Eurofound

Living conditions and quality of life

Quality analysis of the European Quality of Life Survey 2016 questionnaire

European Quality of Life Survey 2016:
Quality of life, quality of public services
and quality of society

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency established in 1975. Its role is to provide knowledge in the area of social, employment and work-related policies according to Regulation (EU) 2019/127.

Contents

Executive summary

Challenges in measuring Quality of Life

Quality of Life (QoL) is a multidimensional concept because individuals' QoL is shaped by multiple factors, including objective living conditions, subjective perception of one's own life, and the broader social context. QoL is therefore challenging to measure because having a "good life" may mean different things in different population groups.

The unique role of the EQLS

The EQLS is uniquely positioned to capture the multidimensional character of QoL. In that it differs from other large-scale surveys which focus on particular aspects of QoL such as living conditions or health. In addition to that, the EQLS has a substantial potential for providing unique data on existing social divides regarding social, economic or environmental issues, the risk of social isolation of different population groups or the role of social relations in moderating the association between the objective living conditions and individuals' subjective assessment of their QoL. The diagnostic value of the EQLS in analysing the social and contextual determinants of individuals' QoL is therefore unparalleled.

Review of the 2016 EQLS questionnaire

The 2016 version of the EQLS questionnaire needs to be adapted to the rapidly changing social environment as well as to incorporate the state of the art knowledge from scientific literature on QoL and its covariates.

The review concerned **303** unique questionnaire items and evaluated their content validity, face validity, reliability, clarity and ease of use, risk of generating biased results, and overall relevance for QoL research.

As a result of the review, each item received a recommendation. They were recommended to be kept in their present form, to be modified or to be dropped. These recommendations were guided by four principles: continuity, conceptual fit to themes proposed for the 2026 EQLS, inclusiveness, and parsimony.

Overall, **126** items were recommended to be kept. Recommendations for modifications were issued for **84** items and suggestions for modifications were provided. Finally, **93** items were recommended to be removed from the questionnaire and the reason were explained in detail for each variable.

In addition to the existing items, several items were recommended to be added to the questionnaire – either as alternatives to existing questions or to account for the covariates of QoL that were missing in the 2016 version of the EQLS questionnaire. Among the variables recommended to be added, **33** fell under the theme Climate Change, Green Transitions and Digitalisation, **13** accounted for different aspects of the Living Conditions and Access to Essential Services, **10** variables measured Subjective Wellbeing and Health; and **9** variables concerned Social Cohesion, Trust and Recognition. Finally, **4** variables were also suggested to be added to the section of background (sociodemographic) variables.

Introduction

Quality of Life Research: past, present, and future

Quality of life (QoL) research is rooted in medical and health studies where the primary focus has been on the QoL of individuals with particular health conditions (e.g. Chen et al. 2023; von der Lippe et al. 2014). Measuring the QoL of patients has reflected the recognition that the impact of healthcare interventions is not limited to human bodies but also affects people's psychological, professional, and social functioning (Addington-Hall, 2001).

To date the field of QoL research remains dominated by research on clinical populations and the vast majority of studies on QoL are de facto measuring the Health-Related Quality of Life (HRQoL). Notably, most of the studies do not distinguish between QOL and HRQoL, treating these terms as equivalent and using the terms interchangeably (Haraldstad et al., 2019).

In this research context it is not surprising the generic QoL questionnaires, e.g. Short Form, SF-12 and SF-36 (RAND), EQ-5D-5L (EuroQol), EORTC QLQ-C30 (EORTC), and WHOQOL-BREF (WHO) concern HRQoL. Those instruments are focused on individuals' physical and psychological functioning and do not account for individuals' broader life circumstances. A less commonly used instruments, Flanagan's Quality of Life Scale (QOLS)(Flanagan, 1978), while also being generated in the field of health studies, draws a clear line between QoL and the health status and adopts a significantly broader approach to measuring QoL (Burckhardt & Anderson, 2003).

Today, although the field of QoL is still dominated by studies of QoL in clinical populations, it is generally accepted that individuals' QoL, both, in a medical and non-medical context, is shaped by an interplay or objective and subjective factors with the latter being individuals' subjective assessment including satisfaction with different domains of life and overall wellbeing.

> *"The concept of quality of life broadly encompasses how an individual measures the 'goodness' of multiple aspects of their life. These evaluations include one's emotional reactions to life occurrences, disposition, sense of life fulfilment and satisfaction, and satisfaction with work and personal relationships."*
> (Theofilou, 2013)

However, what has not been paid enough attention to, is the role of the social context and the individuals' subjective perception of their own place in the society for their QoL. There remains an underlying assumption in the field that an individual's health status influence their physical, psychological or social outcomes, and not the opposite. The social context of an individual's functioning or their perception of their situation has typically not been considered a causal factor.

Meanwhile, a rapidly growing number of studies on the social determinants of health have greatly expanded our understanding of the multidirectional association between health, wellbeing, an individual's functioning, and their social position. Studies have shown that individual's morbidity and all-cause mortality are influenced by their social status, and that is independent of their other socioeconomic characteristics or health behaviours (Marmot, 2005). Moreover, the subjective

perception of one's role or place in the society is not only an important predictor of the risk of death or disease, but also of individual's overall life chances (Oesch & Vigna, 2023).

The implication of these findings for the studies on QoL is such that a person cannot be removed from their social milieu or their broader social context. This context determines individual's functioning in various domains of life as well as how "good" they consider their life to be.

The broader social context and individuals' self-assessment of their situation relative to others is typically missing in the currently used QoL instruments, which is a significant gap. This is also what creates unique opportunities for the EQLS.

Comprehensive measurement of QoL

Objective conditions

Individuals' QoL is affected by their objective living conditions. The importance of material conditions becomes more even more pertinent in the face of the costs of living crisis in Europe (Somarriba Arechavala et al., 2015). Beyond material poverty, attention should be paid to any other objective factors/ constraint that prevents individuals from participation in the society or compromise any of their fundamental needs. Those objective factors include, among others, accessibility of the accommodation (number of steps/ lift), characteristics of the neighbourhood (transport poverty, access to greenery, safety) but also time constraints or work-family conflict. Overall, living conditions that permit to satisfy one's fundamental needs are the necessary condition for achieving a good quality of life.

Subjective wellbeing

While providing the necessary basis, material living conditions and quantifiable measures of a nation's wealth are insufficient to account for whether or "good" people's lives are (Kahneman et al., 2004). The past few decades have seen a great interest in the research on wellbeing, happiness and how individual's perception, choice of lifestyle or the quality of social relations contribute to it. These have become indispensable components of measuring QoL in non-clinical settings.

Despite its relevance for the topic, individual's level of satisfaction with life in general is not a sufficient stand-alone measure of their QoL. Subjective wellbeing is affected not only by how much enjoyment or satisfaction is derived from particular life domains (Pavot & Diener, 2008), but also by individual' dispositions, traits and their approach to life in general (Steel et al., 2008). In addition to that, new studies have also shown that satisfaction with life in general is also influenced by the social context – for example, how individuals compare to others in the society (Jarosz & Gugushvili, 2022).

Social comparisons

Individuals' evaluation of any aspect of their lives is influenced by social comparisons that is by how the see themselves compared to others in the society. A subjective experience of social (dis)advantage has profound implications for individuals' self-perception, health, behaviours, and life chances. Subjective social status (SSS) has been shown to influence the risk of morbidity and all-cause mortality (Graham & Ciciurkaite, 2023; Marmot, 2005) with its effect remaining substantial, net of the objectively measured socioeconomic position (Präg, 2020). The experience of inequality and feeling

that one does not deserve their disadvantage can negatively affect people's emotions, behaviours and physical and mental health (Smith & Huo, 2014). A measure of subjective social position is therefore causally associated with numerous objectively measurable outcomes.

Noteworthy, subjective deprivation may have implications going far beyond an individual's functioning. It has also been linked with tendencies towards political radicalization, with this association being stronger than that between economic poverty and radicalization (Franc & Pavlović, 2023).

The general social context

European societies are facing multiple economic, societal, and environmental challenges. Navigating in this rapidly changing social landscape is challenging for individuals and generates new social divides.

First of all, there is unprecedented level of structural uncertainty in Europe. The crisis of the fordist model in the 1980s and following employment deregulation in Europe has greatly increased employment uncertainty. The role of economic uncertainty in people's lives cannot be overstimated. It is one of the leading causes of radicalization among young European voters, and it shapes not only individuals' work trajectories but also their personal lives.

Individuals who are uncertain about their future income and earnings opportunities may shy away from long-term commitments and postpone leaving the parental home, setting up their own household and having children.
(Billari, 2005)

The costs of living crisis, housing shortage, and labour market instability compete for Europeans' attention with global issues such as environmental challenges. Analyses of the data from the 2016-2017 European Social Survey (ESS) suggests that there are major social divides with regard to what matters more and for whom in terms of the support for welfare and/or environmental policies. The important covariates of these differences in individuals' attitudes are political ideology, and trust in public institutions (Otto & Gugushvili, 2020).

Trust in public institutions has traditionally been a strong predictor in compliance with public regulations but it is now being challenged by the expansion of the Internet and, in particular, the social media. The analysis of 2012 Eurobarometer data showed that the use of online news outlets was associated with higher trust in public institutions. Conversely, using social media as the source of information was associated with lower trust (Ceron, 2015). Digital connectedness may therefore, paradoxically, be deepening existing social divides.

To correctly capture an individual's objective QoL indicators, their subjective assessment of their QoL, and the multiple determinants of this assessment, an instrument must be able to account for numerous individual and country-level confounders.

The unique value of EQLS

EQLS is uniquely positioned to capture multiple important determinants of QoL as well as the interplay between them. The survey permits estimating absolute and relative poverty, and various aspects of material deprivation (crowding, access to good and services, food insecurity) but, unlike other surveys measuring material deprivation and social exclusion (including the EU Statistics on Income and Living Conditions, EU-SILC), EQLS is able to account also for the contextual factors that ultimately shape people's perception of their lives.

Figure 1: Unique properties of EQLS as a multidimensional instrument for the measurement of QoL
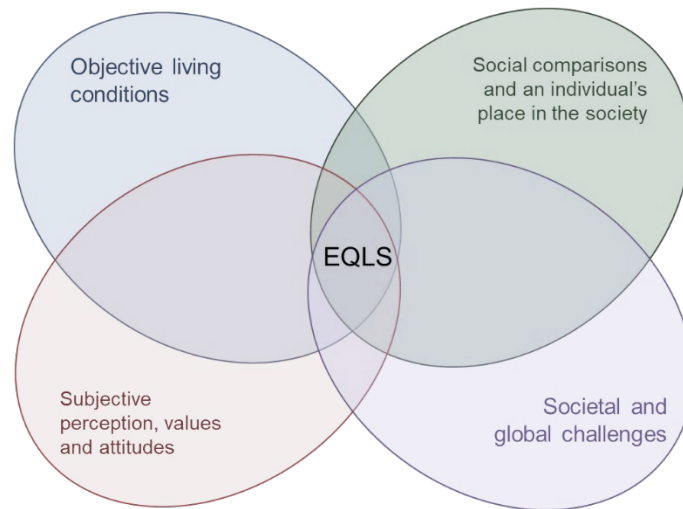
The main strength of the survey – how broad and comprehensive it is – is also its main challenge because of the heterogeneity of the sample[1]. This heterogeneity is expectable because of the differences between the EU countries, between cohorts, and between various social categories. But it is challenging also because QoL is a multidimensional concept and the "good life" may mean different things to different population groups. In other words, the survey must include multiple possible indicators of QoL and its various dimensions, and the design of EQLS should permit identifying some common denominators for a "good life" across the population as well as exploring existing population heterogeneities.

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[1] The survey population for the 2016 wave of EQLS were non-institutionalized individuals aged 18 or more living in a given country for at minimum 6 months. The sample was drawn using multi-stage random probability sampling based on Primary Sampling Units (PSU). The sample was stratified by region and the level of urbanity/rurality. The final response rate differed substantially depending on the region and country (based on the KANTAR Public report on sampling strategy for 2016 EQLS).

Aims and principles of the review of the 2016 EQLS questionnaire

To date, existing reviews of QoL questionnaires concern only instruments intended to measure HRQoL among individuals with a chronic disease or long-term health issues (e.g. De Boer et al. 2004; Coons et al. 2000; Pequeno et al. 2020). Because of this narrow perspective, the utility of these reviews for the review of EQLS is limited.

Quality assessment of EQLS must therefore be informed by the general principles of methodological correctness as well as by the most up-to-date knowledge on how different components of QoL, such as living conditions, social context, and people's everyday experiences are associated with individuals' overall wellbeing and satisfaction with life.

This review assessed whether the questionnaire adequately covers different dimensions of QoL and their covariates. It also analysed particular questionaire items in terms of their:

- content validity,
- face validity,
- reliability,
- clarity and ease of use,
- the risk of generating biased results,
- and overall applicability and relevance for QoL research.

Based on the review a set of recommendations was issued for the 2026 version of the questionnaire. The recommendations were guided by the following principles:

- Continuity: The ultimate value of EQLS comes from its potential to track changes across time. For this reason, maintaining comparability across waves is important. The review adopted a conservative approach to modifications, meaning that priority was given to maintaining comparability across time, even if existing items were not optimal. Modifications were proposed only if there were valid conceptual, methodological or sample-related reasons. Modifications to the existing questions were therefore kept at a minimum.
- Conceptual fit: The review analysed the items from the 2016 questionnaire in terms of how well they corresponded to the four thematic areas proposed for the 2026 survey: i) Subjective Wellbeing and Health, ii) Living Conditions and Access to Essential Services, iii) Impact of Climate Change, Green Transitions and Digitalisation, iv) Social Cohesion, Trust and Recognition.
- Inclusiveness: this principle corresponds with the fact that there is much heterogeneity in the sample and one of the main challenges in the preparation of the 2026 questionnaire lies in guaranteeing that it will take into account the experiences, needs and expectations of the members of the general population in diverse social and cultural settings and at different life stages. The questionnaire items should therefore be applicable to a high share of the population in any European country. Socioeconomic challenges to quality of life faced by all major population groups (families with children, older adults, individuals with disabilities, individuals in precarious social positions, migrants and minority groups) should also be accounted for in the questionnaire. These issues were considered and highlighted during the assessment process.
- Parsimony: To decrease the burden of the interview on respondents and interviewers, the questionnaire should be kept at the minimum necessary length while also covering all required areas. To meet this criterion the review flagged any repetitions or redundant items,

items that overlapped, and items that were applicable only to narrow categories of respondents. Whenever a variable of interest could be derived from exisiting questions, that was recommended over retaining/adding a separate item.

Review of the 2016 EQLS questionnaire

Composition of the questionnaire

The 2016 EQLS questionnaire consisted of 303 unique items (variables), excluding an individual's identifier and meta-data on the country and language completed post-interview.

In the process of review, the items were classified and each item was assigned into one of the following five broad categories: i) Background variables, ii) Objective (external) conditions, iii) Subjective wellbeing, iv) Lifestyle and behaviours, and v) Social perspective. These umbrella categories were selected based on the fact that they capture existing thematic commonalities across the items but remain broad enough to avoid losing a broad perspective and an overview of the proportions between different sub-sections of the questionnaire.

Assigning an item to any of the five groups has been done based on the following criteria:

- **Background variables**. Variables describing the socioeconomic characteristics of respondents and their households. These variables typically are used as independent variables in the analyses of an individual's QoL.
- **Objective (external) conditions**. Items describing individuals' living conditions, including material conditions, housing and the area characteristics, and their broader physical surroundings. These items include also exogenous factors such as environmental exposures (for example, to noise, pollution, and green areas) or availability and ease of access to different services. These items typically represent independent variables in the models on QoL.
- **Subjective assessment and wellbeing**: Items pertaining to self, including individual's mood, satisfaction with different domains of life, and worries over different aspects of life such as housing or employment. Usually used as outcome variable in the models.
- **Lifestyle**. This category was created to include any individuals' behaviours, activities and actions that are reflecting not only objective conditions (e.g. work constraints or household composition) but also personal preferences. Lifestyles are therefore conditioned by exogenous and endogenous factors – to varying extents.
- **Social perspective**. captures items that describe an individual's perspective on the broader social systems (including fairness and justice), country institutions, trust, and views on society and social issues. These are not personal relations (socializing, social contacts) as those are included in the *Lifestyle* section.

The above categories corresponds well with the themes proposed for the 2016 EQLS (*Subjective Wellbeing and Health, Living Conditions and Access to Essential Services, Impact of Climate Change, Green Transitions and Digitalisation, Social Cohesion, Trust and Recognition*), though some items, primarily in the *Lifestyle* section, do not fit into any of these themes (Figure 1). That is not an issue because the themes should be treated as the guidelines regarding the topics that ought to be covered but content of the EQLS does not (and should not) be limited to those themes only but should focus on a comprehensive coverage of different aspects of life.

Figure 2: Correspondence between the thematic content of the 2016 EQLS questionnaire and the proposed themes for the 2026 EQLS questionnaire.
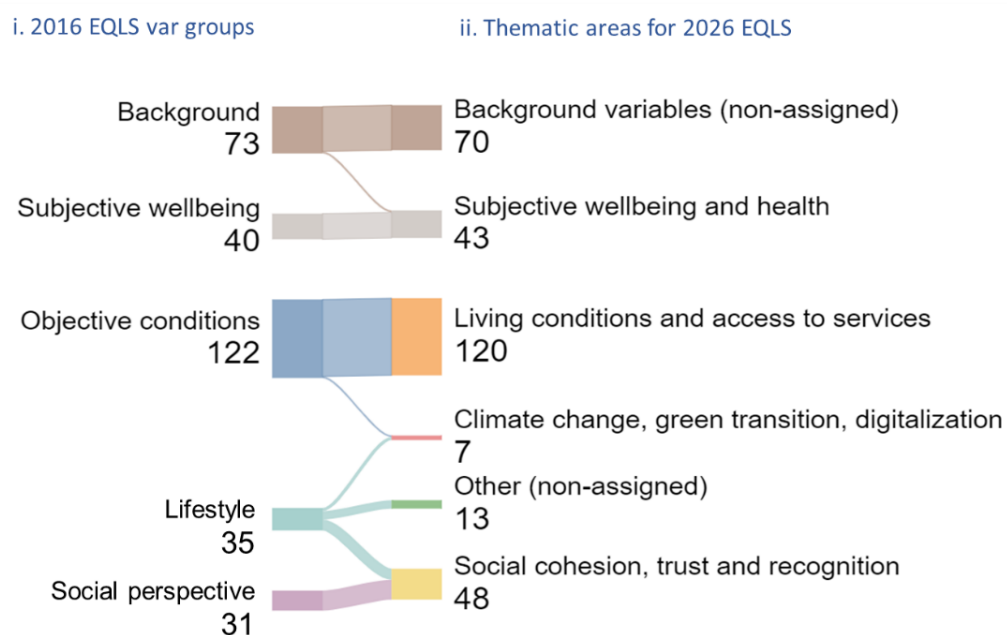
Overall, most items in the 2016 questionnaire concern individuals' *Objective/ external living conditions* and they correspond well to the *Living Conditions and Access to Essential Services*. *Social perspective* and *Subjective wellbeing* are a good fit with the themes *Social cohesion, trust and recognition* and with *Subjective wellbeing and health*, respectively. In the categorization adopted in this review, physical health is among the Background variables because in the case of QL questionnaires is usually an independent variable, though – as outlined earlier – this is primarily because of the genesis of QoL research and the ongoing focus of HRQoL in the field.

Social activities (meetings with friends and family) and volunteering were classified as *Lifestyle* variables in the 2016 questionnaire and they were assigned to *Social Cohesion, Trust and Recognition* among the 2026 themes, although the fit is arguable. These activities represent belonging and community involvement rather than broader social perspective.

Currently there are relatively few items in the 2016 questionnaire that would fall under the *Climate change, green transition and digitalization theme*, and these items are also very diverse. Some of them represent objective conditions (e.g. environmental exposures), whereas other are individual behaviours (e.g. frequency of certain online activities).

Nearly all variables assigned to the category of *Background* variables in the 2016 EQLS were retained in the same category in the 2026 since were typical variables used to describe respondents' socioeconomic and demographic characteristics. The exception was self-rated health and related measures (long-term sickness and limitations in activities of daily living, ADL) which was assigned to *Subjective wellbeing and health* theme for the 2026.

Grouping of the variables served to systematize them and estimate how much of the 2016 questionnaire was dedicated to each section. It did not influence the assessment of the quality of the questionnaire as each item was assessed individually. The sections below provide information on the results of this assessment.

Quality assessment of background variables

There were 73 unique background variables in the 2016 EQLS questionnaire, excluding the metadata completed without the respondent's participation (country of residence, language of the interview, etc.). The variables are presented in the order in which they appear in the questionnaire.

- **HH1   Household size**

  A standard numeric variable in a majority of surveys. Good performance on content and face validity, reliability, and ease of use. Suggestion: KEEP

- **HH2   Age last birthday**

  While it is not uncommon to ask about age instead of the date of birth, the latter variable is time-invariant (stable over time) and easier to recall – especially for other household members than the respondent. Suggestion: MODIFY

- A set of items from the household grid: **HH3.1.b Respondent's age last birthday** (value entered from HH2); age of other household members: **HH3.2.b; HH3.3.b; HH3.4.b; HH3.5.b; HH3.6.b; HH3.7.b; HH3.8.b; HH3.9.b; HH3.10.b**

  The issue is the same as raised above with regard to item HH2. It is advisable to aim for time-invariant age variable in EQLS, and that is particularly relevant for other household members for whom date of birth may be easier to recall and less prone to memory bias than their age last birthday. Suggestion: MODIFY

- A set of items from the household grid concerning gender of the respondent and other household members: **HH3.1.a Respondent's gender** (not asked – entered by the interviewer); **HH3.2.a; HH3.3.a; HH3.4.a; HH3.5.a; HH3.6.a; HH3.7.a; HH3.8.a; HH3.9.a; HH3.10.a**

  The respondent's gender is not asked but entered as binary (male/female) into the household grid. Gender is asked for household members and uses the same binary answers in the following items:

  This is a standard form of asking about gender in population-level surveys. However, it is worth noting that not having a category of 'other' will not permit analyses on non-binary gender status, e.g. as a covariate of discrimination. Yet, a share of individuals not declaring gender other than male or female would likely be low thus also limiting possible analyses. Overall, this measure has good performance on content and face validity, reliability, and ease of use. There is a low risk of bias though the measure does not capture indivduals non-identifying as male or female (which might happen in younger cohorts). Suggestion: KEEP.

- A set of items in household grid describing the relationship between a household member and the Respondent: **HH3.2.c; HH3.3.c; HH3.4.c; HH3.5.c; HH3.6.c; HH3.7.c; HH3.8.c; HH3.9.c; HH3.10.c**

  There are certain inconsistencies in how detailed different categories (1-10) are. For example, gender is specified for *'your son/daughter'*, but not for *'your stepchild'*. Since the gender of the given person is included in the household grid, none of the categories needs to mention it. Overall, the number of step children is very low and this category is redundant because of very low category size (thus it needs to be collapsed for analyses). Suggestion: MODIFY

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10

- Economic activity recorded in the household grid for Respondent and each household member: **HH3.1.d; HH3.2.d; HH3.3.d; HH3.4.d; HH3.5.d; HH3.6.d; HH3.7.d; HH3.8.d; HH3.9.d; HH3.10.d**

  While collecting detailed information on respondent's economic activity is important, this level of detail is likely not needed for other household members. The categories can be different from those used for the respondent. Collapsing multiple categories such as in answer 4 ("in receipt of retirement pension and at work as employee or self-employed") should be avoided. Suggestion: MODIFY

- **Q1   Do you have any children that are not living in your household?**

  A well-worded filtering question with a binary outcome. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP

- **Q2   Number of non-residential children aged <18**
- **Q3   Number of non-residential children aged >=18**

  The questions provide overall very little information on the actual age of the children, which does not permit tracking respondent's fertility history (e.g. having children late in life or at a very young age). Age of children of respondents at the empty nest stage, i.e., parents of adult children, will be unknown if they do not live in the same household. Suggestion: MODIFY

- **Q8   Have you ever had a paid job?**

  A well-worded filtering question with a binary outcome. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q9   Employed or self-employed status**

  This question is well-worded but it could form a part of the earlier question about economic activity – asked to the respondent. Suggestion: MODIFY.

- **Q10   Employment contract in main job**

  Comprehensive categories of answers (1-7) providing good representation of the forms of contract in the sample. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP

- **Q11   What is your current occupation? (1-digit ISCO)**

  ISCO is an appropriate and commonly used categorization of occupations. However, the question uses much of the questionnaire space and there is a risk of self-misassignment by a respondent whose occupation is not among the one used as an example for a given category. Suggestion: MODIFY

- **Q12   Last occupation (1-digit ISCO)**

  Same issue with ISCO categorization as above (see Q11). The question should also be more specific – if a respondent is a working pensioner it is not clear whether they should assign themselves to a certain category based on their current occupation/last occupation or the last occupation <u>before</u> retirement. That needs to be stated explicitly to make sure the question should is unified among all categories of non-working respondents and ask about the last occupation <u>before</u> they stopped working or retired. Suggestion: MODIFY.

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11

- **Q13   Public/ private sector of main job**

  A well-worded question with comprehensive list of answer categories. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q15   Having a second job/ additional paid work**

  A well-worded filtering question with a binary outcome. Good performance on all dimensions. Suggestion: KEEP.

- **Q37   Marital status**

  A basic demographic question. It does not provide informal or legal/civic partnership. Cohabiting with a partner can be derived from the household matrix but the status of the partnership (other than marriage) is not available in the survey. Overall, despite the use of narrow categorization, good performance on content and face validity, reliability, and ease of use. Suggestion: KEEP but please see the note on page 38.

- **Q48   Self-rated health**

  A standard SRH question with 5-point scale answers. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q49   Chronic health conditions**

  Self-reported chronic illness. Information on whether Respondents received any health benefit can be derived from the question HH3.1.d and/ or Q94.a, which together provides a comprehensive information. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q50   Health-related limitations in daily activities**

  This is a general question since it does not probe for limitations in activities of daily living (ADL)/ instrumental activities of daily living (IADL) specifically. It applies to 23% of the sample who declared they have a long-term health condition. The distribution of answer to this item is normal which suggests that it does capture the experiences of this segment of the population well, but it does not provide information on the nature of existing limitations. Overall, good performance on all dimensions. Suggestion: KEEP.

- **Q53   Size of the place of residence**

  A basic background question. There is a certain ambiguity in the distinction between a small and medium-size town and the difference may not be clear to all respondents. Without any numerical reference (number of residents in brackets) or more distinctive categories, a respondent may not be sure which category would be an appropriate choice for them. As this variable is an important predictor of access to services, it could benefit from greater precision. Suggestion: MODIFY.

- **Q87   Educational attainment**

  Standard ISCED-based categorization with additional answer codes for education completed abroad. These additional answers have very low frequencies and cannot be used as standalone items in the analyses. Suggestion: MODIFY.

- The set of questions concerning sources of income in the household: **Q94.a; Q94.b; Q94.c; Q94.d; Q94.e; Q94.f; Q94.g; Q94.h; Q94.i; Q94.j**

  A comprehensive list of binary items. Good performance on content and face validity, reliability, and ease of use. Suggestion: KEEP.

- **Q95   Monthly net household income (does respondent know)**

  This question is not typically asked as 'Don't know' answer is usually included in the general question about household income. There is no added value from separating this item. Furthermore, asking such a question makes it easier for respondent to skip the question on income (by saying they do not know it). Suggestion: DROP.

- **Q96   Monthly net household income in national currency**

  A standard numeric question, typically with high number of missing values and typically followed by a question about income brackets. Good performance on content and face validity, reliability (but expectedly high number of missing values), and ease of use. Low risk of bias but high probability of non-random pattern of missing values with those at the tails of income distribution. Suggestion: KEEP.

- **Q97   HH income band**

  A comprehensive question giving an option to choose the unit for reporting the net household income. All values should be in national currency, which I believe is the case in the country-specific show cards but it does not show in the English language questionnaire. Good performance on content and face validity, reliability, and ease of use. Suggestion: MODIFY.

- **Q99   Country of birth**

  A basic filter question to select first-generation migrants, potentially indicating ethnicity (though usually with low sensitivity). Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q100   Father's country of birth**

  A basic filter question to select second-generation migrants, potentially also indicating ethnicity. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- **Q101   Mother's country of birth**

  A basic filter question to select second-generation migrants, potentially also indicating ethnicity. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

Overall, in the Background section, close to a half (34) of all items had goood content and face validity, reliability, ease of use and was evaluated as not prone to a major bias. Those items are suggested to be retained in their present form.

Modifications were suggested for 38 items which raised issues that were described above. The suggestions regarding how these variables can be modified for the 2026 questionnaire are given in the section 'Recommendations for the 2026 EQLS questionnaire', starting on page 29.

One item was suggsted to be dropped, primarily because of being redundant.

Quality assessment of items concerning objective (external) conditions

There were 122 items representing objective or external conditions, which makes it the largest category in the 2016 EQLS questionnaire. Not every item classified as 'objective condition' represents an exogenous variable, but the conditions or circumstances represented by each item are at least partly outside of the respondent's scope of control that is they are at least partly conditioned by external factors. The variables are presented in the order in which they appear in the questionnaire.

- **Q13   Number of hours in main job (per week)**

  Stylized time use questions such as this one are a common choice in large-scale surveys but it needs to be noted that they also are prone to bias and misestimations (Kan & Pudney, 2008). This item has a limited reliability and some risk of producing biased estimated but it is overall best option for this type of study and a potential indicator of existing time contraints. Suggestion: KEEP.

- **Q16   Hrs in second job (per week)**
  As in the case of Q13, this measure has a good performance on content and face validity and it is easy to use, but it has limited reliability and is prone to bias. However, this is an indicator of existing time contraints. Suggestion: KEEP.

- **Q18   Hrs in paid work- partner**
  This measure has a limited applicability as it is conditional on 1. Having a partner and 2. The partner working for pay. Very high number of missing values (81% of the sample). Low reliability due to the fact that estimating a partner's time use is less reliable and more prone to bias, than estimating own time use. Overall low reliability. Suggestion: DROP.

- **Q19   Work-life balance**
  Applicable to individuals who work for pay. The measure uses a forced (4-point) Likert scale. It has a normal distribution. A fairly high share of missing values (74%) is higher than expected taking into account the share of respondents who work for pay in the sample (47%). Overall an important subjective measure of existing work-life conflict. Suggestion: KEEP.

- **Q21   Job insecurity (How likely to lose job within the next 6 months)**
  A standard survey question indicating the level of job security (in the combination with the type of contract) and using a 5-point Likert scale. Good performance on content and face validity, reliability, and ease of use. Suggestion: KEEP.

- **Q22   Job prospects (How likely to find a similar job within the next 6 months)**
  A good follow-up question to Q21, though it might be used as a stand-alone item too *("If you lost your job, how likely are you to…")*. Good performance on all dimensions. Suggestion: KEEP.

- **Q23   Accommodation: number of rooms**
  A standard question used as indicator of the household's socioeconomic situation and crowding – in combination with the household size. Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP.

- **Q24   Accommodation: ownership**

A standard question used as indicator of the socioeconomic position of the household and financial burden on the household. Good performance on all dimensions. Suggestion: KEEP.

- **Q25.a   Accommodation problems: Shortage of space**

  Information on shortage of space can be derived from item Q23 (number of rooms) in combination with information on household size or, alternatively, a question on the size of accommodation in square meters (currently not available) in combination with household composition. That would be a more reliable method of estimating crowding. Overall, the item has a limited reliability, and content and face validity because experienced shortage of space is not equivalent with an objective measure of crowding. Suggestion: MODIFY

- **Q25.b   Accommodation problems: rot in windows, doors or floors**
  Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP.

- **Q25.c   Accommodation problems: damp or leaks in walls or roof**
  Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP.

- **Q25.d   Accommodation problems: lack of indoor flushing toilet**
  Good performance on all dimensions. Suggestion: KEEP.

- **Q25.e   Accommodation problems: lack of bath or shower**
  Good performance on all dimensions. Suggestion: KEEP.

- **Q25.f   Accommodation problems: problems with heating or cooling the flat**

  Collapsing heating and cooling makes it impossible to analyse geographical variation on the two. This distinction is relevant in the context of the environmental issues as well as housing quality. Suggestion: MODIFY.

- **Q26   Accommodation insecurity** (Likely to lose accommodation within the next 6 months)
  A question using a 5-point Likert scale. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- A set of items concerning available **sources of support: Q40.a** Support in help around the house in case of sickness; **Q40.b** Advice on personal or family matters; **Q40.c** Help in looking for a job; **Q40.d** Emotional support when feeling down; **Q40.f** Financial support to urgently raise a sum of money; **Q40.g** Help with childcare.

  An very good set of questions, typically used in a this combination in large-scale surveys. Very relevant measures of multiple dimensions of an individuals' functioning including sources of support and available safety network, and reliance on family/ informal network or public/ formal services. Note: Q40.g. applies only to respondents with young children. Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP.

- A set of questions concerning **issues in the area of residence**: **Q54.a** Noise; **Q54.b** Air quality; **Q54.c** Litter, rubbish; **Q54.d** Heavy traffic.
  A good selection of items to capture issues in the area of residence. Answer are in all cases are skewed with most respondents declaring no issues (see Appendix, Table 1). This result might be linked with the scales used – a 3-point scale differentiating between 'major', 'moderate', and 'no' problems. The scale itself is slightly imbalanced because it lacks option

such as 'minor problems' or 'some problems', which could help achieve a closer to normal distribution. Suggestion: MODIFY.

- A set of questions concerning **ease of access to**: **Q56.a** Banking facilities; **Q56.b** Public transport; **Q56.c** Cinema, theatre or culture centre; **Q56.d** Recreation or green areas; **Q56.e** Grocery shop or a supermarket; **Q56.f** Recycling services.
  A good selection of items concerning access to basic amenities. Somewhat problematic response categories with category 'Not applicable/ service not used" lowering the diagnostic quality of the item, especially with regard to green areas – availability of green spaces is a measures of the quality of surrounding neighbourhood and the opportunity of exposure. This question is about ease of access to areas/ their availability, not the use of areas. Answers should be consistent with this purpose. If use is of interest, another item should measure use of particular services or places. Furthermore, these items have a high share of missing values that are unexplained by the study design (e.g. 74% missing values on the item concerning ease of access to grocery shop). Suggestion: MODIFY

- **Q57 Usual commute time in minutes**
  An important item which, however, is meaningless if information on the means of transportation is not provided. This question must be accompanied by a question concernins mode of transport typically used during commute. Suggestion: MODIFY

- A set of questions concerning the **quality of public services**: **Q58.a** Health services; **Q58.b** Education system; **Q58.c** Public transport; **Q58.d** Childcare services; **Q58.e** Long-term services; **Q58.f** Social/ municipal housing; **Q58.g** State pension system
  This is a good set of question though their reliability is limited because there are no questions concerning whether a respondent has first-hand experiences with given services (i.e. questions on the use of these services). A question on use should be a control question, not a filtering question. Some of the items have a high number of missing values, probably because non-users were excluded, which is likely not necessary provided that a usage question is included. The perceived quality is also important. The items use 10-point scale with no mid-point which forces the respondents to point to low or good quality. Overall, this is not optimal scale for such items, but in this review priority is given to maintaining comparability across waves. Suggestion: KEEP.

- A set of questions on the **quality of health services**: **Q59.a** GP, family doctor or health centre services; **Q59.b** Hospital or medical specialist services.
  The selection of scale 10-point, no mid-point is perhaps not optimal (as explained above), but otherwise good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP.

- A set of questions on the **use of health services**: **Q60.a** GP, family doctor or health centre services; **Q60.b** Emergency care; **Q60.c** Hospital or medical specialist services; **Q60.d** Ordering prescriptions online/ on the phone; **Q60.e** Medical consultation online or over the phone
  The use of services question is useful as a control variable for Q59, some items might also be indicative of existing health issues of a respondent or in their household. High share of non-users and missing values in Q60.d and Q60.e, these items also have low relevance for QoL measures. Suggestions: KEEP for Q60.a, Q60.b, Q60.c; and DROP items Q60.d and Q60.e.

- A set of items concerning **barriers to use GP services**: **Q61.a** Distance; **Q61.b** Delay in getting an appointment; **Q61.c** Waiting time; **Q61.d** Costs of service; **Q61.e** Finding time.

Distance to the GP and delay in getting an appointment are important measures of quality of services with possible important implications for individual's health and QoL. They have good performance on content and face validity, reliability, and ease of use, and low risk of bias. Conversely, Q61.c and Q61.e are more accidental measures and, in particular the latter, they do not necessarily reflect the quality of services or the barriers to use of service. Likewise, costs of using a GP (Q61.d) are usually not a barrier in the European context where public health services are often free or available at low cost. In this context a variable may capture a systemic variance (differences in welfare provisions) rather than actual individual barriers. It could serve as a measure of financial difficulties but there are other, more sensitive measures of the household's financial situation in the questionnaire.
Suggestion: KEEP Q61.a, Q61.b. DROP Q61.c, Q61.d, Q61.e.

- A set of items concerning the **quality of services used by the respondent (GP)**: **Q62.a** Facilities; **Q62.b** Expertise; **Q62.c** Personal attention; **Q62.d** Being informed.
  All items are positively correlated with correlations varying between 0.28 and 0.57. There likely is a high degree heterogeneity that is not accounted for, including regional variation in the quality of provisions, way of selecting a GP, personal issues that were consulted. Overall the question is time-consuming and non-applicable to those in the sample who did not use the services. Items in Q62 have a very high share of missing values: 83%. Suggestion: DROP.

- A set of items concerning the **quality of services used by the respondent (hospital or specialist services)**: **Q64.a** Facilities; **Q64.b** Expertise; **Q64.c** Personal attention; **Q64.d** Being informed.
  Items are positively correlated, low relevance for the general population, high share of missing values (92%). Suggestion: DROP

- A set of items concerning the **quality of services used by a member of respondent's household (hospital or specialist services)**: **Q65.a** Facilities; **Q65.b** Expertise; **Q65.c** Personal attention; **Q65.d** Being informed.
  Items are positively correlated, low relevance for the general population, high share of missing values (96%). Suggestion: DROP

- A set of items concerning **difficulty in covering the costs of**: **Q67.a** GP; **Q67.b** dental care; **Q67.c** mental/ psychological care; **Q67.d** emergency healthcare; **Q67.e** other specialist care.
  This items combines services that are usually fully or almost fully publicly funded (e.g. GP) with those for which are respondents are much more likely to pay out of pocket (e.g. a dentist). There are multiple sources of heterogeneity, the first one being systemic differences, the second one is whether a service is part of the public or private healthcare, the third one is what expenses are under consideration. This lack of clarity and high degree of heterogeneity show in a nearly uniform (flat) distribution of answers to some items (e.g. costs of dentist; see Appendix, Figure 1). There is also a high share of missing values in the items. Suggestion: DROP.

- A set of questions concerning the **use of care services by the respondent or a household member**: **Q68.a** Nursing care at home, **Q68.b** Help at home or personal care services; **Q68.c** Nursing home.
  A very low frequency of positive answers to these items (<2%) suggest low relevance for a population study and provides an inadequate sample size for comparative analyses. Suggestion: DROP.

- Follow up questions to Q68, concerning the **funding of care services used by the respondent** (**Q69.a, Q69.b, Q69.c**) or by another household member (**Q70.a, Q70.b, Q70.c**).
Very low frequencies suggest the relevance of the topic for the general population sample is low and make the variables unusable for comparative analyses. Suggestion: DROP.

- **Q71   Type of long-term care that respondent used the most**
Low relevance for population-level survey. Over 98% missing values. Suggestion: DROP

- **Q72   Type of long-term care that another household member used the most**
Low relevance for population-level survey. Over 98% missing values. Suggestion: DROP

- A set of questions pertaining to the **quality of long-term services used by the respondent**: **Q73.a** Facilities; **Q73.b** Expertise; **Q73.c** Personal attention; **Q73.d** Being informed
Low relevance for population-level survey. Over 98% missing values. Suggestion: DROP

- **Q74 Difficult to access long-term care due to costs**
Low relevance for population-level survey. Over 96% missing values. Suggestion: DROP

- A set of questions on help/ care received by the respondent or their household member **Q76.a informal care provided by a family member/ friend; Q76.b paid care outside of the formal healthcare**.
High share of missing values, low share of positive answers (the type of care being used), too low sample size for cross-sectional analyses. Suggestion: DROP

- **Q77   Ages of child or children in the household who received childcare**
The item does not provide information on the number of children receiving care. The choice of age brackets of the child is not clear. Overall, it is not clear why child/ children age is the main focus, since the household (not the child) is the actual recipient of childcare (outsources it and, if relevant, pays for it). No differentiation between formal and informal childcare at this stage adds to the overall low clarity of what the item measures. Low content and face validity and reliability due to unclear coding procedure. Suggestion: MODIFY

- **Q78   Main type of childcare for youngest child**
As above, there is an underlying assumption that the child, not the household, is the recipient of care. As a result the item does not account for any other childcare received by the household, except for the childcare for the youngest child. Meanwhile, the youngest child may under parental case or not yet eligible for public schooling or preschool in the household, but older children may be in public day care or under care of a relative. The measure, as a result has very low usability. Suggestion: MODIFY

- **Q79   Childcare for youngest child, hrs per week**
A follow-up to the previous item Q78, unclear what it intends to measure as it is not accounting for all childcare received by the household (explained above). Suggestion: MODIFY

- **Q80   Childcare for youngest child, funding**
Does not accounts for all childcare received by the household, older children may be in paid-for childcare which is not captured in this set of items. Suggestion: MODIFY

- A set of questions probing for the **quality of childcare received by the youngest child**: **Q81.a** Facilities; **Q81.b** Expertise; **Q81.c** Personal attention; **Q81.d** Being informed; **Q81.e** Curriculum

  The item carries the same conceptual errors as the preceding items, applicable only to the parents who use paid-for childcare (low sample size). Suggestion: DROP

- **Q82   Difficult to use childcare due to costs**

The question is asked to those who are using paid-for childcare so its relevance and clarity is low since either the costs clearly were not a barrier to use. Childcare costs as a financial burden to the household should be measured using different and clearly formulated items, directly asking whether they are considered a significant expense. Suggestion: DROP

- **Q84   Age of any children in HH using school**
Unclear choice of age brackets – public schools in most countries start before the age of 12. Attending a school is compulsory (with some exceptions) for the children under a certain age so presence of a child under that age is usually equivalent to school attendance. Children aged 19 and over do not attend primary/ middle or high schools and cannot be evaluated in the same way as children who are in compulsory education. Information about being in education is included in the household grid, so this item is redundant unless the question is rephrased into using private or public schooling system or being home-schooled. Suggestion: MODIFY

- A set of items concerning the **quality of school: Q85.a** Facilities; **Q85.b** Expertise; **Q85.c** Personal attention; **Q85.d** Being informed; **Q85.e** Curriculum

  Similar issues as with the question regarding childcare use for children aged under 12. There may be several children going to different schools, which school should be subject to the assessment? The question does not account for whether the school a child or children use is private or public. High number of missing values, low face and content validity, unclear formulation of the question. Suggestion: DROP

- **Q88 Financial situation: Is HH able to make ends meet**
An important item, easy to understand and with a clear *designatum*. It uses a 6-point scale without midpoint. The distribution is nearly normal but suggesting that the a 5 or 7-point scale with a midpoint could be more adequate, however comparability of this item across waves is of key importance in this case. Suggestion: KEEP

- A set of items concerning **material situation of the household** (whether the household can or cannot afford): **Q89.a** Keeping home warm; **Q89.b** A week of annual holidays; **Q89.c** Replacing worn-out furniture; **Q89.d** A meal with meat or fish; **Q89.e** Buying new clothes; **Q89.f** Having friends or family over.
These items together provide quite comprehensive information on different degrees of financial constraints. Each questions captures different level of deprivation. Some items measure significant degree of deprivation (Q89.a, Q89.d) whereas other point to financial constraints rather than actual deprivation (Q89.b, Q89.c), and that is also reflected in the frequencies (a much higher share of respondents experience the latter; see Appendix Table 2). Items Q89.e and Q89.f are positioned in between the two but not much distinctive from items Q89.a and Q89.d in terms of the frequencies. Furthermore, buying second-hand garments may be a matter of choice not money constraints so the question may not be optimal. Overall, as there are other measures of material difficulties in the questionnaire, the number of items used in Q89 can be decreased. Suggestion: KEEP items Q89.a, Q89.b, Q89.c, Q89.d; DROP items Q89.e, Q89.f. Please see also pages 40-42 for suggestions of alternative questions measuring material situation of the household.
- A set of items concerning **material deprivation: Q90.a** Limiting fruit and vegetables intake; **Q90.b** Buying cheaper meat or less of it.

These items are correlated, and 85% of individuals who buy less meat also limit their intake of fruits and vegetables. Overall, item Q90.a has very low frequency of positive answers (which may be due to overall low consumption of fruits and vegetables in certain populations), so Q90.b is likely a better indicator of deprivation, whereas a question about consumption of fruit and vegetables would be a better fit into health behaviours (without a link to money constraints). Suggestion: DROP Q90.a; KEEP Q90.b.

- Items on **foregoing or delaying an appointment** (with **Q91.a** A doctor; **Q91.b** A dentist) due to financial problems.
  Well-worded questions with an additional benefit of capturing possible negative health implications of financial constraints. Overall few positive answers to these items, in particular with regard to Q91.a, which likely reflects the fact that the costs of using a GP in public healthcare system are low. Probably adding services that are more likely to affected by financial constraints could render the measure more sensitive. Suggestion: MODIFY.

- **Q92 Moved to a cheaper home because of financial situation**
  Very low frequencies of positive answers to this item suggest the phenomenon is either marginal or, more likely, not captured in the survey because of the sample composition: individuals losing their housing due to financial problems would likely not be included in the sample due to not having a permanent residential address (e.g. because of homelessness). Overall the reliability and usability of the question in the present sample is very low. Suggestion: DROP

- A set of items concerning being **unable to pay on schedule: Q93.a** Rent or mortgage, **Q93.b** Utility bills; **Q93.c** Consumer loans; **Q93.d** Telephone or internet bills; **Q93.e** Informal loans.
  A clear, well-worded set of binary items, in particular with regard to the costs of living crisis. For this reason, despite low frequency of positive answers in the 2016 wave, they are worth keeping for comparison. Notably, the scale with two answers (yes, no) is little sensitive for a 12-months period. Suggestion: KEEP. However, please see pages 40-42 for alternative ways of measuring financial problems in the household.

- **Q98 A change in the financial situation of the household over the past 12 months**
  This is a well-worded question. However, because of the wave spacing (2016 and 2026 waves will be 10 years apart) the time frame could be redefined. Suggestion: MODIFY

- **A set of items concerning exposure to : Q104.a** Online harassment; **Q104.b** Online privacy violation or fraud.
  Well-worded items. Although frequencies of positive responses were very low in 2016, the issues may be more relevant as Internet penetration and use have increased. The items are useful to keep in their present form for comparability reasons. Suggestion: KEEP

Overall, in the Objective (external) conditions section, it is suggested that 45 variables are kept in their present form.

Further 21 variables could be modified to improve their performance.

Finally, 56 variables are recommended to be removed from the survey, mainly due to their low relevance in the population for which the data is collected.

Quality assessment of items concerning subjective assessment and subjective wellbeing

In total 40 items were classified as corresponding to the subjective assessment, which represented individuals' assessment of their lives, their expectations, feelings, preferences, and subjective wellbeing. The items are discussed below in the order in which they appear in the questionnaire.

- **Q4 Satisfaction with life in general**
  A standard measure used in social research, with slight differences in the type of scale used across different surveys. This item uses a 10-point scale (no midpoint) which forces the respondent out of a neutral position. Similar scales with no midpoint are used e.g. in the Survey of Health, Ageing and Retirement in Europe, SHARE[2] (4-point scale). The EQLS scale could probably use also fewer points and produce same answers. Suggestion: KEEP

- **Q5   Happiness**
  A standard survey question, using 10-point scale (no midpoint). Suggestion: KEEP

- A set of questions concerning **satisfaction with various life domains**: **Q6.a** Education; **Q6.b** Present job; **Q6.c** Present standard of living; **Q6.d** Accommodation; **Q6.e** Family life; **Q6.f** Local area as a place to live
  All items use a 10-point scale. Items Q6.b – Q6.f are highly correlated, with the results showing that satisfaction with standard of living is quite strongly associated with satisfaction with job and satisfaction with accommodation. Overall, as regards Q6.c, (standard of living), it is not clear what the item measures. 'Standard of living' can include income, consumption patterns, quality of public services or quality of environment. Due to low content validity this item has low informative value, though correlation coefficients (Table 1) shows that it is much determined by respondents' assessment of their paid work and accommodation.

Table 1: Correlations (Pearson's r) between the levels of satisfaction with different domains of life

	Q6b	Q6c	Q6d	Q6e	Q6f
Q6b	1.0000				
Q6c	**0.5918**	1.0000			
Q6d	0.4236	**0.5727**	1.0000		
Q6e	0.3733	0.4503	0.5001	1.0000	
Q6f	0.1992	0.2204	0.2665	0.2343	1.0000

Source: Author's computations based on the 2016 EQLS dataset.

The meaning of item Q6.e is also not clear because it is not said whether it pertains to family relations, partnership, work-family balance, children or how it would be relevant for single individuals. In the context of demographic change and the "epidemic of loneliness" (Gerst-

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[2]https://www.share-eric.eu/fileadmin/user_upload/Questionnaires/Q-Wave_8/paperverstion_en_GB_8_2_5b.pdf

Emerson & Jayawardhana, 2015), the question is relevant and could provide important information but it would benefit from a greater clarity.

Finally, item Q6.a Satisfaction with education, has a low applicability since education is not a dimension of QoL (rather its determinant), and for many individuals the item is meaningless since they have completed their education many years ago, and this dimension of their lives remains constant over time.

Suggestions: DROP Q6.a, Q6.c. KEEP Q6.b, Q6.d, Q6.f. MODIFY Q6.e.

- A set of items concerning the extent to which respondent agrees/ disagrees with statements **Q7.a Optimism about the future**; **Q7.b Optimism about children's/ grandchildren's future**; **Q7.c What I do is worthwhile**; **Q7.d Freedom to decide how to live one's life**; **Q7.e Little time for things I really enjoy**; **Q7.f Difficult to deal with important problems; Q7.g Takes long time to get back to normal when things go wrong**

  A set of items primarily measuring psychological characteristics or psychological resources (e.g. resilience, meaningfulness, optimism, control). All items use a 5-point Likert scale and some of them measure same or similar constructs (e.g. items Q7.f and Q7.g both measure resilience) though the number of indicators is not sufficient for constructing latent factors. Item Q7.e stands out because what it measures, in terms of psychological resources, is not clear. It pertains to external or perceived limitations rather than psychological resources. It also assumes that shortage of time is a main constraint, even though it is not – it is specific to particular population groups, and for many other individuals money or functional limitations are more constraining than the lack of time.

  Suggestion: KEEP items Q7.a, Q7.b, Q7.c, Q7.d, Q7.f, Q7g. DROP: Q7.e

- **Q17   Preferred total work time**

  It is not clear what the question measures, and that is because of the wording: the respondent should declare preferred working time but take into account the need to earn a living. Working as much as one needs to in order earn a living may be much more than they would ideally like to work (and there are no controls for wage/salary in the questionnaire which contributes to the lack of clarity). 36% of the sample, excluding missing values, points to 40 working hours per week (see Table 3 in the Appendix) any most answers are between 20 (part-time) and 40 (full time) hours per week. That suggests the answer may be rooted in how much they should work to make ends meet, not in their actual preferences. The question may be interesting to examine differences across cohorts in attitudes but it is not clear what it measures, but likely not preferences. Suggestion: MODIFY

- A set of items concerning subjective outcomes of **work-family conflict: Q20.a** Being too tired after work to do household work; **Q20.b** Hard to fulfil family duties due to work; **Q20.c** Hard to focus on work because of family

  The items are well-worded but the scale is inadequate, which is reflected in the fact that two out of three items have bimodal distribution (see Appendix, Figure 2). Suggestion: MODIFY

- **Q31 Satisfaction with democracy**

Disclaimer: This working paper has not been subject to the full Eurofound evaluation, editorial and publication process.

22

Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP

- **Q32 Satisfaction with the state of economy**

  Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP

- **Q41 Worry about pension income**

  Good performance on content and face validity, reliability, and ease of use, low risk of bias. However, the question is to be asked to all respondents but it is not relevant for those already receiving a pension. Suggestion: MODIFY

- **Q44   Ease to combine work and caregiving**

  Good performance on content and face validity, reliability, and ease of use, low risk of bias. Suggestion: KEEP

- **Q45   Hypothetical ease to combine work and care**

  A cognitive demanding hypothetical question without a clear *designatum*. Low content and face validity, low clarity, low reliability. Suggestion: DROP

- A set of questions regarding **time use preferences** relative to time currently spent on a given activity: **Q47.a** Family time; **Q47.b** Other social time; **Q47.c** Hobbies/ interests; **Q47.d** Volunteering; **Q47.e** Childcare; **Q47.f** Adultcare

  These items have low validity because time use patterns have major endogenous elements, meaning that to a certain extent respondents decide what they allocate their time to – especially during their time off paid work. In this context, it is not clear what these items are expected to measure, perhaps with the exception of Q47.a which may be another measure of work-family conflict (perhaps not necessary since there are better items to capture that in the questionnaire). Overall these items have low usability.

  Suggestions: KEEP item Q47.a (though might be dropped because this dimension is covered elsewhere in the questionnaire); DROP all other items in this section.

- A set of items measuring **psychological wellbeing (positive)**: **Q51.a** Cheerful and in good spirit; **Q51.b** Calm and relaxed; **Q51.c** Active and vigorous; **Q51.d** Woke up rested; **Q51.e** Interesting daily life

  These items are commonly used in surveys. Good performance on content and face validity, reliability, and ease of use. Low risk of bias. Suggestion: KEEP

- A set of items measuring **psychological wellbeing (negative)**: **Q52.a** Particularly tense; **Q52.b** Lonely**; Q52.c** Depressed

  As above. Good performance on all dimensions. Suggestion: KEEP

- A set of questions concerning **feeling safe Q55.a** When walking after dark in the area; **Q55.b** At home at night

  This is a unique set of questions because it concerns safety. It likely captures an intersection of exogenous and endogenous factors (anxiety, fear or respondent's vulnerabilities, but also the characteristics of the neighbourhood). Good performance on content and face validity, reliability, and ease of use, high relevance for QoL. Suggestion: KEEP

Out of 40 items assigned to this section, 26 items are suggested to be retained in their present form.

In the case of 6 items, the review has identified issues. Those items could benefit from modifications to improve their perfromance.

Finally, 8 items could be dropped because of their low added value to the dataset, including due to low usability, low reliability, or low content validity.

Quality assessment of items concerning lifestyle, activities, and behaviours

A separate section was proposed to accommodate 37 items that did not fit into other thematic sections. The items concerned individual's behaviours, including few items on online behaviours. The items are given below in the order in which they appear in the questionnaire:

- A set of items concerning **frequency of participation in selected activities Q27.a** Religious services; **Q27.b** Internet use; **Q27.c** Sports and exercise; **Q27.d** Activities of social clubs
  It is not clear why these particular activities were selected. There is no common denominator and some activities are reported as never done by a large share of the population (Table 4, Appendix). The distribution of some of the items suggest a binary outcome could be more relevant (Q27.b, see Appendix, Figure 3). The items also have a high share of missing values which are not explained by the study design (Table 2, Appendix). Suggestion: MODIFY.

- A set of items concerning **participation in training Q28.a** For professional reasons; **Q28.b** For non-prof reasons
  While the items have good face and content validity and reliability, it is not clear what is their relevance fort QoL and what is the meaning of distinction between professional and non-professional training in this context. Suggestion: MODIFY

- A set of items on different forms of **volunteering through: Q29.a** Community and social services; **Q29.b** Education, culture, sport, professional organizations; **Q29.c** Social movements; **Q29.d** Political parties; **Q29.e** Other
  Those items have low relevance for QoL measures and it is not clear why distinctive types of organizations are introduced. The frequency of reporting volunteering in any of the items is low, and there is a high share of missing values for all questions. Usability as well as relevance of the items is very limited. Suggestion: DROP

- A set of items concerning **political participation Q30.a** Attended a meeting; **Q30.b** Attended a protest; **Q30.c** Signed a petition; **Q30.d** Contacted a politician; **Q30.e** Commented online; **Q30.f** Boycotted products
  Political participation does not have a direct association with the QoL, so relevance of the items in measuring QoL and its determinants is low. The same set of items is also collected in each wave of the European Social Survey (ESS) along with a large battery of questions on political activism so these items in EQLS would likely not be much used by researchers interested in the topic. Suggestion: DROP

- A set of items on the frequency of **face to face contact with: Q38.a** Family/ relatives; **Q38.b** Friends/ neighbours
  The questions are well-worded and have good face and content validity but the scales are problematic and lower the validity of the questions, for example the answers of 'everyday or almost everyday' and 'at least once a week' overlap because it is not clear to which category

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24

several times per week should be assigned. Other categories of answers also need improvement because there is no clear basis on which they are constructed. Suggestion: MODIFY

- A set of items on the **frequency of over the phone or online contact with: Q39.a** With family/ relatives; **Q39.b** Friends/ neighbours

  The questions use same categories of answers as Q38 so issues listed above also apply to this section. Suggestion: MODIFY

- A set of question concerning **frequency of activities: Q42.a** Care for own children; **Q42.b** Care for own grandchildren; **Q42.c** Cooking and housework; **Q42.d** Adultcare for individuals <75 y.o; **Q42.e** Adultcare for individuals >75 y.o.

  The questions have good face validity but include an unnecessary amount of detail. For example, based on respondent's age and information on their children, it is clear whether childcare concerns a child or a grandchild; a distinction between adultcare depending on the age of care recipient is also redundant. Morevoer, duration is an overall more precise measure of time spent on caregiving and it is highly correlated with activity frequency, which means that retaining both Q42 and Q43 is not needed. Suggestion: DROP

- A set of question concerning **duration (per week) of activities: Q43.a** Care for own children; **Q43.b** Care for own grandchildren; **Q43.c** Cooking and housework; **Q43.d** Adultcare for <75 y.o; **Q43.e** Adultcare for >75 y.o.

  The comments from Q42 apply also to this set of items. Suggestion: MODIFY

- **Q46 Equality in domestic division of labour between partners**

  The estimate has a high risk of bias. In short, women underestimate their time in housework, men overestimate it (Kan, 2008). To relate fairness in domestic division of labour to QoL one would need to include also gender role attitudes, which is not available in the survey. Finally, this item applies only to currently partnered individuals. Overall, this question has a low usability and low relevance for QoL in the current version of the questionnaire. It also has a very high share of missing values (95%). Suggestion: DROP

- **Q102 Being online over the past 12 months**

  The question has a good validity but it is outdated in terms of the assumed frequency of Internet use. There is an alternative set of questions suggested further in this report (see pages 45-47). Suggestion: DROP

- A set of questions pertaining to **online activities: Q103.a** Found a job; **Q103.b** Shopping; **Q103.c** Using government facility (tax, admin); **Q103.d** Online banking

  The items have good concept and face validity but may be too narrow (e.g. 'found a job' has a fairly narrow scope compared to 'looked for a job') and binary answer categories may not be an optimal choice in the face of high penetration of internet in many EU countries, in particularly among younger cohorts. Suggestion: MODIFY

> Overall, none of the items in the Lifestyle section is recommended to be kept in its present form. It has been suggested that 19 items should be modified, and 18 items should be dropped.

Quality assessment of items concerning social relations

This segment of the questionnaire comprised 31 items which concerned trust, fairness, and perceived sources of social conflict as well as a section on self-worth and belonging. Many of the questions in this section are classic items widely used and cross-validated in numerous studies. The items are discussed below in the order in which they appear in the questionnaire.

- **Q33 General trust**
  A classic item. High content and face validity, high reliability, low risk of bias. Suggestion: KEEP

- A set of question about the perceived **sources of social conflict: Q34.a** Poor vs rich; **Q34.b** Management vs workers; **Q34.c** Men vs women; **Q34.d** Old vs young; **Q34.e** Racial, ethnic; **Q34.f** Religious groups; **Q34.g** Sexual orientations

  This is a classic set of cross-validated questions, available also in other cross-national European datasets such as the European Social Survey (ESS). Many studies include also the rural-urban divide, which is not the case in EQLS. It is worth considering whether adding this dimension of social conflict is relevant. These items are useful as control variables or indicators of an individual's' social standing and their perceptions. Suggestion: KEEP

- A set of questions on trust in institutions: **Q35.a** National parliament; **Q35.b** Legal system; **Q35.c** News media; **Q35.d** Police; **Q35.e** Government; **Q35.f** Local authorities; **Q35.g** Banks; **Q35.h** Charities
  Cross-validated questions, good content and face validity, high reliability. While it is not a part of a classic set of questions above, it is worth considering adding an item concerning trust in information on social media because of its major role in shaping opinions and a possible indicator of existing social divides, as outlined in the introduction to this document. Suggestion: KEEP

- A set of questions on **self-perception in the broader social context Q36.a** Feel left out; **Q36.b** Life has become complicated; **Q36.c** Value of what I do is not recognized; **Q36.d** I am looked down on; **Q36.e** I feel close to people in the area
  Items are relevant for exploring social connectedness, recognition, and subjective social position as covariates of QoL. Good face and content validity, good reliability. Suggestion: KEEP

- A set of items concerning **fairness in GP treatment: Q63.a** Equality in treatment by GP; **Q63.b** Corruption in treatment by GP
  These two items essentially measure the same thing on reversed scales. Those two statements could be places on a single continuum extending from Equality in treatment on one end to Corruption on the other end. Two items are therefore redundant. Second, it is not clear what individuals' judgement might reflect (an advantaged/ disadvantaged position, own experiences, opinions one has heard, someone's experiences, media coverage) and there is a high risk of bias. Utility of these items is overall low due to low reliability and high risk of bias. Suggestion: DROP

- A set of items concerning **fairness in hospital treatment: Q66.a** Equality in hospital treatment; **Q66.b** Corruption in hospital treatment
  The issues are same as in the case of items Q63, with yet lower reliability due to the fact that the prevalence of individuals with first-hand experience of hospital treatment is lower than that of individuals who were treated by a GP. Suggestion: DROP

- A set of items concerning **fairness in long-term care: Q75.a** Equality in long-term care; **Q75.b** Corruption in long-term care

  The issues are same as in the case of items Q63, with yet lower reliability due to the fact that the prevalence of individuals with first-hand experience of hospital treatment is lower than that of individuals who were treated by a GP. Suggestion: DROP

- A set of items concerning **fairness in childcare: Q83.a** Equality in childcare; **Q83.b** Corruption in childcare

  While the topic of equality or fairness in *access* (criteria to access) to public childcare services is socially important, it is not what these items measure. The items are poorly worded and it is not clear what "all people are treated equally in these services in my area" mean in substantial terms and whether that pertains to parents (access) or children (how they are handled)? Furthermore, the question does not ask about public childcare but childcare in general. Overall, low face and concept validity, and low clarity of what the questions measure. Suggestion: DROP

- A set of items concerning **fairness in school services: Q86.a** Equality in school services; **Q86.b** Corruption in school services

  As above, it is not clear what is the subject: access to schooling, assessment/grades at school, quality of education at different schools or quality of treatment of children in the same school. Who are 'people'? What level of schooling does the question pertain to? Overall, low face and content validity and low reliability of the items. Suggestion: DROP

> Within this segment of the questionnaire, 21 items were evaluated positively and are recommended to be kept in their present form.
>
> 10 items were recommended to be removed from the questionnaire due to their low validiry and reliability, low clarity, and low overall usability.
>
> None of the items was recommended for modifications.

Summary of the suggested changes and general remarks

Overview of the current content of the questionnaire

Following the review of 303 unique items, nearly half (126) of items were recommended to be retained in their present form which is in line with the proposed conservative approach to quality analysis and prioritizing comparability over time.

Whenever an item was relevant for the topic of QoL but would benefit from modification of wording, scales or other type, it was recommended for modification. There were 84 items overall that received this recommendation. A modification does not mean loss of comparability across waves. Whether a variable will be comparable across waves depends on the degree of changes to its content or scales. Most of the modifications proposed in the following section (Recommendations for the 2026 EQLS questionnaire) do permit comparisons across time after minor *ex-post* harmonization (such as recoding a variable).

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27

Finally, 93 items were recommended to be removed from the questionnaire due to their low utility for the instrument either because of low reliability, or low relevance for the topic of QoL in the general population sample.

Expectedly, the recommended changes, specifically deletion of some items, would influence the structure of the questionnaire. Figure 2 presents the present share of different sections in 2016 EQLS questionnaire compared to the version with changes recommended in the above review (i.e. without the items recommended for removal).

Figure 3: Number of items in the original 2016 EQLS questionnaire compared to proposed changes (deletion of items).

Number of items in 2016 EQLS
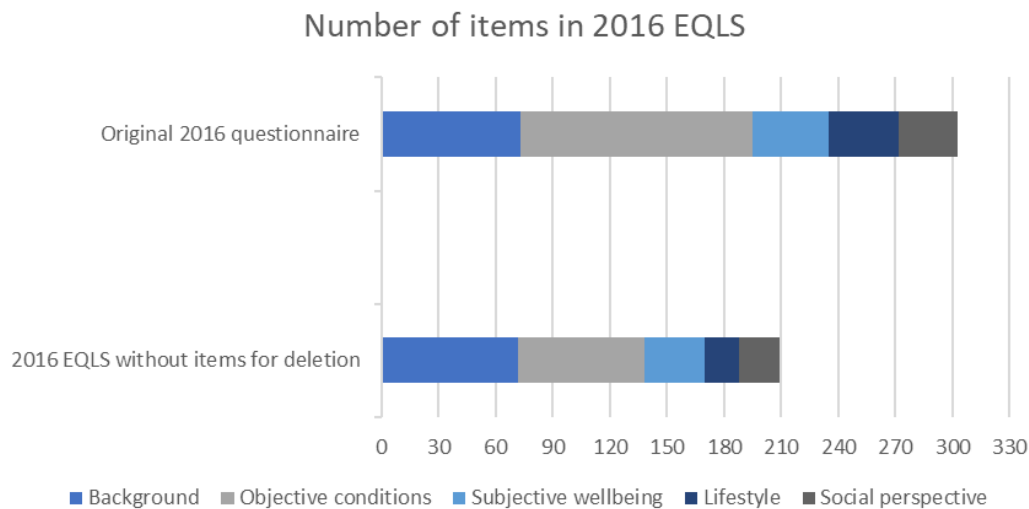
Deletion of some of the variables would be beneficial for reasons beyond their low utility. First, the 2016 EQLS questionnaire is relatively long. Long surveys increase respondent's fatigue and the risk they will skip some questions (Jeong et al., 2023) or provide less thoughtful answers, such as picking "don't know" instead of reflecting on other answer options. Shortening the survey is therefore a desirable outcome of the review. Second, deletion has also generated space to add variables which are missing in the survey. As shown in Figure 1, the number of items that in the thematic area of Impact of Climate Change, Green Transitions and Digitalisation is low. There are also relatively few items on social perceptions that could provide important control variables in the theme Social Cohesion, Trust and Recognition. The suggested new variables are presented and discussed in detail in the further sections of this report (starting from page 39).

Correspondence and consistency across items

Besides evaluating each item on its own, attention needs to be paid to how items work together. First of all, the selection of variables should be sufficient and relevant for explain population heterogeneities in QoL measures. Overall, there is a good choice of background variables in the survey, including an individual's and their household's characteristics. As regards modelling, many of the items classified as objective or external conditions are independent variables influencing individual's overall functioning. The large and diverse pool of items gives many analytical options.

Second, the use of scales should be purposeful and should reflect the scales that were cross-validated for a similar item. Overall, there is much variability in types of scales used in the survey: some items used a forced 4-point Likert, other use 5-point Likert, other use 10-point scale (no midpoint), including in the questions where usually 5-point scales are used. Forced Likert scale or any scale with an even number of categories does not allow a respondent to select an answer such as 'in the middle/ neither nor' because there is no mid-point in those scales. While such scales are very useful when we want to make a respondent pick one of the two options (yes/ no; agree/ disagree) the consequences of forcing a respondent out of the middle should be acknowledged. In EQLS all items measuring an attitude/ wellbeing or happiness on a 10-point scale, force a choice. In this EQLS differs from other large-scale surveys using exactly same items (for example a question on general happiness or overall satisfaction) but employing an 11-point scale (answers from 0 to 10). Employing a 10-point scale is not an error, it is a methodological choice and in my view the scales should be retained to maintain comparability across waves. However, it needs to be noted that these methodological choices have implications for the results.

Finally, the questionnaire should permit combining variables by a researcher to produce derived measures. For example, a household type (e.g. single, family with children, single parent, multigenerational) can be constructed based on the household matrix. Likewise, age of individuals can be derived from their date of birth combined with the year of the interview. For this reason in this review any items that could be derived from other variables were deemed redundant and recommended for deletion. That is in line with the principle of making the survey parsimonious, and putting the minimum necessary burden on the respondent and interviewer and maximizing the potential to derive more complex variables from existing items. As a result, each of the retained items is unique in terms of its *designatum*, and some items are designed to be used jointly as indicators of a latent construct.

Missing values

Multiple questions that are applicable to the entire sample have very high share of missing values. For example, items in Q91 (delaying or foregoing a visit to the doctor or a dentist due to costs) both have 74% of missing values. Missing values that are not explained by study design (i.e. the questions being applicable only for some categories such as parents of under-age children) should be avoided because they dramatically lower the usability of an item. Missing values should not be allowed, unless justified by the survey design, and respondents who do not want or cannot answer the question should be given an option 'refuse' or 'don't know'.

Recommendations for the 2026 EQLS questionnaire

Thematic content of the 2026 EQLS questionnaire

The proposed themes together cover a wide range of potential QoL covariates which corresponds well with the idea of QoL being a multidimensional concept.

Some themes are well-established in the literature, other are novel but much relevant. The theme Social Cohesion, Trust and Recognition is novel in QoL research but it in line with what scholarly evidence of the importance of social context for individual's health and wellbeing. Perhaps adding *inequality* - a pivotal element in scholarly studies on social determinants of health – would be relevant for the theme. Perceived inequality shapes an individual's life chances as well as individuals' functioning in their social *millieu* and broader social landscape. That, in turn translates to social cohesion at an aggregated level. I therefore suggest including a reference to *social inequality* in the theme's title.

The names for all themes are formulated without specifying what is the causal factor and what is the outcome, with the exception of the theme Impact of Climate Change, Green Transitions and Digitalisation. There is an explicit assumption that climate change, green transition and digitalisation are the factors affecting certain outcomes. That is not correct – for example, online behaviours are to a great extend an endogenous factor. And Internet or social media use may be approached as both a dependent (You et al., 2022) and an independent variable (Longstreet & Brooks, 2017) in QoL research. I suggest renaming this theme that is removing the word 'impact' as it implies a causal effect of particular independent variables, and that is not adequate.

Suggested modifications to existing variables

Overall, 84 items were recommended for modification. These items are discussed below together with the proposed changes. The order in which they are presented is the same as in order in which the appear in the questionnaire.

- **HH2   Age last birthday**
  Suggested to be changed into: year of birth. That will make the measure consistent with the proposed changes in household matrix (introducing a time-invariant measure of age). After the change the item will be fully comparable with the same variable in 2016 EQLS.
- **HH3*.b Age of Person 1-10 in the household grid**
  To increase reliability it is suggested that the item asks about the year of birth. Year of birth (as opposed to age last birthday) is time-invariant and thus easier to recall. It is also a variable used in established large-scale studies, e.g. the German Socioeconomic Panel (GSOEP), The UK Household Longitudinal Study (Understanding society), and Survey of Health, Ageing and Retirement in Europe (SHARE).
- **HH2.1.d Economic activity of Respondent**
  Economic status of respondent could use more detailed measure than economic status item for other household members. For parsimony it should also differentiate between employed

and self-employed so that this question does not need to be repeated as separate item later (thus combining two of the current questions in one).

There are multiple ways of asking about economic activity status. The one proposed below is based on categories used in Harmonized European Time Use Surveys (The UK survey 2014/2015) and in Pairfam. The question should be about the _main economic activity status_ and could employ the following categories of answers:

1. *In full-time paid employment*
2. *In part-time paid employment*
3. *Self-employed*
4. *Other employment contract (e.g. civil law contract; managerial contract)*
5. *Unemployed*
6. *Retired*
7. *On maternity leave*
8. *Looking after family or home/ homemaker*
9. *In education/ student*
10. *Long-term sick or disabled*
11. *On a government training scheme / in vocational training*
12. *Unpaid worker in a family business or farm*
13. *Doing something else*

Full-time and part-time employment should be distinguished because there are different benefits for full-time and part-time employed. It also needs to be noted that self-employed is a very heterogenous category combining individuals in very different social positions and working different schedules (Bozzon & Murgia, 2021). Some surveys add question on whether a respondent employs anyone else than himself/herself to probe for that, however in EQLS, there are also other indicators of socioeconomic position.

To probe for doing paid work during education or retirement as well as having any extra jobs, there should be a follow up question about SECONDARY activity (or an additional source of income) – asking whether the Respondent does anything on top of their retirement/ education/ leave or main employment. This split avoids combining retirement and working for pay in a single answer code, and allows for recording paid work, including odd jobs, also for those in education.

- **HH3*.d Economic activity of Person 2-10 in the household grid**
  The details categories used for respondent should not be repeated for household members. The question about economic activity status <u>should not be asked</u> for household members aged <u>below 15</u> as it is illegal for them to be employed and they are in compulsory education. The cases of children working in family business or farm are expected to be very rare and not usable for analyses. Asking this question is therefore not an efficient use of the interview time. Overall, since there is another question about sources of household income, the question about each household member's economic activity is not necessary, with the exception of economic activity of the partner. For the partner (and optionally, for other household members aged 16+) the question could be worded as follows:
  What is the main activity of Person *n*?

1. *Employed*
2. *Self-employed*
3. *Unemployed*
4. *Retired*
5. *In education*
6. *Temporarily not working (on leave)*
7. *Permanently not working (long-term illness or disability)*
8. *Doing something else*

- **HH3*.c Relationship of Person 1-10 to Respondent in the household grid**

Relationship categories are adequate but there are some inconsistencies – in some cases the gender is indicated in this question (e.g. for biological child) in other it is not (e.g. step child). Separation between child and step-child is not necessary because there are very few step children reported in the sample so the answers would need to be collapsed for the analyses. Proposed categories:

1. *Spouse or partner*
2. *Child (son/ daughter) or step-child*
3. *Parent (mother/ father), step-parent or parent-in-law*
4. *Daughter or son-in-law*
5. *Grandchild (grandson/ granddaughter)*
6. *Grandparent (grandmother/ grandfather)*
7. *Sibling (brother/ sister), including half-sibling*
8. *Other relative*
9. *Other non-relative*

- **Q2 number of non-residential children aged <18** and **Q3 number of non-residential children aged >=18**
These are follow-up questions to the question on whether the respondent has any non-residential children. However, there should be a single question asking about the year of birth for all non-residential children (for up to 10 children, though it is unlikely to be filled) because a high share of the sample will have adult children not living with them. This variable will give comprehensive information on fertility history (e.g. having children early in life versus later in life) and closest relatives for empty-nesters and will indicate possible parental or financial responsibilities for those with under-age children.

- **Q9   Whether respondent is employed or self-employed**
This question should be integrated into item HH2.1.d as outlined above.

- **Q11   What is your current occupation? (1-digit ISCO)**

ISCO is an adequate measure but the question takes up too much space and there is risk of self-misclassification of respondent into a wrong ISCO category. I suggest to ask the respondent to provide 2-3 words describing his/her occupation. Based on that information, a coder or software would assign the ISCO code. Although typing 2-3 words by an interviewer

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32

may seem time consuming, it will take much less interview time than reading all ISCO codes and their description.

- **Q12   Last occupation (1-digit ISCO)**

  The comment from Q11 applies also to this item. Furthermore, it should be stated clearly that if a respondent has worked after a retirement (even if he/she is no longer working), the questions concerns the last occupation <u>before</u> they stopped working or retired. In this way respondent will not give information on any last job but a last job before they retired.

- **Q53   Size of the place of residence**

  The differences between answer categories may not be clear to everyone (it is conceptually hard to tell a small town from a medium town). There should either be numeric reference (number of inhabitants in brackets) or the categories should be more distinctive, for example such as the categories used by the European Social Survey (ESS, see below) which are easier for respondents to grasp. Furthermore, suburbs should be separated from the city since environmental issues and access to greenery are some of the important dimensions of QoL and they are much differentiated based on the area of residence.

  How would you describe the area where you live?
  1. *A big city*
  2. *The suburbs or outskirts of a big city*
  3. *A large town*
  4. *A small town*
  5. *A rural area or village*

- **Q87   Educational attainment**

  It is not recommended to assign separate categories to education completed abroad. There are very low frequencies for these categories and they should be incorporated into the main 8 categories.. This information can also be derived from the information on the country of birth and year of arrival in the current country of residence (a variable suggested among the new variables, page 39).

- **Q97   Household income band**

  This is a note more than a suggestion of modification: I assume that household income band was given in the local currency on show cards but that is not reflected in the English language questionnaire which has been subject to this review. Of course local currency should be used.

- **Q25.a   Accommodation: little space**

  Subjective shortage of space has limited reliability to measure crowding. It is recommended that this item be replaced by a question about the size of the accommodation in square meters. It would be a separate item in the questionnaire and it should be combined with the size of the household (number of members) to infer information on crowding.

- **Q25.f   Accommodation: problems with heating/cooling**

  Because of the geographical, regional and seasonal variability in the levels of heat or cold as well as the fact that same household may experience both issues, depending on the season, this item should be split into two items: i) problems with heating and ii) problems with cooling the flat.

- **Q54 A set of items concerning issues in the area of residence (Noise; Air quality; Litter, rubbish; Traffic)**

The items are well-worded but the scale could be modified because it potentially contributes to a skewed distribution. Minor problems may go underreported. Therefore a category of 'minor problems' could be added to response categories.

If there is enough questionnaire time or particular interest in the topics, the EQLS team might also consider including items such as area walkability (a sidewalk/ pavement) or a problem of having too little or too much outdoor light at night which could compromise safety or result in light pollution (Falchi et al., 2019), respectively.

- **Q56 A set of questions on access to services (Bank, ATM; Public transport; Cinema, culture; Green areas; Grocery shop; Recycling services)**

  I suggest dropping the answer "Service not used", this is a question about access, not usage. So that is about the characteristics of the area of residence, not about behaviours, and that should be consistent with the categories of answers. Next, rename "recreational/ green areas" to "green or blue areas such as parks, woods, lake or riverside". Recreational areas are a broader category and may include indoor recreational spaces. If you are interested in access to indoor recreational spaces (e.g. swimming pool) use a separate item to ask about those areas.

- **Q57   Commute duration**

  The item needs to be split into two items, first asking about the usual means of transportation during commute (e.g. car; city transport; suburban train; bike, boat, on foot, etc) and second being the original question about commute time (with no changes in the wording of the original item).

- **Q77   Ages of the child or children in the household who received childcare from someone else than parents or guardians**

  The item should ask about the number of children receiving care. Age of the children is available in the household grid so a question about age is not needed. The number of children is more important because it indicates how much of total childcare parents are able to outsource.

- **Q78   Main type of childcare for youngest child**

  Rephrase to: Who provides childcare – jointly for <u>all</u> children receiving childcare in the household (with multiple answers possible).

- **Q79   Childcare for youngest child, hrs per week**

  Rephrase to: for all children in the household. Approximately how many hours per week. This follow-up question could be in a single table together with Q78, see example below:

	Q78. Who Provides?	Q79. How many hrs per week	Q80. Source of funding
1. Childminding by child's grandparent(s)	Yes / No	Numeric; for those using this type of childcare (Q78)	
2. Childminding by other household members or relatives,	Yes / No	Numeric; for those using	1. Free of charge/100%funded

friends, neighbours or other informal arrangements, such as childminder; no contract		*this type of childcare (Q78)*	*2. Partially funded* *3. Fully paid by the user*
3. Childminding with a formal agreement or contract	*Yes / No*	*Numeric; for those using this type of childcare (Q78)*	*1. Free of charge/100%funded* *2. Partially funded* *3. Fully paid by the user*
4. Childcare facility (e.g. kindergarten, creche, nursery, playgroup, daycare centre) or afterschool care	*Yes / No*	*Numeric; for those using this type of childcare (Q78)*	*1. Free of charge/100%funded* *2. Partially funded* *3. Fully paid by the user*
5. Other	*Yes / No*	*Numeric; for those using this type of childcare (Q78)*	*1. Free of charge/100%funded* *2. Partially funded* *3. Fully paid by the user*
98. Refuse			
99. DK			

Note: While childcare use may be associated with QoL, it is not a key dimension of QoL. Unless there is a specific interest in childcare use and funding, it can be dropped.

- **Q80   Childcare for youngest child, funding**
  This can also be incorporated in the same table – as shown above, and asked for any type of childcare received.

- **Q84   Age of any children in HH using school**
  A question whether a child under 15 is in education is redundant unless it is rephrased into an item inquiring about using a particular schooling system, for example (categorization adopted from SOEP where this question is asked for every child in the household):

  You said [number inserted automatically based on the household grid] of children in your household are in education. What sort of education are they using (multiple answers possible because there may be several children in different types of education):
  1. *Public (state-run)*
  2. *Religious*
  3. *Non-profit, including Free Alternative Schools*
  4. *Private*
  5. *They are home-schooled*

  Note: The utility of this question for analysing QoL is low and the item can be dropped unless there is a particular interest in the type of school used.

- **Q91 Items concerning foregoing or delaying treatment because of money (A doctor; a dentist)**

  The item are useful but likely little sensitive due to public funding of some services, as a result most of the answers are negative (not reporting). The EQLS team might consider using items that are more often, or to a greater extend, paid for by respondent for example: *getting new glasses/ addressing other than necessary dental issues/ getting or updating a hearing, walking or other aid / getting physiotherapy for any existing condition*. Furthermore, a very high share of missing values in these two items is not explained by study design and should be avoided.

- **Q98   A change in the financial situation of the household**

  The 2016 and 2026 waves will be carried out 10 years apart and there will have been substantial social, economic and political changes between them. It would be worthwhile to expand the time frame for this questions. The financial situation of many households has worsened following COVID-19 pandemic and the Russian-Ukrainian war started in 2022 which substantially contributed to the costs of living crisis. It might be that over the past 12 months there would be no difference in the household's situation but this situation has worsened several years ago and remained stable since then. This item could therefore be split into two and ask whether the situation of the household has changed over the past several years (point of reference should be decided by the EQLS team based on any important economic and social events) and, optionally, whether it has changed over the past year.

  Note: In the analyses dates of birth of the children and date of retirement could be used as control variables where applicable.

- **Q6.e   Satisfaction with family life**

  The *designatum* is potentially quite broad and may be interpreted in various ways by different individuals so it is not clear what exactly the item measures. White items such as 'Satisfaction with family' are used in other surveys (e.g. Paifram), there usually is a large set of variables describing family relations. In the absence of such variables, being more specific in formulating questions is recommended.

  The item can be reformulated in different ways depending on what is of main interested to the EQLS team. For example, in the context of demographic change and low fertility one might ask: Are you satisfied with the number of children you have (for those having children)? With a different question (e.g. Would you like to have children?) for childless individuals in reproductive age. Both of these items can be collapsed into a single measure for all in reproductive age – whether they want to have (more) children or not.

  Alternatively, the item may ask: Are you satisfied with the relationships within your family/ relationship with the members of your closest family?

- **Q17   Preferred total work time**

  This item is that is self-contradicting: on the one hand the question is about <u>preferred</u> working time, on the other: taking into account <u>the need to earn a living</u>. The preferred working time and the time needed to earn a living may not overlap, in particular for individuals who have hourly wage.

  Perhaps the item could be rephrased to measure whether respondent would like to have more time or more money if they could choose freely: *Would you rather work longer than now and earn more OR work fewer hours than now and keep your current income.*

  Or ask about unconditional working time preference: *Would you like to work less than now if you could keep your current income?*

- **Q20 Experiences over the past 12 months (Too tired after work; Hard to fulfil family duties; Hard to focus on work)**

  The items are well-worded and they are used in other surveys probing for work-life balance but the distribution of answers suggests the scale could be adjusted. The option 'Several times per year' should be dropped as it is this option which generates a bimodal distribution. Furthermore, options 'Everyday' and 'Several times per week' could be combined because of the very low frequencies of the former. These two options would need to be collapsed for cross-sectional analyses so combining them already in the questionnaire is a reasonable solution to save time.

- **Q41   Worry about pension income**

  This is a very good question but the population to answer the question should be individuals in pre-retirement age/ not yet retired (filter based on respondent's economic activity status – retired or long-term disabled individuals should be excluded).

- **Q27 Frequency of selected behaviours (Religious services; Internet use; Activities of social clubs**

  This item contains a selection of questions but it is not clear why such activities were chosen since some of them are limited to a very narrow part of the population (e.g. social clubs). In order to introduce a common denominator to these items, I recommend to ask about activities that meet 3 conditions: i) are generally available to most people in any population, ii) are associated with some important outcomes (physical and mental health, cognitive performance) and iii) may be indicative of social isolation or some form of exclusion/ deprivation if respondent is not participating in any of them. The frequency of participation in these activities should also be modified, for example:

Q27 How often do you do the following?

	Every day	*Few times per week* OR: *At least once a week*	*Few times per month* OR: *At least once a month*	*Less often than once a month*	*Never*	*DK/ refuse*
a. Meet with family members not living in your household						
b. Meet with friends						
c. Spend some time outdoors for walking, leisure or relaxing						
d. Participate in religious services or meetings of religious group						
e. Participate in training or courses						

outside of regular schooling						
f. Volunteer in an organization						

Item concerning meeting with friends or non-household members measures social isolation, especially for those living alone.

Item concerning going out measures outdoor exposure as well as the ability (mental and physical) to leave the house. It is proposed to replace exercise which is more selective. However, if the EQLS team has a particular interest in health behaviours, exercise could be retained in addition to the proposed item.

A measure of spiritual activity and belonging to religious community is retained in item c. As you can see I collapsed the questions about training (Q28) and volunteering (Q29, suggested to be dropped) because there is no need to separate them. Wording 'regular schooling' is added to item Q27.e because school attendance is captured elsewhere (background variables) and this item should be clearly about training other than at school – which is not captured in background variables. Volunteering will likely be most relevant as one of the measures of active/ successful ageing but because of the high share of older adults in the sample, it might be retained.

As regards the frequency of Internet use for personal purposes, that item is incorporated in a separate section on Internet use (please see page 45-47)

- **Q28   Training for professional and non-professional reasons**
  These questions were collapsed and incorporated into the table above (Q27).
- **Q38   Face to face contact with family/ relatives or with friends/ neighbours**
  This items were incorporated into table Q27, although distinction between family and friends was removed. If the form of contact (online vs in person) is important to the EQLS team, items Q 38 and Q39 can also be collapsed in the following way:

When interacting/ talking with your family members who do not live in your household do you interact/meet with them:
1. *Mostly in person*
2. *Equally much in person and online / over the phone*
3. *Mostly online / over the phone*
4. *I do not interact with them*

When interacting/ talking with your friends do you interact/meet with them:
1. *Mostly in person*
2. *Equally much in person and online / over the phone*
3. *Mostly online / over the phone*
4. *I do not interact with them*

The above items can be combined with item Q27a to obtain information on the frequency. They are worth keeping (in particular the item concerning contacts with friends) because of their significant positive association with happiness in linear regression models (results available upon request) in the 2016 EQLS. Please note these items have a high share of missing values that are not justified by the study design.

- **Q39   Phone, internet contacts with family/ relatives or friends/ neighbours**
  This item was collapsed with Q38 – please see above.

- **Q43   Duration of activities: Care for own children; Care for own grandchildren; Cooking and housework; Adult care for individuals <75 years old; Adult care for individuals >75 years old.**
  Based on the respondents' age and household matrix in it will be obvious whether they care for their children or grandchildren. Usually, outside of paid work, individuals care only for their biological/ adopted children or grandchildren so that does not need to be specified either.
  Next, adult care does not need a distinction between caring for those aged under 75 and 75+. If you want to capture caregiving for an adult child who has a disability, it is better to add a question whether any child has a disability (for those who have a child; see page 40 for suggestions). Besides families having a child with a disability, there is not much difference in whether you care for an adult below or above 75, so there is no valid reason to introduce this distinction.

  Overall, I suggest simplifying these questions and collapsing them into the following categories:

  On average, how many hours per week do you spend on any of the following activities outside of paid work:

  1. *Caring for children aged under 18*
  2. *Caring for adult family members*
  3. *Housework including cooking, cleaning and home maintenance*

  Despite the changes these questions would be comparable with the corresponding questions in the 2016 survey as the answers in 2016 survey can easily be collapsed into general childcare and general adult care.

- **Q103   Online activities over the past 12 months (finding a job, shopping; using governmental online services; banking)**
  Because of the change in the prevalence and frequency of online activities, the 12-months' time frame is probably too wide. Some items would also benefit from rephrasing. Overall, the set of questions on the use of online services should be expanded. As stated earlier, there is a new set of questions concerning Internet use and the items from Q103 are incorporated there – please see pages 45-47.

In addition to the above items, item Q37 was suggested to be kept in an unchanged form because modifications are not necessary to improve its performance or reliability. However, modifications may still be considered for the reason outline below:

- **Q37 Marital status**
  The list of formal categories of marital status is comprehensive but it does not provide all necessary demographic information. Surveys usually ask also about informal relationship

status (such as being in partnership, in civil union or cohabitating). Individuals in partnership other than marriage should therefore assign themselves to one of the other categories. Complete information on partnership status of individuals who are not married but who cohabitate with a partner can be obtained by combining Q37 with information from the household grid (whether there is a partner in the household) so adjustments to Q37 are not necessary. However, it must be noted that Q37 in its present form does not provide sufficient information on partnership status as a stand-alone item and needs to be analysed together with the household grid.

> In line with the principle of conservative approach to the evaluation of the questionnaire, items that measured unique concepts and represented some important aspects of individuals' lives but which needed adjustment, were suggested for modifications. However, some items likely have low overall usability for QoL analyses. A critical review by the EQLS team is needed to determine which of the items are worth keeping in the 2026 questionnaire.

New variables

Making changes to the existing variables in the survey will help improve the overall performance of the questionnaire. However, some dimensions of QoL are not sufficiently covered with the existing questions and some important sources of heterogeneity in QoL cannot be explained because of lack of certain background variables in the survey. This section presents variables that could be added to address these issues. Please note these are suggestions and the number of items recommended for adding to the existing questionnaire is limited because the instrument is already lengthy.

Based on the thematic composition of the current version of the questionnaire (Figure 1), and its version after the deletion of selected items (Figure 2) it is clear that the two themes: *Impact of Climate Change, Green Transitions and Digitalisation*, and *Social Cohesion, Trust and Recognition*, are somewhat underrepresented. These themes do not need to have a representation equal to the other themes but including additional items representing these topics is important because of their role in shaping individuals' QoL and its perception.

The section below discusses suggested variables that could be added to the current EQLS questionnaire. The thematic sections used to present the variables correspond to the themes proposed for the 2026 EQLS with additional section for background variables.

Background

The current version of the questionnaire has a comprehensive selection of background variables but for the QoL analyses it would be beneficial to include the following items:

- **Year of moving to the [country]** [FILTER: Asked only to first-generation migrants]
  Any analyses including migrant status should be supplemented with when a migrant arrived to the host country.
- **Spatial proximity to closest family member not living in the household**
  An important determinant of intergenerational help and frequency of contact (Bengtson, 2001).
- **Father's socioeconomic position when respondent was aged 14**

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40

Important independent variable for analyses on the socioeconomic background of the respondent and a predictor of their current socioeconomic position. This variable together with respondent's own socioeconomic status allows for investigating social mobility (upward or downward) and its link with health, wellbeing, trust, social attitudes, and other domains of life.

An item based on the Polish Panel Survey – POLPAN questionnaire[3]:
In what occupation did your father work when you were 14 years old? What was his job title?
[2-3 words, coded ex-post by coders or pre-programmed software using ISCO categories; separate codes for 'No father present', 'DK' and 'Refuse']

Alternatively, the question may concern educational attainment of respondent's father and mother.

- **Health status of respondent's child/ children** (FILTER: Only for individuals who have children, including those with adult children)
  Does any of your children have a long-lasting health condition or a disability?

Living Conditions and Access to Essential Services

Because of an increase in the prevalence of financial problems in European societies, the battery of questions measuring material living conditions could be expanded. Furthermore, due to the high and increasing share of older adults in the population (United Nations, 2017), functional limitations are worth exploring.

- **How much does your household spend on food per month?**
  Food expenditure as percent of household spending is a measure of material deprivation. An item may be worded as follows:

  Thinking about the last 12 months: about how much did your household spend in a typical month on food to be consumed at home? [numeric variable]

- **Material situation of the household – not enough money for..**

  Below are alternative measures, they may be used in the place of existing measures of material deprivation or in addition to them. The items proposed below are expected to be more sensitive than ones used currently (e.g. Q93) but the decision must be made by the EQLS team whether comparability across or item performance are the priority for the 2026 wave.

  The question below is based on POLPAN:
  In the last twelve months, were there financial problems in your household such that there was not enough money for:

	Yes	No	Refuse/ DK	Not applicable
1. Food				

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[3] Available at: https://polpan.org/wp-content/uploads/2019/06/Master_ENG_2019_06_24_FINAL.pdf

2. Utilities – rent, electricity, other				
3. Medical care, including medicines				
4. Keeping the home at adequate temperature				
5. Entertainment, culture and leisure time activities				
6. Vacation away from home for at least one week a year				

Note: Please note some of the items are included in the current version of the EQLS (e.g. Q89) so including of the table above would mean excluding the repeated items.

- **Additional necessary expenditures**

  Are you obliged to pay alimony for the child who does not live with you?

- **Size of accommodation in square meters**

  This variables is recommended instead of the subjective assessment of having little space in accommodation

- **Accessibility of accommodation**
  The items proposed below as based on a set of items available in the ESS:

  How many steps have to be climbed (up or down) to get to the main entrance of your flat? Do not include steps that are avoided, because the block has an elevator
  1. *Up to 5*
  2. *6 to 15*
  3. *16 to 25*
  4. *More than 25*

  A follow-up question for those who need to climb more than 25 steps:

  Does your home have an elevator? [Yes/ No]

- **Material situation of the household – what applies to the household**

  This measure is based on the German Socioeconomic Panel – SOEP questionnaire[4] and it is complimentary to the above one based on POLPAN. Please note that some of the items overlap with the items currently used in the EQLS questionnaire (items Q89, and Q90) so a decision has to be made about which of these items should be included and which should be dropped.

  Which of the following apply to your household?

	Yes	No	Refuse/ DK

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1. There is an Internet connection in the household			
2. The household has financial reserves for emergencies			
3. We have a hot meal with meat, fish, or poultry at least every other day			
4. Worn-out furniture is replaced with new furniture, even if it is still functional			
5. Worn-out clothing is replaced with new clothing			

Follow up to item 1:

You said you have no Internet connection in your household, is that for financial reasons?

[Yes/ No]

- **Work schedule**

This is an important covariate of QoL as work schedule is an indicator of precarious labour market position (shift work), and existing constraints for family/ social interactions, for example due to working the so-called 'unsocial' hours/ weekends). Working night shifts is also a known risk factors for numerous health issues such as metabolic syndrome, diabetes or cardiovascular disease (Torquati et al., 2018), and a risk factor for adverse health events such as miscarriage (Bonde et al., 2013). Conversely, flexible work time arrangements is one of the major policy instruments that is intended to help combining work and family life.

An exemplary question on work schedule, adopted from German Family Panel – Pairfam questionnaire[5]:

What are your working time arrangements? Do you work:

1. *Only during the day and on weekdays*
2. *Fixed shift, never on weekends*
3. *Fixed shift, also on weekends*
4. *Changing shifts, never on weekends*
5. *Changing shifts, also on weekends*
6. *Other, or no regulation of working hours*

This might be followed-up by a question about working night shifts (e.g. as binary response variable), if there is an interest in HRQL from the EQLS team.

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[5]Available at:
https://www.pairfam.de/fileadmin/user_upload/redakteur/publis/Dokumentation/Codebooks/Release14.1/Anchor/Wave%206/Codebook%20Anchor_en%2C%20pairfam%20Wave%206%202013-14.pdf

- **Working from home**

  The option to work from home has become much more widespread following the COVID-19 pandemic and that is one of the major and lasting changes to the labour market. Capturing the implications of this change is very important in the context of QoL of the working population. To date working from home has been linked with individuals' health and mental health and work-life balance indicators but the direction of this association is not clear (Crawford, 2022). Allowing to explore work for home and its association with multidimensional indicators of QoL would give EQLS an advantage over other comparative datasets.

  The question could measure behaviours, such as whether the respondent works from home (possibly including also the frequency of such work measured using the number of days per week that are spent at home/ in the office).

- **Care commitments**
  A question based on SOEP:
  Does someone in your household require constant care or assistance due to age, sickness, or medical treatment?
  1. Yes
  2. No

  A possible follow-up question:
  How many people in need of care are there in your household?

Impact of Climate Change, Green Transition and Digitalisation

This section has a limited representation in the current version of the questionnaire. Below are suggestions based on items included in other surveys.

EQLS has relatively few attitudinal variables, so including some of such measures would provide useful control variables for the analyses. That is because the perception of certain objective phenomena is greatly affected by an individual's beliefs. Furthermore, those attitudes may co-vary with an individuals' socioeconomic or material position. The items proposed below are based on the 2020 wave of the International Socla Survey Programme – ISSP questionnaire, section on Environment[6]:

- **Most important issues in [country]**

  Which of these issues is the most important for [country] today? [that might be used as a single-choice question or a rank question – e.g. ranking up to 3 most important issues]

  1. Health care
  2. Education
  3. Crime
  4. The environment
  5. Immigration
  6. The economy
  7. Terrorism
  8. Poverty
  9. Housing shortage

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[6] Available at: https://www.gesis.org/en/issp/data-and-documentation/environment/2020

10. *Job market*
11. *None of these*
12. *DK/ Refuse*

- **Beliefs regarding climate change**

  There has been a lot of discussion about the world's climate and the idea it has been changing in recent decades. Which of the following statements comes closest to your opinion?
  1. *The world's climate has not been changing*
  2. *The world's climate has been changing mostly due to natural processes*
  3. *The world's climate has been changing about equally due to natural processes and human activity*
  4. *The world's climate has been changing mostly due to human activity*
  5. *Refuse/ DK*

- **Environmental problems in [country]**

  Here is a list of some different environmental problems. Which problem, if any, do you think is the most important for [country] as a whole?
  1. *Air pollution*
  2. *Chemicals and pesticides*
  3. *Water shortage*
  4. *Water pollution*
  5. *Nuclear waste*
  6. *Domestic waste disposal*
  7. *Climate change*
  8. *Genetically modified foods*
  9. *Using up our natural resources*
  10. *None of these*
  11. *Refuse/ DK*

- **Expected impact of climate change in [country]**

  On a scale from 0 to 10, how bad or good do you think the impacts of climate change will be for [country]? 0 means extremely bad, 10 means extremely good.

  Please note this item uses 11-point scale (as an original item in ISSP) whereas all items in EQLS employ 10-point scale. The scales should be harmonized.

- **Respondent's personal experiences with being affected**

  This is an original item (so it is not based on ISSP or any other survey) probing for respondent's personal experiences.

  Thinking about you and your household, to what extend have you been affected by any of these issues over the past 12 months:

	Not at all	To a small extent	To some extent	To a great extent	Refuse / DK
Air pollution (due to any causes)					

Extreme temperatures: hot or cold					
Drought/ water shortage					
Heavy rains or flooding					
Contamination of water or soil					
Other sever weather conditions (storm, wind, etc.)					

The following section focuses on digitalization. The items proposed below are primarily based on the 2019 Oxford Internet Survey - OxIS questionnaire[7], and, in the case of the first two questions, on the 8th round of the ESS[8].

- **Frequency of Internet use**

  An item based on an ESS item (round 8), with modification: asking only about <u>personal</u> use.

  People can use the internet on different devices such as computers, tablets and smartphones. How often do you use the internet on these or any other devices for personal use?

  1. *Never*
  2. *Only occasionally*
  3. *A few times a week*
  4. *Most days or every day*

  Alternatively, the item can use the same response categories as in the modifications suggested for Q27 (see page 36). The choice of categories depends on whether online and offline activities are planned to be compared later in the analyses. If not, then the categories proposed above are likely more relevant because of the expected nearly binary distribution (as shown in Appendix, Figure 3).

- **Hours of Internet use per day** [FILTER: Only for those who use Internet on most days or every day]
  Item based on an the ESS (round 8), but asking only about personal use.
  On a typical day, about how much time do you spend using the internet on a computer, tablet, smartphone or other device, whether for personal use? Please give your answer in hours and minutes.

- **Use of online service platforms over the past 12 months**

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[7] Available at: https://oxis.oii.ox.ac.uk/wp-content/uploads/sites/16/2019/11/OxIS-Questionnaire-2019.pdf

[8] Available at: https://www.europeansocialsurvey.org/sites/default/files/2023-06/ESS8_internet_use_final_template.pdf

A modification of the 2016 EQLS question (Q103) with additional items from the 2019 Oxford Internet Surveys (OxIS).

Over the past 12 months have you used Internet for:

	Yes	*No*	*Refuse/ DK*
1. Looking for a job			
2. Using governmental services e.g. for administrative or tax reasons			
3. Shopping, including ordering groceries or food			
4. Booking a medial appointment			
5. Making a public announcement of a personal event on social media or elsewhere online, like a birthday, vacation, or promotion			
6. Buying tickets for public transportation such as bus, tram or train			
7. Selling something online as a private person			

- **What is the Internet used for**
  In your private time, do you use Internet to

	Yes	*No*	*Refuse/ DK*
1. Send or read email			
2. Post a photo or video online			
3. Send photo or video to someone			
4. Browse or update social media			
5. Check information on news websites			
6. Play games, watch movies or TV programmes			

- **Where Internet is used**
  I would like to ask you about all of the places where you go online? Do you currently go online….?

	Yes	*No*	*Refuse/ DK*
1. At home			

2. Out and about, or while travelling on a bus, train or car			
3. At work, school, college or at university			
4. Public library			
5. Using free wifi in stores, pubs, hotels or coffee shops			

- **How much do you agree or disagree with the following statements**

  a. I waste too much time on social media

  1. *Strongly agree*
  2. *Agree*
  3. *Neither agree nor disagree*
  4. *Disagree*
  5. *Strongly disagree*
  6. *Refuse/ DK*

  b. Social media helps me pass the time when I am bored or have nothing to do

  1. *Strongly agree*
  2. *Agree*
  3. *Neither agree nor disagree*
  4. *Disagree*
  5. *Strongly disagree*
  6. *Refuse/ DK*

- **Trust in information on social media**
  In addition to the above questions from OxIS, an item concerning *'Trust in information posted on social media'* could be added to the classic set of items concerning trust in institutions (Q35). Social media have a major influence on individuals' perceptions and decisions, and trust in information on social media – in comparison to trust in other institutions – is worth investigating. I expect that the item will be added to the classic set of items at some point in time, and it would give the EQLS an advatage to <u>be the first one to do it</u>.

  The applicability of the item to QoL measures is related to the fact that there is some evidence of a negative association between social media use and HRQL among certain population groups (You et al., 2022) and between social media use and health behaviours (Wilson & Wiysonge, 2020). Overall, the topic is novel and EQLS could provide valuable quality data for its exploration.

Social Cohesion, Trust and Recognition

- **Subjective social status**

A very important variable – as explained in the introduction, SSS or subjective social class is an independent predictor of multiple important individual outcomes from life chances to health risks and all-cause mortality (Mackenbach et al., 2018; Marmot, 2005; Oesch & Vigna, 2023).

There are cross-validated measures which have been commonly used to estimate SSS. I give two examples below, others are very similarly worded.

In POLPAN SSS is measured using the following question:

When comparing various social groups in our country, people believe that some of them are located higher than others. Here is an example of a scale [Card: scale from 0 to 10]. The bottom point on this scale, denoted by zero (0), refers to groups in the lowest social location, and the top point, denoted by ten (10), refers to groups in the highest. Please indicate where on this scale you would locate yourself.

The 2019 ISSP module on Social Inequality[9] uses slightly different wording but the measure is exactly the same:

In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Below is a scale which runs from top to bottom [scale from 0-10, stacked]. Where would you put yourself now on this scale?

Please note items above use 11-point scales, i.e. these are scales with mid-point. If you want to use the scales used in other EQLS questions, it should be a scale from 1-10 (10-point scale) though this type of scales also forces the respondents out of the middle (no midpoint in the scale). A decision should be made by the EQLS team on the choice of scale for the item.

- **Perceived level of social inequality in the country**

An item from ISSP 2019, and a good follow up to the above question, probing for attitudinal variables and acceptance of existing inequalities:

Do you agree with the following statement: Differences in income in [country] are too large.

1. *Strongly agree*
2. *Agree*
3. *Neither agree nor disagree*
4. *Disagree*
5. *Strongly disagree*
6. *Refuse/ DK*

- **Reaction to social inequality in the country**

An item from ISSP 2019, a follow-up to SSS question. This is a very good item to probe for potential for radicalization, in particular in combination with material deprivation and trust variables:

Some people feel angry about differences in wealth between the rich and the poor, while others do not. How do you feel when you think about differences in wealth between the rich

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[9] Available at: https://www.gesis.org/en/issp/data-and-documentation/social-inequality/2019

and the poor in [country]? Please place yourself on a scale of 0 to 10, where 0 means not angry at all and 10 means extremely angry.

Please note this item originally uses an 11-point scale. A decision has to be made by the EQLS team to either harmonize the scale in line with other items in the current version of the questionnaire or to keep the original 11-point scale.

- **Membership in organizations**
  Membership in organizations is one of the measure of weak ties and overall social connectedness. In some cases it is also an indicator of values and beliefs. The item proposed below is a modified version of an item from the Oxford Internet Institute's OxIS.

  Are you a member in any of the following organizations?

	Yes	*No*	*Refuse/ DK*
1. Religious or church organization			
2. Sport, leisure or social club (e.g. senior club)			
3. A trade union or other professional association			
4. A residents, neighbourhood, school or other local group			
5. A charity, political, environmental or animal welfare organisation			
6. Other			

Subjective Wellbeing and Health

Overall, subjective psychological wellbeing has a good representation in the survey items, and they include affective as well as evaluator measures. Physical wellbeing and health are somewhat less represented and the questionnaire could incorporate additional items to cover those areas because of their importance for the overall QoL.

- **Health symptoms and use of medicines**
  All items are adopted from Nottingham Health Profile (NHP) – with modifications, the introduction is adopted from POLPAN:
  I will read some statements describing how people might feel. For each statement I would like you to say "yes" if the statement is true in your case, or "no" if it is false in your case. If you are not sure whether to say "yes" or "no", give the answer that is more true at this time.

	Yes	*No*	*Refuse/ DK*
1. I take pills to help me sleep.			

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50

2. I sleep badly at night.			
3. I regularly take painkillers to help with aches and pains			
4. I have been prescribed medicines for long-term use by a doctor			

- **Loneliness**

  Because of the high prevalence of loneliness in various age group (in particular young adults and older adults), and its negative impact on individual's health and wellbeing, a measure of loneliness should be included in the survey.

  Would you say that you feel lonely:

  1. *Most of the time*
  2. *Some of the time*
  3. *Rarely*
  4. *Never or almost never*
  5. *Refuse/ DK*

- **Experience of discrimination, violence or distress**
  Over the past 12 months have you:

	Yes	*No*	*Refuse/ DK*
1. Felt you were treated worse than others in a public place such as at a public institution, in a doctor's office, or in a shop			
2. Felt physically threatened by a stranger			
3. Felt physically threatened by a person you know personally			
4. Witnessed violence such as a fight or an attack on someone			

- **Expectations towards the future**
  This is an item based on POLPAN. Please note that this item overlaps with a similar item used in EQLS (Q7.e). A decision should be made which item has a higher utility. In line with the conservative approach adopted in this review item Q7e was recommended for keeping.

  Do you think that the next 5 years will bring people like you:
  1. *More opportunities than hardships, or*
  2. *More hardships than opportunities?*

Overall, 4 variables were suggested to be considered for adding to the Background section; 13 of the proposed new variables fall under the Living Conditions and Access to Essential Services theme; 33 variables concern the Impact of Climate Change, Green Transitions and Digitalisation; 9 variables would provide information on the Social Cohesion, Trust and Recognition; and 10 variables concern Subjective Wellbeing and Health.

Please note that some of these variables represent alternatives to existing variables and should not be added if current variables remain in place as they measure the same concept. They are proposed for consideration as possible alternatives.

The flow of the questionnaire

While questionnaire lenght should be kept to the necessary minimum, some items would benefit from a few words of introduction. That is a common practice in large-scale surveys to introduce a question, in particular when a question is considered sensitive or might make a respondent feel like they are sharing too much information with the interviewer. For example, ESS uses the following phase to introduce questions about household expenditures and household income: *"We would now like to ask some questions about your household's usual expenditures and how your household is managing financially"*.

Lastly, the order of the questions should be calibrated to improve the overall flow of the questionnaire. In the current 2016 version background questions are scattered across the questionnaire, which makes it seem erratic. It is good when the respondent or interviewer know what to expect so certain questions should cluster together (such as e.g. household grid and respondent's marital status, possibly also the items concerning the characteristics of the accommodation). If there is a start of a new topic in the questionnaire, there should be a sentence of introduction to be read by the interviewer (e.g. *"I would now like to talk about…"*) as it improves the flow and can help to keep respondents engaged.

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52

Conclusions and final remarks

The EQLS has been providing quality data on people's QoL in Europe. The new wave of the survey has a potential to set new standards for a multidimensional measurement of QoL. In particular, the social aspects of QoL and its relationship with individuals' online behaviours and environmental conditions would be a novel development in the survey. It would also provide answers to important social issues including increasing loneliness, radicalization, social response to climate change or the association of trust in public institutions by increasing impact of the social media.

In order to achieve these objectives, the EQLS needs to expand some sections of the questionnaire. In order to allow space for the new items, items that underperformed or concerned very narrow part of the population can be dropped. In addition to that, some items, while being useful, would benefit from modifications to improve their reliability, clarity and overall usability. This review adopted a conservative approach focusing on preserving a maximum number of items or introducing modifications that would still allow to compare items between waves.

Overall, 126 of the current items were recommended to be retained in their present form, though for a few of them there are suggested alternatives in the section on New Variables. Modifications were suggested for 84 items overall that received this recommendation. In total 93 items were recommended to be removed from the questionnaire primarily due to their low relevance for the topic or for the general population sample. In some cases the variables were suggested to be dropped because of their low reliability or lack of clarity regarding what they measure.

Besides suggesting modifications for the selected variable deemed suitable for retaining in the questionnaire, the review proposed new variables. Some of them are de facto alternatives to existing variables but most of the new variables represent elements that are missing in the 2016 version of the questionnaire. 33 new variables were suggested to be added to represent the topics of Climate Change, Green Transitions and Digitalisation. 13 new variables accounted for various aspects of the Living Conditions and Access to Essential Services, and in this segment there was the highest overlap with existing survey variables. 10 of the new variables represented Subjective Wellbeing and Health; and 9 variables accounted for different aspects of Social Cohesion, Trust and Recognition – in particular social inequality. Finally, 4 variables were suggested to be added to the background section.

Overall the poll of possible items (retained, modified and new) is large. All of these items meet quality criteria established for this review but not all of them should be included in the final version of the questionnaire because of the limited interview time. The EQLS team should therefore select the items that are most suitable for the questionnaire based on the specific objectives for the 2026 wave of the survey.

Finally, to maintain the usability of the items, best efforts must be made by the selected polling company to avoid any missing values that are not justified by the questionnaire design. In many cases in the 2016 survey quality items were de facto rendered unusable for comparative analyses because of a very high share of unexplained missing values.

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54

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