



European Foundation for the Improvement of Living and Working Conditions

# Subjective well-being in Europe



Second European Quality of Life Survey

*Second European Quality of Life Survey*  
Subjective well-being in Europe

**Authors:** Dorothy Watson, Florian Pichler and Claire Wallace

**Research institute:** ESRI, Dublin, and University of Aberdeen

**Research managers:** Branislav Mikulić and Klára Foti

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European Foundation for the Improvement of Living and Working Conditions

# *Second European Quality of Life Survey*

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European Foundation for the Improvement of Living and Working Conditions  
Wyattville Road  
Loughlinstown  
Dublin 18  
Ireland  
Telephone: (+353 1) 204 31 00  
Fax: (+353 1) 282 42 09 / 282 64 56  
Email: [postmaster@eurofound.europa.eu](mailto:postmaster@eurofound.europa.eu)  
**[www.eurofound.europa.eu](http://www.eurofound.europa.eu)**

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# Foreword

The European Quality of Life Survey (EQLS) was conducted by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) for the first time in 2003, covering 28 countries (the 15 EU Member States, 12 forthcoming Member States and Turkey). Eurofound's second round of the EQLS, which was carried out in 2007, offers a wide-ranging view of the diverse social realities in 31 countries – the current 27 EU Member States, Norway and the candidate countries of Croatia, the Former Yugoslav Republic of Macedonia and Turkey.

Many of the questions posed in the first EQLS in 2003 were asked again, on issues such as employment, income, education, housing, family, health, work–life balance, life satisfaction and perceived quality of society. In 2008, Eurofound commissioned secondary analyses of the EQLS data around key policy themes. The selected themes for the first round of secondary analysis are the following: trends in quality of life in Europe 2003–2008; living conditions, social exclusion and mental well-being; family life and work; subjective well-being; and quality of society and public services.

This analytical report focuses on the fourth selected theme – *Subjective well-being in Europe* – mainly referring to life satisfaction as the most comprehensive indicator of subjective well-being. It finds that life satisfaction is highest in the EU15, followed by the NMS12, and is lowest in the CC3. Deprivation, unemployment and poor health have a large impact on life satisfaction levels in all country groups. Social support is also important, as are the perceived quality of public services and institutional trust, particularly for those experiencing deprivation.

An analysis of subjective well-being is key to understanding the role of different dimensions of life in shaping the quality of people's lives. In policy terms, it can serve as a common currency for determining the impact of different conditions on people's well-being. We hope that this study will contribute towards assessing and improving the quality of life in Europe.

Jorma Karppinen  
Director

Erika Mezger  
Deputy Director

# Country codes

EU15 15 EU Member States prior to enlargement in 2004 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom)

NMS12 12 New Member States, 10 of which joined the EU in 2004 (Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia) – and are sometimes referred to as the NMS10 – and the remaining two in 2007 (Bulgaria and Romania)

EU27 27 EU Member States

CC3 3 candidate countries (Croatia, the Former Yugoslav Republic of Macedonia and Turkey)

## EU27

AT	Austria	LV	Latvia
BE	Belgium	LT	Lithuania
BG	Bulgaria	LU	Luxembourg
CY	Cyprus	MT	Malta
CZ	Czech Republic	NL	Netherlands
DK	Denmark	PL	Poland
EE	Estonia	PT	Portugal
FI	Finland	RO	Romania
FR	France	SK	Slovakia
DE	Germany	SI	Slovenia
EL	Greece	ES	Spain
HU	Hungary	SE	Sweden
IE	Ireland	UK	United Kingdom
IT	Italy		

## Candidate countries

HR	Croatia
MK <sup>1</sup>	Former Yugoslav Republic of Macedonia
TR	Turkey

## Other

NO	Norway
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<sup>1</sup> International Organization for Standardization (ISO) code 3166. Provisional code that does not prejudice in any way the definitive nomenclature for this country, which will be agreed following the conclusion of negotiations currently taking place under the auspices of the United Nations ([http://www.iso.org/iso/country\\_codes/iso\\_3166\\_code\\_lists.htm](http://www.iso.org/iso/country_codes/iso_3166_code_lists.htm)).

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# Executive summary

## Introduction

The way we feel about ourselves and assess the quality of our lives is influenced by many factors. Some of them are objective: how much we earn and what we can afford to buy, for example. But quality of life is not only determined by the standard of living we have attained. Objective conditions are certainly linked to our subjective well-being, but not in a straightforward manner. This report looks at the diverse factors that influence levels of subjective well-being. It explores the impact of demographic and socioeconomic factors, of health, social support and the quality of the societies we live in. It asks to what extent these factors can explain the variations seen in levels of subjective well-being in different countries. The study also examines whether social support and good public services can cushion the impact of difficult social and economic conditions experienced by European citizens, thus contributing to an improved quality of life.

The report is based on data from the 2007 European Quality of Life Survey (EQLS), conducted by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), in the 27 EU Member States (EU27), the three candidate countries (CC3) and Norway.

## Policy context

There is widespread recognition of the need for indicators of quality of life that go beyond the traditional economic indicators, such as gross domestic product (GDP). European society is changing rapidly, as a result of globalisation, ageing and the shift to the knowledge economy, to name just a few drivers. These changes can result in a more pessimistic outlook on life and higher levels of dissatisfaction even if economic indicators point to growth and a general improvement of conditions. A growing gap emerges between the picture painted by statistics and people's perceptions of their own living conditions, which needs to be addressed by policy. Here the results of subjective well-being research can help:

- Subjective well-being indicators, such as a happiness index or a life satisfaction index, capture people's evaluations of the quality of their lives, given their own values and preferences.
- Levels of subjective well-being measured can provide an external check on economic indicators and can act as a corrective.
- When the costs and benefits of policy alternatives are assessed, the results gained from subjective well-being research form an important input.
- Changes in levels of subjective well-being are a guide to progress, and can be used to measure the success of policies aimed at increasing social cohesion and social inclusion.

## Key findings

- There is a clear hierarchy in life satisfaction across groups of countries, with the highest levels in the 15 older EU Member States (EU15) – particularly in the Nordic countries – followed by the 12 new Member States (NMS12) and with the lowest levels in the CC3.
- The bulk of the differences between countries and country groups are explained by differences in objective conditions in these countries: demographic characteristics, socioeconomic factors, health and disability, social support and quality of society.
- The analysis of subjective well-being points to the continuing importance of traditional economic concerns – such as material well-being, income and unemployment – for people's quality of life.

- For the individual, the single indicator with the biggest impact on life satisfaction is deprivation: the inability to afford basic lifestyle goods and services. Ill health is the second factor that results in a large reduction in life satisfaction across all country groups. Unemployment and income (especially in the CC3), as well as low education (particularly in the NMS12) and family structure also play a very important role.
- Income matters most when, as a result of low income, basic needs are not met. When basic needs are met, the relationship between income and subjective well-being is weaker. The satisfaction ‘bonus’ associated with high income is lower than the satisfaction ‘penalty’ associated with low income.
- Poor health reduces subjective well-being by about one point on a 10-point scale in all country groups. The impact of poor health on happiness and emotional well-being is even greater than on life satisfaction.
- Retired people have higher levels of subjective well-being than those at work, when factors such as income and social support are controlled for. This suggests that work stress and the challenge of combining work and family life play a significant role in reducing the subjective well-being of people in employment.
- Education’s effect on subjective well-being operates primarily through its impact on income and living standards. However, in the NMS12 low levels of education are directly associated with lower levels of life satisfaction. Interestingly, higher levels of education do not appear to enhance levels of subjective well-being when other factors are controlled.
- People who are widowed, divorced or separated are less satisfied with their lives, even when socioeconomic conditions and broad levels of social support are controlled. The negative impact is even larger for happiness than for life satisfaction. This pattern is found in all country groupings, except in the case of widows in the CC3, and it is stronger for people who are divorced and separated than for widowed persons. Never married lone parents also experience lower levels of life satisfaction in the EU15 and NMS12.
- The availability of practical and moral support from family and friends is important for enhancing life satisfaction for all groups in the EU15 and NMS12 – but not in the CC3. Financial support, the ability to raise a substantial sum of money from someone in case of emergencies, is important for people who are vulnerable and experiencing deprivation.
- The quality of public services is generally important to life satisfaction and has an even greater impact on the subjective well-being of people experiencing deprivation. It is important in all country groups, while trust in public institutions – a second measure of quality of society - is important only in the EU15 and NMS12.

### Policy pointers

- The findings suggest that in order to improve subjective wellbeing and quality of life, it is more important to focus on improving material circumstances of people who are most disadvantaged rather than raising the average standard of living, although the latter goal remains important in the poorer CC3.
- Improving the health of the population is of central importance for improving quality of life. Apart from policies to promote health and treat illness, attention should be paid to understanding other

methods of improving quality of life for people who are ill or have a disability. Especially strategies to address the emotional well-being of persons experiencing illness are needed.

- While education beyond secondary level is important for developing the skills of the workforce and improving the quality of work, direct benefits in terms of improved well-being cannot be expected. The exceptions are people with low educational levels in the NMS12, where promoting the access to education and training should reap large rewards in terms of improved subjective well-being.
- The quality of life of vulnerable groups, such as people who have lost a partner or lone parents, could be enhanced by policy interventions designed to reduce their economic vulnerability to a financial emergency.
- Quality of society is important to life satisfaction in the EU15 and NMS12, especially for deprived people. High quality public services act as a buffer to mediate the effects of difficult socioeconomic circumstances. Improving the quality of public services is not necessarily a question of the quantity and type provided, but how these services are delivered. A commitment to openness, transparency and accountability of public institutions would improve trust in these institutions, a second measure of quality of society.



# Introduction

## Background and policy context

European societies are changing in ways that have profound implications for social policy. The source of this change is partly the different development trajectories and positions of the 27 European Union Member States (EU27). For example, standards of living are significantly lower in the new Member States (NMS) – particularly the former Communist countries – that joined the EU in 2004 and 2007. Other drivers of change relate to the process of globalisation, such as the decline in the manufacturing sector, the transition to post-industrial knowledge and service economies, mass migration and increasing diversity and climate change (Liddle and Lerais, 2007). Within societies, changing family structures, new gender roles and an ageing population have all contributed to the emergence of new policy challenges.

Policy has responded to these challenges by emphasising social inclusion and social cohesion, as well as the traditional concerns regarding economic growth and employment. The Lisbon strategy in 2000 underlined the need for economic and employment growth, but also highlighted the importance of social cohesion. The concept of ‘well-being for all’ is fundamental to the definition of social cohesion promoted by the Council of Europe (2008). This implies that well-being must be shared by all members of society and cannot be attained at an individual level. It emphasises relationships, responsibilities, the importance of public institutions and a concern for future generations.

The Renewed Social Agenda, launched by the European Commission in 2008, sought to address policy in crucial areas such as children and youth, investing in skills, mobility, health, poverty and social exclusion, equality and opportunity. Since late 2008, however, the global recession has brought economic recovery and employment to the forefront of the policy agenda. Innovative policy responses will be needed to preserve and develop the emphasis on social inclusion and social cohesion in this context. Developing a modern policy response requires a range of social indicators to assess the scale and nature of the challenges in these areas and to monitor the success of policy in addressing them.

Since the 1960s, social indicators research has aimed to add to economic data on individual and social well-being, recognising the inadequacy of an exclusive reliance on economic indicators. In recent years, and in the context of the changing European environment, this movement has received an additional impetus and there has been an increased demand for a broader understanding of quality of life and well-being. In the words of the President of the European Commission, José Manuel Barroso, referring to gross domestic product (GDP), ‘we can’t measure the challenges of the future with the tools from the past’ (Beyond GDP, 2007).

International organisations such as the European Commission, the Organisation for Economic Co-operation and Development (OECD), the Organisation of the Islamic Conference, the United Nations (UN), the UN Development Programme and the World Bank now recognise ‘the need to undertake the measurement of societal progress in every country, going beyond conventional economic measures such as GDP per capita’ (OECD, 2007a).

Indicators of subjective well-being have a vital role to play in this process. Subjective well-being indicators are able to directly capture people’s experience, while economic, social and environmental indicators do so only indirectly (Diener and Suh, 1997, p. 205). This, in turn, matters because what is experienced does not necessarily coincide with objective conditions. In fact, it is often argued that subjective well-being indicators are useful complements to objective indicators precisely because there is a divergence between people’s reported experience on the one hand and what is captured in the objective indicators on the other (Diener and Seligman, 2004, pp. 2-3).

The European Quality of Life Survey (EQLS), conducted by the European Foundation for the Improvement of Living and Working Conditions (Eurofound), offers the opportunity to examine in depth the impact of a wide range of objective conditions on subjective well-being. The EQLS focuses on quality of life issues, particularly in the domains of employment, economic resources, family life, community life, health, housing and the local environment.

The first EQLS, carried out in 2003, revealed marked differences between countries in the average subjective well-being of their citizens, with a north-south divide in the 15 EU Member States before enlargement of the EU in 2004 (EU15) and a marked east-west divide between the EU15 and the subsequent NMS. Within countries, however, the groups of people most at risk of low levels of subjective well-being were similar: those experiencing poverty, unemployment and low skills and educational levels. Social relationships were found to be important, as they have a 'sustaining and stabilising function, particularly for very disadvantaged people, such as those who are poor and unemployed' (Böhnke, 2005, p. 93). Böhnke views family and social relationships as mediating the impact of severe economic conditions on subjective well-being, as well as constituting an important dimension of objective experience in their own right. Moreover, in countries with a higher standard of living, social relationships came to the fore more strongly in explaining differences in overall life satisfaction.

This report will use data on the 31 countries from the second EQLS, conducted in 2007, to examine differences across countries in subjective well-being and the relationship between subjective and objective quality of life. The present report further develops the earlier work based on the first EQLS in 2003, extending the analysis to include the larger number of countries, to consider the effect on the conclusions of the choice of different indicators and to examine the role of social support and quality of society as mediators of the impact of objective conditions on subjective well-being. The conceptual framework involves an assumption that subjective well-being is greatly influenced by objective circumstances as mediated by coping mechanisms which are enhanced by social support and high-quality public institutions.

It is important to note that the data on which this report is based were collected in 2007, months before the world economy was subjected to a severe financial crisis. This crisis has resulted in a decrease in GDP, beginning in 2008, with the decline projected to continue in the short term (International Monetary Fund (IMF), 2009). The economic crisis is likely to impact most strongly on the most vulnerable nations and the most vulnerable individuals within those nations. In Europe, the economic decline in the EU15 is likely to lead to higher rates of unemployment among immigrants from the NMS. Many of them will return to their home countries, which is likely to result in strong fiscal pressure in those Member States. The conclusions of this report will explore some of the likely implications of these major economic issues for subjective well-being in Europe.

### **Subjective well-being and social policy**

Subjective well-being refers to positive feelings about one's life and one's self. It is distinguished from objective measures of quality of life such as income, family circumstances or housing conditions. The distinction between 'subjective' and 'objective' in this context is not a reference to methods of measurement (as in self report or non-self report), but to what is measured: whether feelings or non-feelings (Gasper, 2007; Veenhoven, 2002).

Another important feature of the concept of subjective well-being is that it refers to relatively enduring, underlying states. White (2007) draws a distinction between 'brief emotional episodes, periods of

joy or acute happiness, and an underlying state of happiness. This underlying state is conceptualised as a sense of satisfaction with one's life, both in general and in specific areas of one's life such as relationships, health and work.' Subjective well-being refers to this underlying state of happiness or satisfaction.

Objective conditions are not linked to subjective well-being in a straightforward manner and the discrepancies between the two have been extensively documented (for example, Argyle, 1987; Diener and Suh, 1997; Ekins and Max-Neef, 1992; Frey and Stutzer, 2002; Kahneman et al, 1999b; Lane, 2000; Pichler, 2006 and 2008; Robeyns, 2003; Ryan and Deci, 2001; Sen, 1985; Veenhoven, 1993). For instance, levels of satisfaction across countries and over time increase with gross national product (GNP) up to a certain point (Easterlin, 1974 and 2002; however, see Frey and Stutzer, 2001 and Veenhoven and Hagerty, 2006 for a different view). Beyond a certain level, income and other objective indicators of standard of living are only weakly related to subjective well-being (Gasper, 2007).

Subjective indicators of well-being can be valuable policy tools in a number of ways. First, and particularly important in the international context, subjective well-being indicators can capture people's experiences of their lives directly and in a way that respects cultural differences in values by allowing people to assess their lives on their own terms rather than on the basis of what is objectively considered 'the good life' by an outside observer who may have different values and priorities.

A second contribution of subjective well-being indicators is that progress towards some goals cannot be measured without them. An example is trust in government, but even policy goals in the area of health and housing require the use of subjective as well as objective indicators (Veenhoven, 2002). In addition to allowing the measurement of progress towards policy goals, subjective well-being indicators can draw attention to aspects of life and emerging problems that are missed by the standard measures of objective well-being.

Thirdly, it is essential to pay attention to subjective well-being if policymakers are to take seriously the call by the World Health Organization (WHO) to address mental health as a core requirement of social cohesion (WHO, 2005):

*'Mental health and well-being are fundamental to quality of life, enabling people to experience life as meaningful and to be creative and active citizens. Mental health is an essential component of social cohesion, productivity and peace and stability in the living environment, contributing to social capital and economic development in societies.'*

The WHO definition of mental health as a 'state of well-being in which the individual realises his or her own abilities, copes with the normal stresses of life, works productively and fruitfully, and makes a contribution to his or her community' (WHO, 2001, p. 1) comes close to the measures of positive subjective well-being that have been at the core of research on the subjective quality of life.

Subjective well-being indicators capture elements of quality of life that cannot be reduced to objective conditions. Diener and Suh (1997) have reviewed the increasing importance of subjective well-being in comparison to other measures; they concluded that 'subjective well-being measures are necessary to evaluate a society, and add substantially to the economic indicators that are now favoured by policymakers' (p. 189).



### **Use of subjective well-being indicators in policy**

There are two distinct ways in which subjective well-being research could contribute to social and economic policy (Frey and Stutzer, 2007; van Hoorn, 2007). The first involves using ‘a national index of subjective well-being’ which would serve as a key policy goal. The second use is as an input into policy, including in assessing the costs and benefits of policy alternatives (van Hoorn, 2007).

Happiness as a policy goal is not a new idea. Indeed, it comes close to the notion of utility expounded by the 18th-century philosopher Jeremy Bentham: the good is whatever brings the most happiness to the greatest number of people. One notable recent proponent of this thesis is Richard Layard (2005). However, there is a certain reluctance to use levels of happiness as measured by a single survey item as a policy target. Some researchers have argued for the development of a national subjective well-being index as a complement to existing objective measures and to provide a more comprehensive measure of quality of life (Diener, 2000; Diener et al, 2006; Kahneman et al, 2004). Kahneman et al have worked on developing an alternative measure of subjective well-being that may provide the basis for such a national index, the Day Reconstruction Method. This can be administered through survey methodology and combines elements of experience sampling and time diaries designed to facilitate emotional recall.

As noted above, some aspects of ‘the good society’ that are important to social cohesion can only be measured by subjective indicators. These include positive mental health, trust in others or in social institutions and perceived social inclusion. In these contexts, subjective well-being as a policy goal has merit.

However, there are several objections to the maximisation of (measured) happiness as a policy goal more generally. Erikson (1973) argues that subjective well-being reflects people’s aspirations and is therefore a measure of adaptation to current life conditions, rather than a measure of life conditions themselves. Erikson et al ‘acknowledge a considerable subjective element to welfare’ but only to a limited extent: ‘the idea of welfare in the Scandinavian Level of Living Approach is based on a combination of access to resources and the subjectively determined use of these resources’ (Erikson and Uusitalo, 1987, p. 191). Nevertheless, the objective conditions that matter most for subjective well-being include the same life conditions and resources that are emphasised in the Swedish approach – living standards and employment – but also some which receive less emphasis, such as health and the quality of social relationships (Berger-Schmitt, 2000; Delhey et al, 2002).

Other objections to subjective well-being as a policy goal are the fact that such a strategy could lead to a disempowering of citizens – reducing them to ‘metric stations’ – and reducing their participation in the democratic discursive process in which policy should be made (Frey and Stutzer, 2007). Furthermore, as Frey and Stutzer point out, happiness is not necessarily people’s ultimate goal; other important goals may be loyalty, responsibility, self-esteem, personal development, justice, religiosity or freedom. Finally, evidence for the existence of hedonic adaptation and the aspiration treadmill make it unwise to have the maximisation of subjective well-being as the only, or primary, goal of public policy.

Instead, as Frey and Stutzer argue, the results gained from subjective well-being research should be taken as inputs into the political process, where they form part of the discourse among citizens and between citizens and politicians in the policymaking arena. This is a more modest role, but one which is easier to reconcile with a democratic system in which the participation of citizens in policymaking is a core value.

Another use of subjective well-being indicators has been to provide an external check on economic indicators. For example, Nordhaus (1998) and Krueger and Siskind (1998) compare income growth

deflated by the consumer price index with changes in the proportion of the population reporting an improvement in their financial position to assess bias in the price deflator. Layard et al (2007) used data on subjective well-being to estimate how fast the marginal utility of income declines as income increases.

- In summary, subjective well-being indicators are important correctives to what may become an overly narrow focus on objective indicators of progress in an increasingly complex and diverse social world. In social policy terms, they can ensure an appreciation of the values and goals of culturally diverse groups;
- allow measurement of public goods that can only be measured by subjective indicators;
- focus attention on positive mental health and emotional well-being as a key element of social cohesion;
- play an important role in assessing the relative priority of different policy targets to individuals.

### **Measuring subjective well-being**

Research indicates that subjective well-being can be reliably and satisfactorily measured (Eid and Diener, 1999; see also review by Kahneman et al, 1999b) and is associated with objective conditions. In studying subjective well-being across the EU, it is important to reinforce the reliability and validity of the indicators by ensuring that the measures work well in all Member States. A reliable measure is one that will show consistent results. Reliability is reduced if random error affects the measurement obtained (Carmines and Zeller, 1979). In survey research, this is usually based on checking the extent to which different measures of the same phenomenon are correlated. A valid measure is one that captures what it is supposed to measure in a particular context, and validity is reduced if an index is systematically biased in some way. The subjective well-being literature ‘pays a lot of attention’ to the validity of its measures (van Hoorn, 2007), and generally concludes that the measures perform well in terms of validity (see, for instance, Di Tella and MacCulloch, 2006; Diener, 1994; Diener et al, 1999; Frey and Stutzer, 2002; Kahneman and Krueger, 2006; Layard, 2005; and Nettle, 2005).

There are a large number of possible indicators of subjective well-being in the EQLS 2007 data: overall life satisfaction, satisfaction with specific life domains, happiness, the extent to which people like their lives, emotional well-being and perceived sense of social exclusion. This report has chosen to focus primarily on one of the most widely used indicators: overall life satisfaction. This indicator has a clear meaning and allows comparison over time as it has often been used in other surveys. It allows individuals to assess their lives as a whole on their own terms in contrast to, for example, asking how satisfied they are with a limited set of specific life domains. Moreover, it captures both the affective dimension of subjective well-being (sense of satisfaction) and the cognitive dimension (assessment of life overall). Finally, as Chapter 1 will show, its correlation with other indicators of subjective well-being attests to the validity of this measure. Chapter 1 will examine the relationship between life satisfaction and a number of alternative indicators of subjective well-being and Chapter 6 will validate the main conclusions against the same set of alternative indicators.

### **Data and methodology**

Data for this study are drawn from the second EQLS in 2007. The survey was organised by TNS-Opinion in all 27 EU Member States: the EU15 and the NMS12. The three current candidate countries

(CC3) – Croatia, the Former Yugoslav Republic of Macedonia and Turkey – are also included in the survey, together with Norway.

A minimum sample size of 1,000 respondents aged 18 years and over was targeted in nationally representative samples using a multi-stage clustered random sample in most cases, stratified by region and degree of urbanisation. In countries with a larger population – France, Italy, Poland and the United Kingdom (UK) – about 1,500 interviews were completed, while some 2,000 interviews were carried out in both Germany and Turkey. Interviews were conducted face to face.

The survey includes people aged 18 years or older, resident for at least six months in the country, outside of institutions, and able to speak the national languages in order to participate in the interviews. The fieldwork was carried out between September 2007 and February 2008, with considerable differences in timing across countries.

The questionnaire, developed by a research consortium, covers a broad spectrum of life domains as well as quality of society and subjective well-being (see Annex 1 of Anderson et al, 2009).

The overall response rate of 58% was satisfactory. However, national response rates varied significantly, ranging from less than 40% in France, Greece, the Netherlands and the UK to more than 80% in Bulgaria, Ireland and Romania (see Annex 2 of Anderson et al, 2009). After the fieldwork was completed, the data were edited by TNS and then checked thoroughly by the Eurofound research team. The methodological and fieldwork reports are available on the Eurofound website.<sup>2</sup>

The strength of the EQLS is that it brings together information on a wide range of life domains relevant to quality of life: economic resources, work status, health, family situation, social support, perceived quality of society and subjective well-being. Among the limitations of the data are that the national samples, while they provide a representative picture for each country, are too small to allow detailed analysis of some subgroups – such as immigrants, unemployed people or single-parent families – within individual countries. Furthermore, although the wide range of topics covered by the survey is a clear advantage, it also means that none of the topics can be analysed in great depth.

This report presents results for all 31 participating countries. Where appropriate, data are displayed for all countries separately, although figures are only presented in the report if based on at least 30 survey observations. To highlight any differences between the NMS12, the CC3 and the longer-standing EU15, the analysis provides figures for all three country groups as well as for the EU27 as a whole.

All of the averages and proportions presented in Chapters 1 to 6 are population weighted. This means that the averages for the four country groupings reflect the size of the population of individual countries. Therefore, Poland and Romania dominate the cross-country averages for the NMS12, while Turkey dominates the CC3 average. For this reason, it is important to note that a specific cross-country average is not necessarily shared by the majority of countries in the respective group, since the average reflects the very different population sizes of the respective countries.

### **Outline of report**

The bulk of the analysis in this report will focus on overall life satisfaction, but Chapter 1 will begin by exploring how this measure differs from other potential indicators of subjective well-being, such as happiness, perceived social exclusion and positive mental health.

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<sup>2</sup> <http://www.eurofound.europa.eu/areas/qualityoflife/eqls/2007/methodology.htm>.

Chapters 2 to 4 present a descriptive analysis of the differences within countries and country groups associated with demographic factors (age, gender and marital status), socioeconomic factors (education, work, income and deprivation) and health and disability. This descriptive analysis provides the background against which the report will develop its hypotheses on the buffering role of social support and quality of society.

The second part of Chapter 4 turns to the buffering role of social support in mediating the impact of adverse life conditions on the satisfaction levels of vulnerable groups. The related hypotheses are developed in this chapter to examine whether there is supporting evidence for them in the full set of 31 countries. Chapter 6 tests these hypotheses more formally at country group level.

Meanwhile, Chapter 5 examines differences within countries regarding the impact on satisfaction of perceived quality of society – encompassing quality of public services and trust in public institutions. It also examines the buffering role of quality of society in mediating the impact on life satisfaction of low income and deprivation. The report's hypotheses on the mediation role of quality of society are presented in this chapter and, again, tested more formally in Chapter 6.

Chapter 6 uses multiple regression to disentangle the impact of related objective conditions, such as age and ill health, on life satisfaction in order to gain an understanding of which objective conditions matter most to subjective well-being in Europe in 2007. The analysis is conducted for all 31 countries and also at country group level.



# Relationship between indicators of subjective well-being

# 1

This chapter examines country differences in subjective well-being measured in various ways. While the remaining chapters will focus on life satisfaction, it is useful to begin by considering how life satisfaction differs from other potential measures of well-being, such as happiness, liking one's life, emotional well-being and perceived social exclusion. The following indicators may be derived from the EQLS:

- satisfaction with life;
- happiness;
- optimism about the future;
- liking one's life;
- perceived social exclusion;
- emotional well-being.

Veenhoven (2009) proposes a useful way to organise different subjective well-being indicators. Overall, happiness is defined as 'the degree to which an individual judges the overall quality of his life as a whole favorably' (Veenhoven, 1984, pp. 22–4 and 2009, p. 7). Indicators of happiness or life satisfaction – terms which Veenhoven uses interchangeably – can be distinguished depending on whether they refer to life as a whole or part of life, and on the basis of whether they emphasise the feeling or affective component, the cognitive or evaluative component or both. In evaluating their lives, 'people can use two more or less distinct sources of information: their affects and their thoughts' (2009, p. 7).

From this perspective, the indicators of satisfaction with life and happiness are measures of 'life as a whole' that combine both the cognitive and emotional components of subjective well-being. Optimism about the future and perceived social exclusion both refer to part of life. 'Liking one's life' emphasises the evaluative or cognitive component of subjective well-being, which Veenhoven terms 'contentment', while 'emotional well-being' emphasises the emotional or affective dimension.

## Life satisfaction and happiness

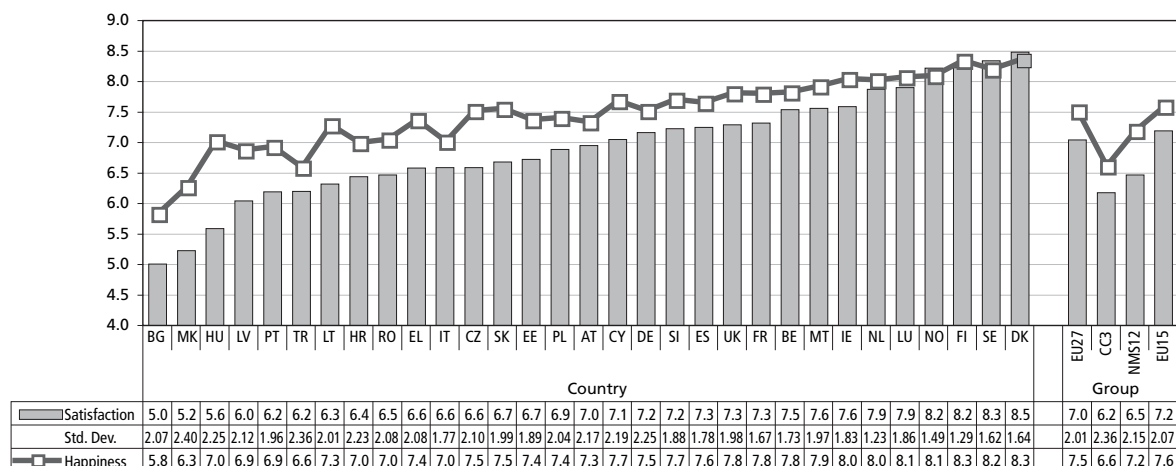
Figure 1 shows the average level of life satisfaction and happiness according to country and country group. Both indicators are measured on a scale of 1 to 10, where a score of 10 corresponds to the highest level of well-being. The countries are sorted from lowest to highest level of satisfaction with life.

A familiar pattern of differences emerges across countries, with the lowest levels of life satisfaction in Bulgaria, the Former Yugoslav Republic of Macedonia and Hungary, and the highest levels in the Nordic countries. The pattern across countries is similar for happiness, but the differences between countries are less pronounced: the lowest average scores on happiness are higher than the lowest average scores on life satisfaction. For example, the average levels of life satisfaction in Bulgaria and the Former Yugoslav Republic of Macedonia are 5.0 and 5.2 on the 10-point scale, respectively, while the average happiness scores for these two countries are 5.8 and 6.3, respectively. There is much less difference between the two indicators for the countries with the highest average scores on happiness and life satisfaction.

The standard deviation of life satisfaction, shown in the second row beneath the chart in Figure 1, reveals the amount of variability in life satisfaction within countries. In general, although the pattern is not an even one, the standard deviation tends to be higher in countries where the average satisfaction

level is lower.<sup>3</sup> Thus, the countries with lower life satisfaction levels are those with the greatest inequality in satisfaction levels.

**Figure 1: Life satisfaction and happiness, by country and country group**



Notes: NO = Norway. See list at beginning of report for country codes and groupings. Data weighted according to population. Satisfaction with life: ‘All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.’ Happiness: ‘Taking all things together on a scale of 1 to 10, how happy would you say you are? Here 1 means you are very unhappy and 10 means you are very happy.’ Source: EQLS 2007

### Life satisfaction, liking one’s life and optimism

Figure 2 shows the association between average levels of life satisfaction and two other indicators: liking one’s life and optimism. Liking one’s life is based on agreement or disagreement with the statement ‘On the whole, my life is close to how I would like it to be’, where a score of 5 indicates strong agreement. As this is measured on a five-point scale, it is plotted on the right-hand axis in the figure. While optimism differs from the other potential subjective well-being indicators in that it captures the person’s feelings about the future, it is instructive to examine how it varies across countries. Optimism, measured on the same five-point scale, is based on agreement or disagreement with the statement ‘I am optimistic about the future’.

The general pattern across countries is similar for liking one’s life and overall life satisfaction, but with some differences across countries. For instance, the average level of liking one’s life is lower in the Former Yugoslav Republic of Macedonia (2.5) and Cyprus (3.0) than would be expected from their scores on the life satisfaction scale.

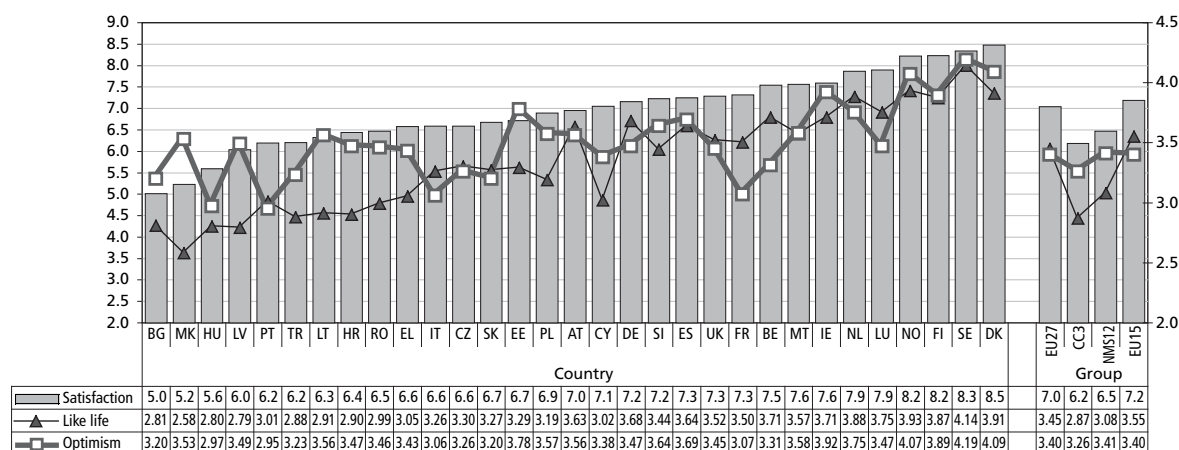
Regarding optimism about the future, the differences across countries are not as significant as for life satisfaction. It is particularly striking that average levels of optimism are the same in the EU15 and the NMS12 (3.4). Thus, while levels of life satisfaction are considerably lower in the NMS12 than the EU15, they are equally optimistic about the future.

Some countries have levels of optimism that are either higher or lower than would be expected, given their ranking on overall life satisfaction. Among the countries that are less optimistic are France and

<sup>3</sup> The correlation across countries between average life satisfaction and the standard deviation of life satisfaction is -0.74.

Italy (both 3.0, which is below the average of 3.2 in the CC3). Higher than expected levels of optimism are found in the Former Yugoslav Republic of Macedonia and Latvia (both 3.5) and Estonia (3.7).

**Figure 2: Life satisfaction, liking one's life and optimism, by country and country group**



Notes: Data weighted according to population. Satisfaction with life: 'All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.' Liking one's life: 'On the whole, my life is close to how I would like it to be.' (1=strongly disagree and 5=strongly agree). Optimism: 'I am optimistic about the future.' (1=strongly disagree and 5=strongly agree).

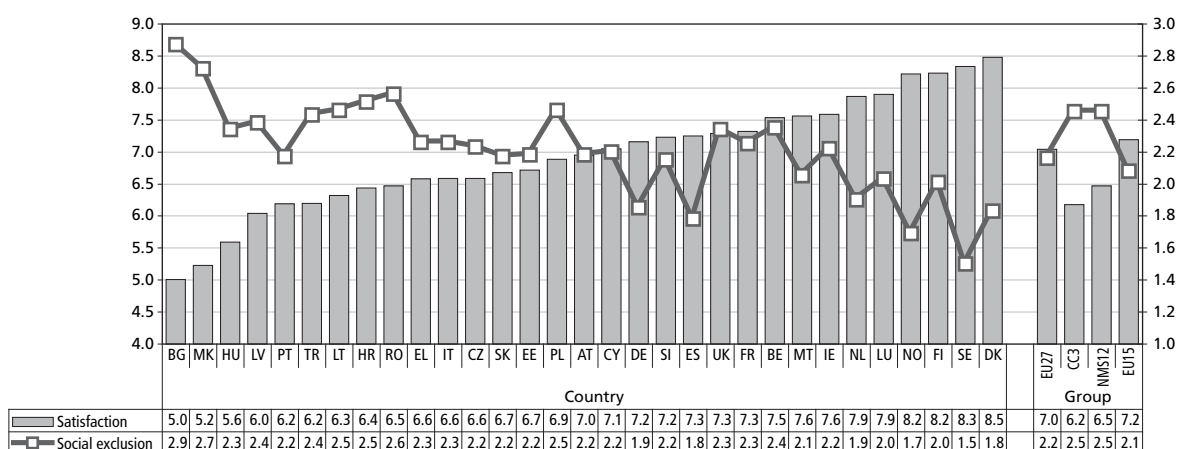
Source: EQLS 2007

## Life satisfaction and perceived social exclusion

Figure 3 turns to a composite scale measuring perceived social exclusion. As well as material well-being and health, the impact of social integration or belonging on subjective quality of life has been well established, both for older (Fiori et al, 2006) and younger adults (Csikszentmihalyi and Wong, 1991; Pichler, 2006). Perceived social exclusion is measured here based on agreement or disagreement with four items capturing the extent to which the individual feels excluded from society (Böhnke, 2004): feeling left out of society, feeling that life has become so complicated that one cannot find one's way, feeling that the value of what one does is not recognised and feeling that others look down on one. The items are scored from 1 (strong disagreement) to 5 (strong agreement) and the scale is the average score across the four items. As the scale ranges from 1 to 5, it is plotted on the right-hand axis in the figure.

As would be expected, the pattern across countries for social exclusion is the reverse of the pattern for life satisfaction. Countries with high scores on life satisfaction tend to have low scores on perceived social exclusion, and vice versa. Looking at the country groups, the average level of perceived social exclusion is lowest (2.1) in the EU15, but is similar in the NMS12 and CC3 (2.5). Levels of perceived social exclusion vary considerably among the EU15, however, with relatively high scores (2.3 to 2.4) in Belgium, France, Greece, Italy and the UK. The lowest score is found in Sweden (1.5) and in the other Nordic countries; low scores also emerge in Spain (1.8) and Germany (1.9). The highest levels of perceived social exclusion are found in the countries with the lowest levels of overall life satisfaction: Bulgaria (2.9) and the Former Yugoslav Republic of Macedonia (2.7).



**Figure 3: Life satisfaction and perceived social exclusion, by country and country group**


Notes: Data weighted according to population. Satisfaction with life: 'All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.' Perceived social exclusion: average score across four items – 'I feel left out of society', 'Life has become so complicated today that I almost can't find my way', 'I don't feel the value of what I do is recognised by others' and 'Some people look down on me because of my job situation or income' (1=strongly disagree and 5=strongly agree).

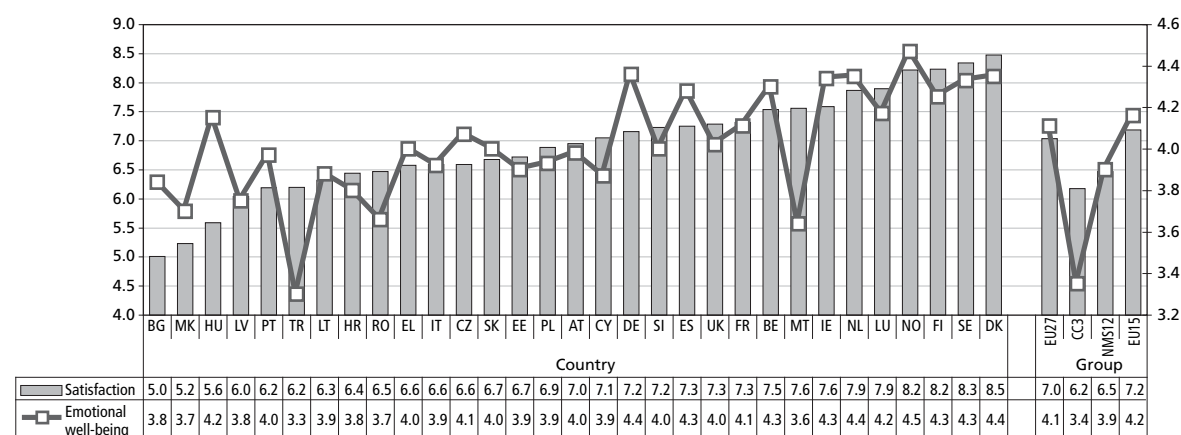
Source: EQLS 2007

## Life satisfaction and emotional well-being

Figure 4 examines another composite measure of well-being that captures emotional well-being. This scale is the WHO five-item Mental Health Index (MHI-5), which captures how often in the last two weeks the person felt cheerful, relaxed, full of vigour, rested and interested in life. The MHI-5 is part of the 36-item Short Form health survey (SF-36) (Ware et al, 2000) and has been used widely in a range of international surveys, with different population groups. The items are scored from 1 ('at no time') to 6 ('all of the time'), and the scale is the average score across the five items.

Emotional well-being shows considerable variation across countries, but the pattern is not the same as for life satisfaction. Although the pattern across country groups is the familiar one, with the highest average levels of well-being in the EU15 (4.2), lower levels in the NMS12 (3.9) and the lowest levels in the CC3 (3.4), the pattern across individual countries is quite different. The low levels of emotional well-being in the CC3 are driven by the pattern in Turkey, which has by far the lowest level (3.3) and well below the levels in Bulgaria (3.8), the EU Member State with the lowest average on life satisfaction. The second lowest score on emotional well-being is found in Malta (3.6), which scores above the median on life satisfaction and on the other indicators – including happiness – examined so far. The most positive levels of emotional well-being are found in Norway (4.5) and the levels are also high in the other Nordic countries (4.3 to 4.4), as well as in Germany (4.4), Belgium (4.3), Ireland (4.3) and Spain (also 4.3). Hungary has an unexpectedly high average score on emotional well-being (4.2), considering its low scores on life satisfaction (third lowest), and its average score on happiness (fifth lowest).

Figure 4: Life satisfaction and emotional well-being, by country and country group



Notes: Data weighted according to population. Satisfaction with life: ‘All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale of 1 to 10, where 1 means very dissatisfied and 10 means very satisfied.’ Emotional well-being: average score across five items – ‘Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks. I have felt cheerful and in good spirits; I have felt calm and relaxed; I have felt active and vigorous; I woke up feeling fresh and rested; My daily life has been filled with things that interest me.’ (1=‘at no time’ and 6=‘all of the time’)

Source: EQLS 2007

## Relationship between indicators

Table 1 summarises the relationship between the different indicators by showing the Pearson correlation between the scores for individuals in the 31 countries.<sup>4</sup> The correlation can vary from 0 (no association) to 1 (perfect association) or -1 (perfect negative association).

The strongest relationship is between life satisfaction and happiness, with a correlation of 0.65. Life satisfaction also has a quite strong correlation with the feeling that life is close to how one would like it to be (0.56), and a moderate association with emotional well-being (0.40) and optimism (0.36). In addition, it has a moderate negative association with perceived social exclusion (-0.44).

It is clear from the table that the various measures are not identical and capture slightly different elements of subjective quality of life. It is also evident that the correlation with life satisfaction tends to be higher than the correlation between the measures and any of the other indicators taken singly.<sup>5</sup> Thus, in taking a single indicator of subjective well-being, overall satisfaction with life seems the obvious choice. Life satisfaction also has the advantage of being a widely used measure; it captures both the cognitive and affective components of subjective well-being and it explicitly refers to life as a whole rather than an arbitrarily selected part of life.

<sup>4</sup> This concerns some 35,600 respondents who participated in the 2007 EQLS.

<sup>5</sup> The exceptions are emotional well-being (highest correlation is with happiness – both capture the affective dimension of subjective well-being) and optimism (highest correlation is with liking one’s life), but even here the correlation with life satisfaction is almost as high.

**Table 1: Relationship between subjective well-being indicators (correlations)**

	Satisfaction with life	Happiness	Optimistic about future	Life close to how one likes it	Perceived social exclusion	Emotional well-being
Satisfaction with life	1.00	0.65	0.36	0.56	-0.44	0.40
Happiness	0.65	1.00	0.30	0.47	-0.36	0.44
Optimistic about future	0.36	0.30	1.00	0.44	-0.26	0.30
Life close to how one likes it	0.56	0.47	0.44	1.00	-0.40	0.41
Perceived social exclusion	-0.44	-0.36	-0.26	-0.40	1.00	-0.30
Emotional well-being	0.40	0.44	0.30	0.41	-0.30	1.00

Note: Table shows Pearson correlation coefficients.

Source: EQLS 2007

## Summary

This chapter has provided an overview of the differences between countries on a number of different measures of subjective well-being: overall life satisfaction, happiness, liking one's life, optimism, perceived social exclusion and emotional well-being. As Table 1 showed, the measures are associated with each other but are not identical, capturing different aspects of subjective well-being. The strongest differences between countries were found for overall life satisfaction, and the pattern follows closely that observed by Böhnke in the 2003 EQLS data (Böhnke, 2005). The average level of life satisfaction is highest in the Nordic countries and lowest in Bulgaria, the Former Yugoslav Republic of Macedonia and Hungary. There is a clear pattern across country groups, with high levels of life satisfaction in the EU15, intermediate levels in the NMS12 and the lowest levels in the CC3. The pattern across countries was similar for happiness and liking one's life, but the country differences were not as marked. Perceived social exclusion follows a similar, though reverse, pattern across countries; however, the national differences are not as large as for life satisfaction. In the case of emotional well-being and optimism, the pattern across countries is much more mixed and levels of optimism are about the same among residents of the NMS12 as those of the EU15.

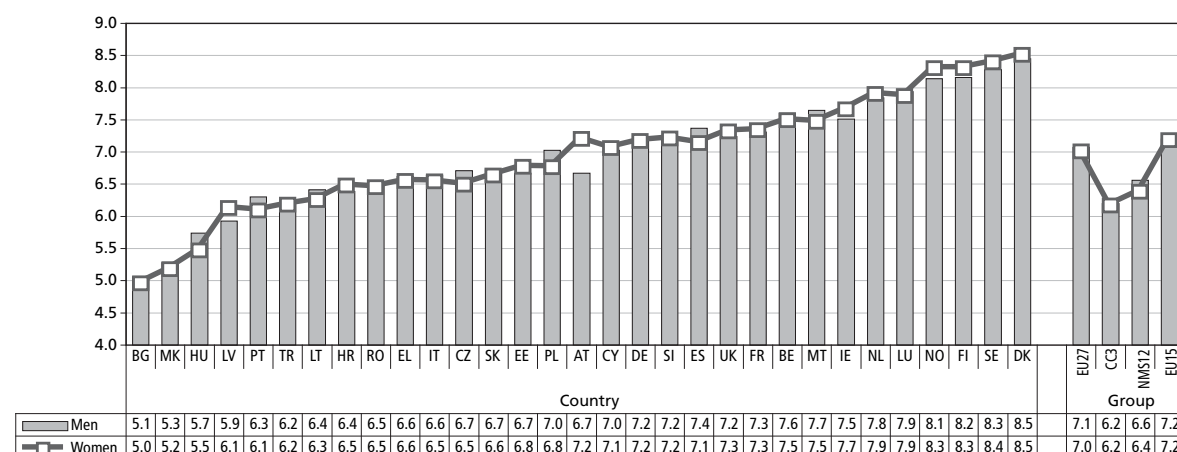
Subsequent chapters will focus on the measure of overall life satisfaction. This indicator has a clear meaning and allows comparison over time as it has been widely used in other surveys. It allows individuals to assess their lives as a whole on their own terms – in contrast to, for example, asking how satisfied they are with a limited set of specific life domains. Furthermore, it captures both the affective dimension of subjective well-being (sense of satisfaction) and the cognitive dimension (assessment of life overall). Finally, its correlation with other indicators of subjective well-being attests to the validity of this measure. Chapter 6 will discuss the multivariate model of life satisfaction and will return to the other indicators to validate the study findings against these alternative indicators of subjective well-being.

This chapter begins an exploration of differences in life satisfaction within countries. The focus here is on the demographic characteristics of individuals – gender, age and marital status – and how these are associated with life satisfaction. It might be expected that women could be less satisfied with life, on average, than men as they are more vulnerable to a number of adverse life experiences, such as widowhood, lone parenthood, challenges in terms of work–life balance and labour market discrimination. The association between age and life satisfaction is likely to reflect a number of factors that may differ across countries: youth unemployment levels, pension adequacy and the general health of the population. Finally, people who are married could be expected to have higher levels of life satisfaction than those who have lost a partner (those who are widowed, divorced or separated) and single persons. The difference between married and single people is likely to be affected by the age differences between these groups, however, and variations across countries in relation to youth unemployment, the availability of higher education and training and housing costs are likely to be important.

## Gender differences

Figure 5 shows the average level of life satisfaction for women and men in each country and country group. Within countries, the differences in life satisfaction levels between men and women tend to be rather small – within one decimal point on the 10-point scale for 21 of the 31 countries. For the EU15 and CC3, there is no difference in the overall average level of life satisfaction between women and men, while in the NMS12 the level of satisfaction is higher for men (6.6) than for women (6.4). The difference between men and women in the NMS12 is largely driven by the pattern in Poland. A total of 11 countries report a higher average level of life satisfaction for women than for men, most notably Austria (7.2 for women and 6.7 for men).

**Figure 5: Life satisfaction, by gender within country and country group**



Notes: Data weighted according to population. The figure shows the average values on a 10-point scale.

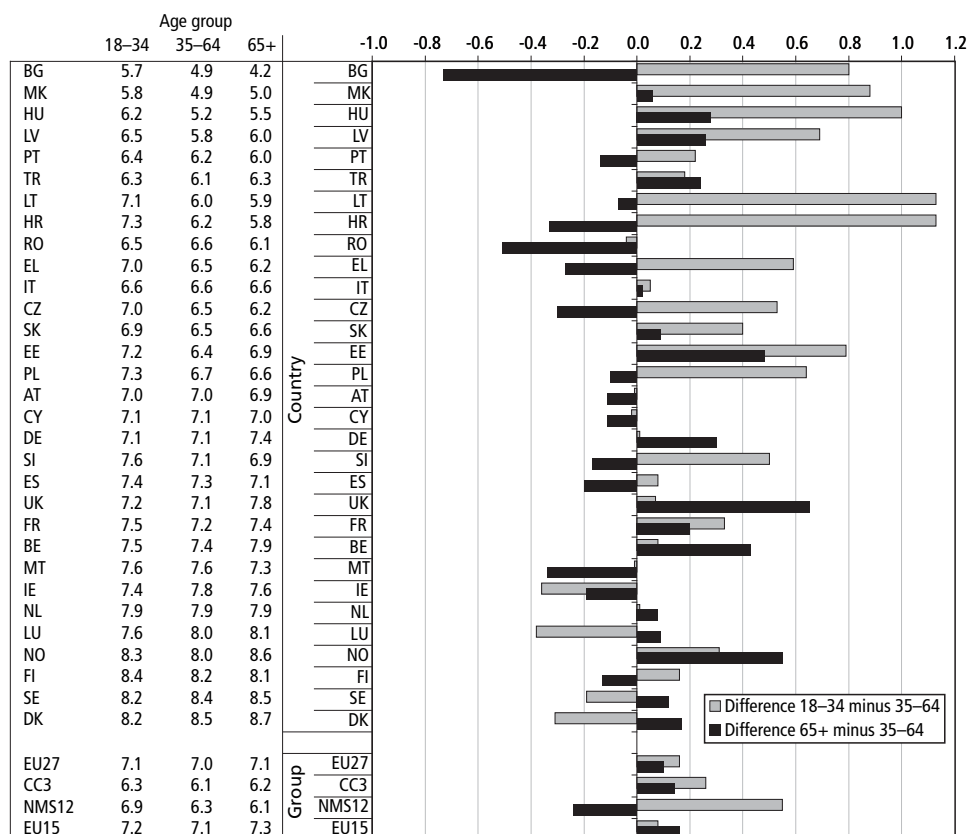
Source: EQLS 2007

## Age effects

Differences in life satisfaction according to age group are more pronounced for several of the countries. Figure 6 shows the difference in the average satisfaction score for younger adults aged 18–34 years and older adults aged 65 years and over, compared with the satisfaction score for adults in their middle

years. The middle age group (35 to 64 years) is represented as 0 in the chart. The actual average scores are shown in the accompanying table on the left. This method of presentation makes it easier to compare the three age groups within a country.

**Figure 6: Differences in life satisfaction, by age, country and country group**



Notes: Data weighted according to population. The figure shows the difference in the life satisfaction level of young adults (18-34 years) and of older adults (65+ years), compared with those in middle years (35-64 years, represented by the vertical line at zero). The table on the left shows the average satisfaction levels for the three age groups on a 10-point scale. Source: EQLS 2007

Younger adults show higher levels of life satisfaction than those in their middle years in all three country groups and the difference is larger in the NMS12 (6.9 for younger adults and 6.3 for the 35-64 age group). The life satisfaction of older adults tends to be higher than among the middle age group in the EU15 (7.3 and 7.1, respectively) and slightly higher in the CC3 (6.2 and 6.1, respectively); however, older adults report lower levels of satisfaction than the middle age group in the NMS12 (6.1 and 6.3, respectively). Thus, in the EU15 and CC3 – but not in the NMS12 – a familiar curvilinear relationship emerges between subjective well-being and age. This can be seen by the pattern in Figure 6 where the bars for the older adults and the younger adults are both greater than zero, which represents the level for adults in their middle years.

This curvilinear relationship is not repeated at national level, however; in fact, the differences between countries in the pattern of subjective well-being according to age are more striking than the similarities. A number of patterns emerge and they all cross the country groupings. The curvilinear pattern by age is apparent in only 10 of the 31 countries: four of the NMS12 (Estonia, Hungary, Latvia and Slovakia),

three of the EU15 (Belgium, France and the UK), two of the CC3 (the Former Yugoslav Republic of Macedonia and Turkey) and Norway.

An equally common pattern is the tendency for life satisfaction levels to decline with age, being highest for young adults, lower for adults in their middle years and lowest for older adults. This pattern is found in 10 countries: Bulgaria, Croatia, the Czech Republic, Finland, Greece, Lithuania, Poland, Portugal, Slovenia and Spain. In the remaining countries where there is a clear age pattern, levels of satisfaction tend to be highest for older adults: Denmark, Germany, Luxembourg and Sweden. In Ireland and Romania, adults in their middle years have the highest life satisfaction levels.

The biggest differences in satisfaction level among the age groups tend to be found in the countries with the lowest average levels of life satisfaction, as Figure 6 clearly shows. For instance, in Bulgaria, the average level of satisfaction for younger adults is 5.7 points compared with 4.9 points for adults in their middle years and 4.2 points for older adults. This represents an average difference of 1.5 points on a 10-point scale between the youngest and oldest age groups.

The pattern of life satisfaction according to age group could be due to a number of differences between the countries and some of these will be controlled for in the analysis in Chapter 6. For instance, unemployment is likely to weigh more heavily on younger adults, while the adequacy of pension levels and health problems are likely to be more pressing issues for the well-being of older adults.

### Impact of marital status

The final figure in this chapter, Figure 7, examines differences in life satisfaction according to marital status. It considers three categories of marital status: married, which includes cohabiting; formerly married, whether divorced, separated or widowed; and single – that is, never married. As in the case of age group, the figure presents the difference in average life satisfaction for single and formerly married adults compared with married adults. The actual average satisfaction levels are shown in the accompanying table.

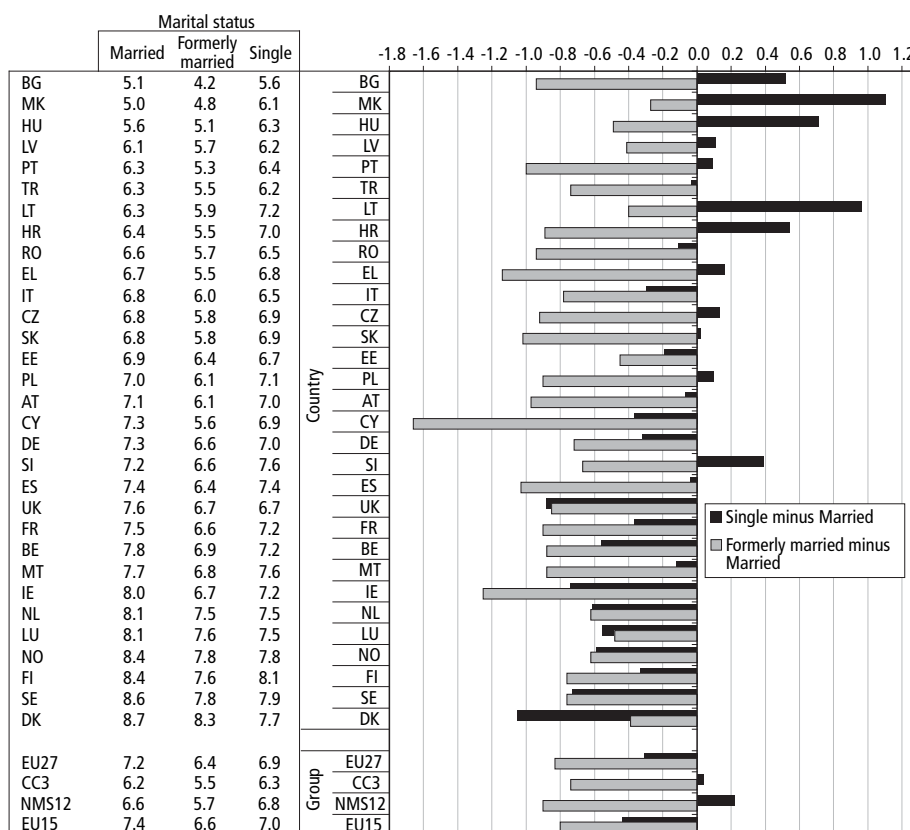
It is clear from Figure 7 that, in all countries, formerly married adults are less satisfied with their lives than married adults, with average satisfaction levels that are 0.8 points lower on a 10-point scale in the EU15, 0.9 points lower in the NMS12 and 0.7 points lower in the CC3. This is not surprising, as both persons who are widowed and those who are separated or divorced have experienced the loss of a life partner. The satisfaction gap is particularly wide in Cyprus (1.7 points) and Ireland (1.3 points).

The pattern across countries is more variable for single people who have never been married. At the level of country group, single people in the EU15 have lower life satisfaction levels than those who are married (by 0.4 points), while single adults have higher levels of satisfaction than married adults in the NMS12 (by 0.2 points). In the CC3, never married adults and married adults do not differ significantly in terms of life satisfaction. At national level, single adults tend to be more satisfied with their lives than married adults in those countries where overall life satisfaction levels are low – particularly in Bulgaria, the Former Yugoslav Republic of Macedonia, Hungary and Lithuania, where the gap ranges from 0.5 to 1.1 points in favour of single adults. In countries where overall satisfaction levels tend to be higher, single adults are less satisfied than married adults: in Denmark and Sweden, for instance, the life satisfaction gap is about 1.1 and 0.7 points, respectively, in favour of married people.

The analysis in Chapter 6 will probe in more detail the reasons for the differences in life satisfaction level according to marital status, particularly the national differences. In countries with high unemployment,

younger, single adults are likely to experience greater challenges in terms of labour force participation. The adequacy of pensions is likely to be a particular issue for widowed adults, who comprise the majority of formerly married people.

**Figure 7: Differences in life satisfaction, by marital status, country and country group**



Notes: Data weighted according to population. The figure shows the difference in life satisfaction levels of formerly married adults (widowed, divorced or separated) compared with those who are married (represented by the vertical line at zero) and the difference in satisfaction levels between single adults (never married) and married adults. The table on the left shows the average satisfaction level of each group on a 10-point scale.

Source: EQLS 2007

## Summary

This chapter has examined variations in life satisfaction levels according to gender, age and marital status within countries and country groups. Gender differences tend to be relatively small, with men having slightly higher average life satisfaction levels than women in the NMS12, but no overall difference in the EU15 and CC3.

There is more variation in life satisfaction according to age group, but the pattern differs considerably by country. At the level of country group, a curvilinear pattern emerges in the EU15 and the CC3, with adults in their middle years (aged 35–64 years) having lower life satisfaction levels than younger or older adults. In the NMS12, however, there is an uneven decline in satisfaction levels with age: young adults have the highest levels, while those in their middle years experience a marked decrease in life satisfaction, which declines further among older adults. The curvilinear pattern is found in 10 of the

31 countries, including several NMS. The pattern of declining satisfaction levels with age is also found in 10 of the 31 countries, again including countries from each of the EU15, NMS12 and CC3 groups.

Substantial differences in life satisfaction emerge according to marital status, with married people having a higher average satisfaction level than those who were formerly married in all countries. The pattern for single (never married) adults, compared with married adults, is more mixed. Single adults tend to have higher life satisfaction levels than married adults in countries with lower overall satisfaction levels, while the reverse is true in countries that have higher average satisfaction levels.

Chapter 6 will explore the main drivers of these patterns and country differences. Among the explanations are likely to be differences in health, income, pension adequacy and unemployment risk.



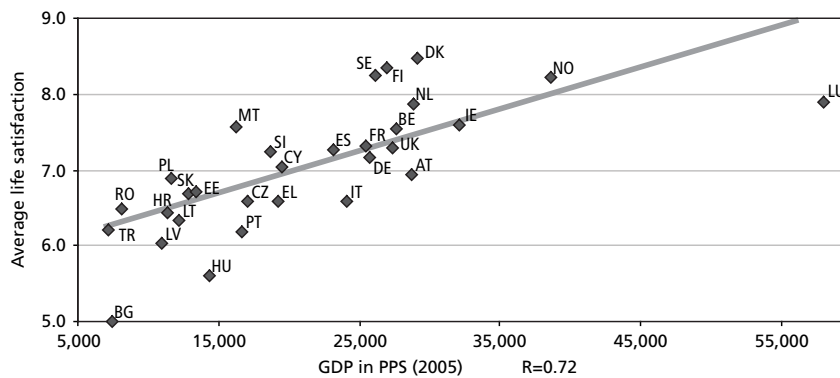


# Income, deprivation, education level and employment status

This chapter will consider how life satisfaction varies according to socioeconomic characteristics such as education, employment, income and living standard. A strong association between income, deprivation and life satisfaction level could be expected, based on a large body of previous research.

Figure 8 shows the relationship between average life satisfaction and GDP per head of population or per capita in each country. The figure outlines per capita GDP for 2005 in purchasing power standard units, which control for differences in currency and living costs. Apart from Luxembourg, with its well-known high level of GDP, a clear linear relationship emerges between life satisfaction levels and GDP. Although there is a good deal of scatter about the regression line, countries with a high level of GDP per capita tend to have higher average levels of life satisfaction.

**Figure 8: Life satisfaction, by GDP (PPS), 2005**



Notes: Data weighted according to population. Pearson's correlation coefficient is 0.72. The figure shows per capita GDP in 2005 in purchasing power standard (PPS) units. PPS is an artificial common currency that equalises the purchasing power of different national currencies and enables meaningful volume comparisons between country incomes. For example, if the GDP per capita expressed in the national currency of each country participating in the comparison is divided by its purchasing power parity (PPP), the resulting figures neutralise the effect of different price levels and thus indicate the real volume of GDP at a common price level.

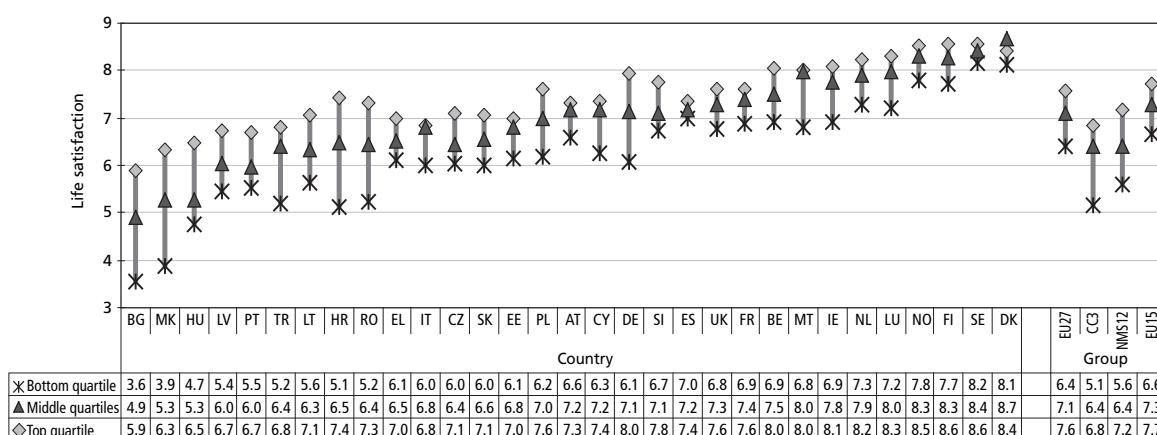
Source: EQLS 2007

## Income effects

Thus, average life satisfaction levels tend to be higher in countries where the general level of wealth, as measured by GDP per capita, is higher. The study now turns to the situation of individuals within each country and country group to determine whether levels of household income are associated with life satisfaction levels within a country. It should be noted at this point that the income measure used in the EQLS is a single item measuring total household income, and that it is missing for about one-third of cases. Nevertheless, income is such an important measure of the household's material living conditions that it is worth reporting the results for the available cases. This analysis is supplemented by presenting figures showing the relationship between life satisfaction and deprivation in the next section.

Figure 9 presents the results for income quartiles<sup>6</sup> calculated for each individual country. The figure, including its accompanying table, shows the average life satisfaction level for persons in the lowest income quartile, the highest income quartile and the middle two quartiles according to country and country group.

**Figure 9: Life satisfaction, by income quartile, country and country group**



Note: Data weighted according to population. Average values on a 10-point scale.

Source: EQLS 2007

In all countries, income levels within the country make a substantial difference to life satisfaction. In general, the pattern is just what would be expected, with the highest levels of satisfaction among individuals in the top income quartile, intermediate levels of satisfaction among those in the two middle quartiles and the lowest levels of satisfaction among those in the bottom quartile. The difference in the average life satisfaction level between people in the top and bottom quartiles is quite substantial: 1.1 points in the EU15, 1.6 points in the NMS12 and 1.7 points in the CC3. As these figures reveal, income tends to matter more to life satisfaction in poorer countries, even when the focus is on relative incomes within countries, as is the case here regarding income quartiles.

The other interesting pattern in Figure 9 is that the satisfaction ‘penalty’ for low income is greater than the satisfaction ‘bonus’ for high income. Compared with the middle quartiles, people in the bottom quartile have life satisfaction levels that are 0.7 points lower in the EU15, 0.8 points lower in the NMS12 and 1.3 points lower in the CC3. Persons in the top quartile, on the other hand, have a more modest increase in average satisfaction levels compared with the middle group: 0.4 points in both the EU15 and CC3 and 0.8 points in the NMS12. This suggests that relative income – as measured by income quartiles – within a country is non-linear in its impact on life satisfaction levels, with most of the effect occurring in the transition from low to middle incomes.

These findings – namely, that income matters more in poorer countries and that the satisfaction ‘penalty’ for low income is greater than the satisfaction ‘bonus’ for high income – are consistent with a hierarchy

<sup>6</sup> The whole population is divided into four income groups (quartiles), each of them consisting of one quarter (25%) of the population. The bottom quartile comprises the 25% of people with the lowest income in the country, while the top quartile has the top 25% income earners in the country. In order to compare incomes for people living in households of different size and composition, the household incomes (in PPS) are standardised. The standardisation takes into account economics of scale in consumption: larger households can achieve the same standard of living with smaller per capita household income because of relatively lower costs of collective goods such as housing, utilities and consumer durables. It also takes into account different consumption patterns: expenditure on children’s consumption might typically be less than expenditure on an adult’s consumption. The standardisation uses a so-called modified OECD scale which assigns a value of 1.0 to the first adult member in the household, 0.5 to additional members aged 14 years and over and 0.3 to children aged under 14 years.

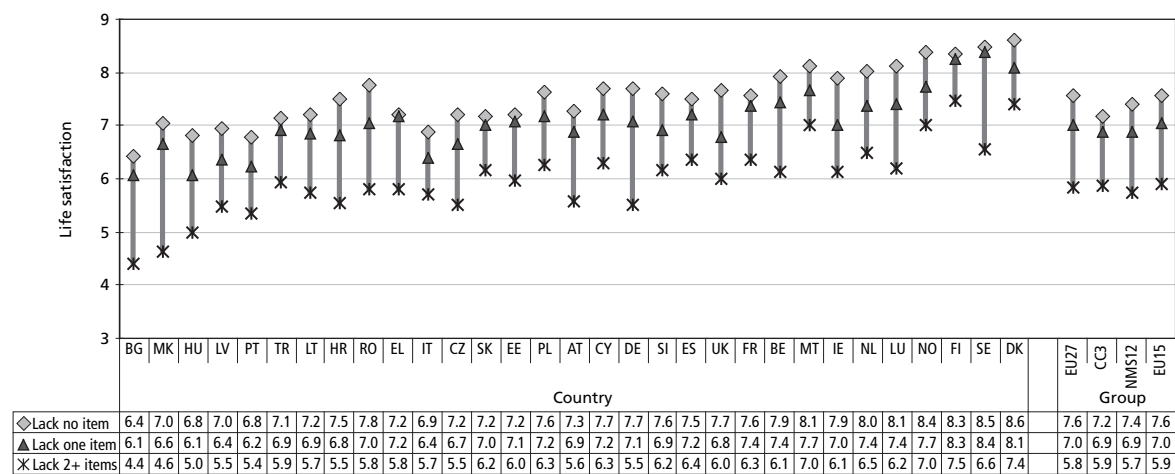
of needs interpretation (Maslow, 1943). Income matters most where, as a result of low income, basic needs are not met. After the point where basic needs are met, the relationship between income and subjective well-being is weaker.

Apart from these general patterns, some differences by country are worth noting. In all of the countries, people in the top income quartile have higher average life satisfaction levels than those in the lowest income quartile, and in most countries – apart from Denmark, Italy and Malta – the top income quartile also shows higher levels of satisfaction than the middle two quartiles. Denmark is unusual in that the middle income quartiles have the highest average level of life satisfaction. In Italy and Malta, people in the top income quartile are no more satisfied than those in the middle of the income distribution. The difference between the top and bottom income quartiles is particularly large in the Former Yugoslav Republic of Macedonia, Bulgaria, Croatia and Romania (2.1 to 2.4 points).

### Impact of lifestyle deprivation

Deprivation, another crucial indicator of objective quality of life, is captured by a count index of six common goods or services that the respondents cannot afford: adequate heating, an annual holiday, replacing worn-out furniture, a decent meal every second day, buying new clothes and entertaining friends. This is similar to a measure which has been widely used in analyses of poverty and deprivation using data from the European Community Household Panel (ECHP) and the EU Survey on Income and Living Conditions (EU-SILC) (see, for example, Whelan et al, 2001; Whelan and Maître, 2007).

**Figure 10: Life satisfaction, by lifestyle deprivation, country and country group**



Notes: Data weighted according to population. Average values on a 10-point scale. Lifestyle deprivation is a count of the number of items (out of six) that the household could not afford if it wanted them: keeping the home adequately warm, taking an annual holiday, replacing worn-out furniture, having a meal with meat, chicken or fish every second day, buying new rather than second-hand clothes, and having friends or family for a meal or drink once a month. The figure shows the average life satisfaction for people lacking no item, those lacking one item and those lacking two or more items.

Source: EQLS 2007

The EQLS shows that in the EU15, 69% of people lack none of the six items, compared with 33% in the NMS12 and 18% in the CC3 (Anderson et al, 2009). The mean number of items missing – representing the deprivation level – is lowest in the EU15 (0.65), higher in the NMS12 (1.8) and highest in the CC3 (2.63).

Figure 10 presents the relationship between deprivation and life satisfaction according to country and country group. The figure shows the average satisfaction level of adults in each country who lack none of the six items, the satisfaction level of those who lack one item and the satisfaction level of those who lack two or more of the items.

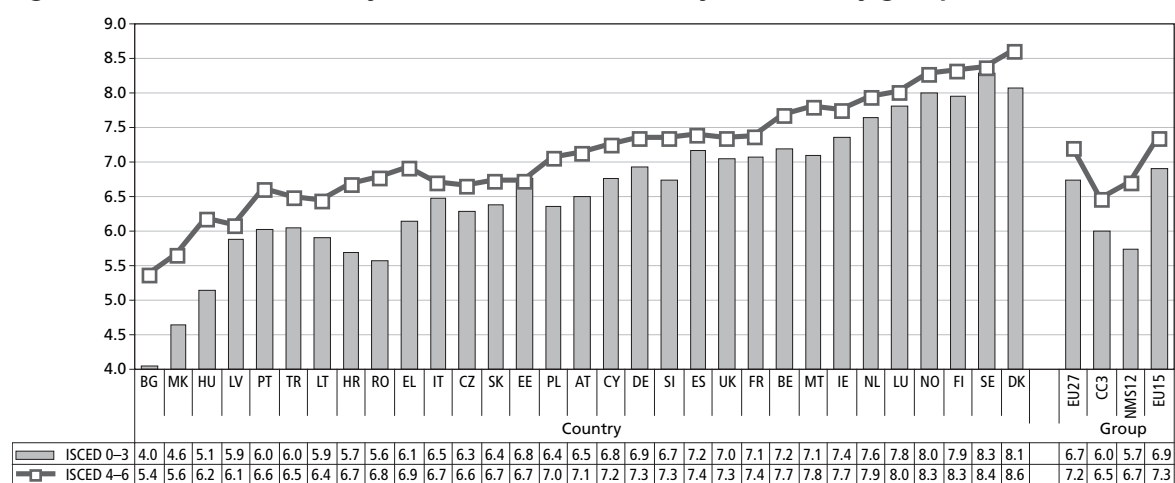
There is a clear relationship between deprivation and life satisfaction, with satisfaction levels being considerably lower for people who lack two or more items than for those who are not deprived. Compared with people experiencing no deprivation, the average life satisfaction level is 0.5 to 0.6 points lower on a 10-point scale for those who lack one item in the EU15 and NMS12, and 0.3 points lower in the CC3. The impact of lacking two or more items is larger compared with persons who are not deprived, with a life satisfaction level that is 1.7 points lower in the EU15 and NMS12 and 1.3 points lower in the CC3.

In interpreting the slightly smaller difference in life satisfaction associated with deprivation in the CC3 compared with the EU15 and NMS12, it is important to remember that the mean level of deprivation in the CC3 is rather high (2.63). This means that people lacking two or more items will tend to be a larger and more diverse group in the CC3. In the EU15, on the other hand, the number of people who lack two or more items is much lower.

### Education effects

It is also possible to examine the relationship between life satisfaction and education within a country. Higher educational levels are associated with improved employment prospects and living standards, so a positive association with life satisfaction would be expected. Figure 11 shows the average level of life satisfaction within each country and country group for two groups of people: those whose highest education standard is up to upper secondary level (ISCED 0–3) and those whose highest education standard is above this level (ISCED 4–6), according to the International Standard Classification of Education (ISCED). In all countries except Estonia, people with higher standards of education also have higher average levels of life satisfaction. In Estonia, the difference is very small (0.1 points on a 10-point scale) and statistically insignificant.

**Figure 11: Life satisfaction, by educational level, country and country group**



Notes: Data weighted according to population. The figure shows the life satisfaction values for people educated up to secondary level (ISCED 0–3) and for those with more than a secondary-level education (ISCED 4–6). Average values on a 10-point scale.

Source: EQLS 2007

The difference between the two education groups is largest in the NMS12, where people with education beyond secondary level have an average life satisfaction level that is 1.0 point higher than those with a secondary-level education or less. In the EU15, the difference between the two education groups is 0.4 points and it is 0.5 points in the CC3. Standard of education matters most for life satisfaction in Romania, where people with post-secondary education have an average satisfaction level that is 1.2 points higher than those with a secondary education or less.

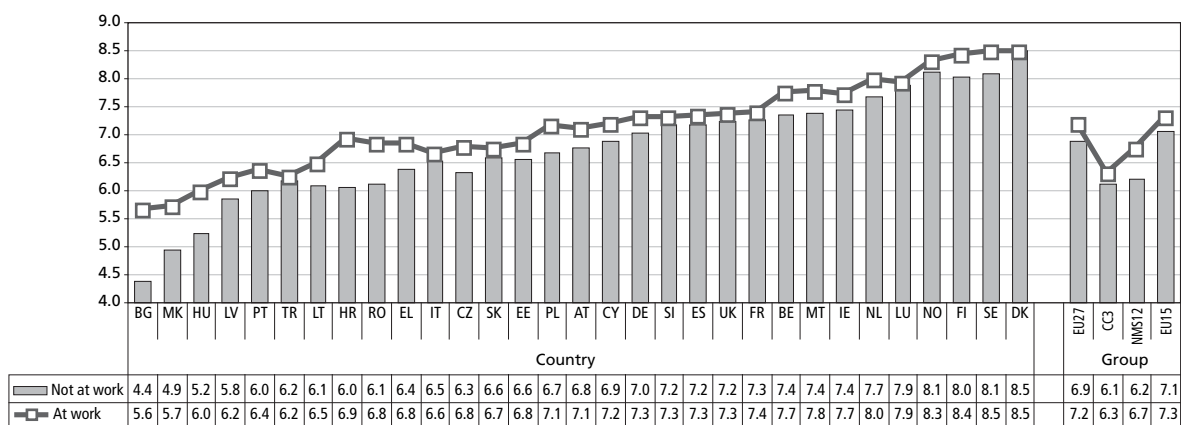
### Influence of employment status

Figure 12 shows life satisfaction levels according to employment status. The analysis compares two groups: people working for pay and those not working for pay. The latter group comprises adults who are retired, homemakers, unemployed, studying or otherwise economically inactive. People not working for pay would be expected to show diverse levels of life satisfaction; however, due to the small number of unemployed persons in each country sample, detailed data are not provided at this point. Chapter 6 will return to the impact of specific economic situations on life satisfaction when it presents the results of the multivariate analysis.

Figure 12 reveals that people working for pay have higher average life satisfaction levels than those not at work. The difference is small in some countries – less than 0.5 points on the 10-point scale in Denmark, France, Italy, Luxembourg, Slovenia, Spain, Turkey and the UK. The largest differences are found in the poorer countries: Bulgaria (1.2 points), Croatia (0.9 points) and the Former Yugoslav Republic of Macedonia (0.8 points).

The overall difference between individuals working for pay and those not working for pay is small in the EU15 and CC3 (0.2 points), but somewhat larger in the NMS12 (0.5 points). Part of the reason for the small apparent difference is that persons not at work are a diverse group. Unemployed people, for instance, would be expected to have lower than average life satisfaction levels, whereas individuals retired on a good pension are likely to be as satisfied as those at work.

**Figure 12: Life satisfaction, by economic status, country and country group**



Notes: Data weighted according to population. The figure shows the life satisfaction values for people in paid work and not in paid work. Average values on a 10-point scale.

Source: EQLS 2007

## Summary

This chapter has explored the relationship between life satisfaction and the socioeconomic characteristics of individuals, such as education, work, income and deprivation. A strong association can be found between life satisfaction and GDP per capita at national level ( $R=0.72$ ), as would be expected. Furthermore, life satisfaction is higher for people with higher levels of education, for those at work, for those with higher incomes and for those who are not deprived.

At the individual level, income and deprivation matter a great deal, and income matters more in the poorer countries. Focusing on relative incomes within a country, the analysis examined the life satisfaction levels among people in the top and bottom income quartiles relative to those in the middle half of the income distribution. The difference in satisfaction levels between individuals in the top and bottom income quartiles was 1.1 points in the EU15 and 1.6 to 1.7 points in the NMS12 and CC3. Moreover, evidence emerged that the impact of income is non-linear: compared with the middle quartiles of the income distribution, the life satisfaction ‘penalty’ for being at the bottom of the income distribution is greater than the satisfaction ‘bonus’ for being among the top earners.

This chapter also measured deprivation as a count of six common goods or services that the survey respondents cannot afford: adequate heating, an annual holiday, replacing worn-out furniture, meat every second day (if wanted), new clothes and entertaining friends. The analysis focused on persons lacking none of these items, those lacking one item and those lacking two or more items. The impact of deprivation, using these categories, on life satisfaction levels tended to be greater in the EU15 and NMS12 than in the CC3. This is partly an artefact of the distribution of deprivation across countries: fewer people in the EU15 are deprived than in the NMS12 or CC3, so that deprivation – as measured here – will be more consequential. Chapter 6 will return to the impact of deprivation on life satisfaction, controlling for other factors, in an analysis of all 31 countries combined.

Educational level has more of an impact in the NMS12, where a difference of 1.0 point in life satisfaction was observed between people with an education above secondary level and those with lower levels of education. In contrast, the difference in the EU15 and CC3 was smaller (0.4 to 0.5 points). Work status also mattered somewhat more in the NMS12 than the EU15 and CC3: people at work in the NMS12 have life satisfaction levels that are 0.5 points higher than those not in paid employment, compared with a gap of 0.2 points in the EU15 and CC3. An insufficient number of cases can be found at national level to provide a more detailed breakdown of persons not at work, but unemployed people would be expected to have lower levels of life satisfaction than retired persons or those engaged in home duties. Chapter 6 will return to this question, using a multivariate model to examine the impact of a more detailed classification of employment status on life satisfaction levels.

This chapter will examine the impact of ill-health and disability on life satisfaction. These would be expected to be negatively associated with overall life satisfaction. Although the focus in this report is on the impact of health on life satisfaction, health status could equally be considered as an outcome variable in its own right. In fact, the WHO definition of health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’ (World Health Organization (WHO), 1948) could be seen as encompassing subjective well-being. It is well known that health is similarly affected by many of the life circumstances that affect subjective well-being: those life circumstances that reduce subjective well-being are also likely to have a negative impact on health.

The analysis in this chapter will also explore the impact of social support on life satisfaction. The role of social support and social integration is twofold. On the one hand, it serves to reduce the effects of economic and material deprivation on the subjective well-being of persons who are disadvantaged. In this respect, it mediates between objective material deprivation and subjective well-being. On the other hand, social integration is also an important dimension of objective quality of life in its own right. This can be seen in the increased importance of social relationships in explaining overall life satisfaction in wealthier countries (Böhnke, 2005). This is consistent with the hierarchy of needs perspective (Maslow, 1943): when basic material needs are met, attention increasingly turns to meeting needs for belonging.

Analysis of the EQLS 2007 by Layte et al (2009) highlighted the importance of social support in buffering the impact of deprivation on perceived social exclusion. This chapter will examine whether social support plays a similar role in buffering the effect of material disadvantage on life satisfaction. The study distinguishes between practical, financial and moral support and between support from different sources – family and non-family. As well as the buffering role of social support for people who are deprived, it is useful to consider whether social support plays a similar role for other vulnerable groups, such as those who have lost a partner and those in poor health.

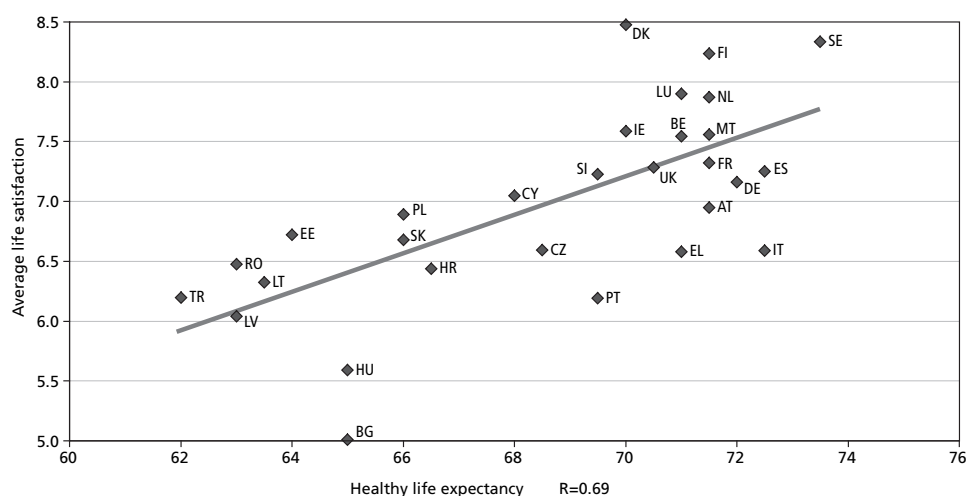
## Health effects

The chapter begins by examining the relationship between health and life satisfaction at national level. Figure 13 shows the relationship between healthy life expectancy in 2002, averaged across men and women, and the average life satisfaction at country level. Healthy life expectancy is a summary measure of population health that combines mortality and morbidity data to represent overall population health on a single indicator. It measures the number of years at birth that a person is expected to live without disability.

The variation in healthy life expectancy across countries is substantial, ranging from 62 years in Turkey to 73.5 years in Sweden, but most of the EU15 are clustered in a narrower range from 70 to 72 years. The association between healthy life expectancy and life satisfaction at national level is as expected, with greater healthy life expectancy associated with higher average levels of satisfaction. However, the amount of scatter around the regression line is considerably greater for the countries where healthy life expectancy is high. The pattern in the EU15 is weak because of the narrow range of life expectancies; thus, little variation emerges in healthy life expectancy but there is a great deal of variation in life satisfaction levels. The pattern is clearer in the NMS, where there is a wider spread of healthy life expectancy values. Nonetheless, Bulgaria and Hungary are outliers in having a lower life satisfaction level than countries with a similar level of healthy life expectancy.



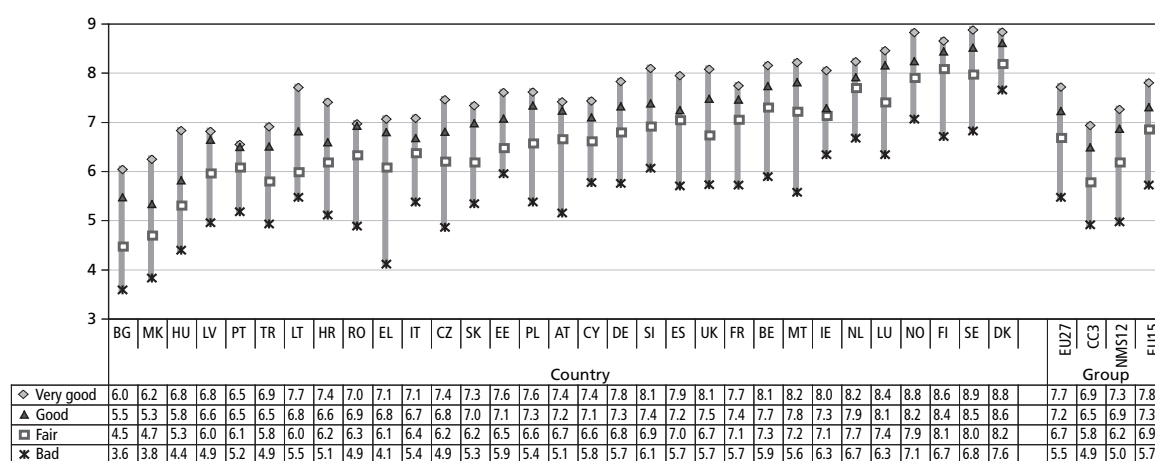
Figure 13: Healthy life expectancy in 2002 and average level of satisfaction, by country



Notes: Pearson correlation is 0.69. No data for the Former Yugoslav Republic of Macedonia or Norway.  
 Source: EQLS 2007 for satisfaction level; EurLIFE<sup>7</sup> data for healthy life expectancy

Figure 14 turns to the individual level within a country and asks to what extent life satisfaction is affected by personal self-rated health. Self-rated health is a widely used measure in survey research and is useful for establishing patterns and differences in health status. Subjective health has been shown to be a good indicator of health status and to predict death in prospective studies (Bowling, 2001; Miilunpalo et al, 1997). One would expect health status to be poorer in the NMS12 and CC3 than in the EU15, and this is indeed the case. Anderson et al (2009) report that 7% of adults in the EU15 report health that is bad or very bad, compared with 13% in both the NMS12 and CC3.

Figure 14: Life satisfaction, by health, country and country group



Note: Health: 'In general, would you say your health is very good, good, fair, bad or very bad?' The life satisfaction of people responding in these four health categories is measured on a 10-point scale.  
 Source: EQLS 2007

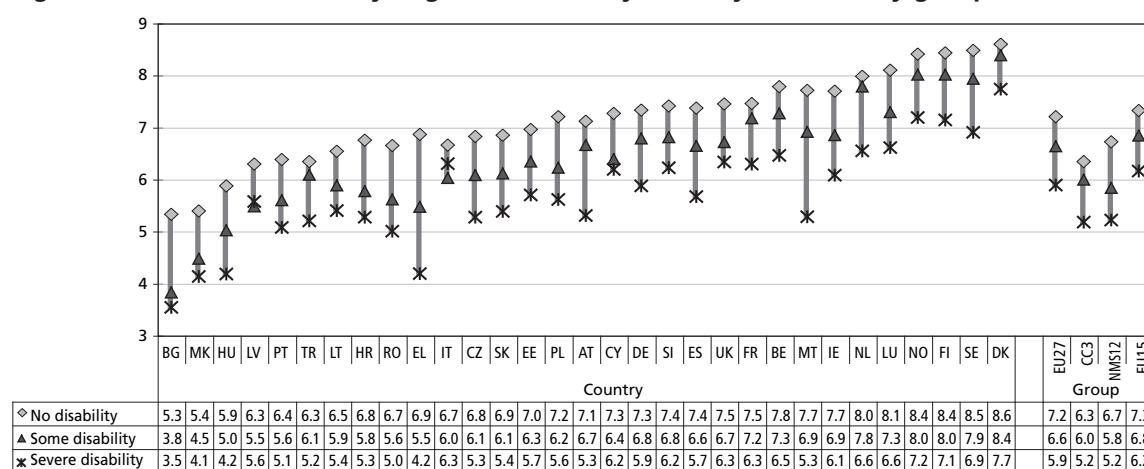
<sup>7</sup> <http://www.eurofound.europa.eu/areas/qualityoflife/eurlife/index.php>.

In all countries, self-rated health makes a substantial difference to life satisfaction. People who rate their health as ‘very good’ have an average satisfaction level that is 2.1 points higher on a 10-point scale than those who rate their health as ‘bad’ in the EU15, with comparable differences in the NMS12 and CC3 (2.3 and 2.0 points, respectively). The differences between countries in life satisfaction levels tend to persist, however, when the analysis takes account of self-rated health. Persons in good health in the Nordic countries show higher levels of life satisfaction than those in good health elsewhere.

## Impact of disability

Disability also makes a substantial difference to life satisfaction levels (Figure 15). The satisfaction gap between people with no disability and those with severe disability is almost 1.2 points on a 10-point scale in the EU15 and CC3 and 1.5 points in the NMS12. Disability makes slightly less of a difference to life satisfaction levels than health does, probably because the group of people with no disability is large in size and diverse. As was observed with health, the differences between countries in life satisfaction levels tend to persist when the analysis takes account of disability, so that people with a severe disability in the Nordic countries remain more satisfied with life than those with a severe disability in most other countries. The pattern in Italy is somewhat anomalous: there is much less variation in satisfaction levels according to disability than in other countries, and people with some disability have a lower level of life satisfaction than those with severe disability.

**Figure 15: Life satisfaction, by degree of disability, country and country group**



*Note:* Disability: The figure shows persons responding ‘Yes’ to the question ‘Do you have any chronic (long-standing) physical or mental health problem, illness or disability?’ and either ‘Yes, severely’ or ‘Yes, to some extent’ to the question ‘Are you hampered in your daily activities by this physical or mental health problem, illness or disability?’ The life satisfaction of this group is measured on a 10-point scale.

*Source:* EQLS 2007

Another aspect of the country pattern worth noting is that life satisfaction levels vary according to disability to a much greater extent in some countries than in others. The gap between persons with a severe disability and those with no disability is particularly wide in Greece (2.7 points) and Malta (2.4 points). A number of explanations are possible for these country differences in the link between life satisfaction and disability. One explanation is the coverage of the survey: the survey population comprises adults living in private households. If people with a disability are more likely to be living in the community than in communal or institutional settings in some countries, then the survey is likely to capture a higher proportion of adults with a very severe disability in those countries. Other differences

are likely to be employment opportunities for people with a disability and the quality of formal and informal support structures.

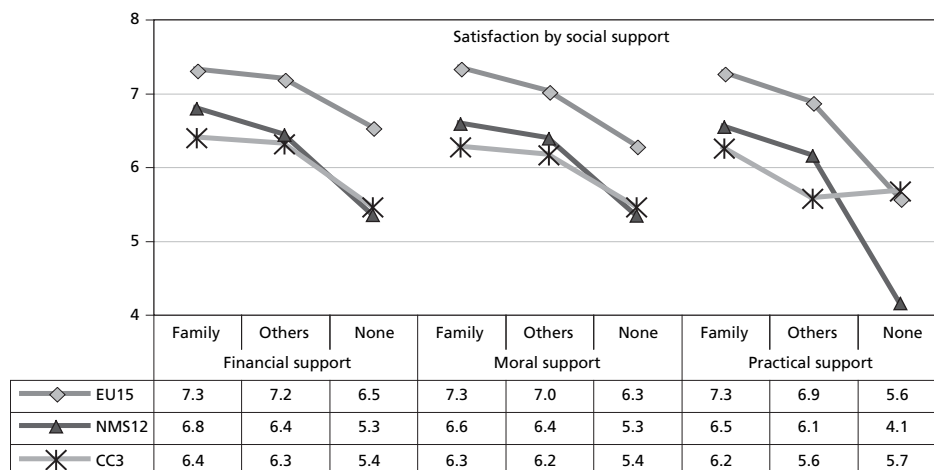
### Influence of social support

This section will begin by briefly outlining the impact of the different types of support measures in the country groups. It follows Layte et al (2009), who distinguish between sources of financial support (Q35e: ‘From whom would you get support if you needed to urgently raise €1,000<sup>8</sup> to face an emergency?’) and moral support (Q35d: ‘From whom would you get support if you were feeling a bit depressed and wanted someone to talk to?’). This report also considers practical support (Q35a: ‘From whom would you get support if you needed help around the house when ill?’), as this may be of particular importance to people with health problems.

Family members tend to be the main source of both financial and moral support. In the EU15, adults are more likely to draw on family for financial support (70%) than those in the CC3 and NMS12 (under 60%). The country groups are similar in terms of the proportions drawing on family for moral support (65%–66%). Individuals in the CC3 and NMS12 are more likely to have nobody in their social circle of family or friends on whom they can rely for financial support, amounting to a proportion of 20%, compared with 15% in the EU15 (Layte et al, 2009).

As Figure 16 shows, support from family tends to be most beneficial in terms of life satisfaction, but any support is better than none. In the EU15, practical, moral and financial support from family are associated with similar life satisfaction levels, while financial support tends to be more important in the CC3 and NMS12.

**Figure 16: Life satisfaction, by type and source of social support, and country group**



Notes: Q35: ‘From whom would you get support...if you needed help around the house when ill’ (practical); ‘...if you were feeling a bit depressed and wanted someone to talk to?’ (moral); ‘...if you needed to urgently raise €1,000 to face an emergency?’ (financial). The main source of support is recorded. The life satisfaction of each group is measured on a 10-point scale.

Source: EQLS 2007

<sup>8</sup> In the NMS and CC3, the amount was €500 or its equivalent in their national currencies.

In the EU15 and NMS12, a complete absence of practical support – something which is very rare – is associated with the lowest life satisfaction levels. This is particularly true in the NMS12, where people who lack practical support have satisfaction levels which are 2.4 points lower on a 10-point scale than those receiving practical support from family. In the CC3, little difference emerges in life satisfaction according to the type of support among people lacking support.

### **Buffering hypothesis**

This section will examine whether social support plays a role in buffering the impact of material disadvantage on life satisfaction. Layte et al (2009) find support for the buffering hypothesis with respect to the impact of deprivation on perceived social exclusion: ‘if the individual or household has received social support in the last year, they have a significantly lower level of perceived social exclusion than those who did not receive support, but who are experiencing the same level of deprivation’ (Layte et al, 2009).

The following analysis will adopt the same measures – material and moral support – and examine the extent to which different types of social support buffer the impact of objective disadvantage on life satisfaction. As well as moral and financial support, this report will consider practical support (Q35a: ‘From whom would you get support if you needed help around the house when ill?’). Similar to the situation regarding moral and financial support, most citizens of European countries have someone to rely on for practical support. However, the reliance on family members for this kind of support is even greater (88% in the EU15 and 92% in both the NMS12 and CC3) and few people lack this kind of support (1.6% in the EU15, 1% in the NMS12 and 3% in the CC3).

It would be expected that practical support of this kind would be more important to the subjective well-being of people whose health is not good, that financial support would be more important to the subjective well-being of those experiencing deprivation and that moral support would be more important to individuals who have experienced a loss, such as the loss of a spouse. The analysis asks the following questions:

- Is the availability of social support associated with higher levels of life satisfaction?
- Does the source of support make a difference (family or friends, neighbours or colleagues)?
- Does the type of support – practical, moral or financial – that matters depend on the nature of the vulnerability? For instance, as noted, practical support would be expected to be more important to people in poor health, while financial support would be more important to those experiencing material deprivation.

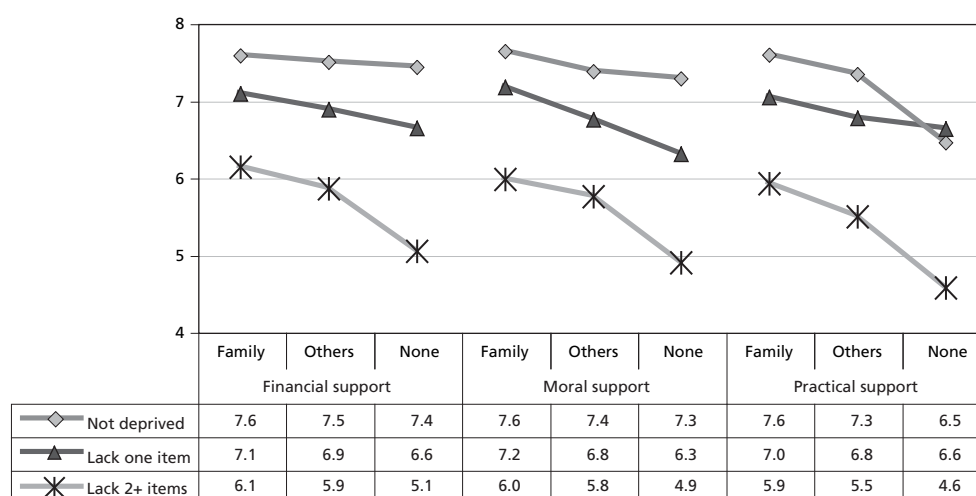
This analysis has the following expectations regarding the role of social support as a buffer.

- For people who are deprived, financial support will have a larger impact on life satisfaction compared with those who are not deprived. Furthermore, financial support will have a bigger impact on the life satisfaction of deprived persons than moral or practical support.
- For individuals who have lost a partner, moral support will have a larger impact on life satisfaction compared with those who are married, and moral support will have a bigger impact on their satisfaction than financial or practical support.
- For persons who are in poor health, practical support will have a larger impact on life satisfaction compared with those who are in good health, and practical support will have a bigger impact on their satisfaction level than other types of support.

## Deprivation

In the previous chapter, material deprivation was shown to be associated with significantly reduced levels of life satisfaction. Material deprivation is measured as the inability to afford any of six commonly available items: keeping the home adequately warm, taking an annual holiday, replacing worn-out furniture, having a meal with meat, chicken or fish every second day, buying new rather than second-hand clothes and having friends or family for a meal or drink once a month. Figure 17 shows the impact of the different types of support on the life satisfaction levels of individuals experiencing no deprivation, those lacking one of the six items and those lacking two or more items.

**Figure 17: Life satisfaction, by type and source of social support and level of deprivation**



Notes: All 31 countries with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for people in each combination of social support and level of deprivation. Deprivation is measured as a count of the number of items (out of six) that the household could not afford if they wanted them.

Source: EQLS 2007

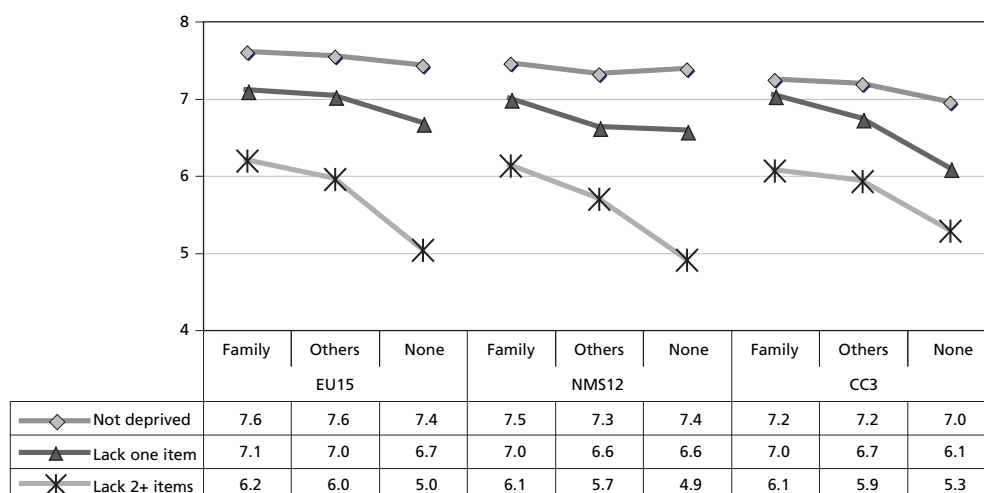
Turning first to the impact of financial support on these groups, the figure shows that an absence of such support reduces life satisfaction levels more for people lacking two or more items than it does for those lacking one item or those who are not deprived. This is consistent with the hypothesis that financial support will be more important to people in vulnerable material circumstances. Moreover, for all three groups, life satisfaction levels are highest where family members – rather than non-family – can be relied on for support. Therefore, the source of support also matters, but to a lesser extent than the availability of support.

It is interesting to consider whether moral and practical support are also more important in terms of deprivation levels and life satisfaction. Although this study did not have a specific hypothesis in this regard at the outset, it seems likely that moral support could be helpful in coping with the stress of deprivation. Figure 17 reveals the impact of moral support on life satisfaction levels. In fact, the pattern for moral support is very similar to that for financial support: it is most important for people who are most vulnerable in material terms (those lacking two items) and most beneficial if it comes from family members. For people who are not deprived and those who lack one of the six items, moral support has even more of an impact than financial support on life satisfaction levels: the line is steeper for moral than for financial support.

Finally, Figure 17 turns to practical support: being able to rely on someone if the person is ill and needs help around the house. Although this analysis had no expectations at the outset that practical support would be more important for people experiencing material deprivation, this turns out to be the case. For people lacking two or more items, having nobody to call on for practical support reduces average life satisfaction levels by 1.3 points on a 10-point scale compared with those receiving family support, which is larger than the reduction for those lacking one item (-0.4 points) and those who are not deprived (-1.1 points). Practical support emerges as being particularly important for individuals who are not deprived: the average life satisfaction level decreases to 6.5 points for people experiencing no deprivation but who have nobody to call on for practical support when required.

Figure 18 shows the impact of financial social support in the three country groups. In the EU15 and CC3, the pattern is very similar: financial support has a bigger impact on life satisfaction levels for people who are deprived, especially those lacking two or more of the six items. In the CC3, the difference according to level of deprivation is less marked: the availability of financial support matters somewhat more for people who are deprived, but the contrast with those not experiencing deprivation is not as strong as in the other country groups.

**Figure 18: Life satisfaction, by financial support, level of deprivation and country group**



Notes: Country groups with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for people in each combination of financial social support and level of deprivation according to country group. Deprivation is measured as a count of the number of items (out of six) that the household could not afford if they wanted them.

Source: EQLS 2007

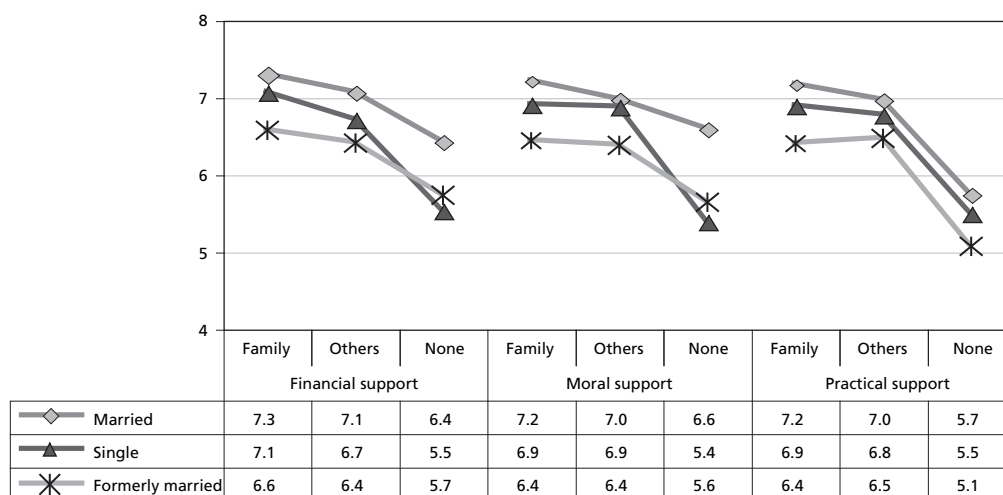
### Loss of partner

At the outset, this analysis hypothesised that moral support would be particularly important to persons who have experienced the loss of a partner. Although becoming widowed, divorced or separated also has financial and practical consequences, the loss of a partner is particularly challenging in emotional terms. The expectation here is that moral support will be more important than financial support for people who have lost a partner, and that moral support will be more important to this group than to those who are married. Although no specific hypothesis is made regarding the impact of support on single (never married) people, they are included in the analysis for completeness.

Figure 19 examines this issue. It shows the average level of life satisfaction for married, single and formerly married adults with each source of the different types of support. For married adults, life

satisfaction is highest if support is available from family members – which could include the husband or wife – but it is only slightly lower if support is available from others. The lowest level of life satisfaction among married people is found among those with nobody to call on for practical support. This suggests that the spouse or partner is either unwilling or unable to provide this kind of support – something that is likely to be stressful in itself.

**Figure 19: Life satisfaction, by type and source of social support and marital status**



Notes: All 31 countries with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for persons in each combination of social support and marital status.

Source: EQLS 2007

For single people, life satisfaction levels are higher if financial support is available from family (7.1 points on a 10-point scale) than from others (6.7 points). In the case of moral and practical support, however, the source of the support does not matter as much: life satisfaction levels are 6.8 to 6.9 points where either moral or practical support is available from either family members or others. For all three types of support, the lowest levels of life satisfaction (5.4 to 5.5 points) are found for single people who have no support available.

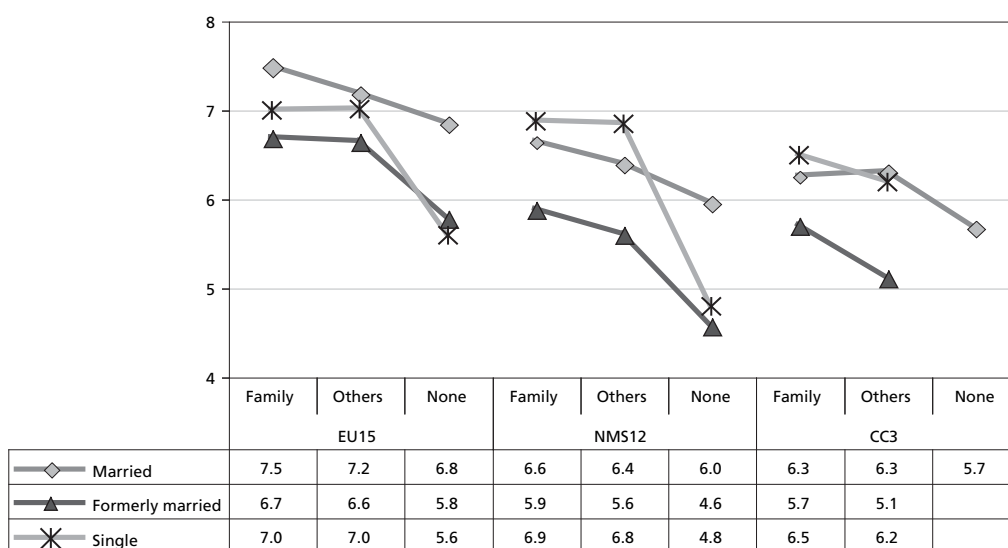
There is some evidence for the idea that moral support will be more important to formerly married people than to married people, but it is rather weak. Life satisfaction is 0.8 points lower for formerly married people who lack moral support, compared with those receiving such support from family, but this gap is not much wider than for married people (0.6 points). For formerly married people, contrary to expectations, moral support does not seem to be more consequential than financial support. Life satisfaction levels average 5.6 to 5.7 points when either kind of support is absent and increase to 6.4 to 6.6 points when these kinds of support are available from either family or others. Like married people, the lowest levels of life satisfaction are found among the small group who lack practical support (5.1 points).

Figure 20 shows the impact of moral support on the life satisfaction levels of married, single and formerly married people in each country group. The differences across the countries in the satisfaction levels of single people, compared with married people, are rather striking. As Chapter 2 showed, single people tend to be more satisfied with their lives than married people in the NMS12. However, in both

the EU15 and NMS12,<sup>9</sup> single people who lack moral support are among the least satisfied. It is clear that moral support is very important to the life satisfaction levels of single people. In the EU15 and NMS12, it does not matter whether this support comes from family or from others, such as friends.

Turning to the hypothesis that moral support will be more consequential for formerly married people than married persons, there is evidence of this in the EU15 and NMS12. The decline in life satisfaction levels when such support is absent is steeper for formerly married people than for married people. In the CC3, there are too few single and formerly married people who have no source of moral support to provide a reliable estimate.

**Figure 20: Life satisfaction, by moral support, marital status and country group**



Notes: Country groups with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for persons with each type of moral social support according to marital status.

Source: EQLS 2007

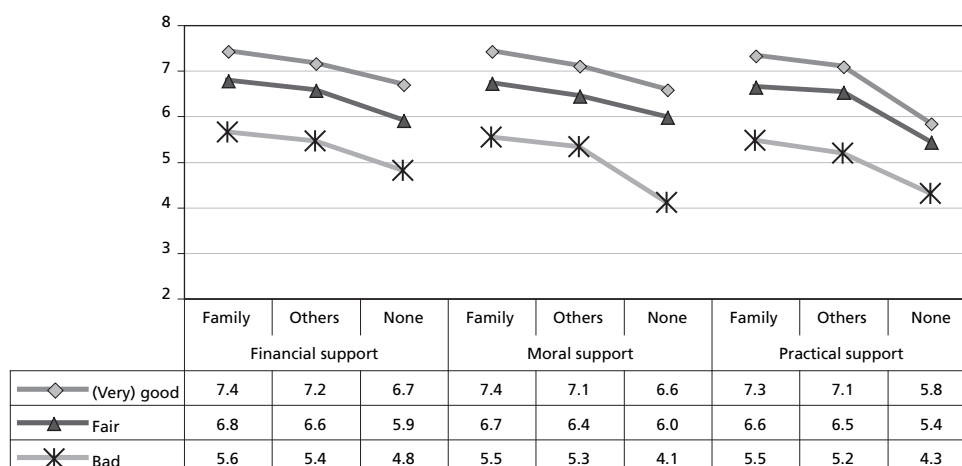
### Poor health

It might be expected that practical support would be particularly important to people whose health is poor. As such, this analysis expects a greater drop in life satisfaction among people in poor health than among those in good health if practical support is absent. One would also expect an absence of practical support to have a larger impact than an absence of financial or moral support for people in poor health. Figure 21 shows the impact of financial, moral and practical support – distinguishing the main source as being from family or others – for persons whose health is good, fair or bad in all 31 countries under consideration. Practical support, whether from family or non-family, does substantially increase life satisfaction levels for people whose health is bad (by 1.2 points on a 10-point scale), but moral support is even more important (1.4 points). Furthermore, the impact of practical support is actually greater for people in good health (1.5 points) than for those in fair or bad health (1.2 points). In fact, it is moral support that has a larger impact for people whose health is bad (1.4 points) than for those whose health is fair or good (0.7 to 0.8 points). Financial support is also important, but its impact is lower and does not differ as much depending on the person’s health status (0.7 to 0.9 points).

<sup>9</sup> There were too few cases of single or formerly married people in the CC3 with no moral support available to provide reliable estimates of their average life satisfaction level.



Figure 21: Life satisfaction, by social support and health status

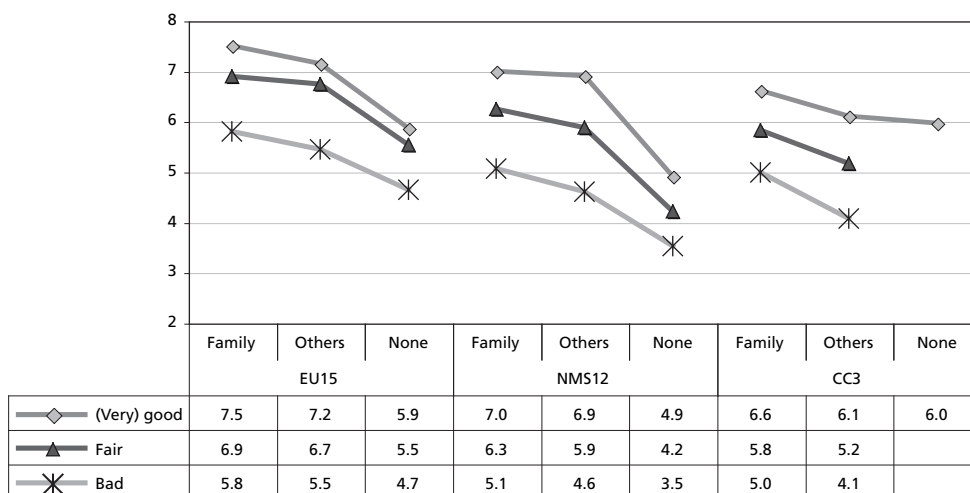


Notes: All 31 countries with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for persons in each combination of social support and health status.

Source: EQLS 2007

Figure 22 shows the impact of practical support on life satisfaction according to country group. In the EU15 and NMS12, the data reveal that the availability of practical support matters in all country groups but that it does not matter more for people whose health is poor. In the CC3, there are too few cases of people in fair or bad health with no practical support to provide a reliable estimate.

Figure 22: Life satisfaction, by practical support and health status and country group



Notes: All 31 countries with population weights. The figure shows the mean level of life satisfaction on a 10-point scale for persons with each type of practical social support according to health status.

Source: EQLS 2007

## Summary

Poor health and disability are both associated with lower levels of life satisfaction. Self-rated health has a substantial effect, with a satisfaction gap of 2.1 points on a 10-point scale between people who rate their health as bad in the EU15 and those who rate their health as good. The life satisfaction gap associated with disability is somewhat smaller overall (1.1 to 1.5 points), probably because people with

no disability are a large and diverse group. It is significant, however, that the broad country differences in life satisfaction persist for individuals in each health or disability status: for example, people in the Nordic countries who are in poor health or have a severe disability remain more satisfied than those in other countries.

This chapter also focused in some depth on social support. Social support is important in its own right, but is also significant in buffering the impact on life satisfaction of material disadvantage and health problems. Social support from family emerged as being particularly important, enhancing well-being to a greater extent than social support from people outside the family. The analysis also examined different types of support: financial support (the ability to raise a substantial sum of money in an emergency), moral support (having someone to talk to when feeling depressed) and practical support (someone to help around the house in the event of illness).

The analysis examined the potential of social support to buffer the impact of disadvantage on life satisfaction in three areas: deprivation, loss of a partner and poor health. It was expected that financial support would be particularly important to persons experiencing deprivation, that moral support would be especially important to those who had lost a spouse and that practical support would be particularly important to those in poor health.

First, the analysis found evidence in support of the buffering hypothesis with respect to lifestyle deprivation: a lack of financial support reduces life satisfaction levels more for people who cannot afford two or more of six items (1.0 point) than it does for those lacking one item (0.5 points) or those who are not deprived (0.2 points).

The next hypothesis was that moral support would be particularly important to someone who had lost a partner; the expectation was that an absence of moral support would result in a greater reduction in life satisfaction levels for adults who are divorced, separated or widowed than for adults who are married. However, the analysis found only weak evidence for the first hypothesis: life satisfaction is 0.8 points lower for formerly married people who lack support compared to those with support from family, but the gap is not much smaller for married people (0.6 points). Unexpectedly, financial support emerged as being equally important to formerly married people and even more important to married persons. Practical support was more important than either financial or moral support and was equally important whether the person was married, single or formerly married (1.3–1.4 points).

The third area concerning the buffering role of social support was in the context of health. Here, it was expected that practical support would be more important for people with health problems and would be more important than financial or moral support. Contrary to expectations, the impact of an absence of practical support was slightly greater for persons in good health than for those in poor health. In fact, moral support had a bigger impact (1.4 points) on the life satisfaction levels of those in poor health than those in good health.



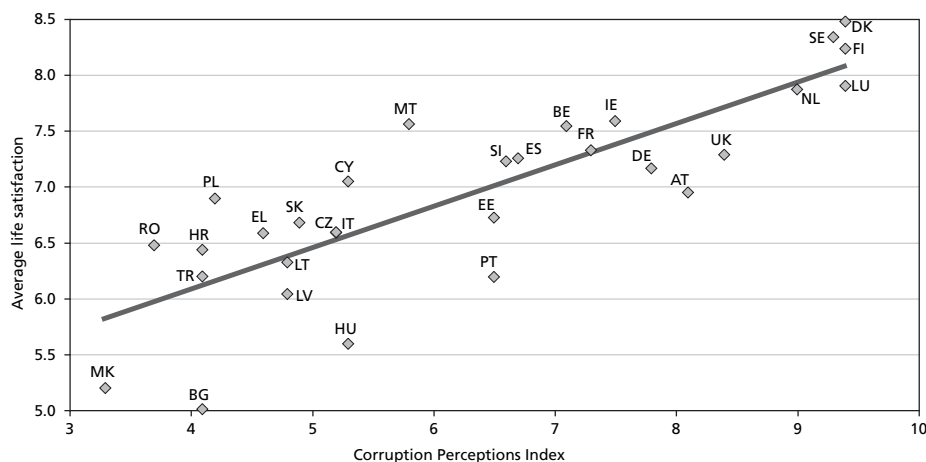
This chapter turns to the impact of public institutions on life satisfaction. Institutional conditions have also been found to have a systematic relationship with subjective well-being (van Hoorn, 2007). For instance, the results of Frey and Stutzer (2000) suggest that forms of direct democracy – such as referenda – increase the level of subjective well-being (see also Dorn et al, 2008). At a more abstract level, Radcliff (2001) finds a positive relationship between the ideological complexion of governments and levels of subjective well-being. He also reports a positive correlation between qualitative features of the welfare state and subjective well-being. Veenhoven (2000) finds that political and private freedom increase subjective well-being, but only in rich countries. Further evidence of the importance of trust to democracy is provided by Grönlund and Setälä (2007) who, in an analysis of 22 European countries, find that trust in parliament has a positive impact on turnout in national elections.

The study will examine the link between life satisfaction and two measures of the quality of society: the perceived quality of public services and trust in democratic institutions. The hypothesis is that the quality of society will be positively associated with life satisfaction. In particular, the quality of public services is expected to serve a buffering role for people experiencing material disadvantage: good-quality public services should enhance the well-being of people with low incomes or experiencing deprivation to a greater extent than those with higher incomes and not experiencing deprivation. The analysis will also explore whether differences arise between countries in the extent to which the quality of society matters. Böhnke (2007), for instance, found that perceived quality of society matters more to people in the poorer countries surveyed, particularly where social provision is weak.

## Perception of institutional corruption

This chapter begins by examining the relationship between life satisfaction and one measure of the quality of society at national level: the Corruption Perceptions Index. This index is an indicator – compiled by the global civil society organisation Transparency International from survey data and expert opinion – of the extent to which the institutions in a country are vulnerable to corruption (Transparency International, 2007). The index ranges from 1 (most corruption) to 10 (least corruption). It is a useful indicator of the trustworthiness of the institutions in a society, as perceived by the population and by national and international observers.

**Figure 23: Life satisfaction, by perception of corruption and country**



Notes: No data for Norway. Pearson correlation is 0.83.

Sources: EQLS 2007 for life satisfaction, Transparency International for the Corruption Perceptions Index (2007)

Figure 23 plots the average life satisfaction at national level against the score on the Corruption Perceptions Index. The relationship is quite strong, with the Nordic countries ranking at the top in both life satisfaction and absence of corruption, while countries such as Bulgaria and the Former Yugoslav Republic of Macedonia receive the lowest scores on both measures. The country-level correlation is 0.83.

### Measuring quality of society in the EQLS

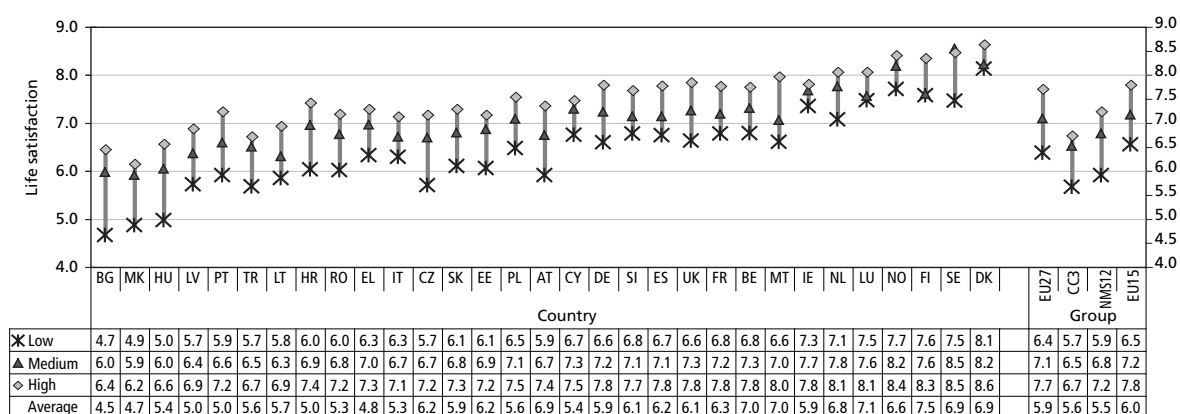
The analysis now turns to individuals’ perceptions of the quality of society. It considers two indicators: the quality of public services and trust in public institutions. The quality of public services is measured using a 10-point index where people are asked to rate the quality of six public services: ‘In general, how would you rate the quality of each of the following PUBLIC services in [country] – health services, education system, public transport, childcare services, care services for elderly and state pension system?’ Each service is given a score from 1 (worst quality) to 10 (best quality). The index is the average value across the six public services. From the available literature, it is reasonable to expect a relatively strong link to subjective well-being.

The study also examines a summary index of the degree of trust across six major institutions – the parliament, the legal system, the police, the press, the government and the political parties – based on the question ‘Please tell me how much you personally trust each of the following institutions?’ Measured on a 10-point scale, a score of 10 indicates very high levels of trust.

### Impact of quality of public services

Figure 24 shows the association between life satisfaction and differences in perceived quality of public services within countries. People are likely to perceive the quality of services differently within a country for a number of reasons. There may be objective differences in how services are delivered according to region or local area, or people who are most dependent on the services may have a different perspective than those who can afford private services as an alternative. Figure 24 shows the

Figure 24: Life satisfaction, by perceived quality of public services, country and country group



Notes: Data weighted by population. The chart shows average life satisfaction on a 10-point scale according to high (6.5–10), medium (5.5–6.5) and low (1–5.5) perceived quality of public services, averaged across health services, the education system, public transport, childcare services, care services for elderly people and the state pension system. The table shows average life satisfaction for each level of quality and the average perceived quality of public services in the country or country group.

Source: EQLS 2007

average life satisfaction for persons whose average rating across the six public services is low (under 5.5), medium (5.5 to 6.5) or high (6.5 to 10). These thresholds were chosen to ensure that each group had a sufficient number of cases to provide a breakdown at national level.

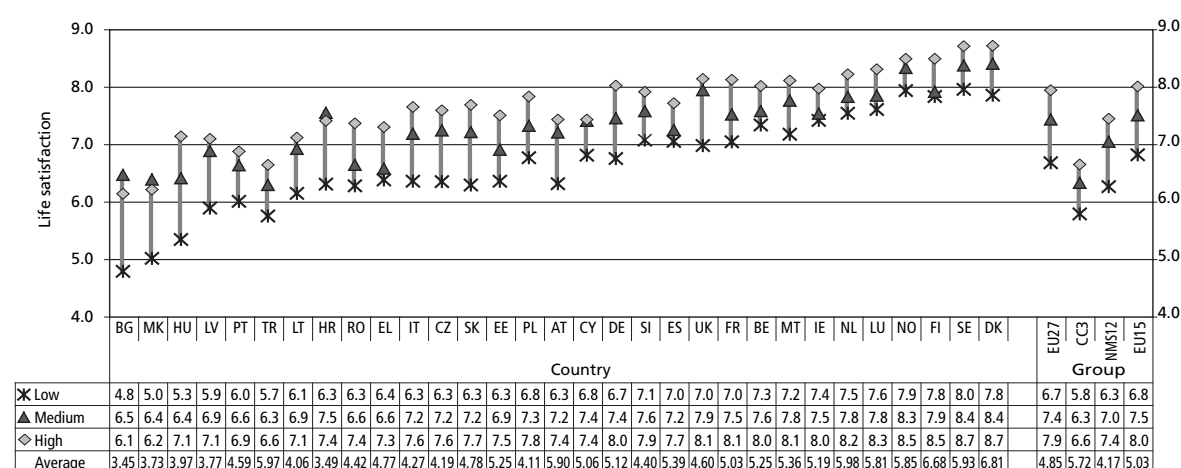
In all countries, people who give the quality of public services a high score are more satisfied with their lives than those giving a low score. The difference in life satisfaction between those giving public services a high and low score is quite substantial: more than 1.2 points in the EU15, 1.3 points in the NMS12 and more than 1.0 point in the CC3. The gap tends to be wider in the poorer countries – for example, 1.7 points in Bulgaria, 1.6 points in Hungary and 1.3 points in the Former Yugoslav Republic of Macedonia, compared with 0.5 to 1.0 points in Denmark, Luxembourg, Finland, Norway and Sweden.

### Influence of trust in institutions

The analysis now shifts focus to the perceived level of trust in institutions according to country and country group. The last row of the table in Figure 25 shows the average level of trust on a 10-point scale across the six institutions cited in the EQLS. On average, trust in institutions is unexpectedly high in the CC3 (5.7 points) compared with 4.1 points in the NMS12 and 5.0 points in the EU15. This relatively high average score in the CC3 is driven entirely by the level of trust in institutions in Turkey, which is considerably higher (5.9 points) than the scores in Croatia and the Former Yugoslav Republic of Macedonia (about 3.5 and 3.7 points, respectively). This high level of trust in institutions in Turkey is unexpected, particularly given the relatively low score on the Corruption Perceptions Index (see Figure 23 above). However, data from the World Values Survey for 1999 to 2004 and the Eurobarometer for 2007 confirm that trust in political institutions in Turkey is close to the middle for EU15 countries (OECD, 2007b; see also European Commission, 2008a).

At national level, comparing the NMS12 and EU15, levels of trust tend to be higher in the richer countries. This finding is in line with other research on levels of trust in eastern European countries in particular (see Pichler and Wallace, 2009).

**Figure 25: Life satisfaction, by trust in institutions, country and country group**



Notes: Data weighted by population. The figure shows average life satisfaction on a 10-point scale according to high (6.5–10), medium (5.5–6.5) and low (1–5.5) levels of trust in institutions, averaged across the parliament, the legal system, the police, the press, the government and the political parties.

Source: EQLS 2007

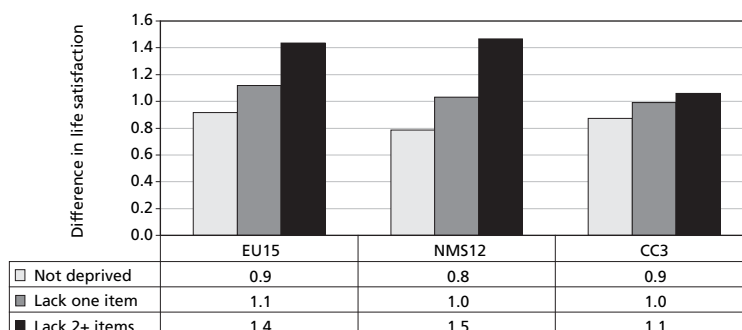
Focusing on the association between life satisfaction and level of trust in institutions, Figure 25 shows the average level of life satisfaction for people whose trust is low (under 5.5), medium (5.5–6.5) or high (over 6.5). A clear association emerges between trust and life satisfaction, with high levels of trust in institutions being associated with higher levels of life satisfaction. Similar to the findings for quality of public services, trust in institutions appears to be more consequential in the richer countries. Compared to people with low levels of trust, those whose levels of trust are high are more satisfied with life by 1.2 points in the EU15, 1.1 points in the NMS12 and 0.8 points in the CC3.

**Buffering hypothesis and quality of public services**

The expectation is that the quality of public services will matter more to the life satisfaction of vulnerable groups, such as people on a low income or who experience deprivation, since these groups are more dependent on public services to enhance the quality of their lives.

The analysis begins by examining the impact of quality of services on the life satisfaction levels of individuals experiencing different levels of lifestyle deprivation. As in previous chapters, deprivation is measured as the inability to afford any of six commonly available items: keeping the home adequately warm, taking an annual holiday, replacing worn-out furniture, having a meal with meat, chicken or fish every second day, buying new rather than second-hand clothes and having friends or family for a meal or drink once a month. The study distinguishes between people who lack none of these items, those lacking one item and those lacking two or more items.

**Figure 26: Difference in life satisfaction between people who perceive quality of public services as high and low, by deprivation within country group**



Notes: Data weighted according to population. The figure shows the difference in life satisfaction on a 10-point scale between people giving a high (6.5–10) and low (1–5.5) evaluation of the quality of public services at different levels of deprivation within country groups.

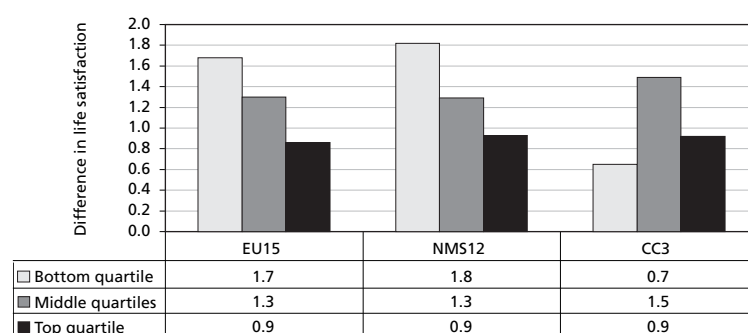
Source: EQLS 2007

Figure 26 shows how much difference the quality of public services makes to the life satisfaction of people experiencing different levels of deprivation within the EU15, NMS12 and CC3. The figure compares the life satisfaction level of individuals giving a low (1–5.5) and high (6.5–10) evaluation of the quality of public services. For instance, looking at people who are not deprived in the EU15, the average life satisfaction level is 0.9 points higher on a 10-point scale for those giving a positive evaluation of the quality of public services compared with those giving a negative evaluation. For individuals who are deprived in the EU15, the quality of public services makes more of a difference to life satisfaction, with a 1.1 point satisfaction gap between people giving positive and negative evaluations of the quality of public services among those lacking one item and a 1.4 point satisfaction gap for those lacking two or more of the six items.

This pattern is repeated in the NMS12 and CC3. In all cases, the life satisfaction gap between people with positive and negative perceptions of public services is wider among those experiencing deprivation. The satisfaction gap for the most deprived group (lacking two or more items) is narrower in the CC3 than in the EU15 or NMS12. This may be because levels of deprivation tend to be much higher overall in the CC3 so that people lacking two or more items may differ more substantially in terms of their experience of relative deprivation.

Figure 27 examines the impact of the perceived quality of public services for different income groups, comparing the bottom and top quartiles – defined at national level – within each country grouping. For the EU15 and NMS12, the life satisfaction gap is widest for people in the bottom income quartile (1.7–1.8 points, respectively, compared with 0.9 points in each group for the top income quartile). However, the pattern is different in the CC3. This pattern is driven by the situation in Turkey, where the perceived quality of public services matters more to persons in the middle half of the income distribution and matters least to those at the bottom. Croatia and the Former Yugoslav Republic of Macedonia follow the dominant pattern, with a stronger association between life satisfaction level and perceived quality of public services for people at the bottom of the income distribution.<sup>10</sup>

**Figure 27: Difference in life satisfaction between people who perceive quality of public services as high and low, by income quartile within country group**



Notes: Data weighted according to population. The figure shows the difference in life satisfaction on a 10-point scale between people giving a high (6.5–10) and low (1–5.5) evaluation of the quality of public services for different income quartiles – the two middle quartiles are combined – within country groups.

Source: EQLS 2007

### Buffering hypothesis and trust in institutions

Issues of transparency and accountability of public institutions have become a focus of attention in recent years. Arguably, these concerns are more pressing for middle income groups than for those at the top or bottom of the income distribution. People at the top of the income distribution may be in a better position to insulate themselves from – or even benefit from – any unfairness or lack of transparency in relation to public institutions. Those at the bottom of the income distribution, on the other hand, may be more concerned with their immediate material conditions. Figure 28 explores this hypothesis. It shows the difference in life satisfaction between people with high levels of perceived trust in institutions (6.5–10) and those with low levels (1–5.5) of trust according to income quartile within countries and country groups.

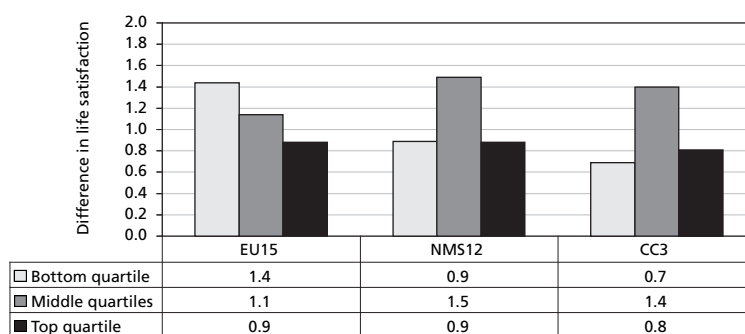
<sup>10</sup> In fact, the pattern is fairly mixed at national level; in a number of countries, the quality of public services matters more to people at the top of the income distribution. Such countries include Cyprus, Hungary, Latvia, Luxembourg, Malta, Portugal and Spain.



The evidence provides some support for the hypothesis in the NMS12 and CC3, but not in the EU15. In the NMS12 and CC3, the life satisfaction gap between people with high and low levels of trust in institutions is widest for the middle income group (1.4–1.5 points on a 10-point scale) and does not differ substantially for those in the top and bottom income quartiles (0.7–0.9 points). In contrast, for people living in the EU15, the satisfaction gap is wider for the bottom income quartile (1.4 points) than those in the middle two quartiles (1.1 points) or top quartile (0.9 points). In fact, in the richer countries, institutional trust has a greater impact on the life satisfaction levels of people in the bottom income quartile than in other income categories. It is in the poorer countries that a greater impact is seen on people in the top or middle income quartiles.

In summary, the life satisfaction gap associated with differences in levels of trust in institutions is wide, but is not always according to the expected pattern in the richer countries.

**Figure 28: Difference in life satisfaction between people with high and low level of trust in institutions, by income quartile within country group**



Notes: Data weighted according to population. The figure shows the difference in life satisfaction on a 10-point scale between people with high (6.5–10) and low (1–5.5) trust in institutions for different income quartiles – the two middle quartiles are combined – within country groups.

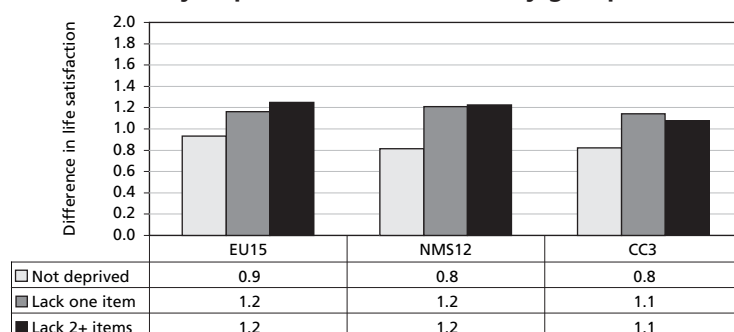
Source: EQLS 2007

Given the problems with the measurement of income in the EQLS – it is missing for about one-third of cases overall, and for over 40% in the EU15 – Figure 29 examines the satisfaction gap associated with high and low levels of deprivation. The relationship between income quartile and deprivation is different across country groups. In the EU15, where deprivation levels are lowest, there is a greater concentration of people who are deprived in the bottom income quartile. In the NMS12 and CC3 – with average deprivation levels of 2.0 and 3.2 items, respectively, on a six-item scale – more people who experience deprivation will be found in the middle income groups. Thus, deprivation is not a good measure against which to check the hypothesis regarding the greater impact of trust in public institutions on middle income groups; nonetheless, it should help to establish whether trust in institutions matters more for people who are most disadvantaged.

Figure 29 shows the difference in life satisfaction on a 10-point scale between people with high levels of perceived trust in institutions (6.5–10) and those with low levels of trust (1–5.5) according to the level of deprivation within each country group. In all three country groups, the satisfaction gap between individuals with high and low levels of trust in institutions is much wider for people who are deprived. The biggest difference is between people who are not deprived and those who are lacking any item. The disparity between people lacking one item and those lacking two or more items is smaller. It appears, then, that low institutional trust is more consequential for people who are most disadvantaged. Chapter

6 will present the results of an analysis that examines the impact of deprivation and income jointly while controlling for other factors. This will provide a more formal test of the hypotheses.

**Figure 29: Difference in life satisfaction between people with high and low level of trust in institutions, by deprivation within country group**



Notes: Data weighted according to population. The figure shows the difference in life satisfaction on a 10-point scale between people with high (6.5–10) and low (1–5.5) trust in institutions according to the level of deprivation within country groups.

Source: EQLS 2007

## Summary

This chapter has examined the association between perceived quality of society and life satisfaction. At the outset, it noted the strong association at national level between the Corruption Perceptions Index and the average level of life satisfaction. Moving to the individual level, the report asked whether differences in perceived quality of society were associated with differences in life satisfaction within countries. Using two measures of the quality of society – an index of perceived quality of public services and an index of trust in public institutions – the analysis found a clear link between life satisfaction and both of these indices. The difference in life satisfaction between people giving public services a high and low score is quite substantial: more than 1.2 points on a 10-point scale in the EU15, 1.3 points in the NMS12 and more than 1.0 point in the CC3. Furthermore, the difference tends to be greater in poorer countries. Similarly, there is a clear association between trust and life satisfaction, with high levels of trust in institutions being associated with higher levels of life satisfaction. Compared to people with low levels of trust, those with high levels of trust are more satisfied by 1.2 points in the EU15, 1.1 points in the NMS and 0.8 points in the CC3.

The analysis also examined the buffering hypotheses with respect to perceived quality of public services. The expectation was that the perceived quality of public services would matter more in terms of life satisfaction for people who are vulnerable in material terms. This hypothesis was largely confirmed: the satisfaction gap between individuals who give a positive and negative score to public services is wider for persons experiencing deprivation in the EU15, NMS12 and CC3. The results for income lead to a similar conclusion for the NMS12 and EU15 in that the satisfaction gap associated with a low and high perceived quality of public services is wider for the bottom income quartile than for the top earners; however, this is not the case for the CC3. This variation is driven by the pattern in Turkey, where the perceived quality of public services matters more to people in the middle half of the income distribution and matters least to the lowest earners.

In addition, the study hypothesised that the level of trust in institutions would matter more to individuals in middle income groups than to those at the top or bottom of the income distribution. The evidence provided some support for this hypothesis in the NMS12 and CC3, but not in the EU15. In the NMS12

and CC3, the life satisfaction gap between persons with high and low levels of institutional trust was widest for the middle two income quartiles (1.4–1.5 points), but the gap is widest for the bottom income quartile in the EU15 (1.4 points). On the other hand – and contrary to expectations – the analysis found that trust in institutions mattered more to persons who were deprived in all three country groups. It seems, then, that the relationship between life satisfaction and trust in institutions is more complex than was anticipated.

# Multivariate analysis of various factors

# 6

So far, this report has examined the different factors associated with life satisfaction separately. This approach is useful in highlighting the groups of people whose quality of life is positively or negatively impacted by a variety of factors. However, it makes it difficult to assess the processes underlying variation in life satisfaction, particularly since the factors examined are associated or causally related in complex ways. For instance, older age and ill health are correlated and it would be interesting to know whether the main determinant of life satisfaction is ill health or some other factor related to age. Similarly, education and income are causally linked and both are associated with differences in life satisfaction. It is important to ask whether education still makes a difference when taking income into account.

This chapter develops a multivariate model of life satisfaction to help answer the above questions. A secondary aim is to investigate the extent to which national differences in socioeconomic and other characteristics account for the observed country differences in life satisfaction. The analysis makes a simplifying assumption and examines only the impact of national differences in the levels of the independent variables. In other words, it assumes that differences in life satisfaction by age group, gender, income and other factors are the same in each country within the country groups.<sup>11</sup>

Unlike previous chapters, where the data were weighted by population, this analysis uses the unweighted data in order to obtain the correct standard errors. Cases with missing information are not excluded from the analysis; across such a large number of variables, this would substantially reduce the cases available for analysis and potentially lead to biased estimates of the impact of different objective conditions on subjective well-being within countries and country groups. Instead, all cases are included, and missing values are controlled in the model by using dichotomous variables. The highest level of missing information is for income: household net income is not reported for 30% of cases across the 31 countries.

Table 2 summarises the measures used in the model and shows the mean level of each variable according to country group. Most of the measures used have been described in earlier chapters. This analysis includes a number of additional variables, including the presence and number of children. The proportion of households with children is slightly lower in the CC3 and is highest in the EU15. The average number of children per adult – expressed as a difference from two – is lowest in the CC3 and highest in the NMS12. This is partly due to the difference in the proportion of adults with children, which is highest in the EU15 and lowest in the CC3. The average number of children among adults with any children is highest in the CC3 (2.58 children, compared with 2.14 in the EU15 and 2.06 in the NMS12).

The analysis also adds a control for being a never married lone parent. The proportion of adults in this position is very small in all country groupings, especially the CC3. However, they are likely to be a vulnerable group and one would expect their life satisfaction levels to be lower.

As well as education, income and level of deprivation, the analysis includes a more detailed breakdown of economic status and a measure of occupational status for persons who have ever worked. Unemployed people are expected to have substantially lower life satisfaction levels, in line with previous research. Among people employed, the analysis expects to find a higher level of life satisfaction among people with professional or managerial occupations than those with manual occupations.

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<sup>11</sup> Thus, the study assumes that once other factors have been controlled for, the effect of each variable – such as gender, age group and income category – on life satisfaction has the same magnitude and direction in each country within the country groups.

**Table 2: Variables used in multivariate model of life satisfaction, by country group**

		EU15	NMS12	CC3	Total
<b>Gender (Ref=male)</b>	Female (%)	52	52	50	52
<b>Age (Ref=35–64 years of age)</b>	18–34 years (%)	28	33	46	31
	65+ years (%)	21	18	10	19
<b>Marital status (Ref=married)</b>	Separated (%)	7	6	2	6
	Widowed (%)	8	10	6	8
	Never married (%)	18	19	28	19
<b>Has children (Ref=no)</b>	Has children (%)	72	71	69	71
<b>Number of children</b>	Mean number of children (Ref=2)	-0.47	-0.54	-0.22	-0.46
<b>Single lone parent</b>	(%)	1	1	0	1
<b>Education (Ref=ISCED 3)</b>	ISCED 0–2 (%)	36	25	62	36
	ISCED 4–6 (%)	30	20	11	26
<b>Employment (Ref=employed)</b>	Unemployed (%)	5	6	6	5
	Retired (%)	24	27	12	24
	Otherwise inactive (%)	18	17	46	21
<b>Occupation (Ref=non-manual)</b>	Professional/managerial (%)	11	9	4	10
	Self-employed (%)	5	3	6	5
	Manual (%)	30	39	28	31
	Farming (%)	2	4	6	3
	Never worked (%)	10	10	45	14
<b>Income quartile (Ref=middle two)</b>	Bottom quartile (%)	15	18	22	16
	Top quartile (%)	15	19	19	16
	Missing income (%)	41	29	19	36
<b>Deprivation</b>	Number of items lacking (mean)	0.70	2.00	3.20	1.22
<b>Health (Ref=good)</b>	Fair (%)	23	30	22	24
	Bad (%)	7	13	13	9
<b>Disability (Ref=none)</b>	Slight (%)	13	13	9	13
	Severe (%)	5	8	10	6
<b>Practical support (Ref=family)</b>	From others (%)	11	7	5	9
	None (%)	2	1	3	2
<b>Moral support (Ref=family)</b>	From others (%)	31	31	30	31
	None (%)	4	3	4	4
<b>Financial support (Ref=family)</b>	From others (%)	15	21	22	17
	None (%)	11	14	16	12
<b>Trust in institutions (centred at 5) – Mean</b>		0.03	-0.82	0.71	-0.06
<b>Quality of public services (centred at 6) – Mean</b>		0.03	-0.49	-0.44	-0.12
<b>Interactions</b>	Mean level of deprivation, lack financial support	0.14	0.48	0.71	0.27
	Loss of partner, financial support from others (%)	3	3	2	3
	Bad health, lack moral support (%)	1	1	0	1
	Deprived, mean quality of public services (scale as above)	-0.10	-0.41	-0.38	-0.19
	Deprived, mean trust in institutions (scale as above)	-0.12	-0.65	0.67	-0.14
	Middle income, mean trust in institutions (scale as above)	0.02	-0.25	0.32	0.00

Notes: Data weighted according to population. The data are a mix of percentages and means, as indicated. Ref = reference.  
Source: EQLS 2007

The income measure compares people in the bottom and top income quartiles with the two quartiles in the middle. As noted above, income is not provided for a substantial proportion of households, ranging

from 19% in the CC3 to 41% in the EU15. As a result, it is important to also include the measure of deprivation, based on six standard items as outlined earlier. This is included in the model as a count variable, ranging from 1 to 6. The three groups of countries differ substantially in the average number of items lacking, reflecting their different standards of living: 0.7 in the EU15, 2.0 in the NMS12 and 3.2 in the CC3.

Chapter 4 described the measures of social support. This analysis treats persons who can rely on family for each type of support as the reference category, as this is the largest group in all countries.

The two indicators of quality of society, both measured on a 10-point scale, are included in the model as continuous variables. To facilitate interpretation of the results, they are coded so that 0 is the value closest to the mean across countries (5 in the case of trust in institutions and 6 in the case of quality of public services). Thus, for trust in institutions, a score of -1 corresponds to 4 on the original 10-point scale.

The last six measures are the variables that emerged as being statistically significant in the tests of the buffering hypotheses regarding social support and quality of society, and of the hypothesis that trust in institutions matters more to the life satisfaction of middle income groups. These measures are as follows:

- level of deprivation for people who lack financial support (0=no deprivation or has financial support, 1-6=level of deprivation for those who lack financial support and lack one or more of the six items described in Chapter 3);
- loss of a partner and can rely on financial support from others (1=widowed, divorced or separated and can rely on non-family for support, 0=otherwise);
- bad health and lack moral support (1=health is very bad or bad and lacks financial support). This turned out not to be significantly associated with life satisfaction in any of the country groups, probably because of the very small number of people in poor health who lack practical support;
- quality of public services for people who are deprived (0=not deprived; for those who lack one or more of the six lifestyle items, quality of public services is coded as above);
- trust in institutions for persons who are deprived (0=not deprived; for those who lack one or more of the six lifestyle items, trust in institutions is coded as above);
- trust in institutions for people in the middle income category (0=top or bottom income quartile; trust in institutions is coded as above for those in the middle income quartile).

Tables 3 and 4 (below) show the results of the multivariate models. The figures are unstandardised Ordinary Least Squares (OLS) regression coefficients for the series of models run on the 31 countries – and within each country group – using unweighted data. OLS regression is a statistical technique that enables an examination of the impact of a set of factors – such as gender, age group and income – on life satisfaction, holding all other factors constant. Thus, for instance, it is possible to see what the difference in life satisfaction between age groups looks like when taking account of differences between age groups in terms of marital status, education and income. The regression coefficients can be interpreted as the difference in life satisfaction, compared with the reference group, when other factors are controlled. For instance, Table 4 reveals that people aged 18–34 years are more satisfied with life than those aged 35–64 years (the reference group) by 0.4 points when controlling for differences in marital status, gender and the presence and number of children in the family (Model number 2). When

adding further controls for education, employment status, occupation and income, the difference is somewhat smaller (0.3 points, Model 3).

The final model (7) is shown for all 31 countries and for each country group in Table 4, which examines the impact of individual characteristics on life satisfaction. At each stage, an additional set of variables is added sequentially in order to understand how demographics, socioeconomics, health and disability, social support and quality of society affect the differences in life satisfaction discussed in earlier chapters. The sequence is as follows:

Model 1	Countries – Germany is the reference country for the model of all 31 countries and the EU15 model, Poland is the reference for the NMS12 model and Turkey is the reference for the CC3 model.
Model 2	Demographic characteristics – gender (reference is male), age group (reference is 18–34 years of age), marital status (reference is married), presence of children (reference is none), number of children (reference is 2) and single lone parenthood.
Model 3	Socioeconomic characteristics – level of education (reference is ISCED 3), employment status (reference is ‘at work’), occupation (reference is routine non-manual occupation), income quartile (reference is the middle two quartiles) and deprivation (reference is lacking none of the six items).
Model 4	Health and disability – self-assessed health status (reference is good or very good) and disability (reference is none).
Model 5	Social support – availability of practical support (help around the house when ill, reference is from family), availability of moral support (someone to talk to, reference is from family) and availability of financial support (to raise about €1,000 in an emergency, reference is from family).
Model 6	Quality of society – perceived quality of public services (average across public services, centred at 5, range from -5 to 4) and level of trust in institutions (average across institutions, centred at 6, range from -4 to 5).
Model 7	Tests of the buffering hypotheses regarding social support and quality of society and of the hypothesis that trust in public institutions matters more to the life satisfaction of middle income groups.

The R-squared statistic – adjusted for the number of parameters – is shown at the top of the table. This can be interpreted as the amount of total variance in life satisfaction explained by the variables included. About one-third of the variation in life satisfaction can be accounted for by the average difference between countries and the individual characteristics of adults. Presenting the results for several models makes it possible to better understand, for instance, how health differences according to age help to explain observed age differences in life satisfaction.

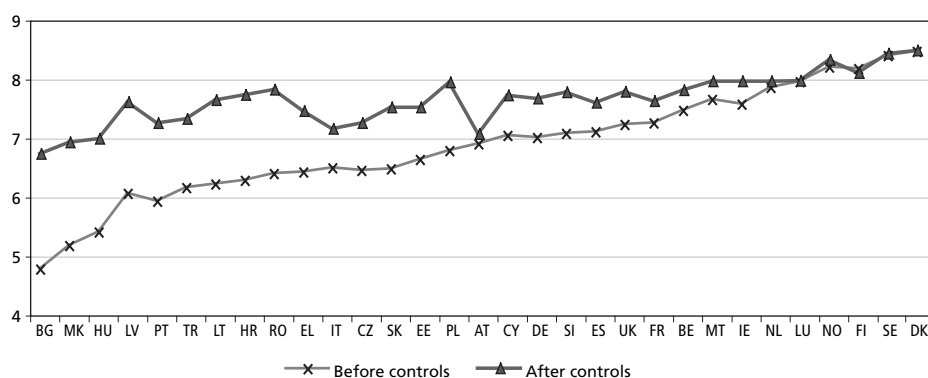
The three right-hand columns of Table 4 show the final model for each country cluster. As the sample size within each country group is lower, this will have an impact on the power of the OLS regression technique to detect small effects. This means that the absence of a significant effect in a country group may be due to the smaller sample size rather than to a substantive difference in people’s experience

in that country group. This is particularly true of the CC3, where there are just 4,008 cases, compared with 12,952 responses in the NMS12 and 17,674 responses in the EU15.

### Accounting for differences between countries

Before exploring the results outlined in Table 4 under a range of headings, Figure 30 examines how the variations in life satisfaction between the 31 countries appear after controlling for differences in the average levels on a full set of factors in the models.

**Figure 30: Country difference in life satisfaction before and after controls**



Notes: Data unweighted, so some differences arise compared with the figures in Chapter 1. The figure shows the average life satisfaction level by country before controls and predicted average life satisfaction after controlling for national differences in demographics, socioeconomics, health and disability, social support and quality of society.

Source: EQLS 2007

It is clear that when national differences are controlled for in these characteristics, the variations between the countries are much smaller. The countries with the lowest observed life satisfaction levels would have much higher rates if they did not experience disadvantage in terms of socioeconomic characteristics and quality of society, in particular. Some notable differences between countries remain when the controls have been included, such as the higher life satisfaction levels in the Nordic countries and the relatively low satisfaction levels in Austria and Italy. However, a full examination of individual country differences lies beyond the scope of the present project.

Table 3 shows that after controlling for differences between the countries in terms of demographics, socioeconomics, health and disability, social support and quality of society, the variations between the countries are reduced markedly. For instance, the difference in life satisfaction between Bulgaria and Germany (the reference country) is 2.2 points, but decreases to 1.4 points when controlling for socioeconomic differences between the countries in Model 3 and declines to 1.0 point when adding controls for variations in the perceived quality of society in Model 6.



**Table 3: Multivariate model of life satisfaction (country differences)**

Model number	1	2	3	4	5	6	7
R. Sq. (adj.)	0.17	0.20	0.29	0.32	0.33	0.37	0.37
Constant	7.0	6.9	7.4	7.6	7.7	7.6	7.7
<b>Country (ref = DE):</b>							
BG	<b>-2.2</b>	<b>-2.3</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.0</b>	<b>-0.9</b>
MK	<b>-1.8</b>	<b>-1.9</b>	<b>-1.0</b>	<b>-1.0</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.7</b>
HU	<b>-1.6</b>	<b>-1.6</b>	<b>-0.9</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.7</b>	<b>-0.7</b>
LV	<b>-1.0</b>	<b>-0.9</b>	<b>-0.5</b>	<b>-0.3</b>	<b>-0.3</b>		
PT	<b>-1.1</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.4</b>	<b>-0.4</b>
TR	<b>-0.9</b>	<b>-1.0</b>				<b>-0.3</b>	<b>-0.3</b>
LT	<b>-0.8</b>	<b>-0.7</b>	<b>-0.3</b>				
HR	<b>-0.7</b>	<b>-0.8</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.3</b>		
RO	<b>-0.6</b>	<b>-0.6</b>				0.2	0.2
EL	<b>-0.6</b>	<b>-0.6</b>	<b>-0.3</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.2</b>
IT	<b>-0.5</b>	<b>-0.5</b>	<b>-0.7</b>	<b>-0.7</b>	<b>-0.7</b>	<b>-0.5</b>	<b>-0.5</b>
CZ	<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>
SK	<b>-0.5</b>	<b>-0.5</b>					<b>-0.1</b>
EE	<b>-0.4</b>	<b>-0.3</b>	<b>-0.2</b>				<b>-0.1</b>
PL	<b>-0.2</b>	<b>-0.3</b>		0.2	0.2	0.3	0.3
AT			<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.6</b>	<b>-0.6</b>
CY							
SI							
ES							
UK	0.2	0.3		0.1	0.1	0.1	0.1
FR	0.2	0.2					
BE	0.5	0.5	0.3	0.4	0.4	0.1	0.1
MT	0.6	0.6	0.7	0.7	0.6	0.3	0.3
IE	0.6	0.6	0.4	0.3	0.3	0.3	0.3
NL	0.8	0.9	0.5	0.5	0.5	0.3	0.3
LU	0.9	0.9	0.6	0.6	0.6	0.3	0.3
NO	1.2	1.2	0.8	0.9	0.9	0.6	0.7
FI	1.2	1.2	0.8	0.9	0.9	0.4	0.4
SE	1.4	1.4	1.0	1.0	1.0	0.7	0.8
DK	1.5	1.5	1.1	1.2	1.2	0.8	0.8

Notes: Data unweighted for all 31 countries. R. Sq. (adj.) = R-squared adjusted, in statistical terms. Ref = reference. The table shows the unstandardised OLS regression coefficient (bold:  $p < .01$ , otherwise  $p < .05$ , non-significant coefficients not shown). Coefficients can be interpreted as the amount by which life satisfaction would change if the variable were to increase by one unit. Controls for other variables (as shown in Table 4) are included in the model, as are controls for missing values on variables.

Source: EQLS 2007

Table 4: Multivariate model of life satisfaction

Model number		All 31 countries						EU15	NMS12	CC3
		2	3	4	5	6	7	7	7	7
	R. Sq. (adj.)	0.20	0.29	0.32	0.33	0.37	0.37	0.32	0.35	0.31
Gender (Ref=male)	Female		<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	
Age (Ref=35–64 years of age)	Age 18–34 years	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	
	Age 65+ years	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.3</b>	
Marital status (Ref=married)	Separated	<b>-0.9</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.7</b>
	Widowed	<b>-0.7</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.3</b>	
	Never married	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>		<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>		
Has children (Ref=no)	Has children	<b>0.2</b>	<b>0.1</b>						<b>0.2</b>	
Number of children (Ref=2)		<b>-0.04</b>	<b>0.07</b>	<b>0.07</b>	<b>0.06</b>	<b>0.04</b>	<b>0.04</b>	<b>0.06</b>		
Single lone parent (Ref=no)		<b>-1.0</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>	
Education (Ref=ISCED 3)	ISCED 0–2		<b>-0.1</b>		<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>		<b>-0.2</b>	
	ISCED 4–6									
Employment (Ref=employed)	Unemployed		<b>-0.7</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.6</b>
	Retired		<b>0.1</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.3</b>
	Otherwise inactive			<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>			
Occupation (Ref=non-manual)	Professional/managerial					<b>0.1</b>	<b>0.1</b>			
	Self-employed				<b>0.1</b>	<b>0.1</b>	<b>0.1</b>		<b>0.2</b>	
	Manual		<b>-0.1</b>							<b>-0.2</b>
	Farming									
	Never worked		<b>0.1</b>	<b>0.1</b>						
Income quartile (Ref=middle two)	Bottom quartile		<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.7</b>
	Top quartile		<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	
Deprivation	Number of items lacking		<b>-0.4</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.2</b>	<b>-0.3</b>
Health (Ref=good)	Fair			<b>-0.6</b>	<b>-0.6</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.4</b>	<b>-0.5</b>	<b>-0.5</b>
	Bad			<b>-1.3</b>	<b>-1.2</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-1.0</b>	<b>-1.1</b>
Disability (Ref=none)	Slight									
	Severe			<b>-0.2</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>	<b>-0.2</b>	
Practical support (Ref=family)	From others									
	None				<b>-0.4</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.4</b>	
Moral support (Ref=family)	From others				<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>	
	None				<b>-0.3</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.3</b>	
Financial support (Ref=family)	From others				<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>		<b>-0.1</b>	<b>-0.2</b>
	None				<b>-0.3</b>	<b>-0.2</b>				
Trust in institutions (centred at 5)						<b>0.14</b>	<b>0.09</b>	<b>0.09</b>	<b>0.12</b>	
Quality of public services (centred at 6)						<b>0.20</b>	<b>0.17</b>	<b>0.18</b>	<b>0.17</b>	<b>0.14</b>
Interactions (Buffering hypotheses)	Deprived, lack financial support						<b>-0.09</b>	<b>-0.11</b>	<b>-0.12</b>	
	Loss of partner, financial support from others						<b>0.16</b>		<b>0.24</b>	
	Bad health, lack moral support									
	Deprived, quality of public services						<b>0.04</b>	<b>0.06</b>	<b>0.05</b>	
	Deprived, trust in institutions						<b>0.08</b>	<b>0.05</b>	<b>0.07</b>	<b>0.09</b>
	Middle income, trust in institutions						<b>0.02</b>			<b>0.11</b>

Notes: Data unweighted for all 31 countries. R. Sq. (adj.) = R-squared adjusted, in statistical terms. Ref = reference. The table shows the unstandardised OLS regression coefficient (bold:  $p < .01$ , otherwise  $p < .05$ , non-significant coefficients not shown). Coefficients can be interpreted as the amount by which life satisfaction would change if the variable were to increase by one unit. Controls for country differences in average levels of life satisfaction are included in the model, as are controls for missing values on variables.

Source: EQLS 2007

## Gender, age and marital status

Chapter 2 found that the differences in life satisfaction according to gender were rather small. This remains the case when controlling for other differences between individuals, as Table 4 shows. The life satisfaction gap in relation to gender is only one-tenth of a point on the 10-point scale. The difference is comparable in size within the three country groups, but is not statistically significant in the CC3.

Age differences follow a slightly curvilinear pattern that is more pronounced in the NMS12. People aged 65 years or more and those aged less than 35 years are more satisfied than the group aged 35–64 years, but only by 0.1 points for the younger age group and 0.2 points for the older age group. However, when considering that many people aged over 65 years will also be retired, it is possible to see from the coefficients for these variables that their economic status would increase their life satisfaction level by a further 0.2 points. On the other hand, if their retirement income places older people in the bottom income quartile or if they experience deprivation or are widowed, their life satisfaction levels would be reduced substantially. The curvilinear pattern is stronger in the NMS12 than in the EU15 and is not statistically significant in the CC3. There are sizeable differences in life satisfaction level according to marital status. Formerly married people remain less satisfied than married persons when controlling for factors such as income and social support. Differences between married and formerly married people in terms of socioeconomic characteristics such as income and deprivation are important in explaining some of the lower life satisfaction of the formerly married group, as observed in Chapter 2. This can be seen in Table 4 by comparing the coefficients for Model 3 (after controlling for the effects of socioeconomic characteristics) with those for Model 2 (before these controls are added). After adding the controls, the difference between formerly married and married adults decreases by 0.3 points. Although social support is also important to this group (the coefficients decline by 0.1 points between Model 4 and Model 5 when adding the measures of social support), it does not compensate fully for the loss of a partner. Controlling for all other factors in the model, people who are separated or divorced are less satisfied with life than married persons by 0.5 points, while those who are widowed are less satisfied by 0.3 points.

The substantially lower life satisfaction level among separated or divorced people is found in all three country groups. The difference in life satisfaction between widowed and married adults varies across country groups: it is larger in the EU15 than in the NMS12 (a reduction of 0.5 and 0.3 points, respectively) and the gap is not statistically significant in the CC3.

The difference between single and married people is smaller (0.1 points across the 31 countries). Overall, the life satisfaction levels of single persons are slightly lower than those of married people, but the difference is statistically significant only in the EU15.

The presence of children does not enhance life satisfaction when other factors are controlled for in the EU15 and CC3, but it has a small positive impact in the NMS12 (0.2 points). In the EU15, slightly higher life satisfaction levels are associated with a larger number of children. Compared to people with one child, for instance, those with three children are more satisfied by about 0.12 points in the EU15. The difference according to number of children is not statistically significant in the NMS12 and CC3.

Being a never married lone parent is associated with substantially lower levels of life satisfaction (by 0.4 points), even when controlling for the poorer economic circumstances in which people in this category often find themselves. This difference is apparent in the EU15 and NMS12 but is not statistically significant in the CC3, where the number of single lone parents is much lower.

## Education, work, income and deprivation

Chapter 3 showed that people with education beyond secondary level had substantially higher life satisfaction than those with a lower education standard – by about 0.5 points, rising to 1.0 point in the NMS12. When controlling for the increased income and reduced risk of deprivation associated with higher levels of education, no difference emerges between people with ISCED levels 4–6 and those with ISCED level 3 (the reference category). However, persons with a lower education standard (ISCED 0–2) have lower levels of life satisfaction by a small amount in the NMS12 (0.2 points). Differences in life satisfaction according to education are not statistically significant in the EU15 and CC3. Thus, much of the advantage – in life satisfaction terms – associated with education arises because of the improved living circumstances that it brings.

Chapter 3 also revealed that people who work for pay have higher life satisfaction levels than those not working for pay. The analysis can now ask whether this difference persists when controlling for other factors such as income and deprivation, as it examines a more detailed classification of economic status. When other factors are controlled, unemployed people are substantially less satisfied (by 0.6 points) than those in employment and, as noted above, retired and otherwise economically inactive people are slightly more satisfied (by 0.2 and 0.1 points, respectively). The negative impact of unemployment on life satisfaction cannot be reduced to its effect on income and living circumstances or on health status, as it remains when these are controlled. On the other hand, when controlling for economic circumstances, retired people have higher life satisfaction levels. Part of the difference between people at work and those not working for pay that was observed in Chapter 3 was due to differences in economic circumstances.

Employment status has a similar impact in all three country groups, with higher life satisfaction levels among retired people and substantially lower levels among unemployed persons. Within country groups, however, the difference between other economically inactive groups – such as homemakers and students – and those at work is not statistically significant.

After controlling for economic circumstances and health status, only small differences arise between occupational groups. Self-employed people are slightly more satisfied than employees, but only in the NMS12 (0.2 points in the NMS12, not statistically significant in the CC3 and EU15). Professional and managerial workers are very slightly more satisfied (0.1 points in the model for all countries), but the effect is too small to reach statistical significance within the country groups. Manual workers in the CC3 have somewhat lower levels of life satisfaction (0.2 points), but this is not the case in the NMS12 and EU15. The minor differences between occupational groups suggest that it is the associated income and living standards and differences in health status between these groups that is driving any observed difference in life satisfaction.

Chapter 3 noted the asymmetric relationship between life satisfaction and income quartile: compared with the middle income quartile, the satisfaction ‘penalty’ for low income was greater than the satisfaction ‘bonus’ for high income. Table 4 reveals that this pattern persists, especially in the CC3, with other factors being controlled. Differences in life satisfaction according to income quartile are significant, but people at the bottom of the income distribution are most affected. Compared with the middle two income quartiles, people in the bottom income quartile are less satisfied in all country groups; the margin is particularly wide in the CC3 (0.7 points, compared with 0.2 points in the EU15 and NMS12). Compared with the middle two income quartiles, people in the top income quartile experience a small increase in life satisfaction in the EU15 and NMS12 (both 0.1 points), but do not differ in the CC3. It is noteworthy that the analysis continues to observe this pattern according to

income, even when deprivation levels are controlled. This suggests that relative income – particularly having much lower incomes than the median in a country – has an influence on life satisfaction that is independent of its impact on being able to afford a basic standard of living.

Lifestyle deprivation is also strongly associated with life satisfaction. Chapter 3 observed differences in life satisfaction ranging from 1.3 points in the NMS12 and CC3 to 1.7 points in the EU15 between people lacking two or more of the six items and those lacking none. The multivariate analysis uses a more detailed measure of deprivation, coded from 0 to 6. Thus, the coefficient refers to the change in life satisfaction for each additional item lacked. People who lack one of the six items experience lower levels of life satisfaction (by 0.3 points) than those who are not deprived; those who lack two items experience satisfaction levels that are 0.6 points lower, and so on. The maximum impact – for persons lacking six items – is 1.8 points. The reduction in life satisfaction associated with deprivation is found within all three country groups.<sup>12</sup>

### Health and disability

Chapter 4 revealed sizeable differences in life satisfaction according to health status, with average satisfaction levels among people whose health is good being 2.0 to 2.3 points higher than the satisfaction levels of those whose health is bad. In Model 4 of Table 4, which introduces health and disability for the first time, the difference is already smaller (1.3 points) because some of the factors associated with poor health have been controlled for, such as age, widowhood, low income, deprivation and unemployment. Social support and quality of society also matter, as the size of the difference decreases to 1.1 points when these are controlled. Nevertheless, bad health still has one of the largest impacts on life satisfaction among the many factors examined. People who describe their health as ‘fair’ are also less satisfied with life than those whose health is good, to a smaller but still substantial degree (by 0.5 points). The impact of health status is comparable in size in all three country groups.

When controlling for other factors, people with a severe disability have lower life satisfaction levels than those who are not disabled (by 0.2 points in the EU15 and NMS12, but no significant impact is found in the CC3). However, people with a slight disability report no decrease in life satisfaction.

### Social support

Chapter 4 showed that most adults throughout Europe can draw on social support, especially from family members, if they need it. The study also found that the availability of support from family was associated with somewhat greater life satisfaction than support from people outside the family, and that support was particularly important for individuals who were experiencing deprivation.

Table 4 shows the impact of social support, having controlled for quality of society as well as the other variables in the model. Having nobody to rely on for practical support – someone to help around the house in the event of illness – has the biggest impact on people in the EU15 and NMS12. Chapter 4 revealed that very few adults in Europe lack practical support. Nevertheless, the absence of this kind of support has a substantial impact on life satisfaction levels among people in these country groups (0.3 to 0.4 points). It does not appear to matter whether the practical support comes from family or non-family, as the coefficients here are not statistically significant. In the CC3, a lack of practical support does not have this sizeable impact on life satisfaction.

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<sup>12</sup> The difference across the country groups is not as large as it might appear in Table 4, as the figures are rounded: 0.28 points in the EU15, 0.24 in the NMS12 and 0.29 in the CC3.

In the case of moral support – having someone to talk to when feeling depressed – a small reduction is found in life satisfaction (0.1 points) if the person relies on people outside the family for this support and a somewhat larger reduction (0.2 points) if this kind of support is absent. Within country groups, the same pattern is found in the EU15 and NMS12; however, the association between life satisfaction and moral support is not statistically significant in the CC3.

This section will defer a discussion of the effect of financial support until the discussion of the buffering hypotheses below because its impact is greater for vulnerable groups. As will be seen, the importance of financial support to life satisfaction increases as material deprivation increases.

## Quality of society

In Chapter 5, the analysis examined two measures of the perceived quality of society: an index of perceived quality of public services and an index of trust in democratic institutions. It found that the perceived quality of public services had a substantial impact on life satisfaction – a difference of more than 1.0 to 1.3 points between persons giving the quality of public services a high and low score – and that the difference tended to be larger in poorer countries. There was also a strong association between people's trust in institutions and life satisfaction, with a difference in satisfaction ranging from 0.8 points in the CC3 to 1.2 points in the EU15 between those with high and low levels of trust in institutions. Trust seemed to have a greater impact on life satisfaction in the wealthier countries. The multivariate model will now determine whether the quality of society still matters when a range of individual-level characteristics are controlled.

Model 6 in Table 4 shows the impact of quality of public services and trust in institutions on life satisfaction while controlling for all of the other variables, but before taking account of differences in how trust affects groups, as in Model 7. The coefficients in Model 6 can be interpreted as the overall impact of quality of society on life satisfaction. As will be shown below, this impact is greater for people who are materially deprived.

Both quality of public services and trust in institutions remain significantly associated with life satisfaction. In interpreting the coefficients, it is important to remember that both indicators are measured on a 10-point scale, in contrast to most of the other variables in Table 4, which are coded 0 or 1. A three-point increase in the perceived quality of public services would result in life satisfaction levels that are 0.6 points higher. A three-point increase in the level of trust in institutions would result in an increase in life satisfaction levels of 0.4 points. This indicates that the effect of quality of society that was observed in Chapter 5 is not driven by a tendency for people with more education or higher incomes to give a more positive rating to social institutions.

## Buffering hypotheses revisited

Chapters 4 and 5 showed some evidence that social support and good-quality public services had more of an impact on the life satisfaction levels of people who are disadvantaged.

In examining the impact of social support on life satisfaction for the multivariate models, the analysis tested a number of different measures to capture the buffering hypothesis. On the basis of this hypothesis, the expectation is that social support would have a larger impact on life satisfaction for vulnerable groups, such as people who are deprived or have lower incomes. Each of the hypotheses and the conclusions from the multivariate analysis in the 31 countries is discussed below. The results are shown in Model 7 of Table 4. In general, the analysis found support for several of the hypotheses

regarding the greater importance of social support to vulnerable groups, but found less support for the hypotheses that sought to link this effect to specific types of support – financial, moral or practical.

**Financial support increases life satisfaction more for people who are deprived than for those not deprived**

Support emerges for this hypothesis in the data. Someone who is not deprived experiences no reduction in life satisfaction if they lack financial support (Model 7 in Table 4). However, there is an impact on people who lack this support and are deprived, and it appears to increase with the level of deprivation. For someone lacking two of the six items outlined earlier, a lack of financial support would reduce life satisfaction by 0.18 ( $2 \times 0.09$ ), while someone lacking four of the six items would experience a reduction in satisfaction of about 0.36 ( $4 \times 0.09$ ) in the same circumstances.

This pattern is found in the EU15 and the NMS12, but the interaction term does not reach statistical significance in the CC3.

**Financial support increases life satisfaction more for people who are deprived than practical or moral support**

This hypothesis was partially supported in the analysis: financial support is more important to people who are extremely deprived, but not for those experiencing lower levels of deprivation. The analysis found that a lack of practical and moral support also has an impact on life satisfaction (a reduction in satisfaction of 0.3 points if the person lacks practical support and a reduction of 0.2 points if the person lacks moral support). However, this effect does not differ depending on the level of deprivation. Thus, at higher levels of deprivation – lacking three or more items – financial support becomes more important. This is true only in the EU15 and NMS12, however. In the CC3, the impact of social support in general was not statistically significant.

**Moral support increases life satisfaction more for people who have lost a partner than for those who are married**

This hypothesis was not supported in the data – the interaction is not statistically significant. Moral support increases life satisfaction across the board: by 0.2 points if the support comes from family and by 0.1 points if it comes from others. There is no difference, however, between people who are married and those who have lost a partner; the interaction term was not statistically significant and is not shown in Table 4.

On the other hand, the analysis did reveal a difference between married and formerly married adults in terms of the impact of financial support in the NMS12. Receiving financial support from people outside the family increases life satisfaction by a small amount (0.2 points) for those who have lost a partner in the NMS12. Financial support from people outside the family has a small (0.1 points) negative effect on life satisfaction for those who are married.

**Moral support increases life satisfaction more for people who have lost a partner than practical or financial support**

There was no support in the analysis for this hypothesis. No difference arises according to marital status in terms of the impact of moral or practical support, although financial support appears to be more important to people who were formerly married.

### **Practical support increases life satisfaction more for people who are ill than those in good health**

This hypothesis is not supported in the data. Very few adults have nobody that they can rely on for practical support. People who are in this position experience a reduction in life satisfaction of 0.3 points, but the impact is not greater for those who are in bad health.

### **Practical support increases life satisfaction more for people who are ill than moral or financial support**

No support can be found in the analysis for this hypothesis. Although, as noted above, practical support has a larger impact on life satisfaction than financial or moral support – at least for a person who is not extremely deprived – its impact is the same regardless of whether the person is ill.

### **High-quality public services increase life satisfaction more for people who are deprived than for those not deprived**

There is support for this hypothesis in the data. The perceived quality of public services has a generally positive impact on life satisfaction levels, but the effect is larger for people who are deprived. Quality of public services is measured on a 10-point scale. A two-point increase in the average quality rating of public services would increase the life satisfaction level of someone who is not deprived by 0.34 points<sup>13</sup> and would increase the satisfaction level of someone experiencing deprivation by almost 0.43 points.<sup>14</sup> Although the size of the effect is smaller in the CC3, this pattern is found in all country groups.

### **Trust in institutions increases life satisfaction more for people on a middle income than those with a lower or higher income**

This hypothesis is partially supported in the analysis, but only in the CC3. In the EU15 and NMS12, trust in institutions has a similar impact across income groups. Trust in institutions is measured on a 10-point scale. In the EU15 and NMS12, a two-point increase in institutional trust would result in an increase in life satisfaction of about 0.2 points. For people in the CC3 and in the middle income range, a two-point increase in institutional trust would increase life satisfaction by 0.22 points, but there is no impact on satisfaction for those in the top or bottom income quartiles.

However, in the EU15 and NMS12, institutional trust has a greater impact on the life satisfaction level of deprived people. A two-point increase in institutional trust is associated with a 0.3 point increase in life satisfaction for those who are deprived, compared with a 0.2 point increase for persons who are not deprived.

## **Differences based on other measures of subjective well-being**

Chapter 1 compared the distribution across countries of satisfaction with life to that of five other indicators of subjective well-being: happiness, liking one's life, optimism, perceived social exclusion and emotional well-being. All of the indicators were correlated and showed a broadly similar pattern across countries, although the country differences were more pronounced for life satisfaction. Life satisfaction and happiness refer to life as a whole, while optimism and perceived social exclusion refer to part of life. Emotional well-being and, to a lesser extent, happiness emphasise the affective components of subjective well-being, while liking one's life emphasises the cognitive or evaluative component; life satisfaction captures both aspects.

<sup>13</sup> This is calculated by taking the coefficient for quality of public services from Model 7 in Table 4 and multiplying it by two.

<sup>14</sup> This is calculated by taking the coefficient in Model 7 for quality of public services, multiplying it by two and adding the coefficient for 'Deprived, quality of public services' multiplied by two.



Since the bulk of the report focused on life satisfaction, it is important to ask how its conclusions would be different if one of the other indicators had been chosen to represent subjective well-being. The analysis will check this by running the final model (Model 7 in Table 4) for each of these indicators for all 31 countries. The results are shown in Table A1 in the annex to the report and are discussed below.<sup>15</sup>

In general, the pattern is very similar for life satisfaction, happiness, liking one's life, perceived social exclusion and emotional well-being. The same individual characteristics emerge as being important, although the relative sizes of the effects differ somewhat across indicators. The analysis finds additional evidence of the buffering effect of social support and quality of society for vulnerable groups in relation to happiness, liking one's life, perceived social exclusion, emotional well-being (for social support only) and even optimism. Optimism, as might be expected, is most different from the other indicators, particularly in terms of the pattern according to age.

Happiness is very similar to life satisfaction regarding the impact of gender, age, number of children, lone parenthood, education, the quality of public services and the greater impact of financial social support and quality of public services for vulnerable groups. Marital status, poor health and the absence of practical support have a stronger impact on happiness, but the effects follow the same direction as for life satisfaction. Compared with the impact on life satisfaction, happiness is affected to a lesser extent by unemployment, deprivation, trust in public institutions and the interactions involving trust in institutions. This is consistent with previous findings that happiness is more responsive than life satisfaction to personal matters, such as health, family and relationships, and is consistent with the view that happiness captures the affective component of subjective well-being to a greater extent than the evaluative component.

Liking one's life ('My life is close to how I would like it to be') is measured on a scale of 1 to 5, so the coefficients in Table A1 should be doubled when comparing them with those for life satisfaction. This indicator is very similar to life satisfaction regarding the impact of gender, age, being single or widowed compared with being married, education, unemployment, retirement, being in the bottom income quartile, having 'fair' health, moral support, trust in institutions and the financial support interactions (greater impact on those deprived and who have lost a partner). The impact on liking one's life is greater than the effect on life satisfaction for a number of characteristics: separation or divorce, having a professional or managerial occupation, being a manual worker, having a severe disability and having nobody to rely on for financial support for people who are not deprived. A slightly different pattern emerges according to income quartile. The effects follow the same direction as for life satisfaction, but compared to the group of persons with middle incomes, the gap is wider for the top quartile than the bottom quartile of earners. It seems that the top earners like their lives more than the lowest earners dislike theirs. This is consistent with the view that liking one's life emphasises the cognitive element of subjective well-being – the results of looking at one's life objectively using criteria that are valued by the culture in which one lives.

A number of the effects regarding liking one's life are slightly smaller than for life satisfaction or are not statistically significant: being in bad health, an absence of practical support (not statistically significant), the quality of public services (including the interaction capturing the impact of the quality of public services on deprived people, which is not statistically significant) and the interactions involving trust in

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<sup>15</sup> Note that, apart from happiness, the other indicators are measured on different scales and this needs to be taken into account in interpreting the sizes of the coefficients. Three indicators are measured on a scale of 1 to 5, so the coefficients should be doubled for comparison: liking one's life, optimism and perceived social exclusion. Emotional well-being is measured on a scale of 1 to 6, so the coefficients should be slightly less than twice those of happiness and life satisfaction for a comparable effect.

institutions. Trust in institutions makes a smaller difference to liking one's life among deprived persons, although it is still a statistically significant effect. The interaction between middle income and trust in institutions has no significant impact on liking one's life. These findings – apart from the smaller impact of bad health – suggest that the wording of the item directs people's attention to their own personal lives rather than to the society in which they live.

While optimism differs from the other potential subjective well-being indicators in that it captures the person's feelings about the future, it is informative to examine how it is structured according to individual and group variations. Compared with life satisfaction, the analysis finds a similar impact on optimism of the number of children in the family, education, having a professional or managerial occupation, deprivation and the interactions involving financial support (more consequential for those deprived or who have lost a partner) and quality of society (more consequential for deprived people). Two characteristics have a greater impact on optimism than on life satisfaction: being in a professional or managerial occupation and level of trust in public institutions. Other factors have a smaller or non-significant impact on optimism: gender (non-significant), loss of a partner, being single (not less optimistic than married people), being a lone parent (no impact on optimism), health and disability, social support and quality of public services. The interactions involving trust in institutions are not statistically significant: people in the middle of the income distribution are similar to those in the top and bottom quartiles in the amount by which optimism increases with level of trust in institutions. The impact of age on optimism is different. While a curvilinear pattern emerges according to age for life satisfaction, happiness and liking one's life – with higher subjective well-being among the younger and older age groups – the pattern is linear for optimism, capturing a decline in optimism with increasing age. The analysis also finds a slightly different pattern according to income quartile: the lowest earners do not differ from the middle income groups in terms of optimism levels, but the top earners are more optimistic. This is different from the pattern for life satisfaction, happiness and liking one's life, where the bottom income quartile had lower levels of subjective well-being than those in the middle quartiles.

Perceived social exclusion is a composite indicator representing the average rating across four items scored from 1 to 5. The study would expect that factors that increase perceived social exclusion would tend to reduce life satisfaction, so this – as well as the difference in scale – should be noted when interpreting the coefficients in Table A1. On that basis, the analysis finds that most individual and group characteristics have a broadly similar impact on social exclusion and life satisfaction: gender, age group,<sup>16</sup> children,<sup>17</sup> lone parenthood, low education, unemployment, retirement, professional or managerial occupation, income, disability, practical social support, trust in public institutions and quality of public services. Evidence can also be found for the hypothesis that financial support is more important for vulnerable groups (those deprived and who have lost a partner) and that the quality of public services and trust in institutions matter more for deprived people.

Emotional well-being is measured by five items describing positive feelings (cheerful, calm, energetic, rested and interested in life) and is scored from 1 to 6. This scale explicitly captures the affective or feeling component of subjective well-being. Again, the pattern is very similar to that found for life satisfaction for most variables: education, presence of children, retirement, professional or managerial occupation, social support, trust in public institutions, quality of public services and the interactions involving financial support (larger impact of financial support on vulnerable groups). Health and

<sup>16</sup> The pattern for older adults was the same, but younger adults do not differ from those in their middle years in terms of perceived social exclusion.

<sup>17</sup> The presence of children rather than the number of children in the family tends to be associated with reduced social exclusion, whereas the number of children mattered more for life satisfaction.

disability have an even greater impact on emotional well-being than on life satisfaction. The relationship between emotional well-being and gender, single marital status and unemployment differs from the relationship between these variables and life satisfaction. The gender difference is more substantial for emotional well-being and goes in the opposite direction: women have lower levels of emotional well-being than men. While single people have slightly lower levels of life satisfaction than married people, their emotional well-being is higher.

As well as the above models, which were all run on the full 31 countries, the analysis tested a number of models on the data for the CC3 to check whether the greater importance of institutional trust for those in middle income categories was found for the other indicators of subjective well-being. This finding was confirmed in the CC3 for three of the other subjective well-being indicators – happiness, perceived social exclusion and emotional well-being – but not for liking one's life or optimism.

### Summary

This chapter examined the impact of objective life conditions, social support and measures of quality of society on life satisfaction using a multivariate model. Across all countries, material deprivation and health status were the most important influences on life satisfaction. In fact, it is as a result of their impact on standard of living that education and work affect life satisfaction. The importance of income is greater in the CC3, where it has a noticeably larger effect. This seems consistent with a hierarchy of needs viewpoint, where basic needs for material goods must be met before needs such as love and belonging. On the other hand, the loss of a partner through divorce or separation is also more consequential in the CC3 than in the other groups of countries.

Health status is very important in accounting for differences in life satisfaction, with a large impact on all country groups. Differences in perceived quality of public services and trust in public institutions also add significantly to understanding disparities in life satisfaction, even with all the other socioeconomic factors being controlled. Unlike the findings in the 2003 EQLS, health and quality of society do not appear to be more consequential in the EU15. The impact of poor health was similar across all country groups. Quality of society was equally important in the EU15 and NMS12, but somewhat less so in the CC3. In both the EU15 and NMS12, the quality of public services and trust in institutions make a substantial difference to life satisfaction levels and matter even more to deprived people.

Social support is somewhat less important in the CC3 than in the EU15 and NMS12 – a finding that would support a hierarchy of needs interpretation of some of the differences between the EU27 and CC3. Financial support is of similar importance in both the EU15 and NMS12, but only to people who are deprived. Since a higher proportion of people in the NMS12 than in the EU15 experience material deprivation, the availability of financial support will be more consequential to overall life satisfaction levels in the newer Member States. However, there is no evidence that moral support matters less to people in the NMS12 than in the EU15, which a hierarchy of needs interpretation would suggest.

Much of the difference between countries is accounted for by these objective conditions. When controlling for demographics, socioeconomics, health and disability, social support and quality of society, the pattern of variation across countries is much less pronounced.

To validate the findings regarding the factors accounting for differences in life satisfaction, the results were checked against a number of other indicators of subjective well-being – happiness, liking one's life, perceived social exclusion and emotional well-being – as well as optimism. Although some differences emerged in the sizes of the effects depending on the indicator chosen, the results broadly confirmed

the important impact of socioeconomic factors such as unemployment, income and deprivation and health and disability. The findings also underlined the significance of social support – particularly the availability of financial support for vulnerable groups – the quality of public services and trust in public institutions and the greater relevance of these quality of society measures to deprived people.



## Overview

This report has examined the impact of a range of individual and national-level characteristics on the life satisfaction of Europeans in 31 countries. It began by examining the relationship between life satisfaction and other potential indicators of subjective well-being: happiness, liking one's life, optimism, perceived social exclusion and emotional well-being. All of the measures are moderately correlated, but some differences emerge in the pattern across countries. The differences across countries associated with life satisfaction tended to be sharper than for the other scales examined. Subsequent analyses focused on life satisfaction, as this is a widely used indicator of subjective well-being and encompasses both the affective dimension of subjective well-being (sense of satisfaction) and the cognitive dimension (assessment of life overall). The study returned to the alternative indicators at the end of the report in order to validate its findings against these indicators.

The analysis reveals substantial country differences in life satisfaction – accounting for about 17% of the total variation in this regard – and these followed a familiar pattern. Levels of life satisfaction are highest in the EU15, followed by the NMS12 and are lowest in the CC3. Within the EU15, the highest levels of life satisfaction were found in Denmark, Sweden and Finland, while the lowest levels were reported in Portugal, Greece and Italy. When objective conditions were controlled within these countries, however – including demographics, socioeconomics, health and disability, social support and quality of society – the bulk of the difference between countries is explained.

The objective conditions that matter most are socioeconomics – particularly an inability to afford basic goods and services – unemployment and health. Deprivation, unemployment and poor health had a large impact on life satisfaction levels in all country groups.

Social support is also important, particularly in the EU15 and NMS12. The report distinguished between sources of support (family and non-family) and according to type of support (financial, moral and practical). In general, support from family members was most beneficial in terms of life satisfaction. Financial support is of similar importance in both the EU15 and NMS12, but only to deprived people – who comprise a larger group in the NMS12. Moral and practical support are important in the EU15 and NMS12 and the importance does not differ depending on the level of deprivation.

The perceived quality of public services is an important predictor of life satisfaction levels in all country groups and is even more important to persons experiencing deprivation – a larger proportion of the population in the NMS12 and CC3 than in the EU15. A similar pattern was found in the EU15 and NMS12 (but not in the CC3) regarding trust in public institutions.

The focus in this analysis has been on life satisfaction and on explaining differences between countries and groups in respect of average levels of life satisfaction. The introduction noted that the countries with lower average levels also tend to have more inequality in life satisfaction. A full exploration of this issue, and an analysis of which groups have particularly low levels of life satisfaction, was beyond the scope of the present analysis but is an issue that merits further attention.

## Contribution of subjective well-being research to policy

The introduction of the report outlined two potential roles for subjective well-being in policy analysis: subjective well-being as a direct policy goal and, more modestly, as an input to policy and a guide to progress. The former would imply a focus on improving average subjective well-being by whatever means necessary. The latter implies using research on trends and group differences in subjective well-

being as an indicator, but not the sole indicator, of successes and failures of policy interventions to improve the quality of people's lives.

An analysis of subjective well-being is a key to understanding the relative contribution of different dimensions of life to the quality of people's lives. In policy terms, it can serve as a common currency for assessing the impact of different conditions on well-being. In this regard, it has the advantage of allowing people to assess the quality of their lives on their own terms. As an example, research on subjective well-being would point to the continuing importance of living standards, particularly in the CC3, where living standards are lower. However, it would also point to the centrality of health to quality of life and would draw attention to the importance of family breakdown (through death or divorce or separation) and the quality of public services – none of which would be captured by the traditional economic indicators of well-being.

The following sections will draw out the implications of the findings in more detail under a number of policy areas.

### **Income and living standards**

Income has a positive impact on life satisfaction across all country groups, but particularly in the CC3. The main contrast was between people in the bottom income quartile and those in the middle of the income distribution. Even using a relative measure of income in the form of income quartiles within country, the satisfaction 'penalty' associated with low income is greater than the satisfaction 'bonus' associated with high income when compared with those in the middle. Income matters most where, as a result of low income, basic needs are not met. After the point where basic needs are met, the relationship between income and subjective well-being is weaker.

Income is also important because of the living standards that it allows households to achieve. The single indicator with the biggest impact on life satisfaction was lifestyle deprivation, which measures an inability to afford a number of widely consumed goods and services. Lifestyle deprivation has a strong negative impact, of similar magnitude, in all country groups. It is evident that a concern that focusing on subjective well-being could lead to ignoring material resources is unfounded. Deprivation is associated with low levels of life satisfaction and the pattern is equally marked in the different country groups. The large impact on subjective well-being of deprivation was confirmed when the analysis considered other potential indicators such as happiness, liking one's life, perceived social exclusion and emotional well-being.

The study of life satisfaction confirms the importance of material well-being to quality of life, but also makes it clear that it is more important to focus on improving the circumstances of people who are most disadvantaged rather than raising the average standard of living. This is a reassuring message in the context of increasing global concerns about the sustainability of continued economic growth.

In policy terms, this means that it is vital to continue to address inequalities in living standards, particularly the low living standards associated with poverty. The emphasis needs to be on improving the situation of people at the bottom of the scale rather than raising the average, as this will bring about the biggest improvement in overall quality of life.

## Employment and work

Unemployment results in a substantial reduction in life satisfaction in all country groups, even having controlled for income and deprivation. This large impact of unemployment was also observed for the other indicators of subjective well-being, although the impact on happiness is somewhat smaller and no significant impact on emotional well-being was found when other factors were controlled.

When controlling for income, deprivation and health, retired people are more satisfied than those at work. This finding was confirmed for the other subjective well-being indicators and is worthy of further attention. It suggests that job quality, work stress and issues of work-life balance may be contributing to lower levels of life satisfaction among people in employment. The analysis found further evidence that job quality matters: those in professional and managerial occupations had slightly higher life satisfaction levels and also higher levels of subjective well-being based on the other indicators.

In policy terms, the large impact of unemployment on life satisfaction levels indicates that active labour market policies, as well as income replacement schemes, are important for improving the quality of life of unemployed people. The findings also reinforce the need for policy to address issues of work quality.

## Education

The impact of education on subjective well-being operates primarily through its effect on income and living standard. Even when these are controlled, people with low levels of education (below ISCED 3) have lower levels of life satisfaction in the NMS12. This effect of low education is found across the range of indicators – happiness, liking one's life, perceived social exclusion and emotional well-being. For three of the indicators – life satisfaction, happiness and emotional well-being – people with low levels of education (ISCED 0–2) had significantly lower levels of subjective well-being than those who had completed secondary-level education; however, there was no additional benefit to subjective well-being from education beyond secondary level when income and living standard are controlled. The absence of any benefit of higher levels of education in terms of subjective well-being when these factors are controlled is worthy of further consideration in order to understand what might be neutralising the expected benefits of a high level of education on subjective well-being.

The implications for policy are that promoting access to education and training is likely to reap large rewards in terms of improved subjective well-being in the NMS12 and that an emphasis on assisting people with low levels of education, through programmes such as those promoting lifelong learning, should be particularly beneficial. As the economies of the NMS12 continue to develop in a direction that is likely to require higher skill levels than traditional industries, it becomes even more important to ensure that all citizens are in a position to participate and benefit.

## Family and life course

Providing specific support measures to families and across the life course is one of the goals of social policy and the policy instruments include income supports, provision of childcare and support for independent living among older adults. The results here suggest that apart from differences due to gender, age, family status, work and standard of living, the residual differences in subjective well-being according to these variables are rather small. The exception is people who have lost a spouse and lone parents. In interpreting the absence of differences in subjective well-being according to age, it is important to remember that the analysis controls for retirement, health and living standards. Health



and pensions policy needs to address the challenges faced by older adults in terms of health and maintaining living standards on a reduced income.

People who are widowed, divorced or separated continue to experience lower levels of well-being, even when socioeconomic conditions and social support are controlled. Using alternative indicators of subjective well-being confirms the importance of the loss of a partner, although the effect is smaller for emotional well-being. This pattern is found in all country groupings, apart from widowed people in the CC3, when the analysis controls for other factors. In the EU15 and NMS12, the negative impact on life satisfaction is somewhat stronger for people who are divorced and separated than for widowed persons.

The study examined the impact of social support on the life satisfaction levels of people who had lost a partner, expecting that moral support – having someone to talk to if feeling depressed – would be particularly important to this group. However, this does not appear to be the case. It emerged that having someone other than family to rely on for financial support was beneficial, but the impact of moral support was not greater for this group. This finding was confirmed across a range of subjective well-being indicators and was stronger in the NMS12.

The policy lessons from this analysis are that people whose marriages have ended – through death of a spouse or marital breakdown – would benefit from increased social supports that reduce their economic vulnerability to a financial emergency. The lower subjective well-being of never married lone parents – which was observed for life satisfaction, happiness and perceived social exclusion, even with income and deprivation being controlled for – suggests that this group also needs support measures other than income.

### **Health and disability**

The analysis showed that self-rated health reduced life satisfaction by a substantial amount among respondents in all country groups. Those with bad health have lower life satisfaction by almost one point on a 10-point scale. Having a severe disability also reduces well-being substantially in the EU15 and the NMS12, but by a smaller amount than for bad health; this significant effect of disability was not found in the CC3. The impact of poor health was even stronger on some of the other indicators of subjective well-being – happiness and emotional well-being.

These findings point to the strong consequences of population health and disability for quality of life. Apart from policies to promote health and treat illness, attention should be paid to understanding other methods of improving quality of life for people who are ill or have a disability. As the models in this study have controlled for standard of living and social support, the required interventions will need to look elsewhere. The strong impact of health problems on emotional well-being points to the need for policy to focus on the mental health of those experiencing illness.

### **Social support**

The results of the analysis suggested that supportive social relationships, particularly with family members, are important to subjective well-being. Moral and practical support are generally important in enhancing life satisfaction in the EU15 and NMS12 – but not in the CC3 – while financial support is important to people who are vulnerable. The availability of someone from whom one can raise a substantial sum of money in an emergency is associated with higher levels of life satisfaction in the EU15 and NMS12, but only among deprived persons. For those who have lost a partner, financial

support, rather than moral support as had been anticipated, is the most important to subjective well-being. In this case, it is the availability of someone other than family members to provide such support that is important. This effect is found only in the NMS12, but it is confirmed across all six potential subjective well-being indicators.

In policy terms, those who lack practical and moral support are a very small group of people who suffer a great deal in terms of quality of life. Further work on identifying this group is required in order to better target social service provision to meet their needs. The group of people experiencing deprivation and lacking financial support is also small in size, and is likely to be concentrated among those who are embedded in family and social networks that experience similar levels of low income and deprivation. An inability to raise money in an emergency has a detrimental impact on their quality of life and is something which social policy could address by providing a safety net source of emergency funding.

### **Quality of society and public services**

This study examined two measures of the quality of society: perceived quality of public services and trust in democratic institutions. The quality of public services is important to life satisfaction and has an even greater impact on the satisfaction levels of people experiencing deprivation. These findings were confirmed for all six of the potential subjective well-being indicators.

Trust in public institutions has a similar impact on life satisfaction: it is associated with increased life satisfaction generally but with a larger increment for persons experiencing deprivation. The general impact of trust in institutions was confirmed for alternative indicators of subjective well-being and its greater importance for deprived people was confirmed for four of the six subjective well-being indicators.

The quality of public services enhances subjective well-being in all three country groups, but trust in institutions is more generally important in the EU15 and NMS12 than in the CC3. In the CC3, trust in institutions is important to the life satisfaction of middle income groups, but not for people in the top and bottom income quartiles.

A range of policy instruments is needed to address these issues and all of them involve strengthening the democratic core of society. Increasing the level of trust in public institutions requires a commitment to openness, transparency and accountability. Improving the quality of public services should begin with an understanding of citizens' needs and levels of customer satisfaction. In this regard, it is not always the quantity or type of public services that is important, but how these services are delivered.

### **Subjective well-being in a period of economic crisis**

The data on which this report is based were collected in 2007, before the current worldwide economic recession had begun in earnest. A number of dramatic changes have taken place in the intervening period, all of which are likely to have contributed to lower levels of subjective well-being. Most notable is the rise in unemployment and increased sense of economic insecurity. Pension levels, to the extent that they depend on the equity market, are also negatively affected. First results from the Eurobarometer of late 2008 reveal a clear shift towards pessimism regarding the national economic situation, particularly in Ireland, the UK, Estonia, Belgium, Sweden and Spain. Over half of Europeans expected the economic situation to deteriorate over the coming 12 months.

This increase in pessimism among Europeans, as well as the growth in unemployment which continued into 2009, will undoubtedly have reduced the level of subjective well-being across Europe. In policy terms, it means that promoting economic recovery and employment have become the overarching priorities for national governments. It is noteworthy, however, that while the largest proportion of EU citizens in late 2008 would like to see more of the EU budget spent on economic growth (38%), the proportions who would like to see spending on employment and social policy (36%), public health (32%) and education (30%) were not far behind. This indicates that even in a period of economic crisis, the European population has policy priorities that go beyond economic growth and affirms the policy agenda that seeks to broaden the concept of quality of life beyond economic concerns to incorporate social inclusion and social cohesion.

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# Annex:

## Comparing six indicators of subjective well-being

**Table A1: Multivariate analysis of life satisfaction and other indicators of subjective well-being (Part 1)**

	Satisfaction with life	Happiness	Life close to how one likes it	Optimism	Perceived social exclusion	Emotional well-being
R. Sq. (adj.)	0.37	0.32	0.33	0.23	0.27	0.31
<b>Constant</b>	<b>7.7</b>	<b>8.0</b>	<b>3.9</b>	<b>3.6</b>	<b>1.7</b>	<b>4.8</b>
Country (Ref=DE)						
BG	<b>-0.9</b>	<b>-0.8</b>	<b>-0.3</b>	<b>0.2</b>	<b>0.6</b>	<b>-0.2</b>
MK	<b>-0.7</b>	<b>-0.5</b>	<b>-0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>-0.4</b>
HU	<b>-0.7</b>	0.1	<b>-0.4</b>	<b>-0.2</b>	<b>0.2</b>	<b>0.1</b>
LV		<b>0.2</b>	<b>-0.4</b>	<b>0.4</b>	<b>0.2</b>	<b>-0.2</b>
PT	<b>-0.4</b>	<b>-0.1</b>	<b>-0.4</b>	<b>-0.4</b>	<b>0.1</b>	<b>-0.2</b>
TR	<b>-0.3</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.1</b>	<b>0.3</b>	<b>-0.8</b>
LT		<b>0.3</b>	<b>-0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>-0.1</b>
HR			<b>-0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>-0.2</b>
RO	0.2	0.2	<b>-0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>-0.5</b>
EL	<b>-0.2</b>		<b>-0.4</b>		<b>0.3</b>	<b>-0.3</b>
IT	<b>-0.5</b>	<b>-0.4</b>	<b>-0.4</b>	<b>-0.4</b>	<b>0.4</b>	<b>-0.5</b>
CZ	<b>-0.4</b>		<b>-0.3</b>	<b>-0.1</b>	<b>0.3</b>	<b>-0.3</b>
SK	<b>-0.1</b>	<b>0.2</b>	<b>-0.2</b>	<b>-0.2</b>	<b>0.2</b>	<b>-0.3</b>
EE	<b>-0.1</b>	0.2	<b>-0.2</b>	<b>0.4</b>	<b>0.3</b>	<b>-0.3</b>
PL	<b>0.3</b>	<b>0.3</b>	<b>-0.2</b>	<b>0.3</b>	<b>0.4</b>	<b>-0.3</b>
AT	<b>-0.6</b>	<b>-0.4</b>	<b>-0.2</b>	<b>-0.1</b>	<b>0.4</b>	<b>-0.5</b>
CY		0.1	<b>-0.6</b>	<b>-0.1</b>	<b>0.3</b>	<b>-0.5</b>
SI			<b>-0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>-0.4</b>
ES			<b>-0.1</b>	<b>0.1</b>		<b>-0.2</b>
UK	0.1	<b>0.3</b>	<b>-0.2</b>		<b>0.5</b>	<b>-0.4</b>
FR		0.1	<b>-0.2</b>	<b>-0.5</b>	<b>0.4</b>	<b>-0.3</b>
BE	0.1	0.1		<b>-0.3</b>	<b>0.5</b>	<b>-0.2</b>
MT	<b>0.3</b>	<b>0.3</b>			<b>0.2</b>	<b>-0.8</b>
IE	<b>0.3</b>	<b>0.4</b>		<b>0.4</b>	<b>0.4</b>	<b>-0.2</b>
NL	<b>0.3</b>	<b>0.2</b>			<b>0.2</b>	<b>-0.2</b>
LU	<b>0.3</b>	<b>0.2</b>	<b>-0.1</b>	<b>-0.2</b>	<b>0.3</b>	<b>-0.3</b>
NO	<b>0.7</b>	<b>0.3</b>		<b>0.4</b>		
FI	<b>0.4</b>	<b>0.4</b>		<b>0.1</b>	<b>0.4</b>	<b>-0.3</b>
SE	<b>0.8</b>	<b>0.4</b>	<b>0.3</b>	<b>0.5</b>	<b>-0.2</b>	<b>-0.2</b>
DK	<b>0.8</b>	<b>0.6</b>		<b>0.4</b>	<b>0.2</b>	<b>-0.1</b>

Notes: Data unweighted. R. Sq. (adj.) = R-squared adjusted, in statistical terms. Ref = reference. The table shows the unstandardised OLS regression coefficient (bold:  $p \leq .01$ , otherwise  $p \leq .05$ , non-significant coefficients not shown). Coefficients can be interpreted as the amount by which life satisfaction would change if the variable were to increase by one unit. The model also includes controls for individual characteristics as shown in Part 2 of this table and controls for missing values on variables.

Source: EQLS 2007

**Table A1: Multivariate analysis of life satisfaction and other indicators of subjective well-being (Part 2)**

		Satisfaction with life	Happiness	Life close to how one likes it	Optimism	Perceived social exclusion	Emotional well-being
	R. Sq. (adj)	0.37	0.32	0.33	0.23	0.27	0.31
<b>Gender (Ref=male)</b>	Female	<b>0.1</b>	<b>0.1</b>	<b>0.03</b>		<b>0.0</b>	<b>-0.1</b>
<b>Age (Ref=35–64 years of age)</b>	Age 18–34 years	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>		
	Age 65+ years	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>-0.1</b>	<b>-0.08</b>	
<b>Marital status (Ref=married)</b>	Separated	<b>-0.5</b>	<b>-0.7</b>	<b>-0.3</b>	<b>-0.1</b>	<b>0.1</b>	<b>-0.05</b>
	Widowed	<b>-0.3</b>	<b>-0.6</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.05</b>	<b>-0.04</b>
	Never married	<b>-0.1</b>	<b>-0.2</b>	<b>-0.1</b>			<b>0.1</b>
<b>Has children</b>	Has children (Ref=no)					<b>-0.05</b>	
<b>Number of children (Ref=2)</b>		<b>0.04</b>	<b>0.05</b>		<b>0.02</b>		
<b>Single lone parent (Ref=no)</b>		<b>-0.4</b>	<b>-0.4</b>			<b>0.2</b>	
<b>Education (Ref=ISCED 3)</b>	ISCED 0–2	<b>-0.1</b>	<b>-0.1</b>	<b>-0.04</b>		<b>0.03</b>	<b>-0.04</b>
	ISCED 4–6			<b>-0.03</b>	<b>0.04</b>	<b>0.04</b>	
<b>Employment (Ref=employed)</b>	Unemployed	<b>-0.6</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.1</b>	<b>0.2</b>	
	Retired	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>		<b>-0.05</b>	<b>0.2</b>
	Otherwise inactive	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>			
<b>Occupation (Ref=non-manual)</b>	Professional/managerial	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>-0.1</b>	<b>0.04</b>
	Self-employed	<b>0.1</b>		<b>0.1</b>			
	Manual			<b>-0.1</b>		<b>0.1</b>	
	Farming						<b>0.1</b>
	Never worked						<b>0.1</b>
<b>Income quartile (Ref=middle two)</b>	Bottom quartile	<b>-0.3</b>	<b>-0.2</b>	<b>-0.1</b>		<b>0.1</b>	<b>-0.04</b>
	Top quartile	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.04</b>	<b>-0.1</b>	<b>0.03</b>
<b>Deprivation</b>	Number of items lacking	<b>-0.3</b>	<b>-0.2</b>	<b>-0.2</b>	<b>-0.1</b>	<b>0.1</b>	<b>-0.1</b>
<b>Health (Ref=good)</b>	Fair	<b>-0.5</b>	<b>-0.5</b>	<b>-0.2</b>	<b>-0.2</b>	<b>0.1</b>	<b>-0.4</b>
	Bad	<b>-1.1</b>	<b>-1.3</b>	<b>-0.4</b>	<b>-0.3</b>	<b>0.3</b>	<b>-0.9</b>
<b>Disability (Ref=none)</b>	Slight			<b>-0.1</b>		<b>0.03</b>	<b>-0.2</b>
	Severe	<b>-0.1</b>	<b>-0.2</b>	<b>-0.2</b>		<b>0.1</b>	<b>-0.4</b>
<b>Practical support (Ref=family)</b>	From others		<b>-0.1</b>			<b>0.03</b>	
	None	<b>-0.3</b>	<b>-0.6</b>			<b>0.2</b>	<b>-0.2</b>
<b>Moral support (Ref=family)</b>	From others	<b>-0.1</b>	<b>-0.2</b>	<b>-0.1</b>	<b>-0.03</b>		<b>-0.1</b>
	None	<b>-0.22</b>	<b>-0.24</b>	<b>-0.11</b>	<b>-0.09</b>		<b>-0.14</b>
<b>Financial support (Ref=family)</b>	From others	<b>-0.1</b>	<b>-0.1</b>	<b>-0.1</b>		<b>0.1</b>	
	None			<b>-0.1</b>		<b>0.1</b>	
<b>Trust in institutions (centred at 5)</b>		<b>0.09</b>	<b>0.03</b>	<b>0.05</b>	<b>0.10</b>	<b>-0.03</b>	<b>0.02</b>
<b>Quality of public services (centred at 6)</b>		<b>0.17</b>	<b>0.16</b>	<b>0.05</b>	<b>0.05</b>	<b>-0.05</b>	<b>0.07</b>
<b>Interactions</b>	Deprived, lack financial support	<b>-0.09</b>	<b>-0.09</b>	<b>-0.02</b>	<b>-0.02</b>	<b>0.0</b>	<b>-0.04</b>
	Loss of partner, financial support from others	<b>0.16</b>	<b>0.12</b>	<b>0.10</b>	<b>0.07</b>	<b>-0.06</b>	<b>0.08</b>
	Deprived, quality of public services	<b>0.04</b>	<b>0.03</b>		<b>0.02</b>	<b>0.01</b>	
	Deprived, trust in institutions	<b>0.08</b>	<b>0.03</b>	<b>0.02</b>		<b>-0.01</b>	
	Middle income, trust in institutions	<b>0.02</b>					

Notes: Data unweighted. R. Sq. (adj.) = R-squared adjusted, in statistical terms. Ref = reference. The table shows the unstandardised OLS regression coefficient (bold:  $p < .01$ , otherwise  $p < .05$ , non-significant coefficients not shown). Coefficients can be interpreted as the amount by which life satisfaction would change if the variable were to increase by one unit. Controls for country differences in values on variables and for missing values are included. Happiness and life satisfaction scales range from 1 to 10; having life close to how one likes it, optimism and perceived social exclusion scales range from 1–5. High values on perceived social exclusion indicate negative subjective well-being, unlike the other indicators. The emotional well-being scale is from 1 to 6.

Source: EQLS 2007

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