpatrick et al. (2018), researched the reasons for residents to feel attached to a place. This research found a lot of reasons to be attached to a place. As also mentioned in the theoretical framework, childhood memories and family activities tend to be important for the local community. For non-locals cultural heritage sites tend to be more important in the attachment to a place. This research did not differentiate between locals and non-locals, which could have influenced the results of the regression.

The most surprising result was the insignificance of the variables: Living in a pre-war neighbourhood, cultural heritage appreciation and cultural heritage awareness. Lewicka (2008) & Sari et al. (2018), stated that living in a neighbourhood with lots of historical traces can influence well-being. As was mentioned before, this result can be influenced by the dataset, that recorded a lot of students and higher educated residents. Especially students could have influenced this result because, as mentioned in the qualitative analysis, students, who often live in pre-war neighbourhoods in the city of Groningen, do not have the same connection towards their living environment as other residents.

6. Conclusion

The first sub-question; *'what is subjective well-being, and which factors influence the subjective well-being of residents?'*, was answered during the literature review. SWB is an umbrella term and measures well-being based on subjective life evaluations (Diener & Ryan, 2009). Multiple factors can influence SWB, which can make it hard to measure. This information was used in creating the questionnaire and interview guide.

The second sub-question; *'What are the values of cultural heritage proximity that affect the subjective well-being of residents?'*, was answered during the analysis of the results. The Multiple linear regression suggested that perceived neighbourhood attractivity has a relation with happiness. However, this does not directly need to be related to cultural heritage, since multiple variables can influence neighbourhood attractivity (Su et al., 2021). The variables cultural heritage awareness, cultural heritage appreciation and living in a pre-war neighbourhood did not result in a significant relationship with happiness. Based on the questionnaire results, it can be concluded that people do appreciate cultural heritage in the city of Groningen. When asked to rate the appreciation of multiple cultural heritage sites in the city, almost all respondents indicated that they appreciated all the sites to a great extent. Especially the influence of cultural heritage on the city image, and the historical connection with the city are appreciated. However, this did not result in a significant relation with happiness. This can be explained by the in-depth interviews where respondents mentioned that they appreciated cultural heritage, however, it is not of importance for their residential happiness or happiness overall. Furthermore, based on the qualitative results, it can be concluded that social participation and place attachment due to cultural heritage, can have an influence on the SWB of residents.

To answer the third sub-question: *'How does the effect on cultural heritage proximity on subjective well-being differ between residents and residential locations?'* an argument can be made that residents living in a residential environment with lots of cultural traces appreciate cultural heritage more and cultural heritage adds more to their residential happiness. The respondent living in a pre-war neighbourhood with lots of historical traces indicated that she enjoys cultural heritage and the old building style of the neighbourhood. This results in feeling better in her neighbourhood than in other 'newly' built neighbourhoods. This deviates from the other respondents. However, more in-depth interviews need to be conducted to draw this conclusion. Furthermore, the results indicate that cultural heritage proximity is of less importance to students. R-1 stated that the residential environment does not matter as much while living in a student house and that it will probably become more important in the future. This could have influenced the results of the multiple linear regression.

To conclude, based on the sample used in this research, it cannot be concluded that there is a relation between cultural heritage proximity and SWB. The Spearman's rho correlation suggests a positive relationship between living nearby a cultural heritage site and its appreciation. This indicates that cultural heritage proximity does influence cultural heritage appreciation, however, the results do not indicate that this influences SWB. The in-depth interviews suggest that cultural heritage proximity can be of importance to the satisfaction with the residential environment and to social participation in the neighbourhood. Further research is necessary to further analyse this relation.

6.1 Recommendations for further research

For further research, it is recommended to further develop the in-depth interviews and conduct more interviews to gain a better insight into residents' judgments about cultural heritage and how this influences well-being. Furthermore, the multiple facets of SWB should be taken into account to gain a better understanding of how cultural heritage influences well-being.

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8. Appendices

8.1 Appendix 1: Questionnaire design

Survey Cultural heritage

Start of Block: Default Question Block Q21

Dear Mr/Ms,

My name is Lieke Koldijk and I am currently completing my bachelor Human Geography & Planning at the University of Groningen. I would like to ask your help in completing my bachelor thesis. This survey will ask questions about cultural heritage in the city of Groningen relating to your well-being. This will take about five minutes of your time.

Before starting this survey, I would like to point out the following:

- To be able to take part in this survey, you must be an inhabitant of the city of Groningen
- The data obtained from this survey is completely anonymous and cannot be traced back to you
- Your participation is voluntary and you can interrupt the survey at any time
- This research focusses on cultural heritage and its effect on subjective well-being of the inhabitants of Groningen. In this project cultural heritage is described as, all cultural historical heritage in the city of Groningen. This can relate to national monuments, iconic buildings and archeological plots.

If you have any questions about my research, or about the use of your data, you can send an e-mail to l.m.koldijk@student.rug.nl

Thank you very much for answering this survey!

Lieke Koldijk

Page Break

Q1 What is your gender?

Male (1)

Female (2)

Other: (3) _____

Prefer not to say (4)

Q2 What is your age?

Q3 What is your average monthly income?

Less than 1000 euros (1)

1000-2000 euros (2)

2000-3000 euros (3)

3000-4000 euros (4)

4000-5000 euros (5)

More than 5000 euros (6)

Q4 What is your educational level?

University (WO) (1)

HBO (2)

MBO (3)

High school (4)

Primary school (5)

No education (6)

Q5 What is your occupation?

Page Break

Q6 In which neighbourhood do you live?

Binnenstad (1)

Schildersbuurt (2)

Zeeheldenwijk (3)

Oranjewijk (4)

Korrewegwijk (5)

Oosterparkwijk (6)

Oosterpoortwijk (7)

Herewegwijk (8)

Helpman (9)

Stadsparkwijk (10)

Hoogkerk (11)

Paddepoel (12)

Vinkhuizen (13)

Selwerd (14)

de Hoogte (15)

de Wijert (16)

Corpus den Hoorn (17)

Beijum (18)

Lewenborg (19)

de Hunze (20)

van Starckenborgh (21)

Other, namely.. (22) _____

Q7 How long have you been living in this neighbourhood?

0-5 years (1)

5-10 years (2)

10-15 years (3)

15-20 years (4)

Longer than 20 years (5)

Q8 How would you rate the attractiveness of you neighbourhood?

Very attractive (1)

Attractive (2)

Neutral (3)

Not attractive (4)

Not attractive at all (5)

Q9 Do you, or your family, originate from the Groningen region?

Yes (1)

No (2)

Page Break

Q10 On a scale from 0 to 10, to what extent are you aware of the cultural heritage in your residential location?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q11 On a scale from 0 to 10, How much do you appreciate the cultural heritage in your residential location?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q12 Which factors influence your appreciation for cultural heritage in your residential location?

The ability to socially participate in your neighbourhood/ city (1)

The economic profits due to tourism (2)

Feeling more connected with the history of my neighbourhood/ city (3)

Its influence on the image of my neighbourhood/ city (4)

Other: (5) _____

None of the above (6)

Q13 Do you identify yourself with your residential location?

Yes (1)

Mostly (2)

Neutral (3)

Mostly not (4)

No (5)

Q14 Are you likely to move out of your residential location any time soon?

Definitely yes (1)

Probably yes (2)

Neutral (3)

Probably not (4)

Definitely not (5)

Q15 From the Groninger Landmarks listed below, can you indicate how much you appreciate them?

Can you also indicate why you do or do not appreciate these landmarks in the text brackets.

	Appreciate it (1)	Neutral (2)	Don't appreciate it (3)
Martinitoren (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Station building (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Groninger Museum (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
der Aa kerk (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
City hall (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hoge lage der Aa (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vismarkt (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Noorderplantsoen (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

Q16 On a scale from 0 to 10, how happy are you at this moment?

- 0 (0)
- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (9)
- 10 (10)

Q17 Indicate how often you have experienced these feelings in the last week

	Very often (1)	Often (2)	Regular (3)	Not often (4)	Never (5)
Laugh/ smile (1)	<input type="radio"/>				
Enjoyment (2)	<input type="radio"/>				
Well-rested (3)	<input type="radio"/>				
Treated with respect (4)	<input type="radio"/>				
Physical pain (5)	<input type="radio"/>				
Sadness (6)	<input type="radio"/>				
Worry (7)	<input type="radio"/>				
Stress (8)	<input type="radio"/>				
Anger (9)	<input type="radio"/>				

Q18 Did you experience major life events due to the COVID19 crisis?

Yes, namely.. (1) _____

No (2)

Page Break

Q19 To be able to incorporate a geographical analysis of the data I would like to ask your postal code. This is not obligatory and can be left blank.

Q20 For further research I would like to interview some respondents. If you are interested in this you can leave your e-mail adress in the bracket below. (I would like to point out that when you do decide to enter your e-mail adress the survey can be lead back to you and will not be anonymous anymore. If you don't want this, the bracket can be left blank.)

End of Block: Default Question Block

8.2 Appendix 2: Interview guide

Interview Guide

About the interviewer:

- Introduce myself
- Introduce my research

About the respondent

- Can you explain who you are?
- In which neighbourhood do you live?
- How long have you been living here? And how long have you been living in the city of Groningen?

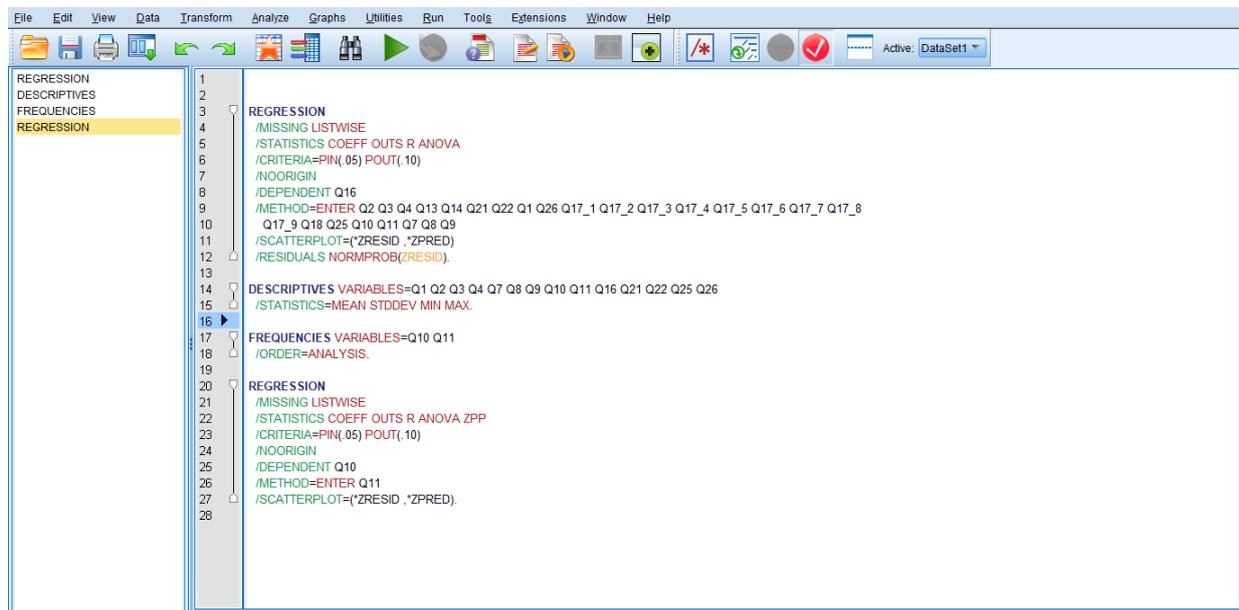
Cultural heritage questions

- What do you think about when hearing the word cultural heritage?
- Are you aware of the cultural heritage in your neighbourhood? -> why/ why not?
- Does your neighbourhood contains a lot of cultural heritage?
 - If no: Do you feel like you appreciate cultural heritage in other parts of Groningen more because it's missing in your neighbourhood?
 - If yes: How often do you visit the cultural heritage in your neighbourhood?
- Do you feel that cultural heritage influences your perspective on the neighbourhood? -> why/ or why not?
- Do you feel at home in your neighbourhood? -> why/ or why not?
 - Which neighbourhood characteristics influenced your answer
- Do you think cultural heritage has a historical value In your neighbourhood? -> why/ or why not?
 - Are you more aware of the history of your neighbourhood/ city because of cultural heritage?
- Do you think cultural heritage has an influence on your residential happiness? -> why/ or why not?
 - Does it matter that the cultural heritage is present in your neighbourhood, or in the city as a whole when answering this question?

Cultural heritage related to well-being

- Does your residential environment influence your overall happiness? -> why/ or why not?
 - What do you think of, when thinking about residential environment?
 - What role does cultural heritage play in the given answers?

8.3 Appendix 3: SPSS syntax



The screenshot displays the SPSS Syntax Editor interface. The menu bar at the top includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Run, Tools, Extensions, Window, and Help. The toolbar contains icons for file operations, analysis, and execution. The left sidebar shows a list of command categories: REGRESSION, DESCRIPTIVES, FREQUENCIES, and REGRESSION (highlighted). The main editor area contains the following syntax commands:

```
1 REGRESSION
2
3
4 /MISSING LISTWISE
5 /STATISTICS COEFF OUTS R ANOVA
6 /CRITERIA=PIN(.05) POUT(.10)
7 /NOORIGIN
8 /DEPENDENT Q16
9 /METHOD=ENTER Q2 Q3 Q4 Q13 Q14 Q21 Q22 Q1 Q26 Q17_1 Q17_2 Q17_3 Q17_4 Q17_5 Q17_6 Q17_7 Q17_8
10 Q17_9 Q18 Q25 Q10 Q11 Q7 Q8 Q9
11 /SCATTERPLOT=(*ZRESID ,*ZPRED)
12 /RESIDUALS NORMPROB(*ZRESID).
13
14
15
16 DESCRIPTIVES VARIABLES=Q1 Q2 Q3 Q4 Q7 Q8 Q9 Q10 Q11 Q16 Q21 Q22 Q25 Q26
17 /STATISTICS=MEAN STDDEV MIN MAX.
18
19
20
21
22 FREQUENCIES VARIABLES=Q10 Q11
23 /ORDER=ANALYSIS.
24
25
26 REGRESSION
27 /MISSING LISTWISE
28 /STATISTICS COEFF OUTS R ANOVA ZPP
29 /CRITERIA=PIN(.05) POUT(.10)
30 /NOORIGIN
31 /DEPENDENT Q10
32 /METHOD=ENTER Q11
33 /SCATTERPLOT=(*ZRESID ,*ZPRED).
```

8.4 Appendix 4: SPSS tables MLR

ANOVA a

<i>Model</i>		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	41,110	24	1,713	3,595	,001b
	Residual	13,343	28	,477		
	Total	54,453	52			

a. Dependent variable: Happiness rate

b. Predictors: (constant), Cultural heritage appreciation, well-rested, social participation, influence lockdown on happiness, Sadness, Economic activity/tourism, Anger, Gender, Laugh/smile, Residential identification, Living in pre-war neighbourhood, Treated with respect, Physical pain, Worry, Likelihood to move, Income, Cultural heritage awareness, Age, Enjoyment, Education, Stress, Family origins, Residence length, Perceived neighbourhood attractiveness

ANOVA table SPSS (Made by author)

Model Summary b

<i>Model</i>	R	R square	Adjusted R square	Std. error of the Estimate
1	,869a	,755	,545	,690

a. Predictors: (constant), Cultural heritage appreciation, well-rested, social participation, influence lockdown on happiness, Sadness, Economic activity/tourism, Anger, Gender, Laugh/smile, Residential identification, Living in pre-war neighbourhood, Treated with respect, Physical pain, Worry, Likelihood to move, Income, Cultural heritage awareness, Age, Enjoyment, Education, Stress, Family origins, Residence length, Perceived neighbourhood attractiveness

b. Dependent variable: Happiness rate

Model summary table SPSS (Made by author)