The Great Recession's Impact on Health

A comparison of Spain and the Netherlands

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Preface

This thesis is part of my graduation project as part of the M.Sc Health and Society at Wageningen University and Research. It is easily the most involved piece of writing I've produced to date, and something of which I am very proud.

A number of people were instrumental in this thesis's production. First and foremost, I'm grateful to my qualitative research participants, who were incredibly open about their experiences and really made working on this thesis a pleasure. I'd also like to thank my supervisors, Johan and Annemarie, for their time, chats, excellent feedback and words of encouragement. This thesis would be in dire straits without their guidance. Finally, thanks to friends, family, housemates and Sicco the cat for their support during a rather busy time.

Kristina Thompson
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Abstract

Background

There is a large body of evidence demonstrating a link between how financially secure individuals and populations are with how healthy they are. The Great Recession, the period of the most acute financial insecurity in recent memory, may be an important period to study this relationship. Doing so may demonstrate how short-term changes in financial security can have long-term effects on health. Particularly, cross-country studies that compare a country that fared well with a country that fared poorly may help to provide more conclusive evidence about the Great Recession's influence on health. Currently, there is debate in the existing literature as to whether the Great Recession's impact on health has been positive, neutral or negative, and scant studies have been conducted in cross-country settings.

Research aim

This thesis analysed the impact of the Great Recession in the Netherlands (as an example of a country that fared relatively well) and Spain (as an example of a country that fared relatively poorly). These countries were selected not only because they are relatively good foils of one another, but also because a comparison of them in the context of the Great Recession has never been undertaken. Given this focus, this thesis's main research question was: *How did the Great Recession impact health in Spain and the Netherlands?*

Methods

To answer this thesis´s main research question, mixed methods were employed. This research rested on a theoretical link between wealth and health: the more money individuals and populations have, the healthier they are (and vice versa). There are two main pathways explaining this relationship: a material pathway, by directly buying better health, and an immaterial pathway, whereby health is influenced by aspects that more money confers (e.g. less stress, greater social capital.

First, a literature review was undertaken to determine what influence the Great Recession had on health in Europe overall. Second, Dutch and Spanish data from the European Social Survey was analysed using the statistical package, SPSS. To assess whether each country experienced significant changes in health and wealth, independent sample t-tests for each country comparing the 2008 and 2014 editions were run to see if changes in health were significant. To assess whether the relationship between wealth and health is stronger in Spain or in the Netherlands in 2014, regressions using health variables as dependent variables and financial security variables as independent

variables were run and compared. Third, qualitative interviews were conducted, to better understand Dutch and Spanish people's experiences of the crisis. These interviews involved 10 Dutch participants and 10 Spanish participants. A timeline method was used. Interview transcripts were viewed as baseline data, and analysed using thematic analysis with the programme Atlas.ti.

Main results

Overall, the Great Recession appears to have had a more acute, negative impact in Spain than in the Netherlands. The literature review found that the Great Recession did impact health in the majority of studies. The significance tests indicated that while financial security worsened, health did not. The linear regressions found that relationship between wealth and health was stronger in Spain than in the Netherlands. The results of the qualitative interviews indicated that financial security and some aspects of health had worsened in the aftermath of the Recession more in Spain than in the Netherlands.

Conclusion

This thesis found that financial security worsened in the aftermath of the Great Recession. Health, however, presents a more complex picture: while health has worsened, it has not done so uniformly. There was mixed evidence that physical health and mental/emotional and social health have worsened, and that this decline was greater in Spain than in the Netherlands. Social health behaved somewhat differently. This may be because social relationships are important buffers against the negative effects of decreased financial security on health. Further research into increased financial insecurity´s influence on all three types of health in the context of the Great Recession is clearly warranted.

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Abbreviations

EC	European Commision
ECB	European Central Bank
ESM	European Financial Stability Mechanism
ESS	European Social Survey
EU	European Union
GDP	Gross domestic product
IMF	International Monetary Fund
OECD	Organisation for Economic Co-operation and Development
PCA	Principle component analysis
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RQ(#)	Sub-research question (#)
SES	Socio-economic status
WHO	World Health Organisation

1. Introduction

1.1 Overview

The amount of money individuals have is a key (or perhaps the key) determinant of health (Deaton, 2013). Within countries, the poorest people have shorter life expectancies and more diseases and disabilities than the richest (Wilkinson & Marmot, 2003). This typically translates to between five and ten years of shorter life expectancies at birth, and between ten and twenty years fewer years of disability-free living (Mackenbach, 2012). The more money people have, the healthier they tend to be.

The Great Recession, the most acute and widespread period of financial strain in Europe in several generations, may have had a profound effect on health. One way of understanding the Great Recession's impact on health may be to compare a country that fared financially relatively well with one that fared relatively worse, to see if different levels of financial security resulted in different health outcomes.

To add a new perspective to the existing literature on the Great Recession's influence on health, this thesis compares Spain and the Netherlands between 2008 (before the Recession took hold) and 2014 (after the Recession's effects were felt). Spain and the Netherlands are useful foils of one another to understand the Great Recession, as Spain was among the worst-hit economically in the Eurozone, while the Netherlands emerged relatively unscathed. This thesis therefore poses the main research question: *How did the Great Recession impact health in Spain and the Netherlands?*

1.2 Background

To introduce the key concepts used in this thesis, this section elaborates how and why the Great Recession, and specifically Spain and the Netherlands during the Great Recession, are suitable for exploring the relationship between wealth and health.

1.2.1 The Great Recession

The Great Recession, beginning in 2007, was one of the defining financial events of the past fifty years, and placed acute strain on the financial security of households worldwide. In Europe, the Great Recession reached a fever pitch in 2011 as a sovereign debt crisis. Eurozone economies - particularly Portugal, Ireland, Italy, Greece and Spain - defaulted on debts (these countries were largely in trouble due to a combination of precarious financial positions exacerbated by the knock-on effect of the US housing crisis, beginning in 2007). As a result, the EC, the ECB and the IMF, collectively termed the Troika, and later the ESM, offered bail-out programmes to Greece, Ireland, Portugal, and Cyprus. While Spain did not receive a bail-out per se, it received a line of credit of up to €100 billion from Eurozone

funds. The terms of these programmes (and line of credit agreements) imposed stringent financial conditions on the recipient countries. To meet these strict repayment plans, recipients employed austerity policies, or the "deliberate deflation of domestic wages and prices through cuts to public spending" (Blyth, 2013, p. 41). But austerity was not contained to these bail-out countries; rather, austerity measures were implemented across the European Union in order "...to reduce a state's debts and deficits, increase its economic competitiveness, and restore what is vaguely referred to as 'business confidence'" (ibid.).

These policies, in tandem with the existing strain of the Recession, had dire consequences for households in the Eurozone. According to Thomson et al. (2014), "many households have faced growing financial pressure and insecurity as a result of collapses in house prices, greater indebtedness, job loss and falling incomes" (p. 20). As unemployment steadily climbed throughout the Eurozone, consumer spending and household savings rates declined dramatically (ibid.). This period clearly marks a loss of financial security for a large share of households in Europe, and therefore makes an informative period to study in better understanding the relationship between wealth and health.

1.2.2 Spanish and Dutch Experiences of the Great Recession

Within the Eurozone, Spain and the Netherlands serve as good foils of one another regarding demographic and governmental factors, as well as their experiences of the Great Recession. While they bore superficial similarities prior to the Recession, they differ in key ways, namely their levels of financial security as a result of the Recession, the welfare state support for unemployment, and the known health impacts of the Recession.

1.2.2.1 Financial security

Providing some common ground for the comparison, both Spain and the Netherlands are Eurozone countries and so have experienced similar economic policies. However, the countries' currencies and shared macroeconomic policies are largely where the similarities in their financial situations end. The overall economic landscape has been decidedly more positive in the Netherlands than in Spain. Dutch real GDP growth was negative in 2009, 2012 and 2013. But by 2015 growth had surpassed pre-Recession (2008) levels (Eurostat, 2017a). In contrast, Spain experienced five years of negative or flat growth, although growth figures in the years since 2014 have approached pre-recession figures (ibid). Against this backdrop, most measures of individual or household financial security indicate that the Netherlands has fared better than most other Eurozone countries, while Spain has fared worse than most others.

For instance, unemployment is significantly less of a widespread problem in the Netherlands than in Spain. The Netherlands' unemployment rate rose as a result of the

Recession, but to a relatively modest 7.4% in 2014 (Eurostat, 2017b). This compares to 11.6% in the Euro area overall in 2014 (ibid.). In contrast, Spain's unemployment rates were some of the highest in Europe, climbing to 26.1% in 2013 and remaining persistently high at 24.5% in 2014. Spain's unemployment problem was particularly acute for young people, with its youth unemployment rate above 50% in 2013 and 2014 (ibid.). The Netherlands' youth unemployment rate fluctuated between 12% and 13% over the same period.

Likewise, there are noticeably more people at risk of poverty or in poverty in Spain than in the Netherlands. 'At risk of poverty' is measured relative to the overall income level in a given country: "Relative poverty is about the number of people who have low incomes relative to those in the middle of the income distribution" (Eurostat, 2015). In the Netherlands in 2011, 16.4% of the population was in this category. This compares to 23.4% in the EU-28, and 28.6% in Spain.

Further, household savings patterns diverged markedly in the two countries. Household savings are an important indicator of consumers´ abilities to undertake large investments, a key driver of economic growth, and are therefore a useful barometer of economic health overall (OECD, 2017a). At the beginning of the Recession in 2009, both Dutch and Spanish households saved much more than they had in years previous, likely a precautionary measure as the economic climate worsened. Yet, as the crisis wore on in Spain, household savings declined, while Dutch household savings surpassed pre-Recession levels. Figure 1 presents the ratio of gross savings to gross annual income in Spain, the Netherlands and the EU28 in 2008 to 2015 (the year with last publicly available data).
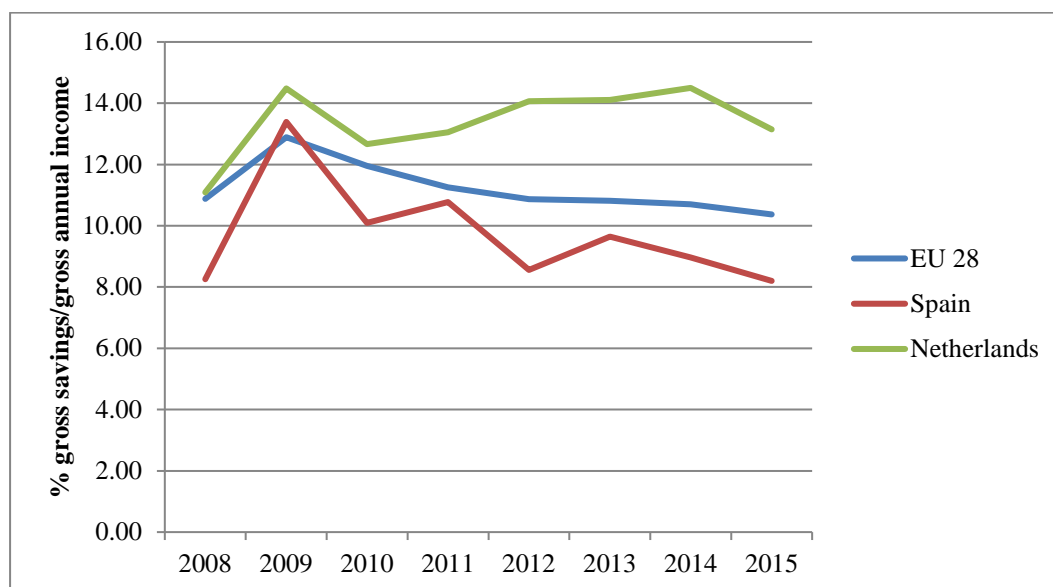
Figure 1. Household savings ratio. Data retrieved from Eurostat,
http://ec.europa.eu/eurostat/web/sector-accounts/data/annual-data/

This decline in Spain´s household savings ratio is even more stark in light of the contraction the country has experienced in average income. Spaniards appear to have been offsetting losses in real income with saving less money.

Spain has also seen more income inequality than other Euro area countries. The Gini coefficient, a measure of income distribution in a country and a common measure of income inequality, clearly demonstrates this. With a Gini coefficient, 0 represents perfect equality, and 1 represents perfect inequality. Spain's Gini coefficient has hovered around 0.345 in the years since the Recession, compared to 0.283 in the Netherlands and an average of 0.300 in the Eurozone overall (OECD, 2017b). The gaps between the highest and lowest earners in Spain also continued to widen as a result of the Recession.

The below table summarises some of the key differences in financial security between Spain and the Netherlands. The data provided focuses on 2014, one of the first years of growth in the Eurozone in the aftermath of the Recession, and the year that this thesis focuses on. However, for the Gini coefficient, data for 2014 is not yet available, and the most recently available data (from 2013) is used instead.

Table 1: Financial security measures

	Spain	**The Netherlands**	**Eurozone**
GDP growth (2014) (Eurostat, 2017a)	1.4%	2.0%	2.0%
Unemployment rate (2014) (Eurostat, 2017b)	24.5%	7.4%	11.6%
% at risk of poverty (2014) (Eurostat, 2015)	28.6%	16.4%	23.4% (includes EU-28)
Household savings rate (2015) (Eurostat, 2017c)	8.97%	14.50%	10.70%
Gini coefficient (2013) (OECD, 2016)	0.346	0.283	0.300

1.2.2.2 Welfare systems

Further, the Netherlands and Spain are worthwhile comparisons because they have different welfare systems, particularly in terms of unemployment insurance. While the differences between the two systems were likely important before the Recession, the extreme financial stress it generated made welfare all the more critical in its aftermath. Welfare regime theory is useful for understanding these differences, and the different levels of

protection they offer. This theory posits that there are clusters of 'regime' types that offer different levels of social protections, largely based on geography and political legacies (Bambra, 2007). The Netherlands has a 'Bismarckian' system, which offers the highest level of protection in the Eurozone (the second highest in Europe overall, after the Scandinavian countries). The hallmark of the Bismarckian system is social insurance, and the wage replacement benefits tend to be higher than elsewhere in Europe (with the exception of the Scandinavian countries) (ibid.). For the Netherlands, this means that between 70% and 75% of the recipient's salary will be paid when unemployed over a period of two years (EC, 2017).

On the other side of the coin, Spain is relatively typical of the 'Southern European' welfare model, which relies much more heavily on informal social networks for unemployment insurance. Its welfare benefits are similarly based on a social insurance system. Unemployment insurance ranges from covering between 60% and 70% of wages, relatively similar to the Dutch system. But, depending on the length of employment, the length they are paid varies from four to 24 months (OECD, 2017c). Both due to the comparatively weaker protection of Spanish unemployment benefits and the length of the Recession, an estimated 700,000 households were without any source of income, from either benefits or employment (Kassam, 2014). However, this changed in 2014, with the introduction of a benefit for those employed longer than one year and who were no longer receiving the regular unemployment benefit, which roughly 400,000 individuals were entitled to (ibid.). Based on macroeconomic events and welfare structures, is appears that, when the Recession hit, Spaniards were somewhat more vulnerable than their Dutch counterparts to financial insecurity.

1.2.2.3 Health outcomes

Finally, the two countries' experiences of health make them interesting to compare. Spain and the Netherlands bear at least superficial similarities. Healthcare access in both Spain and the Netherlands is comprehensive. Also, before the crisis both Dutch and Spanish life expectancies at birth were 81 years in 2010 (Eurostat, 2016), with Spanish citizens estimated to have slightly more healthy life years at birth as of 2014 (Eurostat, 2014).

However, the Great Recession appears to have already affected some health outcomes in the two countries differently. In the Netherlands, scant research has been conducted on the Great Recession's influence on health, but it does not seem to have had a meaningful impact. Spain presents a different picture. While it generally takes longer than the handful of years between the onset of stressful events and the present for disease prevalence to increase

(Vandoros et al., 2013), Spaniards are already experiencing worsened health across several measures. For instance, mental health issues (which generally take less time than physical diseases after a negative event to manifest) increased sharply in the aftermath of the Recession. This was particularly the case for men experiencing unemployment, likely because they faced greater social pressures to be breadwinners (Gili et al., 2012). Spain's suicide rate increased 8% above its underlying trend (van Hal, 2015). The Netherlands' suicide and depression rates increased in recent years, but did not spike in the years surrounding the Recession (Pieters, 2016). In addition, Spaniards' self-reported health assessments, an accurate and sensitive measure of short-term changes in health status, have worsened in the years since the Great Recession (Coveney et al., 2016), while those in the Netherlands have remained relatively constant.

These changes in Spaniards' health status are not confined to mental health. There is also an emerging body of evidence that suggests there may be physical health impacts of the Recession. For instance, in Catalonia, the childhood (under 15 years) obesity rate rose from 18.4% in 2006 to 26.9% in 2010-2012, although it is not clear if this is an acceleration of an existing trend, or as a result of the Recession (Rajmil et al., 2013). In contrast, the obesity rate among schoolchildren in the Netherlands was between 1% and 2% in 2011, a decrease from previous years (WHO, 2013). Rajmil et al. (2013) also found that a widening gap between self-assessments of health (a reliable early-stage indicator of changes in health) among high and low SES groups in 2012 as compared to 2006.

While Spanish and Dutch people had similar health outcomes prior to the Recession, it looks as though this may not remain the case. Because of Spain's and the Netherlands' different experiences of the Recession and health, they may yield a fruitful comparison in better understanding the relationship between wealth and health.

1.3 Research aim

This thesis adds value to the existing debate on the Great Recession's impact on health in several ways. One of the most important ways is by undertaking a cross-country comparison. Only two studies found in this thesis's literature review (see Chapter 4 for a full elaboration) compare a country that was severely negatively affected by the Recession with one that was less so, and these studies reach opposing conclusions (one concludes that the Recession did not negatively impact health, while the other concludes that it did). This thesis joins this debate by comparing Spain and the Netherlands, two countries that have never been compared in the context of the Recession.

This thesis also hopes to add value to the existing debate by employing new methods to study the Great Recession's influence on health. No found studies use mixed methods or solely qualitative research to understand the Great Recession and its relationship to health. Using qualitative methods may be important to further unravel the theoretical link between financial insecurity and health, specifically in the context of the Great Recession.

Finally, this thesis hopes to add value by using comprehensive, complex operationalisations of 'health' and 'wealth'. Much of the existing literature on the Great Recession's influence on health uses simple or proxy definitions. The former (e.g. a single question about self-rated health on a Likert scale) may be too blunt to fully encapsulate various facets of health, and the latter (e.g. mortality rates) may not be sensitive enough to register more subtle short-term changes in health outcomes.

1.4 Research Questions

Given the above, this thesis poses the following main research question: *How did the Great Recession impact health in Spain and the Netherlands?,* with the following RQs:

1. How did the Great Recession influence health in Europe overall?

2. Among Spanish and Dutch people, what are the differences (if any) in financial security and health status (including physical, mental and social health) before and after the Recession?
   Hypothesis: Among Spanish and Dutch people, financial security and health status worsened in the aftermath of the Recession.

3. How does the strength of the relationship between financial security and health differ between Spanish and Dutch people?
   Hypothesis: The relationship between financial security and health is stronger among Spanish people than among Dutch people.

4. What were Spanish and Dutch people's experiences of the Great Recession?

2. Theoretical Framework

This chapter begins by defining the concepts of wealth and health, which will be used throughout this thesis, before exploring the mechanisms that may link these concepts.

2.3 Defining wealth

In this thesis, 'wealth' is conceptualised as financial security, taking into account that the amount of money people feel they need is as important (if not more so) to health than the amount that they actually have (Wagstaff & van Doorslaer, 2000). McKee et al. (2017) discuss how the absence of security in relation to key aspects of individual's financial and labouring lives result in worse health outcomes. This insecurity is broadly termed 'precariousness'. McKee et al. (2017) argue that "…those whose lives are precarious face uncertainty and risk in several areas, including employment, income, and housing," and that precariousness has risen in the wake of the Great Recession (ibid., p. 3).

This thesis borrows heavily from this conception of precariousness. However, 'precariousness' is a negative, undesired state. Because this thesis wants to measure a positive association between wealth and health, it instead terms a very related concept 'financial security', whereby more of it is better (as is the case with health). Because there is no agreed-upon measure of financial security (Osberg, 2015), this concept elaborates on some of the elements included in 'precariousness'. Financial security is therefore defined in this thesis as a composite of education (one of the key facets of human capital that enhances people's employment prospects, discussed later in this chapter), income security (how much money people actually have, and how people feel their income enables them to participate in society), job security (how likely people feel that they will be able to keep their jobs) and housing security (McKee et al., 2017; Osberg, 2015). These measures encompass the material and non-material aspects of being secure financially.

2.4 Defining health

As with financial security, this thesis uses a definition of 'health' that encompasses different aspects of people's lives. There are several widely-used definitions of 'health' that do so. The oldest and one of the most famous is the WHO´s 1948 definition (reiterated in the 2006 edition of its Constitution), where health is defined as a state of "complete physical, mental and social well-being and not merely the absence of disease or infirmity." The WHO's Ottawa Charter for Health Promotion (1986) elaborated this definition, and states that:

> To reach a state of complete physical mental and social wellbeing, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for

everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities.

This elaboration is important, in that it incorporates the idea of resilience to change as an important aspect of health. However, it is worth noting that both of the WHO´s definitions are considered dated and insufficient (Huber et al., 2011). One of the main criticisms lodged at it is the use of the word 'complete': this goal is unattainable for most people, particularly in areas of conflict. Additionally, in most high-income countries, the burden of disease has shifted toward chronic diseases, meaning that fewer people are 'completely' well for ever-increasing periods of their lives (ibid.).

Other definitions of 'health' have increasingly come into vogue among researchers, carrying across key elements from these definitions. These include the idea that health is changeable and about individuals' ability to cope with environmental stressors, and various dimensions of health (social, mental, and physical). One such definition is Bircher's (2005), which states that:

> Health is a dynamic state of wellbeing characterised by a physical, mental and social potential, which satisfies the demand of a life commensurate with age, culture and personal responsibility. If the potential is insufficient to satisfy these demands the state is disease (336).

This definition has some positive aspects, including echoing earlier ones that measure health against physical, mental/emotional and social aspects. It also considers that health is dynamic. Importantly, it introduces new elements that health is a relative state, particularly to personal factors (e.g. age) and social factors (e.g. culture and personal responsibility). However, it is somewhat problematic, in that it states if someone is not healthy, they are in a diseased state. This permits little variability and complexity in the measure of health.

Huber et al. (2011)'s defines health somewhat differently, and states that health is "the ability to adapt and self-manage in the face of social, physical, and emotional challenges" (p. 1). This captures some of the dynamism of the Ottowa Charter (1986) and Bircher (2005), in that coping is the focus of health, and includes elements of social, physical and emotional/mental wellbeing. It also does not have the pitfall that health and disease are binary states.

Still, there may be some issues with Huber et al. (2011)'s definition. This definition of health, with its focus on coping and resilience, places the burden on individuals for understanding their own health, and outside of professionals' hands to decide if disease is present (or not). This presents an issue for understanding health at a population level. Haverkamp (2016) elaborates on the issues with this approach:

The political question here, is to what extent a government should be concerned with subjective experiences when it comes to the health of citizens. The risk with an exclusive focus on the individual is that it distracts from what seems to be a more proper concern for public health. Namely a concern with the circumstances that … determine people's health, but also enable or disable people to cope with their health problems (p. 3).

Despite these shortcomings, this thesis employs Huber (2011)'s definition, as it most closely aligns with current understandings of how variable and relative health is, while carrying over the various facets of health (physical, social, mental/emotional) present in the WHO's definitions.

2.5 The wealth/health pathway

Using these understandings of health and wealth (financial security), thesis rests on the theoretical link between wealth and health, which has been well-established by existing research. The more money people have, the healthier they tend to be. Perhaps the most compelling piece of evidence for this relationship is the gradient that forms when comparing income against health outcomes. When looking at population-level statistics health outcomes, this positive gradient forms between various indicators of socio-economic status (SES) and health across all age groups and all countries studied, along with virtually every measure of health outcome, including morbidity, disability and perceived health status (Wolfe, Evans & Seeman, 2012; Kawachi, 2000). The below figure demonstrates the basic shape of this gradient:
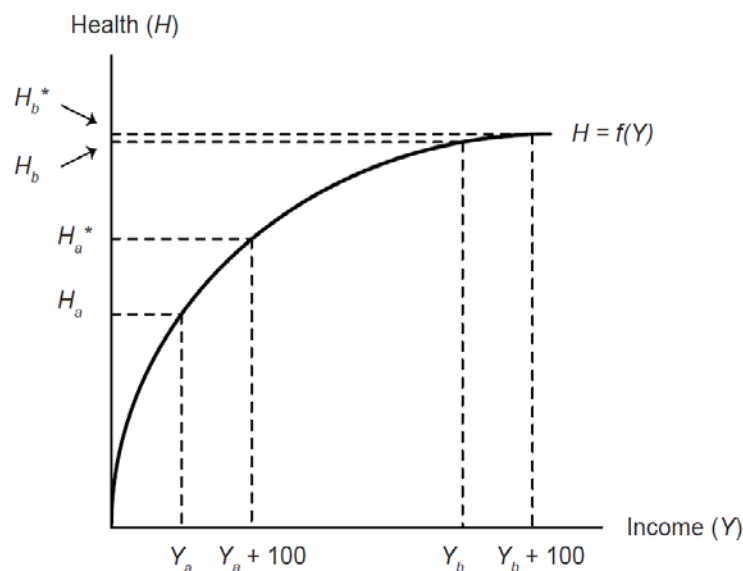
Figure 2. The Income-Health Gradient. From *The biological consequences of socioeconomic inequalities*, by Wolfe, Evans & Seeman, 2012, the Russell Sage Foundation.

This gradient also indicates that there are two types of influences on health: direct and indirect.

2.5.1 Direct influence of income on health

The gradient's slope declines with increasing income, so that rising income produces diminishing returns (Kawachi, 2000). The steepest increases occur at the bottom of the curve: $100 at the bottom increases health much more than at the top (Wolfe, Evans & Seeman, 2012). This points to a material, direct influence of income on health outcomes: the ability to buy good health, or buy goods and services leads to good health (Bartley, 2004). For instance, in relation to factors like sanitation, better health will not result after a certain amount of income. Other ways that money may directly impact health are through the ability to buy better food, clothes and housing. Income may also serve as a protector against environmental hazards. For instance, higher-waged jobs tend to be less dangerous (e.g. a white-collar office job compared to one on a construction site) (ibid.).

There is some evidence of the direct influence of income in the literature (e.g. Marmot et al., 1991; and Mustard et al., 1997; Subramanian & Kawachi, 2004). However, these studies more generally demonstrate that there is a link between income and health, and use a material theory to explain it. There is scant research that demonstrates a causal relationship between environmental exposure and health. Indeed, those that have been conducted on single measures of environmental exposure, e.g. damp in homes, have tended to not find any link to health (Bartley, 2004). Still, the persistence of the gradient and its levelling off are a powerful indication that money can, to an extent, directly buy better health.

2.5.2 Indirect influence of income on health.

However, this gradient also indicates that the way wealth influences health is more complex: each thousand dollars, or additional car improves health outcomes across the income spectrum (Bartley, 2004). Because of the persistence of the income/health gradient even after basic needs are met, it does not appear that directly buying better health is the only way that wealth influences health. Further, this gradient appears with health outcomes that cannot directly be linked to material exposure. For instance, coronary heart disease is more prevalent among poorer segments of populations. But heart disease is not directly linked to "poor sanitation, malnutrition and overcrowded conditions" (Marmot, 2002, p. 31). Rather, stress and diet are among its main causes. The indirect effects of the amount of income individuals have may be equally (if not more so) important to health as the direct effects.

This may occur through the mechanism of relative deprivation, or how individuals' incomes compare to the incomes of people in their reference group (Wagstaff & van Doorslaer, 2000). When individuals feel that they have less income than others in their

reference group, they are relatively deprived (Jones & Wildman, 2008). There is a significant body of literature demonstrating communities' level of income inequality - or level of relative deprivation - may shape the health outcomes of the area overall (e.g. Wilkinson and Pickett, 2006; Wamala et al., 1999; and Steptoe & Willemsen, 2002).

Based on the literature, there appear to be two pathways explaining the link between health and wealth as a result of relative deprivation: the socio-economic pathway and the physiological pathway.

2.5.2.1 Socio-economic pathway

Income inequality may affect health by limiting access to life opportunities, through the mechanisms of human capital investment and social capital. In the former instance, existing research has shown that income inequality is correlated with indicators of unequal human capital investment, an economic concept that refers to individuals' attributes that enhances their abilities to perform labour (Kaplan et al., 1996). Education is one of the key ways identified to enhance human capital. In the US, states with higher levels of income inequality spent a smaller share of budgets on education and had worse educational outcomes (Kawachi, 2000). According to Kawachi (2000), "reduced social spending … translates into truncated life opportunities and thence to poorer population health" (p. 86). One reason that this occurs in more unequal societies may be that the interests of the rich diverge from everyone else (Krugman, 1996). Given that wealthier people tend to have greater political influence, this results in policies that serve their interests, often to the detriment of more 'average' citizens. In Clinton-era America, for example, this process may have been at the root of widespread lower taxes for the wealthy and funding cuts for public education (ibid.).

Another way that income inequality may limit life opportunities is through a lack of social cohesion, or "…the extent of connectedness and solidarity among groups in society" (Kawachi & Berkman, 2000, p. 175). The importance of social cohesion to health was identified as early as 1897, in Durkheim's seminal *Suicide*, which discusses the way in which social control and support can be a protective factor against suicide (Kushner & Sterk, 2005). Kawachi (2000) argues that greater income inequality "disrupt[s]...the social fabric," which in turn impacts health (p. 86). This process may occur because the opposite is true: because social cohesion is more likely to be present in more equal societies. Social cohesion in turn may influence health via health behaviours and access. In the case of health behaviours, it may influence the diffusion of healthy behaviours or information, and curtail more negative ones. More socially cohesive communities have also been found to have better access to, or better utilisation of, local health services (Kawachi & Berman, 2000, p. 175).

2.5.2.2 Physiological pathway

Increased stress is also a way in which financial insecurity impacts health. Financial insecurity has been shown to increase stress levels, particularly in countries where income inequality is higher (Catalano, 1991). According to Graham (2015), "'Bad' stress, which is associated with an inability to plan ahead, lower life satisfaction levels, and worse health outcomes, is more common at the bottom of the [income] distribution." One way that stress may lead to poor health outcomes is evident through adrenaline and cortisol (Havranek et al., 2015). While in human evolutionary past, "violent activity would follow the arousal of the fight or flight response, " and the adrenal gland secretes stress response hormones: rapid response adrenaline (epinephrine and norepinephrine) and slower, longer-lasting cortisol (Bartley, 2004, p. 81).

Taking the example of adrenaline response in the far-distant past, it would be released into the bloodstream, and then be burned off by the vigorous activity of a fight or flight response. Once the activity was over, the person's body would return to a normal state. But in modernity, feelings of fear and anger often are not met with a physical response. Prolonged stress may ultimately 're-set' blood pressure to a higher level permanently. Indeed, existing research has found a relationship between mortality from cardiovascular disease - a product of prolonged higher blood pressure - and SES position, although cardiovascular disease is not from other more environmental exposures (as previously noted) (Wamala et al., 1999). Based on these different pathways, relative deprivation appears to indirectly influence individuals' health outcomes.

2.5.3 Synthesised model

This thesis considers both pathways as important to health, and uses a consolidated model of the two. This is presented in Figure 3. Throughout this thesis, the concepts and various facets of financial security and health are used to explore and analyse the Great Recession´s influence on health in Spain and the Netherlands.
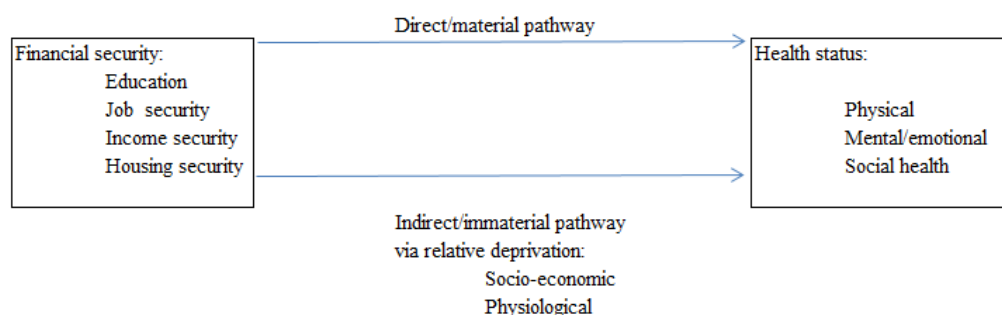
Figure 3. Theoretical model.

3. Methods

This thesis employed mixed methods. A concurrent nested procedure with mixed methods was used, because different methods were best-suited to answering different RQs and the combination of methods may have helped to give a broader perspective on the main RQ (Creswell, 2003). RQ1 is best answered via a literature review, as it seeks to understand the general knowledge base about the Recession´s influence on health. RQ2 and 3 are quantifiable, and are therefore best tested statistically. RQ4 was best-answered via qualitative interviews, because this RQ seeks to understand individual experiences of the crisis. Qualitative methods were also intended to enrich this thesis´s perspective on the quantitative data in RQs 2 and 3, and to bring up relevant mechanisms underlying the relationship between wealth and health not captured in this thesis´s theoretical framework (Carter & Henderson, 2003; Creswell, 2003).These different data sources are combined to answer this thesis´s main research question in Chapter 8.

3.1 Literature review (RQ1)

First, to better understand the debate around the Great Recession's influence on health in Europe overall, a literature review using semi-systematic search methods was conducted. To make this process transparent and reproducible, the five steps outlined in Denyer and Tranfield (2009) (as well as Lubberink et al., 2017) were followed: "question formulation; locating studies; study selection and evaluation; analysis and synthesis; and reporting the results."

3.1.1 Question formulation

The overall goal of the literature review was to answer RQ1: *What is the Great Recession's influence on health in Europe?* Answering RQ1 was intended to help better inform this thesis, and to better inform subsequent RQs (particularly RQ2 and RQ3), and the way in which aspects of all questions were operationalised (particularly in relation to the definitions of health and wealth used throughout this thesis).

3.1.2 Locating studies

To find relevant studies, the following databases were searched: PubMed, Web of Science and Scopus. These databases were selected because of their general size (e.g. Scopus is the largest database of peer reviewed literature) and/or topical relevance (e.g. PubMed focuses on life sciences/medical topics, and Web of Science examines cross-disciplinary research, making them both topically relevant to this thesis). Snowball sampling was also used; once articles were selected, their bibliographies were scanned for additional relevant sources. To yield relevant sources, a Population, Intervention/exposure, Comparison, Outcome, (PICO) framework was used (Ecker & Skelly, 2010).

Table 2: Boolean search terms

Population	Intervention	Comparison	Outcome
'Europe*'	'economic crisis; 'financial crisis'; 'Great Recession'; 'debt crisis'		health; 'disease*'

The following Boolean search string resulted from these terms: Europe AND (crisis OR 'economic crisis' OR 'financial crisis' OR 'Great Recession' OR 'debt crisis') AND (health OR disease). These terms were selected to mirror those in RQ1, along with similar concepts.

3.1.3 Study selection and evaluation

This literature review sought to identify articles that were specifically concerned with the Great Recession´s impact on health outcomes (versus healthcare provision, usage or access) on the population level, so that the resulting articles will have salience for this thesis. Beyond this, there were a number of criteria that were used to narrow the articles included and hone the literature review´s focus. First, to make the geographies relevant to Spain and the Netherlands, included articles had to be predominantly focussed on the Eurozone. Second, because the Recession took hold in Europe in 2008, only articles written in 2010 or later were included. This was to give time for changes in health to become evident. Third, articles had to be written in English, due to the language limitations of the author. Finally, articles had to define health similarly to Huber (2011) (i.e. that health is a composite of physical, social, emotional/physical). Articles that consider only physical health outcomes were included, because it is considered that social and emotional/physical factors may influence physical health outcomes (e.g. Berkman & Glass, 2000 regarding social health; and Scheier & Carver, 1987 regarding emotional/mental health). However, articles that only considered social or emotional/physical aspects of health were excluded, as these not the same as (although are heavily related to) health outcomes. Similarly, articles that only considered health behaviours were excluded, as these are correlated with and linked to health outcomes, but are not the same things.

This initial search yielded 662 results from PubMed, 318 from Web of Science, and 281 from Scopus, totalling 1261 articles. Bibliographic information and abstracts were then uploaded to Endnote. Then, using the above search criteria, a step-by-step title and abstract search was undertaken to eliminate inappropriate articles. Having examined titles and abstracts based on a variety of measures (see Figure 4), 98 articles remained and were read in a full paper analysis.
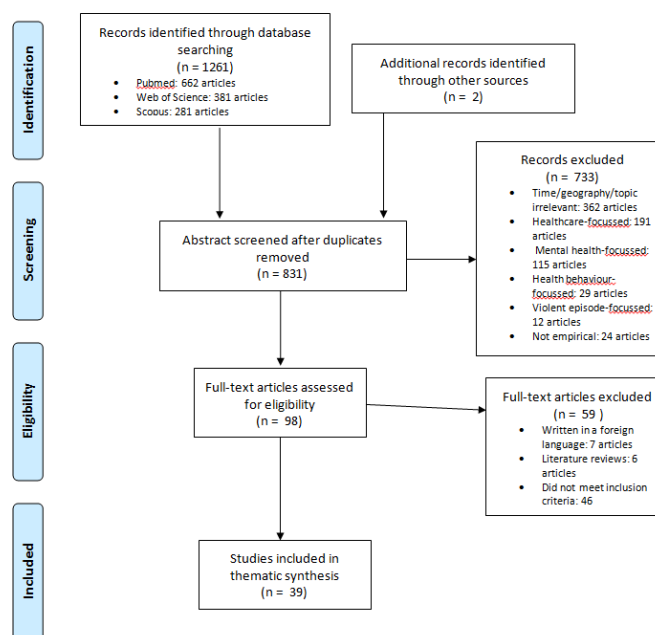
Figure 4. PRISMA flowchart. **Adapted from** *Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, et al. (2009), Table 1.*

These full papers were assessed to ensure that they met the above inclusion criteria, as well as some others that were added at this point in time. Articles that, on closer inspection, did not meet the inclusion criteria, and were written in a foreign language were then excluded. At this stage, it was also decided to exclude systematic reviews/literature reviews: much of the purpose of the literature review was to refine this thesis's research questions and methods based on metrics discussed in the data analysis section, and these articles did not lend themselves to this purpose. From here, a final list of papers was included in the literature review.

This selection process is outlined in Figure 4, in accordance PRISMA's 2015 flow diagram guidelines. This format is useful because this is a widely-accepted format for reporting the results of literature reviews and meta-analyses in healthcare, thanks to its clarity of what was included, excluded and why this was done (PRISMA, 2015).

3.1.4 Analysis and synthesis

The resulting 39 articles were analysed based on metrics that could help inform this thesis. These metrics are listed below:

1. In what geographies has this relationship been studied?
2. How was the research question framed?
3. What types of data was collected/used?
4. How do existing studies conceptualise 'health' and 'wealth', and how does this influence study design?
5. What methods have been used to test this relationship?
6. What kind of debate is there around the influence of the Great Recession's influence on health?
7. What are the limitations to these approaches?

These metrics were selected for two reasons: first, to understand generally (although likely not completely) where has been studied, and how these geographies have been studied(numbers 1, 2 and 6); and second, to identify ways to answer this thesis's research question more completely by improving on study design (numbers 3, 4, 5 and 7). In Chapter 4, results of this literature study are presented based on these metrics. Chapter 4 concludes by indicating how and why these different metrics were used to inform different aspects of this thesis.

3.2 Quantitative research: RQs 2 and 3

RQ2 and RQ3 are heavily related: while RQ2 assesses the direction of the relationship between financial security and health to see if this relationship was affected over time by the Recession, RQ3 assesses this relationship's strength to see if this relationship varies by geography.

3.2.1 Data collection

To answer RQs 2 and 3, this thesis used quantitative, secondary data. Secondary data over primary data was best to use for logistical reasons. Using secondary data enabled nationally representative survey samples to be obtained, something that would have been impossible if primary data were collected.

The ESS was selected for use. The ESS is a publicly available, nationally representative, survey-based dataset that has been conducted every two years since 2002. The most recent edition, conducted in 2014, contains data from 21 countries. The biannual survey

is academically rigorous research into the social conditions across Europe (ESS, 2017). The ESS7 is particularly useful for this thesis's purposes because it included a rotating module on health inequalities. As a point of comparison before the Recession, the ESS4 (conducted in 2008) was also used, although this did not contain a module on health inequalities.

More broadly, it is worth noting that the ESS had some shortcomings, although attempts have been made to address them. While the ESS generally asks the same question to each country's respondents (with adaptations only to generate comprehensible translations), this is often not possible, and questions are re-coded into a single frame. To ensure internal validity, the ESS include the following: omnibus tests, a two-nation pilot survey, cognitive interviews in several European countries, reliability and validity prediction using the Survey Quality Predictor, advance translation, and consultation with coordinators in every participating country (Eikemo et al., 2017).

For the Spanish data, there were 2,576 and 1,925 participants in 2008 and 2014, respectively; and in the Netherlands, there were 1,778 and 1,919 cases in 2008 and 2014, respectively. However, because the ESS contains a sample of people 15 years old and older, the sample contained a large number of cases who would not have been of working age in the years around 2008 or 2014. Because this thesis is most interested in the Great Recession's influence on health, and assumes that this would disproportionately affect those who are working-age, all cases aged 24 and under and 76 and older were excluded. This resulted in a sample of 1,850 and 1,424 cases in Spain in 2008 and 2014, respectively, and 1,367 and 1,446 cases in 2008 and 2014 in the Netherlands, respectively.

A full list of the questions used can be found in Appendix B. 24 questions of the ESS7 and ESS4 were used to answer RQ2. 39 questions of the ESS7 (including the 24 questions used as part of RQ2) were initially selected to answer RQ3. More questions were used to answer RQ3 because there were more relevant questions available: the ESS7 contains a rotating module on health inequalities, and therefore had more questions relevant to this thesis. To select these questions, all questions that captured aspects of the concepts 'health' and 'financial security' were used. However, it is worth noting that the ESS did not contain variables for all facets of these concepts, particularly financial security: no variables encapsulated 'housing security', so this theoretical aspect was not measured in RQ2 and RQ3. All relevant questions were grouped into the sub-categories used in defining these terms.

3.2.2 Data analysis

The statistical analysis package SPSS was used to analyse the results of the secondary data.

3.2.2.1 RQ2

This RQ was tested by comparing data from the ESS4 with the ESS7. This means that the Dutch and the Spanish samples were tested separately. First, the relevant questions from the ESS4 and ESS7 were combined into a single file, cases that did not meet the age requirements of this thesis were deleted, and a weighting variable was applied. The ESS says that a weighting variable must be used for all of its datasets, largely because fact that in some countries respondents have different probabilities to be part of the sample due to the sampling design used. Applying the weights allows to… obtain estimates that are not affected by a possible sample selection bias" (ESS, 2014, p. 1). There are three weighting variables included in all ESS datasets. The post-stratification weight is the most appropriate for this RQ, because it was the most sensitive to SES, and are "constructed using information on age-group, gender, education, and region" (ibid.). Therefore, the post-stratification weight was used. Using a weighting affected the results of the data in a few ways. For descriptive statistics, these include: the distributions of variables; tabulations; average measures; and measures of spread and variance (ibid.). For instance, it appears in the descriptive statistics (Appendix B) that there are 1,436 Spanish cases in 2014, when in actuality there were 1,425.

Next, the scales were adjusted so that they 'move' in similar directions, or have similar meanings. Because it intuitively makes sense (as well as being the case in the majority of questions) that positive values are associated with positive outcomes (e.g. better health, greater financial security), question scales were recoded so that all scales move from low values representing negative concepts to high values representing positive concepts. For example, the question E2 ("How often do you eat vegetables") was initially on a scale where 1 = three times or more per day, and 6 = less than once a week. This was recoded so that 1 = less than once a week and 6 = three times or more per day.

Also, scales involving a '0' with an assigned value (as opposed to simply a non-response) were transformed, so that a 0 became a 1. For instance, the question B20 ("How satisfied with your life as a whole nowadays?"), initially was on a scale from 0 (extremely dissatisfied) to 10 (extremely satisfied). This was recoded from 1 to 11, so that the 0 responses would be captured and analysed by SPSS. All adjustments to scales are noted in the Descriptive Statistics tables included in Appendix B.

Once these adjustments were made, descriptive statistics were run, with these tables available in Appendix B. Next, a principle component analysis (PCA) was run. Because the

ESS asks multiple questions that aim to gauge individuals' health and financial status, a PCA was run to group these into 'latent' variables, or the underlying constructs that multiple variables attempt to capture (Field, 2009). As the underlying concepts that these variables measure are theoretically linked and therefore likely correlated, oblique rotation (oblimin in SPSS) was used. The number of variables to use in analysis was determined based on eigenvalues greater than one, using Kaiser's criterion (ibid.). To ensure that this data was appropriate for a PCA, a KMO test and Bartlett's test for homoscedasticity were run. In interpreting the components, the structure matrix, as opposed to the pattern matrix, tends to allow for clearer interpretation of the latent variables, because single variables are less likely to load onto multiple components (ibid.). An extra component about institutional trust was included for the Spanish interviews, based on one of the themes generated within the qualitative interviews. Although this was attempted to be added for the Dutch data, the underlying variables did not correlate into a single factor, and so were excluded from analysis.

The resulting factor scores were used in two independent-sample t-tests. To answer RQ2, the Spanish and Dutch samples were tested separately, to see if health had worsened over time in the two countries. The results are presented in Chapter 5.

3.2.2.2 RQ3

This hypothesis was tested with data from the ESS7. As with RQ2, the relevant questions from the ESS7 were first combined into a single dataset, and cases outside of this thesis's age requirements were deleted. Variable scales were also adjusted. Further, control variables thought to have an influence on health outcomes (e.g. marital status and age) were used in regressions and transformed into dummies, in order to most clearly see their influence on the overall model. A table describing what variables were adjusted and how this was done is in Appendix C. Then, a weighting variable was applied. Because this question involves comparing across countries, with different sample sizes and demographics, the ESS recommends using the population weighting variable in conjunction with either the design weight or the post-stratification weight variable. Because SPSS (along with other statistical packages) only allows for one weighting variable to be applied, a combined weighting variable was created from the product of the population weight variable and the post-stratification weight variable (based on ESS advice) (ESS, 2014). This new variable was then applied. This also altered the descriptive statistics totals slightly.

Next, a PCA was run. The KMO and Bartlett's tests indicated that this data was suitable for a PCA. After examining the results of an initial PCA, it was decided to exclude

several variables (frequency of doctor's visits and frequency of fruit consumption) that did not load on components with other variables. Some of these deemed to be theoretically more important and/or not reflected in other components were included as additional variables in the regressions (particularly exposure to hazards at work and number of hours worked).

As in RQ2, components with eigenvalues 1.000 or greater were saved as variables. T the pattern matrices were also used to interpret these components. The financial security-related components were used as explanatory variables and health components as dependent variables. Factors that have been shown to confound the relationship between financial stability and health, such as age, race, marital status, education level and gender, were also controlled for.

Then, to test the strength of the relationship between financial security and health, OLS regressions were run. OLS was the most appropriate method to use, because of the linear relationship of the data, and because OLS shows the relative importance of each independent variable on the overall model. Because seven health components resulted from the PCA, seven regressions were run, each using one of the health components as a dependent variable. Independent variables included the two financial security variables, as well as relevant control variables (with a full list of each in Appendix C). For the seven regressions of health components, the chi-square tests were significant, and the goodness-of-fit tests (Pearson and deviance) were insignificant, indicating that these models are better fits than simply estimations of the mean.

Ultimately, it was determined whether the relationship between financial security and health was stronger in Spain or the Netherlands for each model based on: which country had a higher adjusted r-squared to see whether the Dutch or Spanish model explains more variance; the significance levels of the financial security variables' beta coefficients to ensure that this relationship (versus control variables) are in fact important to the model; whether the financial security variables' beta coefficients were negative or positive, to determine the direction of the relationships of financial security on health; and whether country of origin was a significant predictive factor in the overall models, again to see if country of origin plays a significant role in improving health outcomes. At this point, it was decided to exclude the mental health: positive component from analysis. Its r-squared results were counter to mathematical logic. Therefore, the regression results are shown along with the other six health component regressions in Appendix C, but it is not included in the analysis.

3.3 Qualitative research: RQ4

Qualitative interviews answered RQ4.

3.3.1 Population of interest and sampling

In the qualitative research, a sample of 10 Dutch and 10 Spanish people was obtained. Snowball sampling was used, because it was the most appropriate for this thesis's purposes, because of the challenge in finding interview participants in countries where the author has few contacts, although this may mean that a biased sample was obtained (Carter & Henderson, 2003). The age range of 28 to 65 was selected so that people would have been of working age in the years since the Recession. This is intentionally slightly narrower than the age range used in RQs 2 and 3, because this sample is smaller and therefore the most relevant cases were attempted to be selected. Diverse SES backgrounds were also important to understand how the relationship between wealth and health may appear across the income spectrum. However, this sample was not intendent to be representative, and was rather to "…achieve conceptual power" (Herens et al., 2016, p. 5).

In Spain, two Spanish participants were approached in person and a time and place agreed then. Eight interviews resulted through existing contacts. In total, twelve people in Spain were approached through these contacts, and followed up by the author via email or Whatsapp. Three of the approached people who were not interviewed did not decline, but were unable to be interviewed due to scheduling conflicts. One declined because he felt uncomfortable speaking in English.

In the Netherlands, all interviewees were approached through existing contacts (friends or friends/family of friends). Three were approached in person, and all agreed, and eleven were approached via email. Three did not respond. Eight agreed via email, with the same follow-up email further explaining the project and to schedule meeting times sent to each. One of these possible interviewees was unable to be interviewed because of scheduling conflicts.

3.3.2 Interviews

To gather qualitative information about people's experiences of the Great Recession, life history interviews were undertaken, largely based on Adriansen (2012)'s methods. The 'backbone of this method' involves drawing a timeline in the middle of a large paper (ibid.). Using the timeline was important, because it allowed interviewees to orally tell their stories less linearly, and may have served as a memory-generating tool: interviewees may "…de- and re-construct their story" (ibid., p. 43). In all interviews conducted, this timeline was drawn horizontally. Once the concept of the timeline was explained, interviewees were asked about the most important in their lives between 2008 and the present. Respondents then described events, and this author ordered them chronologically on this timeline. Then,

participants were asked about key events that affected them in their families, then their communities, and then society more broadly (loosely based on Adriansen [2012]'s categorisations). Events in these different categories were drawn on different 'levels' of the timeline, and connected to one another when they related. While this author wrote the events, respondents largely connected these different events. This was done to show possible 'cause and effect' patterns, demonstrating how more macro-levels affected the micro, and vice versa. These categories were selected to allow for an unstructured interview, while nonetheless discussing the different spheres that may have affected participants' lives. This also enabled participants to naturally discuss issues that affected them (such as struggles to become employed), without asking them directly about these more sensitive issues. Other than prompting participants to describe chronologically events in these broad categories, no pre-set questions were asked. It is, however, worth noting that because respondents were all aware of the topic of this thesis, all explicitly mentioned health, healthcare and financial security. An example timeline can be found in Appendix D.

Interviews took place in spring and summer 2017: the Spanish interviews were conducted in Madrid between April 18 and April 26, 2017. The Dutch interviews were conducted in the provinces of Utrecht and Gelderland between 21 May and 5 July. All interviews were conducted in public spaces, including cafes, bars and parks. This was mostly due to logistics: participants were often leaving work, so it was most convenient for them to be interviewed near their workplaces. Interviews were recorded with interviewees' permission, and ranged from 28 minutes to an hour and twenty-one minutes in length. The average interview time for the Spanish interviews was 49 minutes, and average interview time for the Dutch interviews was 41 minutes. Interviews were then transcribed verbatim, with the resulting transcripts sent to interviewees for approval.

3.3.3 Interview analysis

To analyse these interviews, Braun & Clark (2006)'s thematic analysis technique was employed. This involves coding for key themes in the data in order to reduce the complexity of interview transcripts to their most salient points. Thematic analysis does not stem from a theoretical position, but rather: "what is important is that the theoretical framework and methods match what the researcher wants to know, and that they acknowledge these decisions, and recognise them as decisions" (ibid., p. 7). While there are no strict rules for what makes a theme in thematic analysis, this thesis included themes that received significant mention in over half of interviews. In this thesis, Braun & Clark (2006)'s six steps for

analysing qualitative data were also employed. The ways in which these steps were used in this thesis are described below:

1. Increasing familiarity with the data: This was done by re-reading each interview transcript before beginning coding (once with all the Dutch or Spanish interviews together, and once before beginning to code each transcript individually).

2. Generating initial codes: Initial codes were first based off this thesis's theoretical framework/ definitions, and the various concepts underpinning financial security and health. Then, concepts that came up in over half of interviews were coded in texts. Finally, initial codes were identified as positive or negative (+/-) aspects of individuals' lives.

3. Searching for themes: This step was unnecessary for the themes generated from this thesis's original theoretical framework. But the initial codes that stemmed from a bottom-up approach, looking common concepts in interview transcripts, were then grouped into themes.

4. Reviewing themes: This initial list of groupings was them analysed to make sure that it was complete enough to represent the content of the interviews, while condensed enough to be usable.

5. Defining and naming themes: The majority of themes were based on the key concepts in this thesis´s theoretical model. Several additional themes were also added to the interviews, including institutional trust, socio-economic inequality and political activism.

6. Producing the report: The results of these qualitative interviews form Chapter 7.

3.3.4 Ethical considerations

Informed consent was given verbally, at the beginning of the recorded interviews. Respondents were assured anonymity and the ability to edit or opt out of participating in this thesis between the interview date and this thesis's completion date. Respondents also were given a final sign-off of their interview transcripts. While all interviewees received their transcripts, only seven of the Spanish and eight of the Dutch participants acknowledged receipt of the transcripts. No interviewees said that they would like their transcripts amended or to no longer participate.

3.4 Integrating Findings

To answer this thesis's main research question (*In what way did the Great Recession impact health in Spain and the Netherlands?*), findings were integrated using a triangulation protocol. This was done based on O'Caithan, Murphy & Nicholl (2010)'s recommendations

for 'triangulating' findings (here used to mean studying a problem from different perspectives to gain a more complete picture). This process involves: "consider[ing] where findings from each method agree (convergence), offer complementary information on the same issue (complementarity), or appear to contradict each other (discrepancy or dissonance)." This is ultimately to help researchers find 'meta themes' that are present across methods. To accomplish this, a convergence coding matrix was created. This is loosely based on O'Caithan, Murphy & Nicholl (2010)'s, but is adapted to this thesis.

Each RQ was analysed against each important aspect of financial security and health. This method was selected because it allowed findings to clearly be analysed against the theoretical constructs (and operationalisations) used in this thesis. In the final column is an assessment (convergence, complementarity or discrepancy) on the extent to which these findings agree. It is worth noting that RQ1 was excluded from this analysis. This is because the literature review did not look at different facets of financial security and health, and was instead intended predominantly to inform other aspects of this thesis.

4. RQ1: Assessing the Great Recession's influence on health in Europe

This chapter explores how the Great Recession's influence on health has been assessed in existing literature to date. To answer RQ1, 39 articles were assessed on seven metrics, with the results presented in a table in Appendix A. In this literature review, articles are synthesised qualitatively, based on concepts deemed to be practically and theoretically important for this thesis.

4.1 Geography

While geographies of focus varied, clear trends emerged. A large share of studies (16 out of 39) analysed large groups of European countries. Ten of the forty included studies (Abebe, Tøge & Dahl, 2016; Bartoll & Mari-Dell'Olmo, 2016; Clair et al., 2016; Farrarini, Nelson & Sjoberg, 2014; Huijts et al., 2015; Reeves et al., 2014; Tapia Granados & Ionides, 2017; Toffolutti & Suhrcke, 2014; Tøge, 2016; Tøge & Blekesaune, 2015) looked at Europe overall, ranging from the EU21 to the EU28. Baumbach & Gulis (2014) stands out as the only study that compared a grouping of multiple European countries that was diverse in their experiences of the Recession (Germany, Finland, Portugal, Slovenia, Poland, Czech Republic, Slovakia and Bulgaria). Four others compare two to three countries that experienced different levels of financial insecurity in the wake of the Recession (Faresjö et al., 2013 – Greece and Sweden; Granados & Rodriguez, 2015 – Greece, Finland and Iceland; Hessel, Vandoros & Avendano, 2014 – Greece, Ireland and Poland; Vandoros et al., 2013 – Greece and Poland). Reile et al. (2014) is the only included study that analyses several countries thought to have had similar levels of financial insecurity in the wake of the Recession (Estonia, Lithuania and Finland).

The remaining 23 studies examine single countries, or individual cities/regions within single countries. Only Loerbroks et al. (2014) examines a country that fared relatively well in terms of financial insecurity (Germany). The other studies examine countries that fared among the worst in the Eurozone. Eleven studies (Arroyo, Renart & Saez, 2015; Barroso, Abasolo & Caceres, 2016; Bartoll et al., 2015; Benmarhnia et al., 2014; Fernandez et al., 2015; Maynou, Saez & Lopez-Casasnovas, 2014; Moya et al., 2015; Rajmil et al., 2013; Regidor et al., 2014; Urabnos-Garrido & Lopez-Valcarcel, 2015; Vasquez-Vera et al., 2016). examine Spain overall or a region in Spain (most commonly Catalonia). At nine studies, another sizeable share of these studies examine Greece as a whole, or municipalities within Greece (Barlow et al., 2015; Bonovas & Nikolopoulos, 2012; Drydakis, 2015; Filippidis et al., 2014; Kollia et al., 2016; Vlachadis et al., 2014a; Vlachadis et al., 2014b; Vrachnis et al.,

2015; Zavras et al., 2012). examine Portugal. One study (Sarti & Zella, 2016) focusses on Italy, while one focuses on Portugal (Nogueira, 2016).

4.2 Research questions

To be included in this literature review, studies had to be predominantly concerned with the extent to which the Great Recession impacted health outcomes. Therefore, to greater or lesser extents, nearly all studies included in this literature review (36 out of 39 articles) pose this question, examining various moderators such as employment status, education level and income on this relationship. Still, three articles that less directly answer this question were included because of their general relevance to this thesis. Clair et al. (2016) and Vasquez-Vera et al. (2016) look specifically at the impact of housing payment problems on health. Huijts et al. (2015) looks at a specific facet of the Recession's impact on health, although it examines the population overall: this article poses the question of whether regaining a job is enough to reverse the impact of job loss on health.

4.3 Data sources

Secondary quantitative data was the most common data source among the included articles, with 38 out of 39 using secondary data. The most commonly used data source was the European Statistics on Income and Living Conditions, with ten studies (Abebe, Tøge & Dahl, 2016; Barlow et al., 2015; Clair et al., 2016; Coveney et al., 2016; Ferrarini, Nelson & Sjoberg, 2014; Hessel, Vandoros & Avendano, 2014; Huijts et al., 2015; Sarti & Zella, 2016; Tøge, 2016; Tøge & Blekesaune, 2015; Vandoros et al., 2013) using it. Other multi-national data sources were also used, including statistics from Eurostat (Bartoll & Mari-Dell'Olmo, 2016; Baumbach & Gulis, 2014; Regidor et al., 2014), the European Centre for Disease Control (Bonovas & Nikolopoulos, 2012; Reeves et al., 2014) and Prevention and the European Health for All Database/WHO statistics (Granados & Rodriguez, 2015; Tapia Granados & Ionides, 2017; Toffolutti & Suhrcke, 2014). The remaining studies used nationally/regionally representative cross-sectional surveys, namely the Spanish National Health Survey (Arroyo, Renart & Saez, 2015; Barroso, Abasolo & Caceres, 2016; Bartoll et al., 2015; Moya et al., 2015; Urbanos-Garrido & Lopez-Valcarcel, 2015; Vasquez-Vera et al., 2016;), among others (Filippidis et al., 2014; Rajmil et al., 2013; Reile et al., 2014; Zavras et al., 2012). Several others used nationally/regionally representative panel data (Drydakis, 2015; Kollia et al., 2016; Loerbroks et al., 2014). Six additional studies used national census data (Benmarhnia et al., 2014; Maynou, Saez & Lopez-Casasnovas, 2014; Nogueira, 2016; Vlachadis et al., 2014a; Vlachadis et al., 2014b; Vrachnis et al., 2015). Only two included studies used primary, non-representative data: a cross-sectional study of Swedish and Greek

medical students (Faresjö et al., 2013), and a longitudinal study of 143 participants from a neighbourhood in Barcelona (Fernandez et al., 2015).

4.4 Wealth measures

There was a great deal of variety in how 'wealth' was measured among the studies. In nine studies (Arroyo, Renart & Saez, 2015; Benmarhnia et al., 2014; Bonovas & Nikolopoulos, 2012; Fernandez et al., 2015; Hessel, Vandoros & Avendano, 2014; Vandoros et al., 2013; Vlachadis et al., 2014a; Vlachadis et al., 2014b; Vrachnis et al., 2015) there was no specific measure of wealth – simply a comparison of before the Recession (2008 and earlier) and after (2010 and later) was used to indicate an increase in financial security. Faresjö et al. (2013) also did not use a before-after comparison, as it conducted a cross-sectional study of Greek and Swedish participants and assumed that the Greek students were more financially insecure. Macro-economic data (e.g. national unemployment rate; GDP; Gini coefficients, national employment insurance rates, national spending on social insurance programmes) was used in an additional nine studies as proxy measures for individuals' wealth. These studies included: Abebe, Tøge & Dahl (2016), Baumbach & Gulis (2014), Coveney et al. (2016), Ferrarini, Nelson & Sjoberg (2014), Granados & Rodriguez (2015), Reeves et al. (2014), Regidor et al (2014), Tapia Granados & Ionides (2017), and Toffolutti & Suhrcke (2014). Employment status was another common proxy measure of financial security, with seven studies (Barlow et al., 2015; Barroso, Abasolo & Caceres, 2016; Drydakis, 2015; Huijts et al., 2015; Tøge & Blekesaune, 2015; Urbanos-Garrido & Lopez-Valcarcel, 2015; Bartoll & Mari-Dell'Olmo, 2016) using solely this. Moya et al. (2015) was the only study that used education alone to measure wealth/SES. Eight other studies used composite measures of SES (including employment status, occupation type, education, and income). These included: Bartoll et al. (2015), Filippidis et al. (2014); Kollia et al. (2016); Rajmil et al. (2013); Reile et al. (2014); Sarti & Zella (2016); Tøge (2016); Zavras et al. (2012). Two studies (Clair et al., 2016; Vasquez-Vera et al., 2016) used issues with housing payments as a measure of wealth. One study used a Multiple Deprivation Scale (Nogueira, 2016), and one used neighbourhood-level wealth data (Maynou, Saez & Lopez-Casasnovas, 2014).

4.5 Health measure

A number of studies relied on individual-level data to measure health. The most common measure of health relies solely on self-rated health. This was used in 15 studies, including Abebe, Tøge & Dahl (2016), Arroyo, Renart & Saez (2015), Barlow et al. (2015), Barroso, Abasolo & Caceres (2016), Clair et al. (2016), Coveney et al. (2016), Ferrarini,

Nelson & Sjoberg (2014), Hessel, Vandoros & Avendano (2014), Huijts et al. (2015), Reile et al. (2014), Sarti & Zella (2016), Tøge (2016), Tøge & Blekesaune (2015), Vandoros et al. (2013), Zavras et al. (2012). Much of this is to do with data choice. Those that used the EU-SILC operationalised health using a single self-assessment question: "How is your health in general? Is it: (1) very good, (2) good, (3) fair, (4) bad, (5) very bad?" Several other health measures were closely linked. Three studies (Drydakis, 2015; Urbanos-Garrido & Lopez-Valcarcel, 2015; Vasquez-Vera et al., 2016) asked about self-rated health and mental health, while asked about health-related quality of life (Fernandez et al., 2015). A handful of other studies used more complex individual measures of health. These include: Bartoll et al. (2015), which examined a composite of self-reported health, overweight and obesity and health behaviours; Faresjö et al. (2013), which used biomarkers such as cortisol levels in hair and self-reported health; and Rajmil et al. (2013), which used overweight/obesity rates, health behaviours and health-related quality of life.

Population-level data was also used to measure health. Several studies used disease incidence rates as proxies for health overall. These include infectious disease incidence rates (Bonovas & Nikolopoulous, 2012); cardiovascular disease prevalence (Kollia et al., 2016; Vlachadis et al, 2014a); asthma incidence (Loerbroks et al, 2014); tuberculosis (Reeves et al, 2014); cancer (Vrachnis et al, 2015) or a combination (Moya et al, 2015 – diabetes, depression, myocardial infection, cancer; Regidor et al., 2014 – 15 health outcomes that result in premature mortality, including cancer and cardiovascular disease).

Several other studies used different mortality rates as measures of health. A handful of studies (Maynou, Saez & Lopez-Casasnovas, 2014; Nogueira, 2016; Vlachadis et al., 2014b) used mortality rates overall. Vlachadis et al. (2014a) used cardiovascular mortality rates. Vrachnis et al. (2015) used cancer mortality rates. Baumbach & Gulis (2014) and Toffolutti & Suhrcke (2014) examined different types of mortality rates, including overall mortality, suicide rates and transport mortality rates. Benmarhnia et al. (2014) used mortality rates in individuals over 60 years old. Bartoll & Mari-Dell'Olmo (2016) and Tapia Granados & Ionides (2017) used life expectancy at birth to measure health. Granados & Rodriguez (2015) used a combination of mortality and life expectancy rates.

4.6 Article conclusions

There is some debate over whether the Great Recession impacted health in Europe. The majority of studies (30 studies) found that some measure of financial insecurity during the Great Recession worsened health outcomes. Seven studies (Arroyo, Renart & Saez, 2015; Bartoll & Mari-Dell'Olmo, 2016; Coveney et al., 2016; Fernandez et al., 2015; Filippidis et

al., 2014; Granados & Rodriguez, 2015; Toffolutti & Suhckre, 2014), concluded that the Recession had a neutral or even a positive effect on health. Two additional studies qwew inconclusive (Baumbach & Gulis, 2014; Faresjö et al., 2013).

Interestingly, four of these studies (Baumbach & Gulis, 2014; Granados & Rodriguez, 2015; Toffolutti & Suhckre, 2014; Bartoll & Mari-Dell'Olmo (2016) used mortality rates/life expectancy at birth as their measures of health; the remaining four used self-rated health or self-rated quality of life (Arroyo, Renart & Saez, 2015; Coveney et al., 2016; Faresjö et al., 2013; Fernandez et al., 2015); and one (Filippidis et al., 2014) measured health behaviours. It is also worth noting that the only two studies using non-representative samples (Faresjö et al., 2013; Fernandez et al., 2015) did not conclude that the Recession worsened health outcomes.

4.7 Summary of findings

It appears that, based on the literature found in this search, there were a number of opportunities for this thesis to add to and/or improve on the existing debate on the Great Recession's influence on health. Again, the overall research question and key findings were collected for practical/informative reasons, and are therefore not considered here. Below, these points are summarised, and points where improvements can be made in this thesis are identified. It is also worth noting that many of these points feed into this thesis's 'Added value' and research questions.

4.7.1 Geography

Among the studies found and included in this literature review, few involved cross-country comparisons, particularly of a country that fared relatively well in the Great Recession and of a country that fared relatively poorly.

Such a comparison could be a rich source of information about the variations in influence of the Recession on health. Also, no found studies that focussed on the Netherlands met this literature review's inclusion criteria, although Spain was among the most popular geographies. Therefore, by comparing Spain and the Netherlands, two countries that are not known to have been compared before, new value may be added to the understanding of the Great Recession's impact on health.

4.7.2 Data source

This literature review found that all articles meeting its inclusion criteria used quantitative methods. Also interestingly, no included studies use data from the ESS. While using statistically testable data is important to establishing a relationship between the Great Recession and health, solely relying on quantitative data may ignore the lived realities of people during the Recession, and may obscure important theoretical mechanisms

underpinning this relationship. This thesis aims to add to the literature on this relationship by employing mixed methods.

4.7.3 Wealth measure

This literature review found that studies used a variety of measures of wealth, but that none fully encapsulated the concepts of 'financial security' (e.g. income, employment status or education as proxies for financial security). None of these measures involved subjective measures of how much money people felt they had, an important aspect of financial security. In this thesis, this shortcoming is addressed by using a composite measure of financial security, particularly in answering RQs 2 and 3 including more material measures (e.g. income, employment status), and more immaterial ones (e.g. how much money they feel they have relative to how much they need).

4.7.4 Health measure

As with the wealth measures used in the studies included in this literature review, few health measures were complex. The majority involved simple measures (e.g. based off a single question assessing self-rated health), or of population-level data (e.g. mortality rates). Neither of these definition types fully encapsulated Huber (2011)'s definition of health. The former did not because it did not consider the three facets of health (physical, social and emotional/mental), and the latter did not because it did not enable the individual to assess his/her health. This thesis does so by using Huber (2011)'s multi-faceted definition of health. As with its 'wealth' measure, this thesis will accomplish this by using a number of self-assessed measures of health, including those from the physical, social and emotional/mental spheres.

4.7.5 Conclusion

Overall, this literature review provided reasonably strong evidence that the Recession impacted health. However, the extent to which health was impacted is not discernible from this literature review: because the measures of health and wealth across studies are so different, they are incomparable.

This literature review also has helped to provide this thesis with an understanding of how the Great Recession's influence on health in Europe has been assessed in the found literature. It has also contributed to this thesis's 'added value'. This literature review was an important information-gathering tool that enabled this author to review and hone existing RQs, to better operationalise concepts (particularly relating to wealth and health), and informed the interpretation of the quantitative data in this thesis's discussion. Because this thesis has taken an iterative approach, it was possible to go back and hone these aspects on the basis of this literature review.

5. RQ2: Assessing the differences in financial security and health status before and after the Recession in Spain and the Netherlands

5.1 Introduction

This chapter addresses RQ2, and assesses whether or not health and financial security worsened in Spain and the Netherlands in the aftermath of the Great Recession. The hypothesis tested in this chapter is: *Financial security and health were worse after the Great Recession in the Netherlands and Spain.* To do so, the ESS4, undertaken in 2008 (before the Recession), and the ESS7, undertaken in 2014 (after the Recession) were compared.

5.2 PCA Results

The results of the PCAs, including the initial component rotation and the structure matrices for the Spanish and Dutch data are in Appendix B, with absolute values below .5 suppressed for visual clarity. Also in Appendix B is a table featuring the five components that roughly align with this thesis's theoretical definitions of health and wealth were named. These include two for financial security (job security and income security; and education) and three for health (physical, social, mental/emotional). An extra component of institutional trust was added to the Spanish data.

5.3 Significance Tests

Using the components extracted from the PCA as variables, independent sample t-tests were conducted, using the ESS edition (4 or 7) as the grouping variable.

5.3.1 Spanish data

The results of the significance tests are presented in Table 4. For all variables except for health: physical health, Levene's test indicated that group variances were unequal in the population. Therefore, for all variables except for health: physical health, the results of the t-tests are presented with equal variances not assumed. Because this thesis's hypothesis is one-sided, significance is shown as one-sided.

The financial security components and institutional trust component are lower in 2014 than in 2008. Financial security: education is significantly lower (p = .000), while financial security is nearly so, at p = 0.059, using α= 0.05. The health components all were rated higher in 2014 than in 2008. They are significantly so for health: physical health and health: mental/emotional health (both at p = .000). Social health also has increased in 2014 relative to 2008, but not significantly so, at p = .4775. Based on the results of these significance tests, it appears that financial security has worsened in Spain, but health has not.

Table 3: Component summary statistics – Spanish data

	ESS Edition	N	Mean	Standard error of mean	Median	Min.	Max.	Standard deviation	Variance
Financial security: Income and job security	4	1121	0.0327551	0.02680813	0.89746106	-4.18521	1.68496	0.02680813	0.805
	7	1063	-0.0345265	0.03364720	1.09713801	-4.10979	1.80481	0.03364720	1.204
Financial security: Education	4	1121	0.0995368	0.02842228	0.95149823	-3.60683	1.02056	0.02842228	0.905
	7	1063	-0.1049197	0.03186014	1.03886688	-3.25355	1.04942	0.03186014	1.079
Health: Social health	4	1121	-0.0011802	0.02859784	0.95737541	-3.32303	1.02056	0.02859784	0.917
	7	1063	0.0012440	0.03200215	1.04349748	-3.44701	2.90545	0.03200215	1.089
Health: Physical health	4	1121	-0.0518175	0.02849500	0.95393278	-1.31306	4.47581	0.02849500	0.910
	7	1063	0.0546198	0.03201860	1.04403403	-1.66619	4.57614	0.03201860	1.090
Institutional trust	4	1121	0.2806825	0.02666637	0.89271537	-2.39508	2.49943	0.02666637	0.797
	7	1063	-0.2958619	0.03133941	1.02188767	-2.52178	2.97063	0.03133941	1.044
Health: Mental/emotional health	4	1121	-0.0953726	0.02742311	0.91804880	-1.86596	4.29582	0.02742311	0.843
	7	1063	0.1005304	0.03284392	1.07094526	-2.02110	4.25460	0.03284392	1.147

Table 4: Component significance tests – Spanish data

	t	df	Sig. (one-tailed)	Mean diff.	Std. error diff.	95% confidence interval	
						Lower	Upper
Financial security: Income and job security	1.564	2053.759	.059	0.06728157	0.04302104	-0.01708785	0.15165098
Financial security: Education	4.789	2139.950	0.000	0.20445650	0.04269536	0.12072776	0.28818523
Health: Social health	-0.056	2140.937	0.4775	-0.00242427	0.04291822	-0.08659002	0.08174148
Health: Physical health	-2.489	2182	0.0065	-0.10643739	0.04276056	-0.19029305	-0.02258172
Institutional trust	14.061	2182	0.000	0.57654438	0.04100384	0.49613373	0.65695503
Health: Mental/emotional health	-4.597	2182	0.000	-0.19590296	0.04261536	-0.27947388	-0.11233205

5.3.2 Dutch data

For the variables financial security: income and job security, and health: physical health, Levene's test showed that equal variances could not be assumed, and so are presented as such. The remaining variables are presented with equal variances assumed. As with the Spanish data, the p-value is presented as one-sided because of this RQ's one-sided hypothesis.

The results of the t-tests are presented in Table 6. The financial security: income and job security component is significantly worse in 2014 than in 2008. The financial security: education component is significantly higher, both at p = 0.000, using α =0.05. In terms of the health variables, social health is the only one that is lower in 2014 than in 2008, but not significantly so, at p = 0.293. Mental/emotional health is significantly higher in 2014 than in 2008, at p = 0.000. Physical/mental health is also greater in 2014 than in 2008, but is not significant, at p = .1605. As with the Spanish data, financial security appears to have worsened, but health has not.

Table 5: Component summary statistics – Dutch data

	ESS Edition	N	Mean	Standard error of mean	Median	Min.	Max.	Standard deviation	Variance
Financial security: Income and job security	4	865	0.1084760	0.03175296	0.93404812	-4.49775	1.64540	0.93404812	0.872
	7	905	-0.1037548	0.03488651	1.04931345	-4.33974	1.75381	1.04931345	1.101
Financial security: Education	4	865	-0.0926786	0.03405162	1.00166577	-1.69543	2.84896	1.00166577	1.003
	7	905	0.0886449	0.03294349	0.99087151	-1.61293	2.83045	0.99087151	0.982
Health: Social health	4	865	0.0132454	0.03446486	1.01382173	-3.27001	2.55403	1.01382173	1.028
	7	905	-0.0126689	0.03281456	0.98699351	-3.31179	2.45649	0.98699351	0.974
Health: Physical health	4	865	-0.0240721	0.03241002	0.95337620	-1.52329	4.56652	0.95337620	0.909
	7	905	0.0230245	0.03466509	1.04265366	-1.58454	3.93195	1.04265366	1.087
Health: Mental/emotional health	4	865	-0.0921629	0.03487998	1.02603276	-6.64470	2.14321	1.02603276	1.053
	7	905	0.0881518	0.03214399	0.96682407	-5.69042	2.40287	0.96682407	0.935

Table 6: Component significance tests – Dutch data

	t	df	Sig. (one-tailed)	Mean diff.	Std. error diff.	95% confidence interval	
						Lower	Upper
Financial security: Income and job security	4.499	1758.974	0.000	0.21223075	0.04717329	0.11970914	0.30475236
Financial security: Education	-3.828	1768	0.000	-0.18132351	0.04736775	-0.27422620	-0.08842082
Health: Social health	0.545	1768	0.293	0.02591425	0.04755965	-0.06736481	0.11919332
Health: Physical health	-0.992	1764.430	0.1605	-0.04709660	0.04745606	-0.14017262	0.04597942
Health: Mental/emotional health	-3.807	1768	0.000	-0.18031470	0.04736993	-0.27322167	-0.08740774

5.4 Conclusion

Table 7 presents the key findings of whether understand whether to accept or reject the hypothesis for RQ2.

Table 7: Significance test summary

	Component	Spain	Netherlands
Financial security	Financial security: income and employment	Negative and (nearly!) significant	Negative and significant
	Financial security: Education	Negative and significant	Positive and significant
Health	Health: Physical health	Positive and significant	Positive and insignificant
	Health: Social health	Positive and insignificant	Negative and insignificant
	Health: Mental/emotional health	Positive and significant	Positive and significant

Overall, it appears that the hypothesis for RQ2 is partially accepted, partially rejected: while health did not worsen between 2008 and 2014, it appears that financial security did in both Spain and the Netherlands, particularly for income and employment.

6. RQ3: Assessing whether the strength of the relationship between financial security and health differs between the Netherlands and Spain

6.1 Introduction

This chapter addresses RQ3, and examines whether the relationship between financial security and health is stronger in Spain or the Netherlands. The hypothesis tested in this chapter is: *The relationship between financial security and health is stronger in Spain than in the Netherlands.* To do so, Dutch and Spanish data from the ESS7 was used (see Appendix C for an explanation of the variables used and for the descriptive statistics of the variables used in this chapter).

6.2 PCA results

The results of the PCA, including the initial component rotation and structure matrix are included in Appendix C, with absolute values below .5 suppressed for visual clarity. Nine components, seven for health and two for financial security, resulted from the PCA.

6.3 OLS regressions results

OLS regressions were then run, using each health component as a dependent variable, and the financial security as explanatory variables in all, along with relevant control variables. The full results of the seven health regressions can be found in Appendix C. To help interpret the different regressions and understand whether this research question's hypothesis was accepted or rejected, Table 8 summarises the findings of the different models (ES for Spain, NL for the Netherlands and OV for overall). Table 8 concludes whether the various findings conflict or complement one another to reach a straightforward conclusion as to whether financial security influences health more in Spain and the Netherlands; and in which country the relationship is stronger. For visual ease, the variables for which the model is stronger in Spain are coloured red, and those in the Netherlands are coloured blue.

Table 8: Regression summary

Variable	Adjusted R-squared	Education variable: significance and direction	Income & employment variable: significance and direction	Nationality: Significance and direction	Significant control variables (OV model) and direction.	Not-tiny beta coefficients (absolute values greater than .2)	Conclusion
Physical health (general)	NL's is higher than ES's or OV's.	Positive in OV and ES, negative in NL. Insignificant in all three.	Positive in all three, significant in OV and NL. Not significant in ES.	Being Spanish has an insignificant negative effect on the overall model.	Belonging to a discriminated-against group (-); being male (+); being overweight/obese (-); being between ages 46 and 55 (-); being above age 55 (-); being exposed to hazards (-).	Gender; Age (36-45); Age (56+); being exposed to hazards	Complementing: The Dutch model better explains the relationship between financial security and physical health general).
Physical health (diabetes and blood pressure)	ES's is higher than NL's, although OV is highest.	Negative and insignificant in all three models. Small beta coefficients.	Positive and significant in all three models.	Being Spanish has a significant negative impact on the model. Large(ish) beta coefficient.	Belonging to a discriminated-against group (-); being overweight/obese (-); hours normally worked (+); being aged 46-55 (+); being aged 56 and older (-); being exposed to hazards (-)	Country; Belonging to a discriminated-against group; being overweight/obese; age (46-55); age (55+)	Complementing: The Spanish model better explains the relationship between financial security and physical health (diabetes and blood pressure).
Physical health (smoking and drinking)	ES's is higher than NL's and OV's.	Positive and insignificant in all three models. Small beta coefficients.	Positive in all three models, significant in OV and ES but not significant in NL.	Being Spanish has an insignificant negative effect on the overall model.	Being male (-); being divorced/separated (-); being overweight/obese (+); working more hours (-); being aged 46-55 (-); being aged 55+ (-).	Gender; being divorced/separated	Complementing: The Spanish model better explains the relationship between financial security and physical health (smoking and drinking).
Physical health (diet and exercise)	Although all three adjusted r-squareds are very low,	Positive and significant in OV and ES; negative and	Positive and insignificant in OV; negative and insignificant in ES; positive	Being Spanish has a positive, significant effect on the overall model.	Being male (+); being overweight/obese (+); working more hours (+); age (36-45) (-); age (46-55) (-); age (56+) (-);	age (46-55); age (56+); Belonging to a discriminated-against group	Conflicting: Although the NL's r-square is marginally higher, they are both low. Each country also has one

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	NL's is higher than ES or OV.	insignificant in NL.	and significant in NL.		being exposed to hazards (+)		significant financial security variable.
Social health	Although all three adjusted r-squareds are very low, ES's is higher than NL's, but lower than OV.	Positive and significant in OV and ES; positive but insignificant in NL.	Positive and significant in OV and ES; positive but insignificant in NL.	Being Spanish has a negative, significant effect on the overall model.	Belonging to a discriminated-against group (+); working more hours (-); being aged 36-45 (-)	Belonging to a discriminated-against group	Complementing: ES's adjusted r-square is slightly higher, and it has two significant financial security variables, while NL has none. However, it is worth emphasising that these models explain very little of the variation in the data.
Mental health (negative)	All three models have similar adjusted r-squareds, although NL's is marginally higher.	Positive but not significant in all three models. Small beta coefficient.	Positive and significant in all three models. Small beta coefficient.	Being Spanish has a negative and significant effect on the OV model.	Belonging to a discriminated-against group (-); being male (+); being divorced (-); being overweight/obese (-); employment contract (+)	Belonging to a discriminated-against group; gender	Complementing: The adjusted r-squareds are roughly the same in the ES and NL models and each has one significant financial security variable. However, being Spanish has a negative and significant impact on the model.
Mental health (positive)	The adjusted r-square for each country individually is very low, but NL's and ES's are roughly the same.	Negative and insignificant in OV and ES, positive and insignificant in NL.	Positive and significant in OV and ES, negative and significant in NL.	Being Spanish has a negative and significant effect on the OV model. Large beta coefficient.	Belonging to a discriminated-against group (-); being overweight/obese (+); being aged 46-55 (-); being aged 55+ (-); having a permanent employment contract (+)	Being Spanish; belonging to a discriminated-against group	Complementing: From the models, it is difficult to tell which has a stronger relationship. The r-squared is very low for both. Still, being Spanish has a significant effect on the OV model, and has a positive relationship with financial security. This relationship, counterintuitively, is negative and significant in NL.

6.4 Conclusion

For a majority of the dependent health variables, the Spanish models overall had a stronger relationship between wealth and health. In four of the seven models, being Spanish was a significant and negative predictor of health outcomes. However, this was not unilaterally the case: the model for physical health (general) (one of the most straightforward measures of health used in this analysis) was stronger for the Dutch. Still, considering each facet of health equally, RQ3's hypothesis (*The relationship between health and financial security is stronger in Spain than in the Netherlands*) is accepted.

7. RQ4: Dutch and Spanish Experiences of the Great Recession

7.1 Introduction

This chapter answers RQ4: *What were Dutch and Spanish people's experiences of the Great Recession?* It is the result of primary interviews with 20 subjects, 10 Dutch and 10 Spanish. Interviewees were assured anonymity, and so their names were not used in this analysis. However, Appendix D includes a breakdown of the demographic aspects of each participant, and a numbering. In discussing interviewees' comments, interviewees are coded as S (Spanish) or D (Dutch) and the number they are assigned in this coding, e.g. S5. A synopsis of the themes that emerged from these interviews and their underlying codes can be found in Appendix D.

7.2 Financial security

Financial security, along with health, is one of the key 'umbrella themes' within this thesis, and accordingly was present in all interviews conducted. How it manifested in the Spanish and Dutch interviews, however, was markedly different. Worries about financial security and its underlying concepts were pressing issues for many Spanish interviewees – if they themselves had not experienced it, they discussed it in their broader social networks and communities.

In the Spanish interviews, it also seemed that there was a 'tale of two cities' – those who were working in Madrid prior to the Recession and who were high educated seemed relatively insulated from the Recession. Indeed, two respondents (S1 and S10) who were employed in the financial services sector said that the Recession was coming to an end, and that the economy is growing. This stands in stark contrast to comments made by all other eight respondents, particularly S2, who stated:

> The problem is that the politicians would say that the crisis is over. OK, but the crisis is over for the macro-economy, but for the micro-economy, for me, for young people, for families, the crisis is here.

This contrast between the two financial services employees and the other respondents was echoed throughout their perceptions of the different aspects of financial security generally and the Recession specifically.

The Dutch interviewees also noted that increased financial insecurity was an issue as a result of the Recession. However, its impact appears to be much less acute, with people describing D7, whose occupation is to repair classic cars, noticed the Recession in terms of curtailing discretionary spending:

> ...what I noticed I must say when the crisis came in was that [millionaires and billionaires] all sold [their classic cars]! A lot of people sold their classic cars. So I had the idea that OK, maybe it's because they're getting old, or they want to sell them to create money. That's the

other idea behind it, I think. But what was typical during this crisis is that people sold houses, sold properties, all the luxury stuff.

While all agreed that there was a crisis and that it affected some Dutch people, none said that they were directly impacted by the Recession. D4 describes the way in which the Great Recession seemed distant from his experiences:

> The crisis is a very abstract thing for us here, as you've probably figured out by now. There's no crisis for us….I can't really compare it to anything else, but personally if it wouldn't have been in the news, if nobody had told me there was a crisis, I wouldn't have known.

The Recession being described as acute, personal and ongoing for the Spanish interviewees and mild, distant and concluded for the Dutch interviewees was carried throughout the various measures of financial security.

7.2.1 Employment security

Employment security was one of the measures that differed most starkly between Dutch and Spanish interviewees. While employment was described as precarious by a majority of Spanish interviewees, it was not for the Dutch interviewees, particularly for those who were higher-educated.

7.2.1.1 Spanish interviews

All Spanish interviewees stated that either that they themselves had experienced or that they had witnessed others experiencing employment security. Temporary contracts or internships was an aspect of working life that was mentioned by nine of ten respondents as something that affected them or their friends and family. S8 describes the way in which the growing Spanish economy has been buoyed by these temporary jobs:

> So right now they're claiming that unemployment has gone down, it's not as bad anymore because they've created jobs. But that's a lie. Because those jobs are only temporary, they're like two to three month contracts, and they're very low hours, so you work ten hours a week, so you earn no money still. And then the employment law changed - I don't remember which year it was. Somewhere around 2012,13. So the employment law changed so before that it was defending the employees more, and now it's defending employers. So now they can sack you, they can change the terms of your contract randomly, they can do weird stuff that can never be legal.

Another way temporary work affected interviewees was through multiple internships that rarely lead to permanent job offers. S3 noted that for his internships, he was "paid in false hopes" about the possibility of securing a permanent job afterwards (he was never given a permanent contract in Spain and instead moved to France). The inability to find full-time, long-term employment affected seven of the ten interviewees. S1, who had started his career abroad, noted that he was not affected likely because of this move, and his peers who stayed in Spain struggled. For instance, his brother had only found temporary work since graduating from university.

Also, two interviewees (S2 and S8) noted that they were self-employed illegally, because of the high taxes that the government imposes on business owners, even solo operators. This resulted in often unsteady work and operating outside the law.

7.2.1.2 Dutch interviews.

Two of the older Dutch interviewees (D6 and D7) noted that close friends had experienced employment insecurity as a result of the Recession, but that this was now largely a thing of the past. D6 elaborated:

> Yes, one of my friends, she had a job at a school. And she was told there are too many people….She had problems how to finance her life again. And how can I pay the rent? How should I do this? Now happily she is having an education for people to learn Dutch as a second language. Now she is hoping well one of these weeks she's finished. Of course she hopes to get a job, but there are really good chances for her to get a job. So it was worse and now it gets better.

Younger interviewees (who also tended to be higher-educated) said they had minimal to no finding work, both in their fields of choice, and in part-time work alongside their studies. D4 describes finding work with a gardener, with whom he still works, at age 16:

> I just took the phone book and started to call all the gardeners in [my hometown]. I think he was the fourth or the fifth on the list and he said, "OK, come by and let's see if we can make an agreement."

D1 also was easily able to find internships throughout his studies through networking and maintaining professional contacts. D1 also describes working after his professional bachelor's degree, and having supervisors that encouraged his career:

> And I had really good supervisors, and I was free to do whatever experiments I wanted. Of course it should be related and practical, but I was really free in this. And I really liked it, but at some point, my supervisor said, "I can give you a serious job here, I can give you a permanent contract. But if I were you, I would go back to school. You have the potential.

D5 describes the challenge of finding a more selective job (a PhD place in biology) after being a secondary school teacher for several years:

> Sometimes you have to settle for something else for a while, like I did last year, but eventually all is well, I guess.

For the Dutch interviewees, job security - both finding and keeping jobs - appears to be much less problematic than for the majority of Spanish interviewees.

7.2.2 Income security

Like job security, the Spanish and Dutch interviewees have had starkly different experiences of income security. While a majority of Spanish interviewees mentioned the amount of money that they were earning (and that this amount was insufficient), Dutch interviewees generally mentioned

that they had enough to support themselves, and when they did not, described this as a result of personal choice.

7.2.2.1 Spanish interviews

Money, particularly the lack thereof, was present in a majority of Spanish interviews. Six out of the ten interviewees describe their struggles with earning enough to support themselves. An additional three describe how other people were impacted by a lack of income security. Although he himself said that he had no issues with his personal income, S7 similarly reflected on this low income, articulates the close between temporary work and low income:

> They keep changing - they keep having new jobs. Lots of temporary jobs that are very badly paid - we call them *milleguistas*. Basically means that they earn 1000 euros at the most. Mille-guistas, 1000 euros, right? So the maximum they get is 1000 euros. Or below that amount, right, which may be the case for, you know, the vast majority of them. So, yeah, it's very difficult for them.

This is reflective of S2's experiences. He described his income expectations, versus those that he received when he started working:

> In Spain, we do not have a good salary. Because maybe it's normal that in Spain a person is happy in my situation - like an architect - it's a very hard degree, you expect that when you finish you are going to get 2500 per month, maybe. But here in Spain, it's 800, 700. And when you have 1000, you think, "Oh!" It's crazy.

S6 noted that her low income was because of the temporary contracts she was given:

> It's better for [the law firm I work for]. They pay very, very little for you. I'm working as other workers with my company, I receive a third of the salary.

Three respondents (S3, S4, and S5), noted that they moved abroad because of the greater income opportunities. S4 stated:

> If I stayed in Madrid I'd be earning the same salary for, for life. Because there's no expectations of achieving a better salary, improvement of your conditions, or promotions. I realized that there are people with ten years of experience and earning less than 1000 euros. So, that's why me and other people that I know decide to go abroad.

It seemed that for the majority of respondents, income security was elusive.

7.2.2.2 Dutch interviews

In contrast, a majority of Dutch interviewees said that they never experienced income insecurity, and all were in paying jobs. No respondents report problematic unpaid internships or low-paying permanent jobs. For D5, this was particularly the case.

> The thing is I've had it really easy the past ten years because I've always had jobs left and right…. So I've always had money. Every year I've been to the Alps snowboarding at least one week a year, sometimes two….So I'm not rich by any means and I have a student loan I

need to pay off, but I've always been able to do the things I want to do. I want to go to Cuba, I can go to Cuba. I want to go to Madagascar, I can go to Madagascar.

Indeed, two interviewees (D2 and D5) opted to go part-time at otherwise full-time jobs, and said that money was not an issue as a consequence of working fewer hours.

Still, D8 experienced income insecurity, but this was largely as a consequence of a personal choice not to work:

We were incredibly poor. Money was always an issue and really strained [my and my partner's] relationship. He was a welder and was always asking why I didn't work more, because I was the one with the education, but I needed to stay at home and be a mother. That was most important to me.

Two other interviews (D7, and D10) alluded to possible income insecurity, but that they themselves did not experience it. D7, among the more financially precarious of those interviewed (he is in a manual occupation and self-employed) described how a workplace injury breaking his rib could have negatively affected his income:

… I noticed if it was worse I wouldn't be able to work for months, and then I would have a problem. I do have my savings and insurances, but the thing is if I can't do anything because I'm injured, then there's no income. That was the thing I was worried about. Because I once broke a collarbone with horseback riding and I was out for three months. And [my wife] was still here and she had an income so we could handle that, but since I'm alone, yeah I noticed … It could have been worse, and all of my savings would go flowing out. But I was lucky. After a few weeks I was able to work again.

While income insecurity was somewhat present, it was described as part of life choices or bad luck.

7.2.3 Housing security

Housing security was mentioned less frequently than other factors, and by fewer respondents. Still, for Spanish interviewees, the repercussions of the Recession were evident in their housing arrangements, and less so for the Dutch respondents.

7.2.3.1 Spanish interviews

Housing security was a problem for half of the Spanish interviewees. Five interviewees noted that they were unable to afford living on their own in Madrid. S2 comments that he lives at home with his family because of the high cost of living alone:

If you want to share for example a room it's 400 euros. But the problem is that this generation - I'm 30 years old. I want to live alone, and I can't. This is a problematic situation.

S8 also noted that she had moved in with friends because she could not afford to live alone, and S6 said "it is embarrassing!" that her parents pay her rent in her late 20s. Similarly, S4 noted that the Recession had an impact on his family's housing security:

> We had two houses in the same town near Madrid. Yes. We had to sell them really fast for a lower price to cover the debts. And my mother still has the mortgage with the banks.

S3 and S9 did not specifically mention housing as an aspect that was important to them. As with other aspects of financial insecurity, S1, S7 and S10 specifically mentioned that they did not experience housing insecurity. One of these respondents, S1, noted that the Recession – when he was in the US and in Spain – had helped him buy property.

7.2.3.2 Dutch interviews

No Dutch interviewees mentioned experiencing housing insecurity. All of the respondents older than 40 were homeowners, and those who are younger experienced no issues renting. D6 discussed moving house to be closer to the city centre, and to move in with her partner, and described this experience as a positive one. Additionally, D3, who is still in her 20s, is in the process of buying a home with her partner, with her parents helping them with the down-payment.

D4 mentioned that he was able to move out of a larger shared apartment thanks to government policy:

> I met someone in the house and we decided to go to an apartment and yeah, after one … after a while searching we found an apartment because you have subsidy with people with low income, and because of that… and a certain regulation that you may rent an apartment while it's on a sale, we were able to live an apartment til this day.

Still, the Recession may have had a negative influence on housing security in the Netherlands. Several respondents noticed that housing sales took longer, and attributed this possibly to the Recession. D6 commented that the sale of her parents' house in a relatively remote part of the Netherlands has taken much longer than expected:

> It's still for sale, which is also, well, maybe it's part of the crisis, I don't really know…. Til now, it's done some financial damage. [The government says] "Well, you have this house, and it's worth this much of money, and you have to pay this much taxes," it's income now. But we don't have the money because the money is in the house and the house isn't sold.

D3 and D7 commented that selling higher-end houses took longer in the years around the Recession, but that this was a thing of the past. Overall, it appears that housing security, like other types of financial security, was experienced much less acutely among Dutch interviewees as it was among Spanish interviewees.

7.3 Health

Relative to financial security, health was mentioned much less frequently in interviews. Still, respondents described how various aspects of health changed for them and their communities since 2008. Many Spanish interviewees framed these changes in social and mental/emotional health as

negative and as a direct consequence of the Recession. Dutch interviewees, in contrast, generally discussed health in social or mental/emotional health without linking them to the Recession.

7.3.1 Social health

Social health was the type of health most frequently discussed by respondents both in relation to themselves and to their communities more broadly.

7.3.1.1 Spanish interviews

Spanish interviewees frequently discussed ways in which the Recession impacted their ability to socialise. S6 describes how discretionary spending on social activities was curtailed by the Recession in her family:

> You cannot spend as much money as you used to, for example, shopping. Going out for dinner or for lunch. My family didn't save any money - everything was for education and the lifestyle. Our social life, maybe, going to the theatre, travelling, we couldn't take the whole family, couldn't travel as we used to.

S1 similarly described fewer people going out to eat and drink:

> Something that affected me personally, it's not that big of affecting, you do realize how people are living a bit differently. Because even before the crisis with people complaining about money and losing their houses, there were so many people eating and drinking out. There still are, but so many fewer people.

It may be that the long hours many interviewees report working also played a role in constraining their social lives. S5 commented that the long hours she worked at her temporary job constrained her social life:

> The problem is that I do everything, from images to calculations, details, plans, so I am trying to, to deal with all of that. It's too much....The soonest I leave the office [is] at seven. So I arrive at home at eight, half past eight. I need to cook for the next day, I need to spend time with [my boyfriend], feed the cat…the weekdays pass so fast.

For a majority of Spanish interviewees, financial insecurity appears to have had a direct consequence on their social well-being.

Yet, at the same time, three Spanish interviewees describe the protective factor of social relationships. S1 situates this specifically within Spanish culture:

> One thing unique to Spain is the strong family ties that we have. One of the reasons we did not go through a civil war in the last five years - and I mean this seriously - is because of the strong family ties we have. Just for a specific example. Someone is fired. You get a two year unemployment benefit, which is actually pretty good. For you to realise how it was, there were people who were not able to find a job within two years. So you'd be in a situation without an income, and move back in with your parents or grandparents while you figure something out. So the reason you wouldn't see riots or huge protests was because of this, as opposed to Greece.

It may be that financial security worsened social health, but also that existing social relationships help to fray the effects of the Recession for some Spaniards.

7.3.1.2 Dutch interviews

Dutch interviewees, in contrast, did not describe financial security (or lack thereof) as having an impact on their social health.

Two respondents (D1 and D7) described periods of loneliness as impacting their overall well-being, D1 during an internship and D7 after his children left home and his cats died. Several respondents (D1, D2 and D8) described having tumultuous romantic relationships when they were younger that had relatively serious consequences on their overall well-being. For instance, D1 stated:

> This was the first girl I was feeling butterflies all over the place. It was really intense, but not really substantial…. You could call it a fling, but it was a really intense one, and a long one - for a year. We had nothing in common….We would always fight. But it fed it for a year. But it was really intense….Like, oh my God. I barely passed. I had straight As in my second year, and then I didn't study for my exams and I barely passed. I don't want to experience that again. I felt out of control.

On the other side of the coin, respondents discussed relationships - both romantic and platonic - as being positive, stabilising forces. D6, for instance, described becoming closer to her siblings after her father died:

> Well, taking care of my mom had an impact on my relations with my brothers and sisters. But in a positive way. Lots of contact, we're with five. And well, we're a family of great democracy, I think. So everything, well everything is discussed with all five of us. So it's "OK, OK, Oh! He's not OK! We do it again."

While Dutch interviewees discussed positive and negative periods of social health, they did not link these shifts in relation to the Great Recession, but rather as a result of ebbs and flows in other circumstances (job, family and age-related changes, particularly).

7.3.2 Emotional/mental health

Mental health received fewer specific mentions than social health. Still, there emerged a general pattern of Spanish interviewees linking negative mental health to a lack of financial security generally or the Recession specifically. While some Dutch respondents describe money as a source of stress, most did not and none linked their money concerns to the Recession.

7.3.2.1 Spanish interviews

Similar to social health, Spanish respondents noted the way that stress from the Recession has contributed to worsened mental health. Four of the ten respondents noted feeling more stress as a result of the Recession. Both S2 and S3 noted that they felt that economic factors had prevented them from developing a career and becoming independent adults in Spain. S3 said:

> In an economic way they don't allow you to have a project of life.

S5 similarly describes the way she feels her salary and lack of a full-time contract leads to increased stress:

> It's not that everything depends on the job, but if you have a good job, you will have a good flat, you can travel around, and your life will be better. But with the salary of a job, I could do many things that at the moment I cannot do. And my family keeps on helping me, and I'm 28 years old. I'm crazy about the way to earn my money.

S2, in a conversation after the interview, said that he had trouble sleeping due to stress related to working multiple jobs. S9 similarly said that he had difficulty sleeping, because he was worried about money:

> It gets to you. Sometimes it's hard to turn off my mind at the end of the day. I'm thinking, who do I need to pay and when.

For a number of Spanish interviewees, money concerns impacted their mental/emotional well-being.

7.3.2.2 Dutch interviews

Few Dutch respondents specifically discussed mental/emotional health, either positive or negative. D8 stood out as the only interviewee who discussed the way in which financial insecurity impacted her emotional/mental well-being:

> Being poor is terrible! It takes up so much mental energy. Every decision has to be planned out. And being poor really constrains you. You think you want to go see a movie, but no you can't. You feel incredibly restricted. Money enables things, it enables life to be easier.

As mentioned above, two other respondents (D1 and D7) discussed periods of loneliness that impacted their overall well-being, but these were unconnected to financial issues. D1 described specifically how an internship in a socially isolating place impacted his mental/emotional and physical health:

> So it was like five months of hell. Really the worst five months of my life. Because I was all alone in [this town], there was really nothing to do there. And I just had my thesis, and it was quite isolating. And it was after the summer, so it was winter time, and it was completely dead. It's kind of touristic in the summer, but the winter was the worst. I felt really alone and had a shitty internship…. And I got fat. Really fat. I just ate.

Several respondents described ways of actively improving their mental/emotional health. D7 described playing in a band as a positive, stress-relieving activity for him:

> ...music is an important thing for me. I know if when I'm tired or depressed or had a shit day or whatever, they ask me to play some numbers on stage, I'm a different person. I get a lot of energy out.

D5 described how he has been able to maintain balance and not become too stressed by work:

> I've never been stressed by deadlines or anything. Or overworked, whatever you want to call it. The teaching thing was on the brink for me, at 60%, that was probably the most I could

comfortably do. When I got home, sure I was exhausted and my voice was, how do you say it, broken...after three days of talking for five, six hours, but at the end I was still healthy, I could go swimming, go running, go out with friends, have dinner some place. So on average I was really comfortable.

As with social health, respondents described ups and downs regarding mental/emotional health, but these ebbs and flows were not linked to the Recession.

7.3.3 Physical health

Few respondents mentioned physical health, positive or negative. Because of the small sample size and the relative rarity of ill health (particularly among younger people), it was difficult to discern trends among respondents. Still, several respondents did mention physical health, and discussed their experiences of healthcare systems along with it.

7.3.3.1 Spanish interviews

Physical health received scant mention from Spanish interviewees. This may be because of the relatively young age and higher SES backgrounds of interviewees. Only two interviewees (S3 and S4) discussed broken bones, and their experiences of the Spanish public and private healthcare systems. S10 noted that he had high blood pressure, and used private healthcare as a result of delays in the public system.

S6 noted becoming more interested in her physical health as she got older. She was the only Spanish respondent who commented on going to the gym as part of her daily routine.

7.3.3.2 Dutch interviews

As with the Spanish interviews, physical health was infrequently mentioned by interviewees. All younger respondents (D1, D2, D3, D4, and D5) describe being physically active and involved in sports as important to their overall well-being. D5 describes seeking out physical challenges:

> From 2010 to 2015, I also did a stint in the Reserve Corps. So basically you just go through basic training and you have exercises, large, small ones. You do all the things all the things that a regular enlisted man would do. And you get paid for your hours. It's not much but you get to do some things that regular civilians never experience, like you go shooting, you go on major exercises. It's a bit of teambuilding and a bit of physical challenge as well. So that's really cool.

Older respondents, particularly D6 and D7, describe being injured (both due to workplace injuries), and having relatively brief and positive experiences of being unwell, and both visited physiotherapists to recover.

7.4 Socio-economic inequalities

This category is a theme outside of this thesis´s theoretical framework, but saw some of the starkest differences when comparing the Dutch and Spanish interviews. This theme is also theoretically important, as it may help to explain differences in the relationship between financial

security and health between Spain and the Netherlands, particularly in the way that different countries' welfare systems seek to redress these SES imbalances.

7.4.1 Spanish interviews

Four respondents remarked that Madrileños' experiences of the Recession were in part in relation to their SES background. S2 and 3 both emphasised this inequality between different neighbourhoods in Madrid:

> I saw a paper that talks about the differences between the hope of life [life expectancy] between Salamanca [the wealthiest barrio in Madrid] and in the surroundings of Madrid - it's like 15 years. You're talking about the same city. You're not doing the difference between Spain and an African country. Same city, and 15 years of difference. What the fuck.

Similarly, S7 noted that people from certain industries and with fewer years of education struggled to find jobs more than others:

> OK, we used to have a big and solid industry up north in Spain. I'm talking about big companies like Castinero, … people who used to manufacture big machines. That industry is lost. So, loads, thousands of jobs have been lost because of the crisis, right? It seems to me that a person aged 45 to 50 has no chance to get a new job in this country nowadays. I mean, you can change from one company to another one, but if you lose your job, unless you're a brilliant guy, or very talented guy, or unless you have a marvellous CV, your chances of getting a good quality job are non-existent, to be honest with you.

Also, S8 said that she had noticed an increase in pickpocketing and homelessness in the city:

> The city is becoming less secure now. There's more pickpocketing. It's always been a touristic city, so it's always been an issue, but it's much more intense now.

It appeared that the gap between low and high SES Madrileños was widening in the wake of the Recession.

7. 4.2 Dutch interviews

A handful of Dutch interviewees did discuss socio-economic issues, but only in the context of narrowing socio-economic differences. For instance, D3 and D6 saw low-income housing in her area improve in recent years. D4 discussed being helped financially by the government after his parents had lost their jobs:

> For me it was quite a good move that my father was displaced because he got a lower salary and in the Netherlands if your parents earn below a certain salary you get a raised fund from the government for your study.

7.5 Institutional trust

Institutional trust was a second theme that emerged from a bottom-up approach. Spanish interviewees frequently mentioned a profound distrust of welfare systems, political institutions, politicians themselves and the economy. These issues were not present in Dutch interviews. This

variable is considered to be important because it may be a reflection of various welfare institutions that may be an important buffer in the relationship between financial security and health.

7.5.1 Spanish interviews

A distrust of politics was evident in nearly all Spanish interviews, and cut across SES and age lines. S10, a higher SES and older interviewee, described being concerned about the corruption at a municipal and national level:

> The lady who used to be president of the community of Madrid has resigned less than 24 hours ago. For basically fraud, you know, political corruption…. There is a kind of a political turmoil going on and I don't know what is going to happen. That is very worrying.

S7 said that corruption in the Spanish system is linked to the current incarnation of democracy being relatively young:

> Fortunately almost 45 years ago the dictator kicked the bucket, you know, he passed away. So democracy came to this country and everything seems quite stable institutionally speaking. OK - but we were once in a transitional period, you know. We got back our human rights. Freedom of speech, freedom of absolutely everything. I suppose all Spanish people love to live in a solid, stable democracy. But having said that we have got to learn quite a lot how to handle corruption, how to deal with difficult issues of this nature. And as I was saying before, now we are going through a very worrying moment for us as well.

Five out of ten of those interviewed discussed being involved in anti-corruption and anti-mainstream politics protests, including the 11am movement (protests like Occupy Wall Street held in Puerto del Sol) and Polemos, a youth-focused, communist party. S4 describes the process of him becoming involved in protest politics:

> I think that's when 15m happens in Madrid. And I remember to be really, really aware of that. Indignate with corruption and all the problems with the country. It was the beginning of a new way of thinking about politics in Spain. I think me and my generation realise that we are going to live a worse life than our parents had, and a worse life than we had planned. We had planned to get a job at 21, a home in our 30s, a good retirement, a quiet life. But suddenly we realized that none of this is going to happen. We are going to struggle much to fight for our rights and our future.

S8 also participated in the 15m movement, but became disenchanted:

> They occupied the main square in Puerto Sol. So for the first few days we were in the main square with the people. But unfortunately I realized that after the first few days, whoever you asked what they wanted to achieve, what it was for, each person was giving a different answer. And there was no official statement given to the government. And after a few months it was just like a festival scene, just people with tents, so I stopped participating in that.

S2 discussed being involved in the 15m movement, but feeling as though the parties in power prevented them from forming a government:

A lot of people were feeling … very furious with the situation. There's a Spanish word that is *'indignatos'*, and its character is an *indignatos* movement. Because this...there are two political parties at the power. Ok, one wins the election and four years later, the other one. But it's the same. Because all political parties are the same, all policies, this kind of thing. Then was born Polemos in 2015, maybe, for European elections, and they have very good results. And we appear in the elections for the country, and Polemos has true options of winning. True options of winning. What happened is that the other economic powers say, no no no, Polemos is not going to win.

He said that after feeling like there was the real possibility for change, he realised that the political system would not.

7.5.2 Dutch interviews

No Dutch interviewees voiced serious issues with or distrust of the government. Nearly all Dutch interviewees, when asked whether they were involved in politics, said they were not. Two Dutch interviewees, D2 and D6, were involved, but on specific issues. D6 said that she was active in helping refugees, and was upset by the nationalist backlash in the Netherlands:

...Now people don't even feel ashamed when they think [racist and nationalist things]. I am really not used to this, and me and my friends, it's more normal to think 'what can we do?' … But I'm not really a political human being.

D2 also described becoming involved in environmental, feminist and LGBT+ issues. It is worth noting, however, that these issues are singular, and not broad complaints against the government.

7.6 Conclusion

Although these interviews represent only a snapshot of Spanish and Dutch experiences of the Recession, clear patterns emerged among the various themes relevant to this thesis. With both financial security and health, there appears to be greater hardship among Spanish than Dutch respondents. Spanish interviewees blame negative outcomes on the Recession, and the Dutch on normal ebbs and flows of life.

What was most striking was the contrast between the young, well-educated people in Spain and the Netherlands. While the Dutch students found themselves quickly moving into high paying jobs and not expressing concerns for their futures, young Spanish interviewees were very concerned about their ability to establish homes and careers. This speaks to the magnitude of the Recession in Spain. While there were people affected in the Netherlands, this seems to be more confined to lower SES individuals, and to a fewer number of people. In Spain, larger swathes of people, cutting across SES lines, appear to have been impacted.

8. Discussion and conclusion

This thesis sought to better understand the Great Recession's influence on health. This was done both by using mixed methods, employing more complex operationalisations of 'wealth' and 'health', and undertaking a cross-country comparison of two countries that had not yet been compared. This thesis hypothesised that because the Recession was (and is) worse in Spain than in the Netherlands, health outcomes would similarly be worse.

In this chapter, the conclusions from each RQ are summarised and integrated using a convergence coding matrix, in order to answer this thesis's main research question. Then, the strengths, limitations of the present research, and potential areas for future research are discussed.

8.1 Summarised findings

Below, each RQ´s key results are presented.

8.1.1 RQ1: Literature review

This literature review aimed to answer RQ1: *How did the Great Recession influence health in Europe overall?* It found that in 30 out of the 39 articles included, that health had worsened as a result of the Recession.

8.1.2 RQ2: Quantitative analysis, T-tests

This secondary data analysis sought to answer the RQ: *Among Spanish and Dutch people, what are the differences (if any) in health status (including physical, mental/emotional and social health) before and after the Great Recession?* While financial security variables had worsened in 2014 relative to 2008 in both Spain and the Netherlands (with the exception of education in the Netherlands), none of the health variables had worsened. The overall hypothesis that financial security and health was worse in Spain and the Netherlands was partially rejected regarding health and accepted regarding financial security.

8.1.3 RQ3: Quantitative analysis, OLS

This chapter sought to answer the RQ, *How does the strength of the relationship between financial security and health differ between Spanish and Dutch people?* In nearly all of the models, income and employment was significant and positive, indicating that this variable of financial security is a relatively consistent and important determinant of health. Education, however, followed a less clear-cut pattern: in five of the seven models, education was insignificant for all three.

8.1.4 RQ4: Qualitative analysis, timeline interviews

This chapter sought to answer the RQ: *What were Spanish and Dutch people's experiences of the Great Recession?* This thesis found that Dutch people's lives were less touched by the Recession than Spanish people's, that financial security was severely worse, and health was moderately worse.

8.2 Integrated findings

Each RQ included in this thesis sought to explore a different facet of the main research question: *In what way did the Great Recession impact health in Spain and the Netherlands?* Each RQ therefore had slightly different results. Three of the RQs (RQ1, RQ3 and RQ4) found that the Great Recession to some extent worsened health status, particularly in Spain relative to the Netherlands. But RQ3 did not find this. Ultimately, findings were integrated using a triangulation protocol. Each RQ is analysed against each important aspect of financial security and health, based on this thesis's theoretical definitions. However, RQ1 is excluded from this analysis, because it did not look at different facets of financial security and health, as other RQs did. RQ1 was posed in order to hone this thesis´ methods, research questions, and help to interpret the findings from RQs 2 through 4. The findings for RQs 2 through 4 are therefore presented in Table 9.

Table 9: Convergence coding matrix

	RQ2: Quantitative data t-tests	RQ3: Quantitative data OLS	RQ4: Qualitative interviews	Synthesis
Physical health	For both the Dutch and Spanish sample, this improved in the wake of the crisis, significantly for Spain and insignificantly in the Netherlands	The physical health: general model explained a moderate amount of variation; the physical health: smoking and drinking explained a moderate amount of variation; and physical health: diet and exercise explained a low amount of variation. The models varied whether being Spanish or Dutch improved outcomes, and which country the adjusted r-squared was higher in.	This sample was not big enough to assess whether physical health worsened in recent years.	Discrepancy: while RQ2 found that health did not worsen, RQ3 found that physical health was relatively well-explained by financial security.
Mental/emotional health	For both the Dutch and Spanish sample, this improved significantly in the wake of the crisis	This model explained a moderate amount of variation, and the adjusted r-squared were roughly the same in Spain and the Netherlands. Also, being Dutch improved mental health outcomes.	While mental health was not frequently mentioned by Dutch respondents, it was often mentioned by Spanish respondents, who describe stress and uncertainty as a result of low incomes and no job opportunities.	Discrepancy: RQ2 found that mental health improved in the wake of the crisis in both Spain and the Netherlands. However, RQ4 found indications that emotional health had a stronger relationship in Spain than in the Netherlands. The results of RQ3 showed that mental health was equally important in explaining health outcomes in Spain and the Netherlands.
Social health	This was not significantly worse in the wake of the crisis.	This variable was the worst - explained by the model: social health does not seem to be well explained by financial security	Spaniards discuss the importance of Spanish culture in light of the Recession; the Dutch's social health seemed to be much the same.	Complementarity: while increased financial security did not worsen social health, RQ4 highlighted that social health/social relationships may be another protective factor against financial security worsening other types of health.
Financial security: income/employment	Both Spain and the Netherlands saw financial security (income and employment) worsen (almost) significantly in the aftermath of the crisis	A significant positive predictive factor in all models	Nearly all Spaniards (save the high SES, older interviewees) had had stressful and negative experiences with financial security. Only one Dutch interviewee said the same.	Complementarity: While it appears that income and employment opportunities worsened in both countries in the aftermath of the crisis, it appears that this was much more significantly so in Spain.
Financial security: education	Spain saw financial security: education worsen in the aftermath of the crisis, while the Netherlands saw it improve	Only a significant, positive predictor variable in a handful of the models.	Education did not seem to be a buffer against financial insecurity for the Spaniards. For the Dutch, education was a determinant of job type, but less of a hindrance	Complementarity: While RQ2 and 3 showed that education was modestly important for health and that it had worsened in the aftermath of the crisis in Spain particularly. RQ4 found that education itself may not be a way to escape financial security.
Institutional trust	Worsened significantly in Spain; improved non-significantly in the Netherlands	Not measured	Low among a majority of Spanish interviewees; relatively high among Dutch interviews	Convergence: in the two research questions this was measured, the results corroborate each other.

The integrated results show that financial security and health was impacted more negatively in Spain than in the Netherlands, but that this impact is not yet evenly distributed across the measures of financial security and health. It seems that there is not yet evidence to suggest that physical health had worsened as a result of the crisis (RQ2). However, there is evidence to suggest that there is a relationship between financial security and health (RQ3). As previously noted, changes in physical health may take longer to register than changes in mental health. This may mean that this thesis's time horizon is simply too short to register a meaningful change in physical health, and that the physical manifestations of the crisis's impact may still yet occur.

Mental/emotional health also presents a complex picture: while the t-tests in RQ2 do not show a worsening in mental health, the mental health variables in RQ3 were among the best-explained by the models. Moreover, worsened mental/emotional health was a repeated theme in the results of RQ4. Additional research, ideally using nationally representative panel data, is necessary to better untangle this relationship over longer time horizons (pre- and post- crisis).

Finally, social health likewise improved in the wake of the Recession based on the results of RQ2, and was among the least-explained variables by the models in RQ3. In RQ4, Spaniards frequently mentioned the importance of social relationships in response to the crisis, while Dutch people's remained relatively unchanged. It may be that social health is rather a protective factor in the pathway between financial security and mental/emotional health and physical health. This may mean that social health does not interact with financial security in the ways that other types of social health do.

Overall, it appears that there are preliminary signs that the Great Recession impacted health in Spain and the Netherlands. Given the strong evidence that the crisis was worse in Spain than in the Netherlands, it can be expected that Spain will experience worsened health outcomes in the future.

8.3 Methodological and theoretical considerations

In this section, some of the interesting methodological and theoretical points that each RQ raised are discussed.

8.3.1 RQ1: Literature review

This literature review, conducted concurrently with the start of the quantitative research for RQs 2 and 3, was used to further hone the methods and RQs of this thesis. Understanding how 'wealth' and 'health' were operationalised, what geographies were studied and what methods were used informed and helped identify ways for this thesis to add to the existing debate on the Recession's influence on health. For instance, this thesis identified that there were relatively simple and proxy measures of health and wealth, and no composite measures were used. To overcome

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shortcomings that may be associated with these measures, this thesis used more holistic measures of both, particularly in RQ2 and RQ3.

8.3.2 RQ2: Quantitative analysis, T-tests

This question greatly benefited from this thesis's iterative approach. In addition to benefitting from the literature review´s honing of the question phrasing and variable operationalisation, this RQ also further explored findings from RQ4. The variable 'institutional trust', describing how much faith people have in the economy and health services, was also tested. This additional t-test was done because there was a clear division in the Spanish and Dutch interviews in RQ4: a number of the Spaniards interviewed had an open distrust of public institutions, whereas the Dutch interviewees did not express similar sentiments. This seemed to be intimately tied to life opportunities and financial security, and so was tested for significance over time. This t-test was only able to be done for the Spanish data, as the underlying variables did not load into a single component for the Netherlands. This is interesting, because the underlying variables concerned the state of the economy and trust in government. For the Dutch ESS respondents, these responses were not even related. This was found to be significant and negative among the Spanish interviewees. The results of this t-test provided evidence that welfare states may have a buffering effect against the more corrosive effects of financial downturns.

8.3.3 RQ3: Quantitative analysis, OLS

In general, these regressions behaved roughly in line with expectations. While financial security: employment and education was frequently a significant predictor, financial security: education was only a significant predictor in a handful of models. This is somewhat surprising, because education takes into account respondents' educational attainment, as well as that of their parents'. This measure is often used as a proxy measure of SES or class (Davey et al., 2009), and as seen in this thesis's literature review (with six out of the 39 articles using education as part of their measure of financial security). This may mean that it is worth placing more emphasis on individuals' income and job security when attempting to measure financial security in future research. Other variables, particularly exposure at work to environmental hazards, and the type of employment contract, were important predictors in a number of models. These findings strengthen this thesis´s argument that there is a positive relationship between financial security and health, as permanent, office–based jobs tend to be held by higher SES individuals. Overall, this chapter found evidence to accept its hypothesis that the relationship between financial security and health is stronger and worse in Spain than in the Netherlands.

Turning to the different health models, it is worth noting that some measures of health were better-explained by their models than others, and different factors played a role in each. To better

understand these variations, key points of each model are analysed in the following sections. Again, an iterative approach was also taken here: findings from RQ1 (as well as other relevant literature) were used to better understand and interpret each model. Then, the limitations and areas for future research of each are discussed.

8.3.3.1 Physical health: general

This model was the only one in which the Dutch model clearly better-explains the relationship between financial security and health, and one of the three models in which being Spanish did not have a significant negative impact.

This result can possibly be explained by the fact that this model (along with physical health: diabetes and high blood pressure) are the only two that examine physical health, which tends to take a longer time to respond to environmental factors than mental health (Baumbach & Gulis, 2014). However, the underlying variables for physical health: general are subjective, self-rated health, which tends to respond more quickly to changes, and is considered to be a reliable early indicator of long-term changes in health (Schnittker & Bacak, 2014). Still, it may be that the 2014 time horizon was too short for many of the negative physical health manifestations of the crisis to take effect. This is particularly the case for Spain, where unemployment did not reach its height until 2013.

In terms of individual variables, most influenced the model in a way in line with this thesis´s theoretical framework. For instance, being overweight/obese worsened physical health significantly, as did being exposed to hazards in the workplace. Interestingly, having a permanent employment contract (relative to those who have temporary contracts or who are not working), another measure of financial security (although one that did not load on these components), significantly improved general physical health, although this may also be linked to age, i.e. those who are not working tend to be older, and therefore have worse health.

8.3.3.2 Physical health: diabetes and blood pressure

The model, physical health - diabetes and blood pressure, explained the most variance out of any of the health models used to answer this RQ. However, this is likely because of the control variables that were used: age and BMI are important factors explaining diabetes and blood pressure, and are likely responsible for this very high adjusted r-squared (although each of these variables´ beta coefficients was low).

The health measures of diabetes and high blood pressure were selected from those asked by the ESS because they are directly linked to this thesis's theoretical framework, particularly regarding psycho-social mechanisms linking financial security and health. Also importantly, both diseases often have an environmental component, in contrast to a number of the other diseases that the ESS listed (e.g. cancer, which often is thought to have a stronger genetic component). Existing research

has already established a link between wealth and higher blood pressure. Diabetes, too, is correlated with SES (Rabi et al., 2006). Still, it is somewhat counterintuitive that this measure of physical health had higher adjusted r-squareds than physical health: general, because, as mentioned above, these should be more sensitive to short-term shifts.

In terms of individual independent variables, education was not a significant predictive factor in any of the models, but income and employment was. Also, being between the ages of 46 and 55 improved not having diabetes and blood pressure, although being aged 55+ worsened it significantly (with being under 35 the baseline for this dummy variable). This is somewhat curious, given that both diabetes and high blood pressure are thought to be problems that increase in prevalence with age.

8.3.3.3 Physical health (smoking and drinking)

While health behaviours themselves are not health outcomes, they may be important bellwethers of them. Changes in health behaviours can be stress-related (e.g. Rod et al., 2009), and could therefore indicate future shifts in health. However, the findings of these regressions for health behaviour variables may be difficult to interpret: there may be different cultural values surrounding health behaviours. When compared across countries instead of across time using the same sample, it may be difficult to assess what health behaviours mean for health overall. However, interpreted alongside other measures of health, they may help to paint a more holistic picture of health in both countries.

Turning to physical health: smoking and drinking particularly, this model for smoking and drinking had one of the largest differences in adjusted r-squareds between Spain (11.4%) and the Netherlands (7.5%). However, nationality itself did not have a major impact on the model: being Spanish improved health outcomes in the overall model, but not significantly so.

Looking at other significant variables, these largely behaved in line with expectations: being male worsened this health outcome (in this case, 'worse' means an increased likelihood of smoking or drinking). In general, men tend to drink and smoke more than women, particularly in countries and among age groups with traditional gender roles (Wilsnack et al., 2000; Emslie, Hunt & Macintyre, 2002). Being divorced or separated also significantly increased the likelihood of increased smoking and drinking. Existing studies have found that excessive drinking is both a cause and response of divorce (Torvik et al., 2013). Being exposed to hazards at work also increased the likelihood of smoking and drinking. The evidence on this is less clear-cut: hazards at work are associated with manual occupations. Existing research shows that people in manual occupations tend

to smoke more but drink less than those in white-collar occupations (Office of National Statistics, 2011).

Surprisingly, being overweight/obese significantly decreased the likelihood of smoking and drinking. Existing research shows that moderate alcohol consumption is not associated with weight changes, while excessive drinking is associated with weight gain (Traversy & Chaput, 2015). Smoking, however, is associated with a lowered risk of obesity (Dare, Mackay & Pell, 2015).

8.3.3.4 Physical health (diet and exercise)

This model is among the least accurate, with an overall adjusted r-square of 5.6%. As with smoking and drinking, this may be because health behaviours are themselves not health outcomes or status, although they can be informative indications of it. Its association with financial security may therefore be more tenuous.

Interestingly, this is one of the only models in which increased education is significant in determining healthier diet and exercise habits. This is the case for the overall and Spanish models. Also, being Spanish has a significant, positive impact on diet and exercise (measured by vegetable consumption and frequency of exercising). Given that most other models saw that being Spanish had a negative impact, this gives further credence that a variable unaccounted for in this model may be affecting the results.

Additionally, being overweight/obese had a positive effect on this model, which is somewhat counterintuitive. This may be because a somewhat blunt measure of BMI was used to calculate the obesity/overweight category, based on height and weight (and not actual body fat percentages). For instance, many athletes are classed as obese by blunt BMI measures because of their muscle weight, despite having low body fat percentages. It may also be that overweight/obese people are more health-conscious. Reporting bias may also be at play, with people with higher BMI overstating their vegetable consumption and exercise regimes.

8.3.3.5 Mental health (negative)

This model was a modestly good fit for the data, with an overall adjusted r-square of 9.3%. As with previous models, education was not significant, but income and employment was. Being Spanish also had a significant, negative effect.

This model adhered relatively closely to this thesis's theoretical framework and hypothesis. It is logical that this model should be a good fit, because as previously mentioned, negative mental health symptoms are one of the first health manifestations of negative financial events.

Other variables included in the model behaved in line with this thesis´s theoretical framework: belonging to a discriminated group, being divorced, and being exposed to environmental hazards at work worsened health outcomes. Also, being overweight/obese worsens mental health

outcomes. This link between overweight/obesity and depression is relatively well-established (e.g. Ross, 1994, Luppino et al., 2010).

8.3.3.7 Social health

Social health was better explained in the Spanish model than in the Dutch, and was negatively associated with financial insecurity. There may be several reasons underpinning this: first, traditional familial structures may still be stronger in Spain than in the Netherlands (something mentioned in the qualitative interviews undertaken for RQ4) with Spaniards placing more importance on close-knit relationships than the Dutch. Another possible explanation is that social relationships are protective against financial insecurity, and social health may itself be a buffer against financial insecurity's influence on health. Finally, with less time spent working, Spaniards may simply have had more time to nurture social relationships.

In terms of significant variables, it is interesting that identifying as part of a discriminated-against group improved social health. This is because social relationships may be protective: when people feel 'othered' by society more broadly, they may forge closer-knit relationships in response.

8.3.4 RQ4: Qualitative analysis, timeline interviews

An interesting element was the role of the state and trust in state institutions: Dutch people often noted minor ways in which the welfare state benefited or hurt them (e.g. going back to university sooner to take advantage of better student financing in 2015, changing that academic year for those who were not already enrolled). The Spanish interviewees had a much more negative experience of the welfare state, with few discussing the social welfare benefits (although healthcare was widely considered to be good and effective). Many Spanish interviewees discussed feeling cheated, and wanting to engage with the welfare system as little as possible.

Drawing from welfare state theory, this thesis argues that countries' welfare systems may have a buffering effect on the relationship between financial security and health: the risks of being financially insecure may be mitigated when there are strong welfare systems in place, helping to making societies more equal and not truncating individuals' life opportunities, as well as reducing financial worries - all of which has been found to lessen stress and therefore improve health. This finding was triangulated with secondary quantitative data RQ2, which confirmed that institutional trust had weakened since the onset of the Recession.

8.3.5 Integrated methodological and theoretical considerations

The initial theoretical framework posited that financial security impacts health through two pathways. While this thesis did not find evidence to confirm or disprove these mechanisms, it did find that some evidence that financial security impacted health status, and this model broadly confirms this thesis´s results. However, it also found that there may be mediating or buffering factors

against the relationship between financial security and health. Based on the results of RQs 2 and 4, it appears that welfare systems may be an important buffer between the relationship of health and wealth. This may also help to explain why the relationship between financial security and health was stronger in a majority of the linear regressions in RQ3. Also, social health behaved differently than the other facets of health: RQ3 showed that this had the weakest relationship to financial security, and in RQ4, the importance of social relationships and culture were discussed by several Spanish respondents. It may be that social health (or the relationships that lead to good social health) also can mitigate the effects of worsening financial security on health. The relationship between financial security and health may therefore not be as straightforward as it was conceived initially in the theoretical framework, and has accordingly been elaborated below:
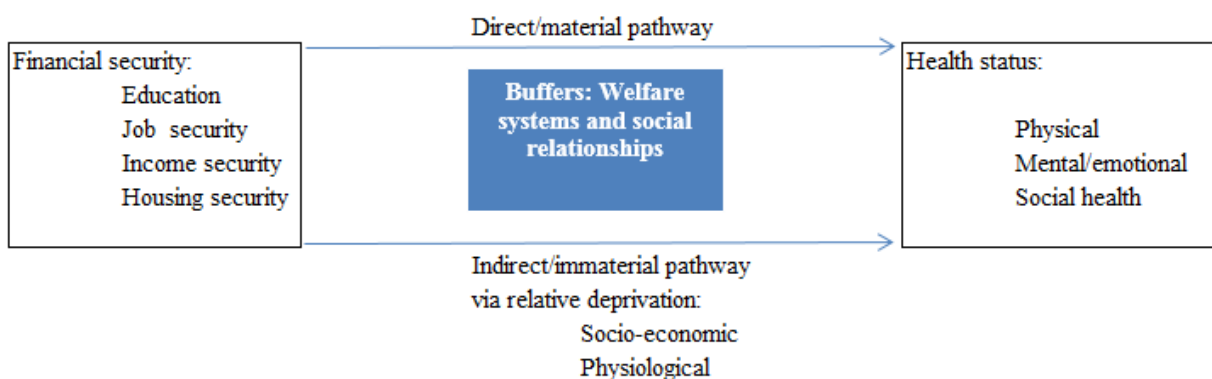
Figure 10: Updated theoretical framework

While future research is necessary to confirm these relationships, this thesis nonetheless has been able to theory about the mechanisms underlying the relationship between wealth and health.

8.4 Strengths

This thesis added value to the debate on the Great Recession's influence on health. Initially, it set out to do so by using mixed methods, using more elaborated operationalisations of 'health' and 'wealth', and undertaking a cross-country comparison of Spain and the Netherlands. This thesis also added value through taking an iterative approach: not only was the combination of methods used novel, but different findings were used to triangulate and build on one another. This ultimately meant that RQs were able to be honed more tightly, and different themes able to be integrated into the findings. This also enabled several new themes to emerge and be included in different research questions.

In answering this thesis's main research question, factors explaining how financial security generally (and the Recession specifically) may have impacted health were revealed, particularly relating to the possible buffering effects of welfare systems and social relationships. This enabled elaborating on existing theory about the relationship between wealth and health, and these possible buffers were included in an updated version of thesis's theoretical framework.

8.5 Limitations

In the following sections, the limitations of each RQ are discussed.

8.5.1 RQ1: Literature review

This literature review has several limitations. First, this thesis used various aspects of health (social, mental/emotional, physical) to define health, but the final literature review largely focussed on physical health. This was in part because of logistics: there were simply too many articles concerning a single facet of the other aspects of health (particularly mental health) that ignored the others. Physical health was the most appropriate choice to focus on because it has the clearest link to this thesis´s theoretical framework. This is particularly the case with the psycho-social pathway, which posits that increased stress as a result of financial insecurity worsens physical health outcomes. However, social and mental/emotional health also play a role. And because physical health manifestations of stress take the longest to be impacted out of the three types of health, this may have distorted the results.

Second, a top-down approach was taken in this literature review: initial ideas about how this thesis would be structured and how the research questions would be posed guided the metrics by which articles were analysed. This may have prevented the literature review from revealing new information that could have ultimately proven useful to this thesis. It may also make this literature review less generalizable in answering broader questions about what is known about the Great Recession's influence on health.

Third, this literature review was confined to three databases and articles written in English, due to time pressure in the former instance, and the limitations of the author in the latter. This may mean that all relevant articles were not included in the search, and that the conclusions reached may not be correct if these parameters were able to be set more broadly.

Fourth, this literature review did not synthesise results from the included articles to understand the extent to which health was impacted by the Recession. This was because the included articles used different measures of wealth and health, and so combining them was not straightforward. However, this means that the present literature review´s conclusion is based on a blunt counting of articles, versus a more sophisticated and sensitive analysis.

8.5.2 RQ2: Quantitative analysis, T-tests

Because this chapter was based on independent sample t-tests, it was not possible to control for possible confounders (e.g. age, marital status, BMI). Also, because the data was edited down (those under 25 and over 70 were excluded from analysis, and all respondents who did not answer a question included in a component were excluded from the analysis overall, based on the way in which component variables are created), it may be that these samples are no longer nationally representative, and are too small to detect meaningful changes. Also, this was undertaken with cross-sectional data: the cases in 2008 were not the same in 2014. This time horizon also may have been too short to register meaningful changes. Finally, the components used were generated from questions not specifically meant to assess financial security or health based on this thesis's theoretical framework. For example, housing security could not be considered, because the ESS did not ask questions about it. These factors may be responsible for the relatively results of improved self-rated health.

8.5.3 RQ3: Quantitative analysis, OLS

This research had several limitations. First, as with RQ2, this was undertaken with cross-sectional data, and over a relatively short time horizon. Meaningful shifts may therefore not have been reflected in the data.

Also, this data was not designed for this purpose, and does not stem from the same theoretical starting point. This may mean that questions were asked in a certain way that did not yield accurate results, or that certain questions that were theoretically relevant were not asked. For example, more complex measures of SES were not undertaken, aside from income and employment status (type of occupation was not). Yet, it is entirely possible that low-paid occupations confer higher levels of social prestige, and are therefore by some measures considered to be higher SES. For instance, according to the National Readership Survey class system designed for the United Kingdom, clergy are in the top grade (likely due to the higher social standing and educational requirements), despite their comparatively low salaries (National Readership Survey, 2017).

As noted above, these models are not the best fits. Some of the adjusted r-squareds for the regressions (particularly social health and physical health) were extremely low. All of the beta coefficients for all regressions were also extremely small. However, some of this is logical: financial security is only one piece of the puzzle explaining individuals' health, and it is understandable that these models only explain a modicum of health outcomes using financial security as an explanatory variable.

8.5.4 RQ4: Qualitative analysis, timeline interviews

Perhaps the biggest limitation of the research for this RQ was the sample size and sampling method. This thesis used snowball sampling and interviewed ten Dutch and ten Spanish people. First, this sample size was too small to compare the two countries conclusively, and to be able to detect any sort of changes in health status. This may also be because health problems during working age are comparatively rare, and a larger sample size would be needed to detect such shifts. Paritcularly regarding physical health, data saturation was not achieved. Therefore, this research was less investigative and more elaborating on the other parts of the research undertaken in this thesis.

A second limitation involving the sample was the language barrier. This thesis´s author does not speak Dutch or Spanish well enough to conduct interviews in these languages, and so all interview participants had to speak English. In both countries, this meant that lower SES people (who tend to not speak English as well) were harder to access. This may have resulted in the people most affected by the Recession not being represented in this research's sample.

Third, the sample was largely drawn from this author's broader social network, including parents' friends/acquaintances and friends' friends/acquaintances. This means that finding people between the author´s age (late 20s to mid-30s) and parents´ age (late 50s to mid-60s) was a challenge, and they are underrepresented in the sample. Also, sampling from acquaintances resulted in many interview participants were in some ways connected to one another. This means that many of them have similar backgrounds, particularly in terms of SES backgrounds, or are similar in other, unaccounted-for ways. It may mean that a very particular perspective of the Great Recession that is not representative of Dutch and Spanish experiences overall has been reflected in this thesis.

Fourth, the Dutch and Spanish samples may not be comparable. Most obviously, Madrid may not be comparable to Gelderland and Utrecht. Madrid is a major cosmopolitan city, whereas the areas interviewed in the Netherlands are significantly more rural. Yet, this may not have affected results too profoundly, as the Madrileños interviewed frequently said that the crisis was worse in rural areas in Spain. Other sources of bias may be present, however: the lower-SES Spaniards interviewed were immigrants with a strong command of English. Their perspectives may not be reflective of lower SES Spaniards overall, and may not be comparable to the lower SES Dutch interviewees. However, this was largely because of the aforementioned language barrier. All contacts in Spain said that they did not know any lower SES people who also had a good enough command of English to be interviewed. In the Netherlands, this was not an issue.

Another significant limitation involved the interview method. Because respondents were simply sked about the events that impacted them, many interviews did not specifically discuss

physical health, as theirs had been good. As mentioned above, younger, working-age people tend to have better health. Still, different aspects of health – particularly mental/emotional and social health – came up with enough frequency naturally that interviews could be analysed using these themes and meaningful patterns extracted.

Finally, the way in which the interviews were analysed may have been a limitation: this thesis's theoretical framework was largely relied on to analyse interviews. While this was important to allow the theory to guide the methods and was also more efficient time-wise, it may have limited the analysis. Taking a bottom-up approach would have been more appropriate for building and elaborating existing theory. Still, this thesis sought to contend with this by adding additional elements into its theoretical framework based on themes generated during the qualitative research.

8.6 Areas for future research

In this section, avenues for further research are discussed for each RQ.

8.6.1 RQ1: Literature review

While there are a handful of existing literature reviews on this topic (e.g. Stuckler et al., 2009), one undertaken in the near future could help to understand the impact on the crisis ten years on. More specific (or different) facets of health could also be explored. For instance, a literature review on the Great Recession's impact on social health or emotional health alone may be informative to understand its myriad impacts on health overall. A literature review also more specifically guided from a theoretical perspective, such as one exploring the different facets of health and wealth used in this thesis, may be informative to better understanding the relationship between health and wealth. Further, a broader literature review, using more databases and including articles in European languages (Spanish, Portuguese and Greek in particular, where there were a number of articles unable to be included) may produce a more complete understanding of what is known about the Great Recession's influence on health. Finally, a meta-analysis of articles with similar or comparable measures of wealth and health could help elucidate the extent to which the Recession impacted health.

8.6.2 RQ2: Quantitative analysis, T-tests

Posing similar questions using nationally representative panel data that is collected for the purpose of this type of analysis (versus a general secondary dataset) could address the limitations identified for this RQ. Particularly, using a dataset guided by a theoretical framework similar to the one used in this thesis may yield results that are more in line with this RQ.

Also, using panel data would enable analyses that could control for individual variations (age, marital status, BMI), and help to ensure that the results were generalisable to the population overall.

If this is not a possibility, looking at multiple years of the ESS, and looking at responses to these questions over longer time horizons could help address some of these shortcomings.

8.6.3 RQ3: Quantitative analysis, OLS

As with RQ2, using panel data to undertake similar analyses may be helpful. Likewise, using data that is collected from questionnaires guided by a similar theoretical framework may yield results that are more in line with expectations. Also, by using a dataset that is fit-for-purpose, research could better contend with confounders: by systematically identifying other variables that impact health outcomes may help create better models. Addressing these issues was not possible in the present study, as it was constrained by using an existing dataset.

Additional statistical tests could also be undertaken to provide further granularity on the data: stratifying data by age or SES (although both were controlled for), and undertaking multi-level analyses using municipal and regional-level data could provide a richer picture of whom the Great Recession impacted most. This was an issue that could have been contended with in the present study, but due to time constraints and the involvement of answering other RQs, it was not.

8.6.4 RQ4: Qualitative analysis, timeline interviews

Conducting further qualitative research into the Great Recession's impact on individuals' lives is important to better understanding the Recession's impacts more broadly, and to elaborating existing theory on the relationship between wealth and health in the context of the crisis. Future research should attempt to accomplish this by obtaining a bigger and more diverse sample, in terms of both SES and geography. This may help make results more generalisable to the country overall. This would also possibly mean people with a range of health statuses and outcomes would be interviewed, and could perhaps enable a more systematic cross-country comparison. Alternatively, more comparable sub-groups identified as particularly informative (e.g. lower-SES older people, or higher-SES younger people) could be targeted and compared. In terms of analysis, bottom-up analysis techniques could be applied to interviews in order to help elaborate on existing research.

A new direction for future research could be more specifically examining the buffering effect of welfare states on the relationship between financial security and health. This could involve similar cross-country research, possibly examining a country before and after a welfare regime transition in comparison to a 'control' country.

8.7 Conclusion

There is strong evidence that the Recession had worsened financial security, and mixed evidence that the Recession had worsened health. In addition to the novel methodological approaches this thesis took in answering the question about the Recession's influence on health, it also added

value to this debate by taking an iterative approach to answering RQs and by elaborating on the existing theory on the relationship between wealth and health.

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Appendix A: RQ1

Table A1: Literature review synopsis

Reference	Geography	Research question	Data source	Wealth measure	Health measure	Key findings	Limitations
Abebe, D. S., Tøge, A. G., & Dahl, E. (2016). Individual-level changes in self-rated health before and during the economic crisis in Europe. International journal for equity in health, 15(1), 1.	EU-23	Has self-rated health changed since start of the Great Recession?	EU Statistics on Income and Living Conditions	- Severity of the Recession - SES factors - Macroeconomic data	Self-rated health	Self-rated health has declined among working-age populations across Europe, although this was not more pronounced among lower SES people.	Very limited definition of health - Self-rated health based off one question.
Arroyo, E., Renart, G., & Saez, M. (2015). How the economic recession has changed the likelihood of reporting poor self-rated health in Spain. *International journal for equity in health*, *14*(1), 149.	Spain	How has self-rated health changed since the start of the Great Recession?	Spanish National Health Survey	None – data is compared pre and post crisis	Self-rated health	The financial crisis did not alter the likelihood of reporting ill health in 2011 as compared to 2006.	This examines the likelihood of reporting ill health if individuals have an illness: this does not measure disease incidence. It also uses 2011 as its post-crisis year. This may have been too soon to find effects of the crisis in Spain.
Barlow, P., Reeves, A., McKee, M., & Stuckler, D. (2015). Austerity, precariousness, and the health status of Greek labour market participants: Retrospective cohort analysis of employed and unemployed persons in 2008–2009 and 2010–2011. Journal of public health policy, 36(4), 452-468.	Greece	How did self-reported health change from Greece's initial recession (2008-2009) and its austerity programme?	EU Statistics on Income and Living Conditions	Employment status	Self-rated health	The economic crisis is associated with a decline in self-reported health, especially among the unemployed	Comparison of "initial crisis" and the Great Recession may be too close together temporally. Also, they may not be foils of one another - both were periods of financial strain.

Reference	Location	Research Question	Data	Independent Variable	Dependent Variable	Findings	Limitations
Barroso, C., Abásolo, I., & Cáceres, J. J. (2016). Health inequalities by socioeconomic characteristics in Spain: the economic crisis effect. International journal for equity in health, 15(1), 62.	Spain	What, if any, are the differences in the effect of socioeconomic characteristics on self-reported health status, pre and post crisis?	Spanish National Health Survey data	Professional status	Self-assessed health	The economic crisis brought about a slight increase in socioeconomic inequalities in the likelihood of reporting good health.	Relies on self-assessed health. It also uses 2011 as its post-crisis year. This may have been too soon to find effects of the crisis in Spain.
Bartoll, X., & Marí-Dell'Olmo, M. (2016). Patterns of life expectancy before and during economic recession, 2003–12: a European regions panel approach. The European Journal of Public Health, 26(5), 783-788.	232 European regions	Is the Great Recession associated with an increase in life expectancy?	Regional life expectancy statistics from Eurostat	Employment status	Life expectancy at birth	Increased life expectancy is not correlated with unemployment	The crisis time horizon (2012) may be too short to have registered changes in life expectancy, generally one of the last things to be affected as a sign of ill health.
Bartoll, X., Toffolutti, V., Malmusi, D., Palència, L., Borrell, C., & Suhrcke, M. (2015). Health and health behaviours before and during the Great Recession, overall and by socioeconomic status, using data from four repeated cross-sectional health surveys in Spain (2001–2012). BMC public health, 15(1), 865.	Spain	How has the Great Recession changed health and health related behaviours in Spain?	Spanish National Health Survey	Employment status and education level	Self-reported health, overweight obesity + health behaviours	Socio-economic inequalities in health have increased in the wake of the crisis.	Health only measured by self-rated health and obesity (a problematic measure). Also, the time horizon may be too short.
Baumbach, A., & Gulis, G. (2014). Impact of financial crisis on selected health outcomes in Europe. The European Journal of Public Health, 24(3), 399-403.	Germany, Finland, Portugal, Slovenia, Poland, Czech Republic, Slovakia, Buglaria	What are the effects of the financial crisis on selected population-level health outcomes?	Eurostat, 2000-2011	Unemployment rate and economic growth	Overall mortality, suicide and transport mortality	While cause-effect relationships are unclear, suicide mortality increased and transport mortality decreased after the crisis.	Solely relies on mortality data – it may be too short of a time horizon to see changes in mortality statistics.
Benmarhnia, T., Zunzunegui, M. V., Llácer, A., & Béland, F. (2014). Impact of the economic crisis on the health of older persons in Spain: research clues based on an analysis of mortality. SESPAS report 2014. Gaceta Sanitaria, 28, 137-141.	Spain	How has the crisis changed trends in mortality among the elderly in Spain?	Mortality rates from the Spanish National Statistics Institute	None – pre-and post-crisis comparison.	Mortality rates in individuals 60 years +	During the crisis, the mortality rate decreased at a slower rate; winter mortality increased; the impact of the crisis has been	May not be as generalisable to this thesis as other articles, due to focus on the elderly and focus on mortality.

Citation	Country	Research Question	Data Source	Independent Variable	Dependent Variable	Findings	Limitations
						greater on women than on men.	
Bonovas, S., & Nikolopoulos, G. (2012). High-burden epidemics in Greece in the era of economic crisis. Early signs of a public health tragedy. Journal of preventive medicine and hygiene, 53(3).	Greece	How did infectious disease incidence rates change in the wake of the Greek financial crisis?	European Centre for Disease Control and Prevention	None	Infectious disease incidence rates	Greece has experienced several large-scale pandemics of infectious diseases since the outbreak of the financial crisis.	Solely studies the increase in disease incidence - there is no inclusion of a wealth variable.
Clair, A., Reeves, A., Loopstra, R., McKee, M., Dorling, D., & Stuckler, D. (2016). The impact of the housing crisis on self-reported health in Europe: multilevel longitudinal modelling of 27 EU countries. The European Journal of Public Health, 26(5), 788-793.	EU27	How did housing payment problems during the Great Recession affect self-rated health?	EU Statistics on Income and Living Conditions	Housing payment problems	Self-rated health	People who had housing arrears experience increased risk of worsening self-reported health, particularly among renters.	Measures health solely based on self-rated health – may be too simplistic.
Coveney, M., García-Gómez, P., Van Doorslaer, E., & Van Ourti, T. (2016). Health disparities by income in Spain before and after the economic crisis. Health economics, 25(S2), 141-158.	Spain	How did health disparities by income change during the financial crisis?	EU Statistics on Income and Living Conditions	Income growth, income inequality and differential income mobility	Self-rated health:	Health inequality began to fall at a faster pace after the crisis began	Very limited definition of health - Self-rated health based off one question.
Drydakis, N. (2015). The effect of unemployment on self-reported health and mental health in Greece from 2008 to 2013: a longitudinal study before and during the financial crisis. Social Science & Medicine, 128, 43-51.	Greece	What is the effect of recession-related unemployment on health and mental health in Greece?	Longitudinal Labor Market Study (LLMS) from 2008–2013	Employment status	Self-rated health and mental health	Health effects are worse on the unemployed during periods of greater unemployment.	
Faresjö, Å., Theodorsson, E., Chatziarzenis, M., Sapouna, V., Claesson, H. P., Koppner, J., & Faresjö, T. (2013). Higher perceived stress but lower cortisol levels found among young Greek adults living in a stressful social environment in comparison with Swedish young adults. PLoS One, 8(9), e73828.	Greece and Sweden	How did the financial crisis impact cortisol levels in Greece and Sweden?	The total number of participants in the study was n=114 Swedish and	None, assumption that Greek students were more financially	Biomarker - human hair cortisol levels + perceived stress; Self-reported health was	Greek students had significantly lower cortisol levels than Swedish students, although the Greek sample reported higher perceived	Samples from med student population only - extremely biased sample and limited SES diversity. Also, cortisol measures stress at one moment in time.

Reference	Location	Research Question	Study design		Outcome measure	Findings	Comments
			n=125 Greek students.	strained than Swedish ones	measured by three categories: not so good, average, and good.	stress, reported more experience of serious life events, had lower hope for the future, and had widespread symptoms of depression and anxiety.	
Fernandez, A., Garcia-Alonso, J., Royo-Pastor, C., Garrell-Corbera, I., Rengel-Chica, J., Agudo-Ugena, J., ... & Mendive, J. M. (2015). Effects of the economic crisis and social support on health-related quality of life: first wave of a longitudinal study in Spain. Br J Gen Pract, 65(632), e198-e203.	Barcelona, Spain	What is the impact of the crisis in health-related quality of life, while taking into account the possible buffering effect of social support?	Longitudinal study – Social Support and Quality of Life study	None	Self-assessed health-related quality of life	There was no association between having been affected by the crisis and physical health-related quality of life.	The sample size is very small: 143 participants. This may have been too small to register a change. Also, it was undertaken in an already-deprived neighbourhood in Barcelona, meaning these individuals may not have been relatively deprived as a result of the crisis as much as middle class individuals.
Ferrarini, T., Nelson, K., & Sjöberg, O. (2014). Unemployment insurance and deteriorating self-rated health in 23 European countries. Journal of epidemiology and community health, 68(7), 657-662.	EU 23	What was the role of unemployment insurance for deteriorating self-rated health in the working age population at the onset of the Great Recession in Europe?	EU Statistics on Income and Living Conditions	Coverage and net replacement rates of unemployment insurance	Self-rated health	"Unemployment insurance significantly reduces transitions into self-rated ill-health and, particularly, programme coverage is important."	Focus is on the role specifically of unemployment insurance, so may be less relevant for this thesis's purposes.
Filippidis, F. T., Schoretsaniti, S., Dimitrakaki, C., Vardavas, C. I., Behrakis, P., Connolly, G. N., & Tountas, Y. (2014). Trends in cardiovascular risk factors in Greece before and during the financial crisis: the impact of social	Greece	How did the Great Recession impact health outcomes in Greece?	Cross-sectional "Hellas Household" study; some	Occupation and education of main	CVD risk factors (smoking; BMI; fruit and	During the economic crisis in Greece, fruit and vegetable consumption declined, whereas	The focus is on health behaviours, not health outcomes, although they are more squarely linked to disease aetiology.

disparities. The European Journal of Public Health, 24(6), 974-979.			self-reported measures and the International Physical Activity Questionnaire	earner in household	veg consumption)	trends in smoking decreased and physical activity increased.	
Granados, J. A. T., & Rodriguez, J. M. (2015). Health, economic crisis, and austerity: a comparison of Greece, Finland and Iceland. Health Policy, 119(7), 941-953.	Greece, Finland and Iceland	How did austerity policies impact health?	World Health Organisation	GDP	"Population health" measures, particularly mortality rates and life-expectancy data	The study found no difference in health between Greece and Finland and Iceland.	Solely relies on mortality data – it may be too short of a time horizon to see changes in mortality statistics.
Hessel, P., Vandoros, S., & Avendano, M. (2014). The differential impact of the financial crisis on health in Ireland and Greece: a quasi-experimental approach. Public health, 128(10), 911-919.	Greece, Ireland and Poland	How did the financial crisis impact health in two countries heavily hit by the financial crisis, but that had different welfare regimes?	EU Statistics on Income and Living Conditions	None - measured before and after crisis	Self-rated health	There was no significant change in health in Greece or Ireland following the onset of the financial crisis, although self-reported health decreased in Greece.	Very limited definition of health - Self-rated health based off one question.
Huijts, T., Reeves, A., McKee, M., & Stuckler, D. (2015). The impacts of job loss and job recovery on self-rated health: testing the mediating role of financial strain and income. The European Journal of Public Health, 25(5), 801-806.	EU27	Is regaining a job sufficient to reverse the harmful impacts on health of job loss during the Great Recession?	EU Statistics on Income and Living Conditions	Employment status - unemployed who then regained job after a year vs long term unemployed	Self-rated health	Men and women's health appears to suffer equally from job loss but differs in recovery. For men, employment recovery was insufficient to alleviate financial strain and associated health consequences, whereas in women regaining employment	Very limited definition of health - Self-rated health based off one question.

						leads to health recovery.	
Kollia, N., Panagiotakos, D. B., Georgousopoulou, E., Chrysohoou, C., Tousoulis, D., Stefanadis, C., ... & Pitsavos, C. (2016). Exploring the association between low socioeconomic status and cardiovascular disease risk in healthy Greeks, in the years of financial crisis (2002–2012): The ATTICA study. International Journal of Cardiology, 223, 758-763.	Attica, Greece	What was the effect of low socioeconomic status on a 10-year cardiovascular disease incidence, in the years of financial crisis?	During 2001–2002, information from 1528 men (18–87 years old) and 1514 women (18–89 years old) was collected. 10 year follow up	Education al level and annual income were used to define their SES.	CVD incidence	There is evidence for a consistent reverse relation between SES and the incidence of CVD and for higher CVD risk factors among less privileged individuals.	Low generalizability because conducted in a single suburb outside of Athens.
Loerbroks, A., Bosch, J. A., Douwes, J., Angerer, P., & Li, J. (2014). Job insecurity is associated with adult asthma in Germany during Europe's recent economic crisis: a prospective cohort study. Journal of epidemiology and community health, jech-2014.	Germany	Is asthma incidence associated with increased job insecurity in Germany?	The German Socio-economic Panel	Job insecurity – measured by responden ts rating the likelihood of losing their jobs in the next two years	Asthma incidence	Asthma incidence is more likely with greater job insecurity.	Asthma is a very small facet of health. Also, many possible confounders (including type of work).
Maynou, L., Saez, M., & Lopez-Casasnovas, G. (2014). Has the economic crisis widened the intraurban socioeconomic inequalities in mortality? The case of Barcelona, Spain. J Epidemiol Community Health, jech-2013.	Barcelona, Spain	(i) have spatial variations in socioeconomic inequalities in mortality at an intraurban level changed over time? and (ii) as a result of the economic crisis, has the gap between	National Statistical Institute of Spain population data and	Neighbour hood wealth	Mortality rates	Relative risks from mortality have increased since 2009.	Mortality may not capture more subtle gradations in health. Also, the wealth data is linked to neighbourhoods overall.

		such disparities widened?					
Moya, A. Z., Buffel, V., Yáñez, C. N., & Bracke, P. (2015). Social inequality in morbidity, framed within the current economic crisis in Spain. International journal for equity in health, 14(1), 131.	Spain	How does education and region impact the prevalence of preventable vs less preventable diseases?	Spanish National Health Surveys and from the European Health Surveys in Spain	Education	Disease (diabetes, depression, myocardial infection, presence of malignant tumors) prevalence rates	Education plays a larger role in preventable diseases than non-preventable ones.	Combined cross-sectional surveys – not the same questions and not from the same surveys.
Nogueira, H. (2016). What is happening to health in the economic downturn? A view of the Lisbon Metropolitan Area, Portugal. Annals of human biology, 43(2), 164-168.	Lisbon, Spain	Have mortality trends changed as a result of the financial crisis, as stratified by SES status?	Portuguese census data	Multiple Deprivation score (household crowding,	Mortality	The 'newly deprived' people in Lisbon's middle classes are experiencing a worse decline in mortality.	Focussed solely on Lisbon, and may not be generalizable to the population overall. Also, focus on mortality.
Rajmil, L., Medina-Bustos, A., de Sanmamed, M. J. F., & Mompart-Penina, A. (2013). Impact of the economic crisis on children's health in Catalonia: a before–after approach. BmJ Open, 3(8), e003286.	Spain - Catalonia	What are the changes in the family living conditions of children in Catalonia between 2006 and the 2010-2012 period, and what are the associations between these changes and health outcomes?	Before/after comparison of two cross-sectional surveys, before and after crisis	Education and employment status	Overweight/obesity, health behaviour, mental health and health-related quality of life (HRQOL)	Although some health-related behaviour improved during the study period, childhood obesity increased and inequalities in HRQOL appeared.	Focussed solely on Catalonia, and may not be generalizable to the population overall.
Reeves, A., Basu, S., McKee, M., Stuckler, D., Sandgren, A., & Semenza, J. (2014). Social protection and tuberculosis control in 21 European countries, 1995–2012: a cross-	EU 21	How does spending on social protection programs impact tuberculosis incidence rates?	Tuberculosis case data from the European Centre for Disease	National-level spending on social protection	Tuberculosis incidence rates	"Each US$100 increase in social protection spending was associated with a decrease per 100000	Social protection and wealth are related but not synonyms. Tuberculosis is hard to generalize to 'health' overall - in the

national statistical modelling analysis. The Lancet infectious diseases, 14(11), 1105-1112.			Prevention and Control's 2014 European Surveillance System database.	programmes.		population in the number of tuberculosis case notifications."	EU, tuberculosis is most prevalent in people with HIV, already relatively rare and more common in specific population segments.
Regidor, E., Barrio, G., Bravo, M. J., & de la Fuente, L. (2014). Has health in Spain been declining since the economic crisis?. Journal of epidemiology and community health, 68(3), 280-282.	Spain	How have trends in health outcomes changed as a result of the financial crisis in Spain?	Eurostat; national health registries the National Health Survey	GDP-PPP	15 health outcomes that result in premature mortality, e.g. cancer and CVD.	Most mortality rates showed significant downward trends during the recession.	Solely relies on mortality data – it may be too short of a time horizon to see changes in mortality statistics. Also, its data is taken through 2011, while the main effects of the crisis in Spain were just being felt.
Reile, R., Helakorpi, S., Klumbiene, J., Tekkel, M., & Leinsalu, M. (2014). The recent economic recession and self-rated health in Estonia, Lithuania and Finland: a comparative cross-sectional study in 2004–2010. Journal of epidemiology and community health, jech-2014.	Estonia, Lithuania and Finland	How did health change in Estonia and Lithuania compared to Finland in the wake of the crisis?	Cross-sectional surveys from FinBalt Health Monitor project	Education - high/mid/low; Employment status - employed/ unemployed	Self-rated health	"The short-term health effects in Estonia and Lithuania did not differ from those in Finland, although the recession years marked the end of the previous positive trend in self-rated health. The reduction in health disparities during the recession indicates that different socioeconomic groups were affected disproportionately"	Conducted in 2010, at the beginning of the crisis, so health effects may take longer to manifest.
Sarti, S., & Zella, S. (2016). Changes in the labour market and health inequalities during the	Italy	How did work trajectory influence self-reported health	EU-SILC data for Italy,	Education and occupatio	Self-reported health	Individuals who are unemployed or are in precarious occupation	Considers years 2007 and 2010 – this may not have been long enough for the

Citation	Region	Research Question	Data Source	Independent variable	Dependent variable	Findings	Limitations
years of the recent economic downturn in Italy. Social science research, 57, 116-132.		during the financial crisis?	individuals aged 30 to 60	nal changes		positions are more likely to have worse health in the wake of the crisis	crisis's effects to be shown.
Tapia Granados, J. A., & Ionides, E. L. (2017). Population health and the economy: Mortality and the Great Recession in Europe. Health economics.	EU-27	How did mortality change in the wake of the Great Recession?	European Health for All data (WHO) and World Development Indicators (World Bank)	National unemployment rate and GDP	Life expectancy at birth, along with 15 other indicators of population health	Recessions on average have a beneficial effect on population mortality.	Life expectancy a tricky measure over such a short time horizon. This, plus national level health data might not reveal individual level-trends.
Toffolutti, V., & Suhrcke, M. (2014). Assessing the short term health impact of the Great Recession in the European Union: a cross-country panel analysis. Preventive medicine, 64, 54-62.	EU23	What are some of the adverse health effects of the Great Recession?	European Health for All Database and the mortality indicator database	Unemployment rate	Health and health behaviour indicators, but discussion focuses on different mortality rates	Increase in unemployment rate is associated with decrease in mortality rates, with exception of suicide rate. However, there are SES differences in countries with different levels of social protection.	Solely relies on mortality data – it may be too short of a time horizon to see changes in mortality statistics.
Tøge, A. G. (2016). Health effects of unemployment in Europe (2008–2011): a longitudinal analysis of income and financial strain as mediating factors. International journal for equity in health, 15(1), 75.	EU 28	Is the effect of unemployment on self-rated health (SRH) is mediated by income, financial strain and unemployment benefits?	EU Statistics on Income and Living Conditions	Income and unemployment	Self-rated health	Financial strain is found to be a potential mediator of the individual health effect of unemployment, while neither absolute income, relative income, relative rank, income deprivation nor unemployment benefits are found to be mediators of this relationship	Very limited definition of health - Self-rated health based off one question, and uses data from early on in the crisis (2008 through 2011).

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Citation	Location	Research Question	Data Source	Independent Variable	Dependent Variable	Findings	Limitations
Tøge, A. G., & Blekesaune, M. (2015). Unemployment transitions and self-rated health in Europe: A longitudinal analysis of EU-SILC from 2008 to 2011. Social Science & Medicine, 143, 171-178.	EU 28	How has self-rated health changed as a result of unemployment?	EU Statistics on Income and Living Conditions	Employment status	Self-rated health	There is a decrease in self-rated health as people enter unemployment	Very limited definition of health - Self-rated health based off one question, and uses data from early on in the crisis (2008 through 2011).
Urbanos-Garrido, R. M., & Lopez-Valcarcel, B. G. (2015). The influence of the economic crisis on the association between unemployment and health: an empirical analysis for Spain. The European Journal of Health Economics, 16(2), 175-184.	Spain	How have the effects of unemployment on health changed in the wake of the crisis?	Spanish Health Survey	Employment status	Self-rated health and self-rated mental health	Unemployment had a significant impact on self-rated health and self-rated mental health, particularly self-rated mental health	Relies solely on self-rated mental and physical health and concentrates solely on Spain.
Vandoros, S., Hessel, P., Leone, T., & Avendano, M. (2013). Have health trends worsened in Greece as a result of the financial crisis? A quasi-experimental approach. The European Journal of Public Health, ckt020.	Greece and Poland (control)	Did health in Greece worsen in the aftermath of the crisis?	EU Statistics on Income and Living Conditions	None	Self-rated health	Results provide strong evidence of a statistically significant negative effect of the financial crisis on health trends.	The study compares 2006 and 2009 – this may be too short of a time horizon.
Vásquez-Vera, H., Rodríguez-Sanz, M., Palència, L., & Borrell, C. (2016). Foreclosure and health in Southern Europe: results from the Platform for People Affected by Mortgages. Journal of Urban Health, 93(2), 312-330.	Spain (Catalonia)	Are those affected by mortgage issues more likely to have worse health outcomes than those not affected by mortgage issues?	Health Survey of Catalonia and data collected by People Affected by Mortgages	Mortgage foreclosure status	Self-rated health (physical and mental)	People who have experienced mortgage trouble have poorer mental and physical health than the general population. Poor mental health was more prevalent in the early stages of foreclosure, while poor physical health was more evident in later stages of foreclosure.	Data is based on a civil movement, People Affected by Mortgages, which has a political agenda and therefore may be subject to bias.
Vlachadis, N., Iliodromiti, Z., Vlachadi, M., Xanthos, T., Ktenas, E., Vrachnis, D., ... & Vrachnis, N. (2014). Cardiovascular mortality	Greece	Were cardiovascular mortality rates	Cardiovascular mortality data provided	None – assumed that time	Cardiovascular mortality rates	The decline in cardiovascular mortality that Greece	Focuses solely on cardiovascular mortality – this is only one disease,

and the financial crisis in Greece: Trends and outlook. International journal of cardiology, 176(3), 1367-1368.		impacted by the financial crisis?	by the Hellenic Statistics Authority	passing was indicative of the crisis worsening.		was experiencing levelled off (although deaths did not increase).	and mortality trends may take longer to see the full impacts.
Vlachadis, N., Vrachnis, N., Ktenas, E., Vlachadi, M., & Kornarou, E. (2014). Mortality and the economic crisis in Greece. Lancet, 383(9918), 691.	Greece	Were mortality rates impacted by the financial crisis?	Mortality data provided by the Hellenic Statistics Authority	None – assumed that time passing was indicative of the crisis worsening.	Mortality rates.	Age-adjusted mortality rates continued to decline after the advent of the crisis. The 2011-2012 increase in mortality in the age group 55 and up indicates that there may be an austerity-related link to mortality.	Focuses solely on mortality rates.
Vrachnis, N., Vlachadis, N., Salakos, N., Vlachadi, M., & Iliodromiti, Z. (2015). Cancer mortality in Greece during the financial crisis. Acta Oncologica, 54(2), 287-288.	Greece	Were cancer mortality rates impacted by the financial crisis?	Mortality data provided by the Hellenic Statistics Authority	None – assumed that time passing was indicative of the crisis worsening.	Cancer mortality rates	Cancer mortality rates continued to decline in the aftermath of the crisis.	Focuses solely on cancer mortality rates.
Zavras, D., Tsiantou, V., Pavi, E., Mylona, K., & Kyriopoulos, J. (2012). Impact of economic crisis and other demographic and socio-economic factors on self-rated health in Greece. The European Journal of Public Health, cks143.	Greece	Did health in Greece worsen in the aftermath of the crisis?	Cross-sectional, nationally representative surveys	Unemployment and income	Self-rated health	In 2011, in this study representing the year of the crisis, self-rated health was worse compared to previous years.	The study only goes up to 2011 – this may be too short of a time horizon.

Appendix B: RQ2

Table B1: ESS variable synopsis

Question	Question number (based on ESS7 numbering)	Theoretical grouping	Edition
On the whole, how satisfied are you with the state of the economy in [country]?	B21	Institutional trust	ESS4 and ESS7
Now thinking about the government, how satisfied are you that it is doing its job?	B22	Institutional trust	ESS4 and ESS7
Please say what you think about the overall state of health services in [country] nowadays?	B25	Institutional trust	ESS4 and ESS7
Ever been divorced/had a civil union dissolved?	F6	Control	ESS4 and ESS7
Gender (interviewer code)	E9	Control	ESS4 and ESS7
Would you describe yourself as being a member of a group that is discriminated against in this country?	C16	Control	ESS4 and ESS7
What is your height without shoes?	E11	Control	ESS7
What is your weight without shoes?	E12	Control	ESS7
In what year were you born?	F3	Control	ESS4 and ESS7
How satisfied are you with your life as a whole?	B20	Health (general)	ESS4 and ESS7
How is your health in general?	C7	Health (physical)	ESS4 and ESS7
Are you hampered in your daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem?	C8	Health (physical)	ESS4 and ESS7
Taking all things together, how happy would you say you are?	C1	Health (mental)	ESS4 and ESS7
When was the last time you felt depressed?	E20	Health (mental)	ESS7
When was the last time you felt that everything you did was an effort?	E21	Health (mental)	ESS7
When was the last time your sleep was restless?	E22	Health (mental)	ESS7
When was the last time you felt happy?	E23	Health (mental)	ESS7
When was the last time you felt lonely?	E24	Health (mental)	ESS7
When was the last time you enjoyed life?	E25	Health (mental)	ESS7
When was the last time you felt sad?	E26	Health (mental)	ESS7
When was the last time you could not get going?	E27	Health (mental)	ESS7
Please tell me how often you eat fruit, excluding drinking juice?	E1	Health (physical)	ESS7
Please tell me how often you eat vegetables or salad, excluding potatoes?	E2	Health (physical)	ESS7
On how many of the last 7 days did you walk quickly, do sports or other physical activity for 30 minutes or longer?	E3	Health (physical)	ESS7

Which of the descriptions on this card matches your cigarette smoking behaviour?	E4	Health (physical)	ESS7
Have you or ever have you had the health problems listed on the showcard? (diabetes)	E30	Health (physical)	ESS7
Have you or ever have you had the health problems listed on the showcard? (heart disease)	E30	Health (physical)	ESS7
In the last 12 months, that is since [MONTH, YEAR], with which of the health professionals on this card have you discussed your health? (specialist and GP)	E15	Health (physical)	ESS7
Compared to other people of your age, how often would you say you take part in social activities?	C2	Health (social)	ESS4 and ESS7
How often do you meet socially with friends, relatives or work colleagues?	C3	Health (social)	ESS4 and ESS7
Please consider the income of all household members and any income which may be received by the household as a whole. What is the main source of income in your household?	F40	Financial security (income and employment)	ESS4 and ESS7
Using this card, please tell me which letter describes your household's total income, after tax and compulsory deductions, from all sources?	F41	Financial security (income and employment)	ESS4 and ESS7
Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?	F42	Financial security (income and employment)	ESS4 and ESS7
Which of these descriptions best describes your main activity (in the last seven days)?	F42	Financial security (income and employment)	ESS4 and ESS7
Ever had a paid job?	F19	Financial security (income and employment)	ESS4 and ESS7
Have you ever been unemployed and seeking work for a period of more than three months?	F36	Financial security (income and employment)	ESS4 and ESS7
And in any of the jobs you have ever had, which of the things on this card were you exposed to?	F35b	Financial security (income and employment)	ESS4 and ESS7
Regardless of your basic or contracted hours, how many hours do/did you normally work a week (in your main job), including any paid or unpaid overtime.	F30	Control	ESS4 and ESS7
What is your highest level of education?	F15	Financial security (education)	ESS4 and ESS7
What is your father's highest level of education?	F52	Financial security (education)	ESS4 and ESS7
What is your mother's highest level of education?	F56	Financial security (education)	ESS4 and ESS7

Table B2: ESS 7 descriptive statistics – Spanish data

Variable	N	Range	Value explanation	Recode Explanation	Minimum	Maximum	Mean Statistic	Std Error	Std. Deviation	Variance
Age	1436	45	Scale	None, but ages 24 and below and 71 and above excluded from dataset	25	70	46.36	0.324	12.264	150.408
Not discriminated against	1432	1	1 = False; 2 = True	Recoded from "Are you a member of a discriminated against group?" 1 = Yes; 2 = No.	1	2	1.93	0.007	0.256	0.066
Ever been divorced/had civil union dissolved	1430	1	1 = Yes; 2 = No	N/a	1	2	1.90	0.008	0.298	0.089
Gender	1436	1	1 = Male; 2 = Female	N/a	1	2	1.50	0.013	0.500	0.250
Total hours normally worked per week in main job overtime included	1292	108	Scale	N/a	0	108	41.42	0.393	14.134	199.775
What best describes your main activity in the past 7 days?	1422	1.00	1 = Unemployed/sick or disabled/ retired/ housework; 2 = employed/in community or military service/in education	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others	1.00	2.00	1.6338	0.01278	0.48195	0.232
Ever had a paid job?	531	1.00	1 = No; 2 = Yes	Recoded from 1 = Yes; 2 = No.	531	1.00	1.00	2.00	1.8940	0.01337
What best describes your highest level of education?	1434	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	3.1002	0.04090	1.54875	2.399

Question	N		Scale	Recode note	Min	Max	Mean	Std. Error	Std. Dev	Variance
What best describes your partner's highest level of education?	1002	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	2.9713	0.04791	1.51676	2.301
What best describes your father's highest level of education?	1353	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	1.8037	0.03622	1.33244	1.775
What best describes your mother's highest level of education?	1404	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	1.5434	0.02971	1.11324	1.239
Feelings about household income	1430	3.00	1 = Very difficult on present income; 4 = living comfortably on present income	Recoded from 1 = living comfortably on present income; 4 = very difficult on present income	1.00	4.00	2.9565	0.02345	0.88665	0.786
Household's total net income, all sources	1194	9	1 = 1st decile; 10 = 10th decile	N/a	1	10	5.31	0.079	2.725	7.423
Any period of unemployment and work seeking lasted 12 months or more?	848	1	1 = Yes; 2 = No	N/a	1	2	1.39	0.017	0.488	0.239
How do you feel about the state of the economy in your country?	1429	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	3.7558	0.05680	2.14760	4.612
Ever unemployed and seeking work for a period more than three months	1434	1	1 = Yes; 2 = No	N/a	1	2	1.41	0.013	0.492	0.242

Variable	N		Value labels	Recoded	Min	Max	Mean		Std. Dev.	Variance
Main source of household income	1401	1.00	1 = unemployment or social benefits; 2 = income and pensions	Recoded from 1 = wages/salaries; 2 = income from self-employment; 3 = income from farming; 4 = pensions; 5 = unemployment/redundancy benefit; 6 = any other benefit; 7 = income from investments/savings; 8 = income from other sources	1.00	2.00	1.9302	0.00681	0.25497	0.065
How happy are you?	1436	10.00	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy	1.00	11.00	8.4174	0.04714	1.78601	3.190
Are you hampered in daily activities by illness/disability/infirmity/ mental problem	1435	2	1 = Yes; 2 = Somewhat; 3 = No	N/a	1	3	2.84	0.012	0.446	0.199
How satisfied are you with the state of health services?	1430	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	5.6144	0.06653	2.51616	6.331
How satisfied are you with life as a whole?	1434	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	7.8827	0.05753	2.17825	4.745
Take part in social activities compared to others of same age	1410	4	1 = Much less frequently; 5 = Much more frequently	N/a	1	5	2.69	0.025	0.938	0.880
How often socially meet with friends, relatives or colleagues	1433	6	1 = Never; 7 = Every day	N/a	1	7	5.14	0.038	1.442	2.080
How is your subjective general health?	1436	4.00	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad	1.00	5.00	3.7516	0.02285	0.86585	0.750

Table B3: ESS 4 descriptive statistics – Spanish data

Variable	N	Range	Value explanation	Recode Explanation	Minimum	Maximum	Mean		Std. Deviation	Variance
							Statistic	Std Error		
Age	1897	45	Scale	None, but ages 24 and below and 71 and above excluded from dataset	25	70	44.51	0.290	12.612	159.061
Not discriminated against	1878	1	1 = False; 2 = True	Recoded from "Are you a member of a discriminated against group?" 1 = Yes; 2 = No.	1	2	1.94	0.005	0.229	0.052
Ever been divorced/had civil union dissolved?	1881	5	1 = Yes; 2 = No	N/a	1	2	1.9478	.00387	.22246	.049
Gender	1897	1	1 = Male; 2 = Female	N/a	1	2	1.50	0.011	0.500	0.250
Total hours normally worked per week in main job overtime included	1592	99	Scale	N/a	1	100	41.95	0.265	10.591	112.162
What best describes your main activity in the past 7 days?	1881	1.00	1 = Unemployed/ retired/ housework; 2 = employed/in education	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others	1.00	2.00	1.6990	0.01058	0.45880	0.210

What best describes your highest level of education?	1892	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	2.8865	0.03634	1.58057	2.498
What best describes your partner's highest level of education?	1316	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	2.7193	0.04174	1.51435	2.293
What best describes your father's highest level of education?	1779	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	1.6661	0.03045	1.28416	1.649
What best describes your mother's highest level of education?	1807	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	1.3908	0.02211	0.93988	0.883
Feelings about household income	1885	3.00	1 = Very difficult on present income; 4 = living comfortably on present income	Recoded from 1 = living comfortably on present income; 4 = very difficult on present income	1.00	4.00	3.0627	0.01825	0.79222	0.628
Household's total net income, all sources	1227	9	1 = 1st decile; 10 = 10th decile	N/a	1	10	5.37	0.072	2.510	6.300
Any period of unemployment and work seeking lasted 12 months or more?	704	1	1 = Yes; 2 = No	N/a	1	2	1.66	0.018	0.475	0.226
Ever unemployed and seeking work for a period more than three months	1874	1	1 = Yes; 2 = No	N/a	1	2	1.62	0.011	0.485	0.236
Main source of household income	1865	1.00	1 = unemployment or social benefits; 2 = income and pensions	Recoded from 1 = wages/salaries; 2 = income from self-employment; 3 = income from farming; 4 = pensions; 5 = unemployment/redundancy benefit; 6 =	1.00	2.00	1.9726	0.00378	0.16330	0.027

			any other benefit; 7 = income from investments/savings; 8 = income from other sources						
How do you feel about the state of the economy in your country?	1879	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely unsatisfied; 10 = completely satisfied	1.00	11.00	4.5415	0.04645	2.01339	4.054
How happy are you?	1892	10.00	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy	1.00	11.00	8.6975	0.03584	1.55911	2.431
Are you hampered in daily activities by illness/disability/infirmity/mental problem	1894	2	1 = Yes; 2 = Somewhat; 3 = No	N/a	1	3	2.87	0.009	0.408	0.167
How satisfied are you with the state of health services?	1878	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	6.9537	0.04866	2.10858	4.446
How satisfied are you with life as a whole?	1881	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	8.3506	0.04155	1.80218	3.248
Take part in social activities compared to others of same age	1877	4	1 = Much less frequently; 5 = Much more frequently	N/a	1	5	2.66	0.019	0.829	0.688
How often socially meet with friends, relatives or colleagues	1896	6	1 = Never; 7 = Every day	N/a	1	7	5.33	0.033	1.421	2.018
How is your subjective general health?	1897	4.00	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad	1.00	5.00	3.9035	0.01930	0.84046	0.706

Table B4: ESS 7 descriptive statistics – Dutch data

Variable	N	Range	Value explanation	Recode Explanation	Minimum	Maximum	Mean		Std. Deviation	Variance
							Statistic	Std Error		
Age	1446	45	Scale	None, but ages 24 and below and 71 and above excluded from dataset	25	70	49.16	.339	12.894	166.246
Not discriminated against	1438	1	1 = False; 2 = True	Recoded from "Are you a member of a discriminated against group?" 1 = Yes; 2 = No.	1	2	1.92	.007	.279	.078
Ever been divorced/had civil union dissolved?	1446	1	1 = Yes; 2 = No	N/a	1	2	1.78	.011	.412	.170
Gender	1417	1	1 = Male; 2 = Female	N/a	1	2	1.52	.013	.500	.250
Total hours normally worked per week in main job overtime included	1391	100	Scale	N/a	0	100	34.81	.363	13.542	183.393
What best describes your main activity in the past 7 days?	1272	1.00	1 = Unemployed/ retired/ housework; 2 = employed/in education	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others	1.00	2.00	1.6855	.01302	.46449	.216

What best describes your highest level of education?	1424	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	3.3041	.03646	1.37576	1.893
What best describes your partner's highest level of education?	939	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	3.3568	.04312	1.32126	1.746
What best describes your father's highest level of education?	1241	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.	1.00	5.00	2.2176	.03346	1.17887	1.390
What best describes your mother's highest level of education?	1241	4.00	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5	1.00	5.00	2.2176	.03346	1.17887	1.390

				scale, and this question in the ESS7 was harmonised with that.						
Feelings about household income	1441	3.00	1 = Very difficult on present income; 4 = living comfortably on present income	Recoded from 1 = living comfortably on present income; 4 = very difficult on present income	1.00	4.00	3.2797	.02149	.81577	.665
Household's total net income, all sources	1314	9	1 = 1st decile; 10 = 10th decile	N/a	1.00	10.00	6.52	0.071	2.583	6.671
Any period of unemployment and work seeking lasted 12 months or more?	421	1	1 = Yes; 2 = No	N/a	1	2	1.55	.024	.498	.248
Ever unemployed and seeking work for a period more than three months	1442	1	1 = Yes; 2 = No	N/a	1	2	1.71	.012	.455	.207
Main source of household income	1442	1.00	1 = unemployment or social benefits; 2 = income and pensions		1.00	2.00	1.8537	.00931	.35355	.125
How do you feel about the state of the economy in your country?	1438	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	6.2232	.04714	1.78748	3.195
How happy are you?	1446	10.00	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy	1.00	11.00	8.8071	.03597	1.36774	1.871
Are you hampered in daily activities by illness/disability/infirmity/mental problem	1417	2	1 = Yes; 2 = Somewhat; 3 = No	N/a	1	3	2.65	0.016	0.598	0.357

How satisfied are you with the state of health services?	1440	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	6.8681	.05428	2.05973	4.242
How satisfied are you with life as a whole?	1445	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	8.5896	.04013	1.52533	2.327
Take part in social activities compared to others of same age	1432	4	1 = Much less frequently; 5 = Much more frequently	N/a	1	5	2.78	.023	.878	.771
How often socially meet with friends, relatives or colleagues	1446	6	1 = Never; 7 = Every day	N/a	1	7	5.40	.033	1.265	1.600
How is your subjective general health?	1446	4.00	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad	1.00	5.00	3.8506	.02121	.80643	.650

Table B5: ESS 4 descriptive statistics – Dutch data

Variable	N	Range	Value explanation	Recode Explanation	Minimum	Maximum	Mean		Std. Deviation	Variance
							Statistic	Std Error		
Age	1321	45	Scale	None, but ages 24 and below and 71 and above excluded from dataset	25	70	47.19	0.336	12.207	149.001
Not discriminated against	1318	1	1 = False; 2 = True	Recoded from "Are you a member of a discriminated against group?" 1 = Yes; 2 = No.	1	2	1.92	0.007	0.264	0.070
Ever been divorced/had civil union dissolved?	1317	1	1 = Yes; 2 = No	N/a	1	2	1.9163	.00763	.27699	.077
Gender	1321	1	1 = Male; 2 = Female	N/a	1	2	1.51	0.014	0.500	0.250
Total hours normally worked per week in main job overtime included	1261	89	Scale		1	90	36.14	0.396	14.063	197.765
What best describes your main activity in the past 7 days?	1053	1.00	1 = Unemployed/ retired/ housework; 2 = employed/in education	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others	1.00	2.00	1.8242	0.01174	0.38080	0.145

Was your partner working in the past week?			1 = No; 2 = Yes	Recoded from 1 = Yes; 2 = No.					
What best describes your highest level of education?	1315	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	3.2750	0.03540	1.28387	1.648
What best describes your partner's highest level of education?	1034	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	3.2217	0.04038	1.29859	1.686
What best describes your father's highest level of education?	1235	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	2.3262	0.03832	1.34654	1.813
What best describes your mother's highest level of education?	1253	4.00	1= primary school; 5 = bachelor's +	N/a	1.00	5.00	1.9241	0.03060	1.08319	1.173
Feelings about household income	1316	3.00	1 = Very difficult on present income; 4 = living comfortably on present income	Recoded from 1 = living comfortably on present income; 4 = very difficult on present income	1.00	4.00	3.4082	0.01934	0.70139	0.492
Household's total net income, all sources	1208	9	1 = 1st decile; 10 = 10th decile	N/a	1	10	6.81	0.074	2.574	6.627
Any period of unemployment and work seeking lasted 12 months or more?	261	1	1 = No; 2 = Yes	N/a	1	2	1.59	0.030	0.492	0.242
Ever unemployed and seeking work for a period more than three months	1318	1	1 = No; 2 = Yes	N/a	1	2	1.80	0.011	0.399	0.160
Main source of household income	1321	1.00	1 = unemployment or social benefits; 2 = income and pensions	Recoded from 1 = wages/salaries; 2 = income from self-employment; 3 = income from farming; 4 =	1.00	2.00	1.9350	0.00679	0.24670	0.061

			pensions; 5 = unemployment/redundancy benefit; 6 = any other benefit; 7 = income from investments/savings; 8 = income from other sources							
How do you feel about the state of the economy in your country?	1316	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	6.5054	0.05220	1.89332	3.585
How happy are you?	1320	10.00	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy	1.00	11.00	8.7930	0.03475	1.26231	1.593
Are you hampered in daily activities by illness/disability/infirmity/mental problem	1321	2	1 = Yes; 2 = Somewhat; 3 = No	N/a	1	3	2.72	0.015	0.537	0.289
How satisfied are you with the state of health services?	1315	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	7.0261	0.05078	1.84155	3.391
How satisfied are you with life as a whole?	1317	10.00	1 = Completely dissatisfied; 11 = completely satisfied	Recoded from 0 = Completely dissatisfied; 10 = completely satisfied	1.00	11.00	8.6548	0.03999	1.45100	2.105
Take part in social activities compared to others of same age	1309	4	1 = Much less frequently; 5 = Much more frequently	N/a	1	5	2.85	0.025	0.898	0.807
How often socially meet with friends, relatives or colleagues	1321	6	1 = Never; 7 = Every day	N/a	1	7	5.38	0.034	1.244	1.547

How is your subjective general health?	1321	4.00	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad	1.00	5.00	3.9030	0.01935	0.70343	0.495

Table B6: Structure matrix - Spanish data

Variable	Component					
	1	2	3	4	5	6
Take part in social activities compared to others of same age			0.797			
How often socially meet with friends, relatives or colleagues			0.690			
Ever unemployed and seeking work for a period more than three months						
Highest level of education	0.500	-0.644	0.334			
Household's total net income, all sources	0.694	-0.386				
Hampered in daily activities by illness/disability/infirmity/mental problem				-0.850		
Father's highest level of education		-0.883				
Mother's highest level of education		-0.870				
How happy are you?						-0.904
Subjective general health				-0.834		
Feelings about household income	0.657					-0.337
Main source of household income	0.680					
What best describes your main activity in the past 7 days?	0.677			-0.413		
How satisfied are you with the state of the economy?					0.813	
How satisfied are you with the state of health services?					0.836	
How satisfied are you with life as a whole?						-0.887

Table B7: Structure matrix - Dutch data

Variable	Component				
	1	**2**	**3**	**4**	**5**
Take part in social activities compared to others of same age			0.774		
How often socially meet with friends, relatives or colleagues			0.815		
Ever unemployed and seeking work for a period more than three months	0.501				
Highest level of education		.939			
Household's total net income, all sources	0.688				
Hampered in daily activities by illness/disability/infirmity/mental problem				-0.866	
Father's highest level of education		0.873			
Mother's highest level of education		0.868			
How happy are you?					0.888
Subjective general health				-0.815	0.389
Feelings about household income	0.659				0.417
Main source of household income	0.732			-0.340	
What best describes your main activity in the past 7 days?	0.547			-0.458	
How satisfied are you with life as a whole?					0.909

Table B8: Total variance explained – Spanish data

	Initial eigenvalues			Extracted Sums of Squared Loadings			Rotation Sums of Squared Loadings	Included Variables (loadings above the absolute value of .5)	
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total		Component Name
1	3.498	21.863	21.863	3.498	21.863	21.863	2.319	Highest level of education; Household's total net income; feelings about income; main source of household income; main activity – last seven days.	Financial security: Income and job security
2	1.621	9.534	30.610	1.621	9.534	30.610	1.728	Highest level of education; father's highest level of education; mother's highest level of education	Financial security: Education
3	1.352	8.453	42.188	1.352	8.453	42.188	1.490	Take part in social activities relative to others of the same age; how often do you meet socially with friends, relatives or colleagues?	Health: Social health
4	1.261	7.881	50.069	1.261	7.881	50.069	1.886	Hampered in daily activities by illness/disability/infirmity/mental problems; Subjective general health	Health: Physical health
5	1.186	7.412	57.481	1.186	7.412	57.481	1.611	Satisfaction with the economy; Satisfied with the state of health services	Institutional trust** **I know this looks random, but I was interested in seeing if this changed among the Spanish data, because these themes came up a lot in interviews
6	0.956	5.974	63.455	0.956	5.974	63.455	2.048	How happy are you?; How satisfied are you with life as a whole?	Health: Mental/emotional health

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Table B9: Total variance explained – Dutch data

	Initial eigenvalues			Extracted Sums of Squared Loadings			Rotation Sums of Squared Loadings	Included Variables (loadings above the absolute value of .5)	Component Name
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total		
1	3.400	22.669	22.669	3.400	22.669	22.669	2.265	Household's total net income; ever unemployed for more than three months; feelings about income; main source of household income; main activity – last seven days.	Financial security: Income and job security
2	1.592	10.614	33.283	1.592	10.614	33.283	1.801	Highest level of education; father's highest level of education; mother's highest level of education	Financial security: Education
3	1.409	9.392	42.675	1.409	9.392	42.675	1.417	Take part in social activities relative to others of the same age; how often do you meet socially with friends, relatives or colleagues?	Health: Social health
4	1.189	7.929	50.605	1.189	7.929	50.605	2.051	Hampered in daily activities by illness/disability/infirmity/mental problems; Subjective general health	Health: Physical health
5	1.050	7.001	64.812	1.050	7.001	64.812	2.195	How happy are you?; How satisfied are you with life as a whole?	Health: Mental/emotional health

Appendix C: RQ3

Table C1: ESS 7 Descriptive statistics – Spanish data

	Variable	N	Range	Minimum	Maximum	Mean Statistic	Mean Std Error	Std. Deviation	Variance	Scale	Recode explanation
Control variables	Age, categories	2942	3.00	1.00	4.00	2.5432	0.02059	1.11655	1.247	1 = 25 – 35; 2= 36 – 45; 3 =46-55; 4 = 55+	Recoded from scale variables to categories
	Age, dummies, 36-45	2942	1.00	0.00	1.00	0.2436	0.00792	0.42934	0.184	1 = 36 – 45; 0 = everyone else	Categories made into dummies to use in regression
	Age, dummies, 46-55	2942	1.00	0.00	1.00	0.2573	0.00806	0.43723	0.191	1 = 46 – 55; 0 = everyone else	Categories made into dummies to use in regression
	Age, dummies, 56+	2942	1.00	0.00	1.00	0.2617	0.00811	0.43961	0.193	1 = 56 and above; 0 = everyone else	Categories made into dummies to use in regression
	Member of a discriminated-against group (1 = discriminated-against)	2934	1.00	0.00	1.00	0.0707	0.00473	0.25644	0.066	1 = discriminated against; 0 = not discriminated against	Changed from 1 = discriminated against; 2 = not discriminated against
	Ever been divorced/had civil union dissolved dummy	2931	1.00	0.00	1.00	0.0987	0.00551	0.29827	0.089	1= divorced/separated; 0 = never been divorced/separated	Changed from 1= yes; 2 = no.
	Gender dummy (1 = male)	2942	1.00	0.00	1.00	0.4981	0.00922	0.50008	0.250	1 = male; 0 = female	Changed from 1 = male; 2 = female
	BMI ranges	2875	3.00	1.00	4.00	2.6712	0.01425	0.76408	0.584	1= underweight; 2 = normal	Recoded from scale; calculated from weight and height

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									weight; 3 = over weight; 4 = obese	
	BMI dummy	2875	1.00	0.00	1.00	0.5222	0.00932	0.49959	0.250	1 = overweight/o bese; 0 = normal or underweight	Recoded from BMI ranges to use in regression
Financial security: Income and Employment	Ever unemployed and seeking work for a period more than three months	2939	1	1	2	1.41	0.009	0.491	0.242	1 = yes; 2 = no	
	Feelings about household income	2930	3.00	1.00	4.00	2.9565	0.01638	0.88649	0.786	1 = very difficult on present income; 4 = living comfortably on present income	Scale reversed
	In paid work	2942	1.00	1.00	2.00	1.6221	0.00894	0.48494	0.235	1 = No; 2 = Yes	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others
	Main source of household income	2862	1.00	1.00	2.00	1.9299	0.00477	0.25533	0.065	1 = unemployme nt or social benefits; 2 = income and pensions	Recoded from 1 = wages/salaries; 2 = income from self-employment; 3 = income from farming; 4 = pensions; 5 = unemployment/redundancy benefit; 6 = any other benefit; 7 = income from

Section	Variable	N		Min	Max	Mean	Std. Error	Std. Dev	Variance	Coding	Notes
											investments/savings; 8 = income from other sources
	Total household income, all sources	2447	9	1	10	5.31	0.055	2.724	7.420	1 = first decile; 10 = tenth decile	n/a
Financial security: Education	Highest level of education	2937	4.00	1.00	5.00	3.1002	0.02857	1.54847	2.398	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
	Father's highest level of education	2773	4.00	1.00	5.00	1.8037	0.02530	1.33219	1.775	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
	Mother's highest level of education	2877	4.00	1.00	5.00	1.5434	0.02075	1.11304	1.239	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
Health: mental/emotional (negative)	Could not get going last week, how often	2905	3.00	1.00	4.00	3.4077	0.01352	0.72870	0.531	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt depressed last week, how often	2940	3.00	1.00	4.00	3.4804	0.01318	0.71485	0.511	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt everything was an effort last week, how often	2938	3.00	1.00	4.00	3.4116	0.01404	0.76098	0.579	1= Almost always; 4 = Never/almost never	Scales reversed

		N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Variance	Scale	Notes
	Felt lonely last week, how often	2940	3.00	1.00	4.00	3.5911	0.01294	0.70166	0.492	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt sad last week, how often	2938	3.00	1.00	4.00	3.3153	0.01349	0.73137	0.535	1= Almost always; 4 = Never/almost never	Scales reversed
	Sleep restless last week, how often	2939	3.00	1.00	4.00	3.1754	0.01655	0.89705	0.805	1= Almost always; 4 = Never/almost never	Scales reversed
Health: mental/emotional (positive)	Enjoyed life, how often past week	2936	3	1	4	2.80	0.017	0.898	0.806	1= Almost always; 4 = Never/almost never	n/a
	Were happy, how often past week	2926	3	1	4	3.00	0.015	0.807	0.651	1= Almost always; 4 = Never/almost never	n/a
	How happy are you?	2942	10.00	1.00	11.00	8.4174	0.03292	1.78569	3.189	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy
	How satisfied are you with life as a whole	2938	10.00	1.00	11.00	7.8827	0.04018	2.17786	4.743	1 = Extremely dissatisfied; 11 = Extremely satisfied	Recoded from 0 = Extremely dissatisfied; 10 = extremely satisfied
Health: Physical health (general)	Health problems, diabetes	2942	1.00	1.00	2.00	1.9656	0.00336	0.18217	0.033	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No
	Health Problems, high blood pressure	2942	1.00	1.00	2.00	1.8768	0.00606	0.32878	0.108	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No

	Variable	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation	Variance	Coding	Notes
	Health problems, heart or circulation	2942	1.00	1.00	2.00	1.9410	0.00434	0.23561	0.056	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No
	Hampered in daily activities by illness/disability/infirmity/mental problem	2940	2	1	3	2.84	0.008	0.446	0.199	1 = Yes; 2 = Somewhat; 3 = No	N/a
	Subjective general health	2942	4.00	1.00	5.00	3.7516	0.01596	0.86570	0.749	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad
Health: Physical health (smoking and drinking)	Cigarettes smoking behaviour	2937	4	1	5	3.19	0.030	1.632	2.664	1 = I smoke daily; I have never smoked	N/a
	How often drink alcohol?	2938	6	1	7	4.02	0.039	2.140	4.578	1 = Every day; 6 = Less than once a month	N/a
Health: Physical health (diet and exercise)	How often do you eat vegetables?	2942	6.00	1.00	7.00	4.6440	0.02189	1.18744	1.410	1 = never; 7 = three or more times per day	Scales reversed
	Do sports or other physical activity, how many of last 7 days	2925	7	0	7	3.18	0.051	2.740	7.509	Number of days	N/a

Table C2: ESS 7 Descriptive statistics - Dutch data

	Variable	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance	Scale	Recode explanation
						Statistic	Std Error				
Control variables	Age, categories	1033	3.00	1.00	4.00	2.7009	0.03513	1.12880	1.274	1 = 25 – 35; 2= 36 – 45; 3 =46-55; 4 = 55+	Recoded from scale variables to categories
	Age, dummies, 36-45	1033	1.00	0.00	1.00	0.2023	0.01251	0.40194	0.162	1 = 36 – 45; 0 = everyone else	Categories made into dummies to use in regression
	Age, dummies, 46-55	1033	1.00	0.00	1.00	0.2660	0.01376	0.44207	0.195	1 = 46 – 55; 0 = everyone else	Categories made into dummies to use in regression
	Age, dummies, 56+	1033	1.00	0.00	1.00	0.3222	0.01455	0.46755	0.219	1 = 56 and above; 0 = everyone else	Categories made into dummies to use in regression
	Member of a discriminated-against group (1 = discriminated-against)	1028	1.00	0.00	1.00	0.0800	0.00847	0.27145	0.074	1 = discriminated against; 0 = not discriminated against	Changed from 1 = discriminated against; 2 = not discriminated against
	Ever been divorced/had civil union dissolved dummy	1033	1.00	0.00	1.00	0.1806	0.01198	0.38491	0.148	1= divorced/separated; 0 = never been divorced/separated	Changed from 1= yes; 2 = no.
	Gender dummy (1 = male)	1033	1.00	0.00	1.00	0.4825	0.01556	0.49993	0.250	1 = male; 0 = female	Changed from 1 = male; 2 = female
	BMI ranges	2875	3.00	1.00	4.00	2.6712	0.01425	0.76408	0.584	1= underweight; 2 = normal weight; 3 =	Recoded from scale; calculated from weight and height

		N	Median	Min	Max	Mean	Std. Error	Std. Dev.	Variance	Coding	Notes
										over weight; 4 = obese	
	BMI dummy	2875	1.00	0.00	1.00	0.5222	0.00932	0.49959	0.250	1 = overweight/obese; 0 = normal or underweight	Recoded from BMI ranges to use in regression
Financial security: Income and Employment	Ever unemployed and seeking work for a period more than three months	1030	1	1	2	1.72	0.014	0.448	0.201	1 = yes; 2 = no	
	Feelings about household income	1028	3.00	1.00	4.00	3.3142	0.02490	0.79845	0.638	1 = very difficult on present income; 4 = living comfortably on present income	Scale reversed
	In paid work	1033	1.00	1.00	2.00	1.6564	0.01479	0.47515	0.226	1 = No; 2 = Yes	Recoded from 1 = paid work; 2 = education; 3 = unemployed and looking for a job; 4 = unemployed and not looking for a job; 5 = permanently sick or disabled; 6 = retired; 7 = in community or military service; 8 = doing housework/looking after others
	Main source of household income	1021	1.00	1.00	2.00	1.8816	0.01011	0.32321	0.104	1 = unemployment or social benefits; 2 = income and pensions	Recoded from 1 = wages/salaries; 2 = income from self-employment; 3 = income from farming; 4 = pensions; 5 = unemployment/redundancy benefit; 6 = any other benefit; 7 = income from investments/savings; 8 = income from other sources

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		N	Range	Min	Max	Mean	Std. Error Mean	Std. Deviation	Variance	Coding	Notes
	Total household income, all sources	957	9	1	10	6.52	0.083	2.583	6.673	1 = first decile; 10 = tenth decile	n/a
Financial security: Education	Highest level of education	1023	4.00	1.00	5.00	3.3641	0.03904	1.24856	1.559	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
	Father's highest level of education	930	4.00	1.00	5.00	2.4008	0.04551	1.38741	1.925	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
	Mother's highest level of education	959	4.00	1.00	5.00	2.1180	0.03774	1.16889	1.366	1= primary school; 5 = bachelor's +	Recoded from scale on 0 – 800 (0 = not completed ISCED level 1; 800 = doctoral degree). ESS4 uses a 1-5 scale, and this question in the ESS7 was harmonised with that.
Health: mental/emotional (negative)	Could not get going last week, how often	1031	3	1	4	3.4173	.02220	.71237	.508	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt depressed last week, how often	1031	3.00	1.00	4.00	3.6841	0.01867	0.59936	0.359	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt everything was an effort last week, how often	1031	3.00	1.00	4.00	3.5042	0.02166	0.69575	0.484	1= Almost always; 4 = Never/almost never	Scales reversed
	Felt lonely last week, how often	1032	3.00	1.00	4.00	3.7911	0.01543	0.49566	0.246	1= Almost always; 4 =	Scales reversed

		N	Range	Min	Max	Mean	Std. Error	Std. Dev.	Variance	Scale	Notes
										Never/almost never	
	Felt sad last week, how often	1031	3.00	1.00	4.00	3.5901	0.01858	0.59678	0.356	1= Almost always; 4 = Never/almost never	Scales reversed
	Sleep restless last week, how often	1033	3.00	1.00	4.00	3.2912	0.02524	0.81114	0.658	1= Almost always; 4 = Never/almost never	Scales reversed
Health: mental/emotional (positive)	Enjoyed life, how often past week	1031	3	1	4	3.19	0.023	0.737	0.543	1= Almost always; 4 = Never/almost never	n/a
	Were happy, how often past week	1031	3	1	4	3.21	0.022	0.711	0.506	1= Almost always; 4 = Never/almost never	n/a
	How happy are you?	1033	10.00	1.00	11.00	8.8951	0.04011	1.28901	1.662	1 = Completely unhappy; 11 = completely happy	Recoded from 0 = Completely unhappy; 10 = completely happy
	How satisfied are you with life as a whole	1031	10.00	1.00	11.00	8.6590	0.04627	1.48570	2.207	1 = Extremely dissatisfied; 11 = Extremely satisfied	Recoded from 0 = Extremely dissatisfied; 10 = extremely satisfied
Health: Physical health (general)	Health problems, diabetes	1033	1.00	1.00	2.00	1.9506	0.00675	0.21689	0.047	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No
	Health Problems, high blood pressure	1033	1.00	1.00	2.00	1.8379	0.01147	0.36870	0.136	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No

		N				Mean				Coding	Recoded
	Health problems, heart or circulation	1033	1.00	1.00	2.00	1.9202	0.00844	0.27109	0.073	1 = Yes; 2 = No	Recoded from 1 = Yes; 0 = No
	Hampered in daily activities by illness/disability/infirmity/mental problem	1033	2	1	3	2.65	0.019	0.598	0.358	1 = Yes; 2 = Somewhat; 3 = No	N/a
	Subjective general health	1033	4.00	1.00	5.00	3.8960	0.02432	0.78164	0.611	1 = Very bad; 5 = Very good	Recoded from 1 = Very good; 5 = Very bad
Health: Physical health (smoking and drinking)	Cigarettes smoking behaviour	1031	4	1	5	3.29	0.048	1.526	2.328	1 = I smoke daily; I have never smoked	N/a
	How often do you drink alcohol?	1032	6	1	7	3.76	0.065	2.086	4.353	1 = Every day; 6 = Less than once a month	N/a
Health: Physical health (diet and exercise)	How often do you eat vegetables?	1033	6.00	1.00	7.00	4.8274	0.02048	0.65817	0.433	1 = never; 7 = three or more times per day	Scales reversed
	Do sports or other physical activity, how many of last 7 days	1033	7	0	7	3.46	0.080	2.564	6.574	Number of days	N/a

Table C3: Structure matrix

Variable	Component								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
How often drink alcohol						0.719			
Cigarettes smoking behaviour						0.739			
Could not get going, how often past week	0.780								
Enjoyed life, how often past week					0.715				
Hampered in daily activities by illness/disability/infirmity/mental problem			0.614						
How many people with whom you can discuss intimate and personal matters								0.626	
Take part in social activities compared to others of same age								0.608	
How often socially meet with friends, relatives or colleagues								0.736	
Were happy, how often past week					0.748				
How often do you eat vegetables							-0.687		
Felt depressed, how often	0.787								
How often have you felt everything was an effort	0.757								
How often did you feel lonely	0.603								
Felt sad, how often	0.769								
How happy are you					0.824				
Subjective general health			0.653						
Sleep restless, how often	0.657								
How satisfied are you with life as a whole					0.783				

Health problems, breathing problems			0.542					
Health problems, diabetes								-0.662
Health Problems, high blood pressure								-0.633
Health problems, heart or circulation			0.557					
non critical health problems _Correct (back and neck, muscular in arm and leg, skin condition, stomach and digestion, headaches			-0.571					
Do sports or other physical activity, how many of last 7 days						-0.638		
Household's total net income, all sources				-0.769				
Highest level of education		0.636						
Father's highest level of education		0.874						
Mother's highest level of education		0.865						
Feelings about household income				-0.708				
Main source of HH's income				-0.670				
In paid work				-0.603				

Table C4: ESS7 Spanish and Dutch component loadings

	Initial eigenvalues			Extracted Sums of Squared Loadings			Rotation Sums of Squared Loadings	Included Variables (loadings above the absolute value of .5)	Component Name
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total		
1	6.174	18.710	18.710	6.174	18.710	18.710	4.523	Could not get going in the past week, how often; felt depressed in the past week, how often; felt everything was an effort, how often; felt lonely, how often; felt sad, how often; sleep was restless, how often	Health: Mental/emotional health (negative)
2	2.418	7.326	26.036	2.418	7.326	26.036	2.463	Highest level of education; Mother's highest level of education; Father's highest level of education	Financial security: Education
3	1.995	6.046	32.081	1.995	6.046	32.081	2.319	Level of being hampered in daily activities; Subjective general health; Health problems: diabetes; health problems: high blood pressure; health problems: heart or circulation	Health: Physical health (general)
4	1.540	4.666	36.748	1.540	4.666	36.748	2.900	Household's total net incomes; Main source of household income; Feelings about household income; Whether in paid work	Financial security: income and employment
5	1.335	4.045	40.793	1.335	4.045	40.793	3.792	How often did you enjoy life in the past week; How often were you happy in the past week; How happy are you; How satisfied are you with life as a whole	Health: Mental/emotional health (positive)

6	1.297	3.930	44.723	1.297	3.930	44.723	1.282	Frequency of cigarette smoking; Frequency of drinking alcohol	Health: Physical health (smoking and drinking)
7	1.167	3.536	48.259	1.167	3.536	48.259	1.356	How many times per week do you eat vegetables; How many times per week do you exercise	Health: Physical health (eating vegetables and exercising)
8	1.074	3.256	51.514	1.074	3.256	51.514	1.811	Frequency of meeting with friends/relatives/colleagues; Number of people can discuss intimate matters with; Frequency of taking part in social activities compared to others of same age	Health: Social health
9	1.018	3.086	54.600	1.018	3.086	54.600	1.527	Health problems: diabetes; health problems: high blood pressure	Health: Physical health (diabetes and high blood pressure)

Table C5: Physical health (general) - coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	0.241	0.077		3.127	0.002	0.134	0.087		1.539	0.124	0.287	0.137		2.095	0.036
Financial security: education	0.000	0.021	0.000	0.008	0.994	0.017	0.026	0.017	0.672	0.502	-0.021	0.038	-0.020	-0.541	0.588
Financial security: income/employment	0.069	0.020	0.067	3.395	0.001	0.016	0.025	0.015	0.637	0.524	0.201	0.035	0.201	5.699	0.000
Country recode dummy (1 = Spain)	-0.029	0.044	-0.013	-0.662	0.508										
Discriminated group_Dummy (1 = discriminated against)	-0.470	0.074	-0.118	-6.388	0.000	-0.484	0.089	-0.121	-5.413	0.000	-0.296	0.131	-0.077	-2.261	0.024
Gender dummy (Male = 1)	0.277	0.040	0.137	6.866	0.000	0.337	0.048	0.166	7.046	0.000	0.094	0.078	0.047	1.196	0.232
Divorce dummy (1 = divorced/separated)	-0.057	0.058	-0.018	-0.977	0.329	0.005	0.076	0.001	0.065	0.948	-0.131	0.089	-0.051	-1.476	0.140
Overweight/obese dummy (1 = overweight/obese)	-0.157	0.039	-0.078	-4.011	0.000	-0.127	0.048	-0.062	-2.643	0.008	-0.236	0.067	-0.120	-3.512	0.000

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Total hours normally worked	0.002	0.001	0.029	1.459	0.145	0.003	0.002	0.039	1.703	0.089	0.002	0.003	0.030	0.762	0.446
Age, 36 – 45	-0.067	0.055	-0.028	-1.221	0.222	-0.047	0.064	-0.020	-0.738	0.461	-0.145	0.105	-0.060	-1.380	0.168
Age, 46 – 55	-0.281	0.055	-0.122	-5.066	0.000	-0.311	0.066	-0.134	-4.739	0.000	-0.198	0.103	-0.088	-1.926	0.054
Age, 56+	-0.440	0.059	-0.191	-7.452	0.000	-0.454	0.072	-0.188	-6.287	0.000	-0.382	0.103	-0.182	-3.713	0.000
Employment contract dummy (1 = permanent contract)	0.030	0.040	0.015	0.746	0.456	0.021	0.048	0.010	0.440	0.660	0.093	0.074	0.043	1.256	0.209
Being exposed to hazards	-0.225	0.042	-0.103	-5.377	0.000	-0.214	0.052	-0.093	-4.101	0.000	-0.235	0.069	-0.116	-3.390	0.001

Table C6: Physical health (general) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,297[a]	0.088	0.084	0.96514681
Spain	,298[a]	0.089	0.083	0.97448782
Netherlands	,366[a]	0.134	0.121	0.92419893

Table C7: Physical health (not having diabetes and high blood pressure) - coefficients

| | Overall | | | | | Spain | | | | | Netherlands | | | | |
| | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Unstandardized coefficients | | Standardized coefficients | t | Sig. |
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	-0.242	0.069		-3.520	0.000	-0.598	0.074		-8.079	0.000	-0.272	0.137		-1.984	0.048
Financial security: education	-0.015	0.019	-0.015	-0.764	0.445	-0.003	0.022	-0.003	-0.145	0.884	-0.057	0.038	-0.053	-1.499	0.134
Financial security: income/employment	0.006	0.018	0.006	0.308	0.758	0.067	0.021	0.069	3.148	0.002	0.161	0.035	0.156	4.549	0.000
Country recode dummy (1 = Spain)	-0.402	0.039	-0.186	-10.211	0.000										
Discriminated group_Dummy (1 = discriminated against)	-0.201	0.066	-0.052	-3.058	0.002	-0.354	0.076	-0.096	-4.663	0.000	0.010	0.131	0.002	0.074	0.941
Gender dummy (Male = 1)	0.031	0.036	0.016	0.862	0.389	0.074	0.041	0.040	1.826	0.068	-0.083	0.078	-0.041	-1.063	0.288
Divorce dummy (1 = divorced/separated)	-0.043	0.052	-0.014	-0.828	0.408	-0.046	0.064	-0.015	-0.721	0.471	-0.058	0.089	-0.022	-0.656	0.512
Overweight/obese dummy (1 = overweight/obese)	-0.235	0.035	-0.119	-6.702	0.000	-0.203	0.041	-0.108	-4.990	0.000	-0.269	0.067	-0.132	-4.006	0.000

Total hours normally worked	0.003	0.001	0.050	2.732	0.006	0.003	0.001	0.040	1.916	0.056	0.006	0.003	0.082	2.172	0.030
Age, 36 – 45	-0.003	0.049	-0.001	-0.059	0.953	0.000	0.054	0.000	0.008	0.994	0.043	0.105	0.017	0.412	0.680
Age, 46 – 55	0.261	0.050	0.116	5.257	0.000	0.309	0.056	0.145	5.547	0.000	0.181	0.103	0.079	1.762	0.078
Age, 56+	-0.874	0.053	-0.389	-16.530	0.000	-0.946	0.061	-0.426	-15.424	0.000	-0.716	0.103	-0.331	-6.946	0.000
Employment contract dummy (1 = permanent contract)	0.097	0.036	0.048	2.702	0.007	0.049	0.040	0.026	1.213	0.225	0.158	0.074	0.071	2.134	0.033
Being exposed to hazards	-0.134	0.038	-0.062	-3.565	0.000	-0.147	0.044	-0.069	-3.314	0.001	-0.096	0.069	-0.046	-1.390	0.165

Table C8: Physical health (not having diabetes and blood pressure) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,484[a]	0.234	0.231	0.86436715
Spain	,475[a]	0.225	0.221	0.82731284
Netherlands	,428[a]	0.184	0.171	0.92510406

Table C9: Physical health (smoking and drinking) **-** coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	0.456	0.075		6.068	0.000	0.583	0.085		6.833	0.000	0.244	0.134		1.829	0.068
Financial security: education	0.020	0.021	0.020	0.958	0.338	0.030	0.025	0.029	1.177	0.239	0.001	0.037	0.001	0.024	0.980
Financial security: income/employment	0.051	0.020	0.051	2.590	0.010	0.088	0.024	0.084	3.591	0.000	0.031	0.034	0.032	0.889	0.374
Country recode dummy (1 = Spain)	0.004	0.043	0.002	0.086	0.931										
Discriminated group_Dummy (1 = discriminated against)	-0.034	0.072	-0.009	-0.479	0.632	-0.125	0.087	-0.031	-1.433	0.152	0.094	0.128	0.026	0.733	0.464
Gender dummy (Male = 1)	-0.558	0.039	-0.281	-14.150	0.000	-0.616	0.047	-0.304	-13.158	0.000	-0.430	0.076	-0.230	-5.640	0.000
Divorce dummy (1 = divorced/separated)	-0.227	0.057	-0.075	-3.996	0.000	-0.163	0.074	-0.048	-2.198	0.028	-0.335	0.087	-0.136	-3.862	0.000
Overweight/obese dummy (1 = overweight/obese)	0.159	0.038	0.080	4.176	0.000	0.146	0.047	0.072	3.114	0.002	0.186	0.065	0.100	2.852	0.004

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Total hours normally worked	-0.002	0.001	-0.035	-1.763	0.078	-0.004	0.002	-0.056	-2.519	0.012	0.000	0.003	0.007	0.171	0.864
Age, 36 – 45	-0.065	0.053	-0.028	-1.225	0.221	-0.061	0.063	-0.026	-0.974	0.330	-0.028	0.102	-0.012	-0.274	0.784
Age, 46 – 55	-0.148	0.054	-0.066	-2.734	0.006	-0.142	0.064	-0.061	-2.209	0.027	-0.137	0.100	-0.065	-1.370	0.171
Age, 56+	-0.112	0.058	-0.049	-1.936	0.053	-0.023	0.071	-0.009	-0.320	0.749	-0.264	0.100	-0.133	-2.632	0.009
Employment contract dummy (1 = permanent contract)	-0.013	0.039	-0.006	-0.321	0.748	-0.065	0.047	-0.032	-1.395	0.163	0.096	0.072	0.047	1.336	0.182
Being exposed to hazards	-0.087	0.041	-0.040	-2.130	0.033	-0.105	0.051	-0.046	-2.057	0.040	-0.046	0.067	-0.024	-0.681	0.496

Table C10: Physical health (smoking and drinking) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,317[a]	0.100	0.096	0.94208856
Spain	,346[a]	0.120	0.114	0.95363160
Netherlands	,298[a]	0.089	0.075	0.90062648

Table C11: Physical health (diet and exercise) - coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	-0.076	0.078		-0.985	0.325	0.019	0.092		0.208	0.835	-0.204	0.123		-1.653	0.099
Financial security: education	0.094	0.021	0.094	4.391	0.000	0.127	0.027	0.119	4.685	0.000	-0.029	0.034	-0.032	-0.852	0.394
Financial security: income/employment	0.016	0.021	0.016	0.789	0.430	-0.015	0.026	-0.014	-0.574	0.566	0.073	0.032	0.083	2.290	0.022
Country recode dummy (1 = Spain)	0.074	0.044	0.034	1.668	0.095										
Discriminated group_Dummy (1 = discriminated against)	0.024	0.074	0.006	0.323	0.747	0.028	0.094	0.007	0.301	0.764	0.012	0.118	0.004	0.101	0.919
Gender dummy (Male = 1)	0.167	0.041	0.083	4.104	0.000	0.217	0.050	0.103	4.294	0.000	0.057	0.070	0.033	0.806	0.420
Divorce dummy (1 = divorced/separated)	-0.003	0.059	-0.001	-0.056	0.956	0.061	0.080	0.017	0.762	0.446	-0.105	0.080	-0.047	-1.321	0.187
Overweight/obese dummy (1 = overweight/obese)	0.086	0.039	0.043	2.173	0.030	0.027	0.051	0.013	0.543	0.587	0.191	0.060	0.111	3.170	0.002

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Total hours normally worked	0.001	0.001	0.011	0.542	0.588	0.001	0.002	0.007	0.312	0.755	0.003	0.003	0.043	1.073	0.284
Age, 36 – 45	-0.160	0.055	-0.068	-2.891	0.004	-0.169	0.067	-0.070	-2.502	0.012	-0.098	0.094	-0.046	-1.039	0.299
Age, 46 – 55	-0.264	0.056	-0.116	-4.718	0.000	-0.274	0.069	-0.114	-3.947	0.000	-0.226	0.092	-0.116	-2.456	0.014
Age, 56+	-0.547	0.060	-0.239	-9.180	0.000	-0.550	0.076	-0.221	-7.225	0.000	-0.513	0.092	-0.280	-5.546	0.000
Employment contract dummy (1 = permanent contract)	0.028	0.040	0.014	0.701	0.483	0.004	0.050	0.002	0.082	0.935	0.065	0.067	0.034	0.981	0.327
Being exposed to hazards	0.137	0.042	0.063	3.248	0.001	0.140	0.055	0.059	2.542	0.011	0.144	0.062	0.082	2.318	0.021

Table C12: Physical health (diet and exercise) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,246[a]	0.061	0.056	0.97442396
Spain	,227[a]	0.051	0.045	1.02797999
Netherlands	,287[a]	0.082	0.068	0.82984594

Table C13: Mental Health (negative) - coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	0.040	0.074		0.540	0.590	-0.139	0.088		-1.575	0.115	0.071	0.110		0.640	0.522
Financial security: education	0.020	0.020	0.021	0.987	0.324	0.013	0.026	0.012	0.504	0.615	0.030	0.031	0.036	0.972	0.331
Financial security: income/employment	0.110	0.019	0.112	5.679	0.000	0.093	0.025	0.087	3.676	0.000	0.151	0.028	0.191	5.336	0.000
Country recode dummy (1 = Spain)	-0.144	0.042	-0.068	-3.429	0.001										
Discriminated group_Dummy (1 = discriminated against)	-0.250	0.070	-0.065	-3.548	0.000	-0.211	0.090	-0.052	-2.339	0.019	-0.280	0.105	-0.091	-2.657	0.008
Gender dummy (Male = 1)	0.446	0.039	0.230	11.550	0.000	0.520	0.048	0.252	10.754	0.000	0.216	0.063	0.138	3.434	0.001
Divorce dummy (1 = divorced/separated)	-0.124	0.056	-0.042	-2.219	0.027	-0.096	0.077	-0.028	-1.245	0.213	-0.180	0.071	-0.087	-2.518	0.012

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Overweight/obese dummy (1 = overweight/obese)	-0.104	0.037	-0.054	-2.780	0.005	-0.072	0.048	-0.035	-1.485	0.138	-0.178	0.054	-0.114	-3.309	0.001
Total hours normally worked	0.000	0.001	0.002	0.124	0.901	0.001	0.002	0.009	0.387	0.699	0.002	0.002	0.040	1.000	0.317
Age, 36 – 45	0.014	0.052	0.006	0.260	0.795	-0.001	0.065	0.000	-0.016	0.987	0.021	0.084	0.011	0.244	0.807
Age, 46 – 55	-0.047	0.053	-0.021	-0.888	0.375	-0.095	0.066	-0.040	-1.436	0.151	0.071	0.082	0.040	0.865	0.387
Age, 56+	0.040	0.056	0.018	0.714	0.475	-0.058	0.073	-0.024	-0.789	0.430	0.222	0.083	0.134	2.684	0.007
Employment contract dummy (1 = permanent contract)	0.114	0.038	0.058	2.973	0.003	0.176	0.048	0.085	3.647	0.000	-0.051	0.059	-0.029	-0.850	0.395
Being exposed to hazards	-0.191	0.040	-0.090	-4.759	0.000	-0.247	0.053	-0.106	-4.683	0.000	-0.074	0.056	-0.046	-1.330	0.184

Table C14: Mental Health (negative) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,313[a]	0.098	0.093	0.92353801
Spain	,310[a]	0.096	0.091	0.98505470
Netherlands	,332[a]	0.110	0.097	0.74228444

Table C15: Mental health (positive) - coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	0.466	0.074		6.309	0.000	-0.029	0.088		-0.330	0.742	0.356	0.111		3.198	0.001
Financial security: education	-0.007	0.020	-0.007	-0.358	0.720	-0.021	0.026	-0.021	-0.818	0.414	0.014	0.031	0.017	0.449	0.654
Financial security: income/employment	0.170	0.019	0.169	8.734	0.000	0.178	0.025	0.171	7.063	0.000	0.156	0.029	0.198	5.424	0.000
Country recode dummy (1 = Spain)	-0.555	0.042	-0.255	-13.140	0.000										
Discriminated group_Dummy (1 = discriminated against)	-0.228	0.071	-0.058	-3.228	0.001	-0.204	0.091	-0.051	-2.247	0.025	-0.289	0.106	-0.095	-2.711	0.007
Gender dummy (Male = 1)	-0.040	0.039	-0.020	-1.032	0.302	-0.024	0.049	-0.012	-0.504	0.614	-0.106	0.064	-0.069	-1.673	0.095
Divorce dummy (1 = divorced/separated)	0.010	0.056	0.003	0.183	0.855	0.010	0.077	0.003	0.136	0.892	0.004	0.072	0.002	0.061	0.951

Overweight/obese dummy (1 = overweight/obese)	0.068	0.038	0.034	1.819	0.069	0.046	0.049	0.022	0.936	0.350	0.116	0.054	0.075	2.137	0.033
Total hours normally worked	-5.629E-05	0.001	-0.001	-0.042	0.967	-0.001	0.002	-0.009	-0.411	0.681	0.003	0.002	0.056	1.375	0.169
Age, 36 – 45	-0.069	0.052	-0.030	-1.321	0.187	-0.016	0.065	-0.007	-0.252	0.801	-0.225	0.085	-0.118	-2.647	0.008
Age, 46 – 55	-0.292	0.053	-0.129	-5.498	0.000	-0.312	0.067	-0.134	-4.686	0.000	-0.260	0.083	-0.148	-3.120	0.002
Age, 56+	-0.126	0.057	-0.056	-2.218	0.027	-0.117	0.073	-0.048	-1.594	0.111	-0.163	0.084	-0.099	-1.947	0.052
Employment contract dummy (1 = permanent contract)	0.170	0.038	0.084	4.424	0.000	0.184	0.048	0.090	3.812	0.000	0.103	0.060	0.060	1.707	0.088
Being exposed to hazards	-0.059	0.040	-0.027	-1.456	0.146	-0.129	0.053	-0.056	-2.439	0.015	0.086	0.056	0.054	1.522	0.128

Table C16: Mental health (positive) – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,367[a]	0.134	0.130	0.92586949
Spain	,254[a]	0.064	0.058	0.98854459
Netherlands	,275[a]	0.075	0.062	0.75046561

Table C17: Social health– coefficients

	Overall					Spain					Netherlands				
	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.	Unstandardized coefficients		Standardized coefficients	t	Sig.
	B	Std. Error	Beta			B	Std. Error	Beta			B	Std. Error	Beta		
Constant	0.360	0.078		4.595	0.000	0.155	0.089		1.739	0.082	0.523	0.139		3.761	0.000
Financial security: education	0.088	0.022	0.088	4.080	0.000	0.100	0.026	0.096	3.786	0.000	0.050	0.039	0.050	1.295	0.196
Financial security: income/employment	0.053	0.021	0.052	2.577	0.010	0.058	0.025	0.056	2.277	0.023	-0.017	0.036	-0.018	-0.480	0.631
Country recode dummy (1 = Spain)	-0.152	0.045	-0.069	-3.400	0.001	0.269									
Discriminated group_Dummy (1 = discriminated against)	0.211	0.075	0.053	2.814	0.005	0.101	0.091	0.067	2.939	0.003	0.019	0.133	0.005	0.146	0.884
Gender dummy (Male = 1)	0.042	0.041	0.021	1.033	0.302	-0.082	0.049	0.050	2.057	0.040	-0.155	0.079	-0.082	-1.949	0.052
Divorce dummy (1 = divorced/separated)	0.014	0.059	0.004	0.230	0.818	0.004	0.078	-0.024	-1.056	0.291	0.133	0.090	0.053	1.469	0.142
Overweight/obese dummy (1 = overweight/obese)	-0.029	0.040	-0.014	-0.721	0.471	-0.007	0.049	0.002	0.089	0.929	-0.123	0.068	-0.065	-1.807	0.071

Total hours normally worked	-0.006	0.001	-0.081	-3.971	0.000	-0.122	0.002	-0.097	-4.169	0.000	0.000	0.003	-0.007	-0.167	0.868
Age, 36 – 45	-0.096	0.056	-0.041	-1.728	0.084	-0.066	0.065	-0.053	-1.862	0.063	-0.054	0.106	-0.023	-0.507	0.612
Age, 46 – 55	-0.096	0.056	-0.042	-1.704	0.088	0.105	0.067	-0.029	-0.983	0.326	-0.177	0.104	-0.083	-1.700	0.089
Age, 56+	0.058	0.060	0.026	0.972	0.331	0.110	0.074	0.044	1.422	0.155	-0.067	0.104	-0.033	-0.638	0.524
Employment contract dummy (1 = permanent contract)	0.062	0.041	0.030	1.509	0.131	-0.019	0.049	0.054	2.252	0.024	-0.086	0.075	-0.041	-1.149	0.251
Being exposed to hazards	-0.055	0.043	-0.025	-1.280	0.201		0.053	-0.008	-0.355	0.723	-0.104	0.070	-0.054	-1.486	0.138

Table C18: Social health – model summary

Country	R	R Square	Adjusted R Square	Std. Error of the Estimate
Overall	,203[a]	0.041	0.037	0.98289473
Spain	,196[a]	0.038	0.032	0.99707245
Netherlands	,179[a]	0.032	0.018	0.93721822

Appendix D:RQ4

Figure D1: Example Timeline Interview. S2, Age 30, Spain

Friends
Franc went north to do a PhD
Only 800 euro pcm
In cancer research - important! Not like art!

Lots of friends go abroad - 15-20 friends

Family
Parents and sister always fine - older generation not touched by crisis

Personal
Shaky mind/personal growth

Went travelling! Especially to Poland

Lots of travelling - Italy, Ukraine, Kosovo

2008   2009   2010   2011   2012   2013   2014   2015   2016   2017

Academic
Working with grant of 700 euro
Started degree in architecture -
hoped they would make money after a few years

India exchange - Ahmedabad (2 months)

Finished degree and started masters
Architectural advanced design
Thesis on Auschwitz: how we understand it
and understand space

Graduated

Started PhD
No funding

Work in London summer school
Made a lot of money!

Professional
Working in architecture office, but they had no work
Decrease production b/c of crisis

Continue to work in office for free

Teaching at university - no pay
University in crisis

Building radical house
No pay

Formed architectural collective with friends
No investment in architecture
Focussed on research

Political
Puerto del Sol riots
People were furious - "indignatos"

Young Without Future movement

EU Elections - Polemos
Hope for political change

Politicians couldn't form coalition -
Second election
Just Rajoy again and same people in power
Nothing changed

Municipal/regional Madrid had a 15 year 'hope of life'/
life expectancy gap between barrios

Barrio Salamanca - not touched by crisis
Immigrant communities on periphery - can see changes

National
Crisis started because people who could not afford it given $$ by banks
Spanish property bubble burst
Tourism and construction hit

No salaries on offer for work
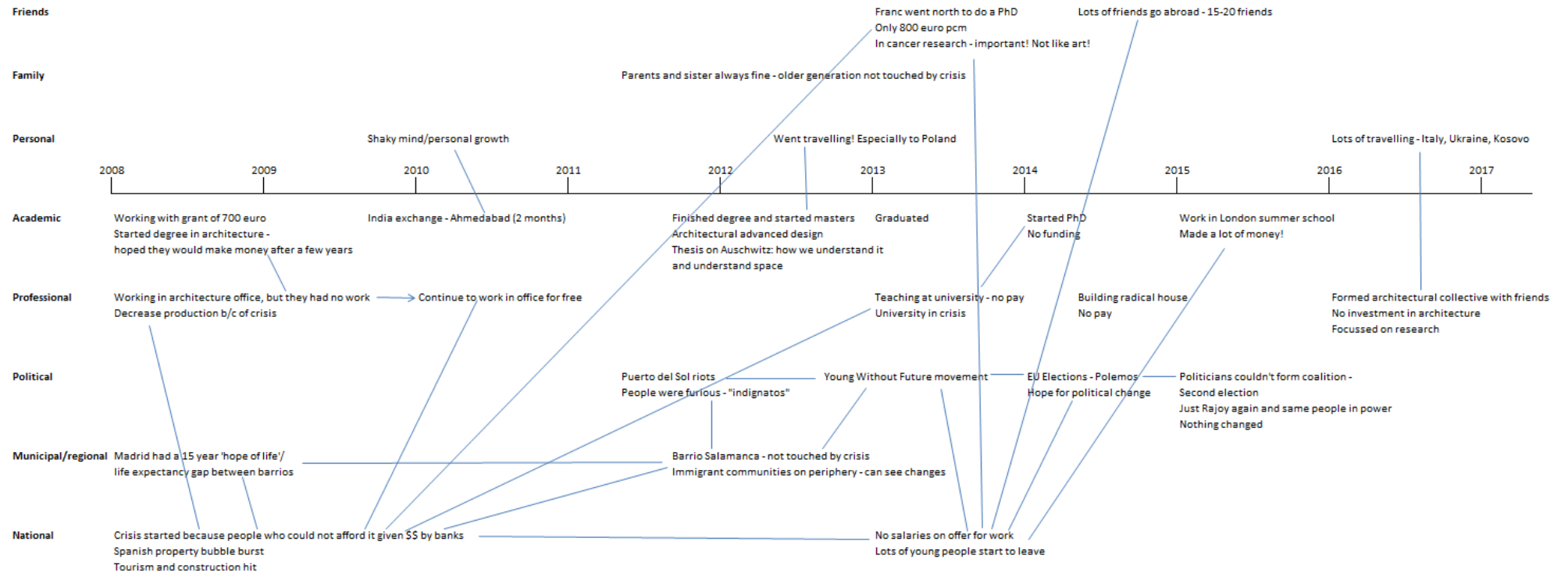Lots of young people start to leave

Table D1: Interview respondent demographics - Spanish interviews

Respondent number	Nationality/Residency	Gender	Age bracket	Highest level of education completed	Interview time
1	Spanish, Spain	Male	35-50	Masters	63 minutes
2	Spanish, Spain	Male	28-35	Masters	70 minutes
3	Spanish, France	Male	28-35	Bachelors	49 minutes
4	Spanish, UK	Male	28-35	Bachelors	42 minutes
5	Spanish, UK	Female	28-35	Bachelors	46 minutes
6	Spanish, Spain	Female	28-35	Masters	38 minutes
7	Spanish, Spain	Male	50-65	Masters	52 minutes
8	Polish, Spain	Female	28-35	Secondary school	42 minutes
9	Angolan, Spain	Male	35-50	Secondary school	48 minutes
10	Spanish, Spain	Male	50-65	Masters	39 minutes

Table D2: Interview respondent demographics - Dutch interviews

Respondent number	Nationality/Residency	Gender	Age bracket	Education level	Interview time
1	Dutch/Surinamese, Netherlands	Male	28-35	WO	35 minutes
2	Dutch, Netherlands	Female	28-35	MBO	42 minutes
3	Dutch, Netherlands	Male	50-65	WO/Masters	48 minutes
4	Dutch, Netherlands	Female	28-35	WO/Masters	27 minutes
5	Dutch, Netherlands	Female	50-65	HBO	30 minutes
6	Dutch, Netherlands	Male	50-65	MBO	46 minutes

7	Dutch, Netherlands	Male	28-35	WO/Master's	1 hour 9 minutes
8	Dutch, Netherlands	Female	36-45	HBO	52 minutes
9	Dutch, Netherlands	Female	36-45	MBO	36 minutes
10	Dutch, Netherlands	Male	50-65	HBO	24 minutes

Table D3: Qualitative interview analysis themes and codes

Theme source	Theme	Underlying codes
Theoretical framework: Financial security	Great Recession	Great Recession impacts
	Employment security	Job searching
		Contract type
		Job market
		Redundancy
	Income security	Taxes
		Salary amount
		Ability to support self
	Housing security	Buying a home
		Renting a home
		Living with roommates
		Living alone or with partner
		Paying for a home
	Education	Studying
		Graduation
		Dropping out
Theoretical framework: Health	Great Recession	Time with friends
		Time with family
		Holidays
		Going out to restaurants or bars
		Going out to cultural events
		Relationships (platonic)
		Relationships (romantic)
	Mental/emotional health	Stress and anxiety
		Happiness
		Sleep
		Mental illness
	Physical health	Injury
		Diet
		Exercise
		Chronic illness
		Acute illness
		Smoking
		Drinking
		Weight changes

Bottom-up approach	Great Recession	Personally experienced SES (in)equality	
		Community experienced SES (in)equality	
Bottom-up approach	Political activism	Government trust	
		Economy trust	
		Participation in protests	
		Participation in political parties	