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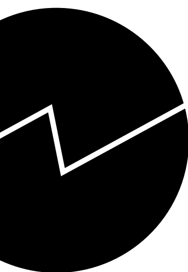

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Documents

Translating and Testing the European Health Status Module in Norway, 2005

Preface

Eurostat has put effort into obtaining comparability between data collected through Health Surveys in different European countries over the past twenty years. Different measures have been taken, and the work has passed through many phases. The latest initiative by Eurostat is to establish a European Health Survey as a part of the European Health Statistical System. The different modules in the European Health Survey are now under development. One of the modules is a module on *health status*. This is now being tested in different European countries. This report is a documentation of translation of the health status module into Norwegian, and testing of the module in Norway.

The aim of this report is to give an overview of the experiences from the translating process and the testing. The guidelines for development and adoption of Health Survey Instruments[1] has been guiding the work. This work is a part of a larger international development project titled "The European Module on Health Status", and it is coordinated and mainly financed by the European Commission, with additional funding from Statistics Norway. Statistics Norway has tested the module both in a qualitative/exploratory manner and in a realistic manner, and adjusted it for use in a Norwegian setting. In the testing, we have used cognitive interviews combined with a realistic mini scale field test. The interviewers used behavioural coding to evaluate the way the respondents answered the survey questions.

Jorun Ramm, Division for Health Statistics, led the project. She had the main responsibility and coordinated the translation work. Anne Sundvoll, Division for Data Collection Methods, coordinated and was responsible for the cognitive testing and the field test. Both divisions participated in all phases of the project.

Representatives from Statistics Norway and Heidi Lyshol from the National Institute of Public Health were involved in the translation work. Anne Sundvoll, Elisabeth Gulløy and Trine Dale have participated from Division for Data Collection Methods. Grete Borge from the Dissemination Department performed the back-translation of the questionnaire. Solveig Gustad, Bente Hole, Synnøve Øiseth, Gunn Bredevang and Aud Kari Holt have assisted as secretaries and observers in the cognitive interviews. The project has also involved staff resources from the Division for Sample Surveys for programming the questionnaire in Blaise, drawing a sample, field administration and face-to-face interviews in the field. Hilde Degerdal, Glenn-Erik Wangen, Bjørn Are Holth, Greta Røyne and eight of the divisions most experienced interviewers have contributed to efficient planning and fieldwork. Thanks to Jenny Linnerud and Henry Nsbuga Mubiru for commenting on language.

[1] Taffereau, Jean (coordinator): Guidelines/criteria for the development and/or adoption of Health Survey instruments, Partnership on health statistics

Summary

The questionnaire on *health status* represents one of four modules in the European Health Interview Survey. Statistics Norway has translated, tested and adjusted the questionnaire according to guidelines given by Eurostat. The Norwegian project has used cognitive interviews to test the questionnaire, followed by a realistic miniscale field test by face-to-face interviews. In the field test, the interviewers have used behavioural coding to monitor the respondent's answering process. The coding was supplemented by feedback talks with the interviewers.

The questionnaire was translated into Norwegian. Deviations between the original English survey instrument and the back translation were discussed with Eurostat. The final and adjusted instrument was then systematically tested on respondents in selected groups (old-age pensioners, middle-aged and young non-western immigrants) by cognitive interviewing. In parallel with this testing, a field test with 39 face-to-face interviews was carried out. The project has shown that it is challenging to develop robust questions that measure different aspects of physical and mental health.

Experiences from the test work showed that the first part of the questionnaire was flowing relatively well in a real life interview setting. The interview became increasingly staccato when progressing through the questionnaire. The section on other daily activities incurred most problems. Generally, there were problems connected to the use of double-barrelled questions in the sections on functional limitations and emotional states. In addition, there was some difficulty with formatting a response that corresponded with the predefined answering alternatives. This is related to use of the yes/no questions in the section on functional limitations and in the activity sections. Quite a few questions in the questionnaire do not have a time reference. The cognitive interviews showed that the test persons have a tendency to search in near past when they retrieve information from their memory. This happens despite the fact that the questions are pointing far back in time as in "Have you ever …". We also observed that questions with many or long answering alternatives were difficult to remember for the respondents when read aloud. There might be a need for additional show cards.

The concept mapping sequence confirmed that the concepts of physical health, mental health, long-standing health problems and temporary health problems were perceived and comprehended by most test persons. However, some find it difficult to differentiate between long-standing health problems and temporary health problems.

The testing indicated a considerable respondent task related to the pre-defined diagnoses. Some of the diagnoses in the questionnaire should perhaps be explained better. This concerned especially the diagnoses: asthma, allergy, hypertension and arthritis/arthrosis. The testing showed that middle-aged test persons had problems understanding some the diagnoses. The young immigrants also reported many of the diagnoses as unfamiliar. The testing indicated that one should consider opening up for registration of additional diagnoses.

Testing of the questions on functional limitation showed that it was difficult to give valid answers to the questions on functional limitations for the middle-aged group. The yes/no answering alternatives did not capture or were not differentiated enough to capture their problems. The youngest test persons and the middle-aged men reacted negatively to the detailed questions about functioning in relation to personal care. They also found the questions on physical and sensory functional limitation irrelevant. The questions on personal care were ridiculed by some of the respondents. They felt that it should be obvious for the interviewers that they were able to perform the activities in question. However, other test persons perceived the questions as relevant. One might consider to pose the questions on need for help concerning personal care to selected groups.

In the section describing personal care activities, the focus is to capture whether there is an unmet need for personal assistance. However, a reasonable supply of aids and ability to find solutions to practical problems delays the need for personal help. The questions do not consider this. The testing among

elderly people showed that some of the test persons had special devices to help them manage these activities or had found practical solutions themselves to the problems they have. The other test groups commented that these questions had little relevance for them and that we might consider a filter.

The expression used in the introductory text to the questions on daily activities; "your health or the way you felt" allows for a wide variety of interpretations. It can be seen to cover all kinds of problems not only long standing bodily or emotional health problems i.e. temporary lack of motivation, feeling of time squeeze, high level of ambition, mood variations, stress etc. In the Norwegian translation, "lasting physical and mental health problems" is used as this ismore in line with the terminology used earlier in the questionnaire. The testing of this section demonstrated that the questions on other daily activities need a reference, both to time and to a level of functioning. It is also necessary with an introductory filter question so that people that do not work or that are under education are not posed these questions.

Phrases from everyday spoken Norwegian can easily be misunderstood. A Norwegian phrase for "getting out and about" was difficult to understand for young immigrants. The meaning of this phrase is not intuitive and there might be a need for further explanation. The notion of "reduced activity" and "activity" was also somewhat difficult to grasp because activity in Norwegian is associated with a state that demands physical effort. The fact that some of the questions are long has also been problematic for this group.

In the section about other daily activities, there is a need for a question to filter old-age pensioners, people on disability pension, homemakers and people applying for work. These groups are not supposed to receive the follow up questions on paid work or schoolwork. The notion of having had to cut down on an activity needs a reference for comparing. The questions in this section did not flow well in the cognitive interviews or in the field test interviews. Our experience from the cognitive testing was that these questions involved a lot of fumbling on behalf of the test persons. Generally, the questions in this section were difficult for the respondents to answer, as there was no time reference or other reference to compare the reduction in activity to.

The questions on moods/emotional states (extract from MOS SF-36) were difficult for the respondents to comprehend and answer. These questions are developed for use in a self-completion questionnaire and are not really suitable in a face-to-face interview setting. The concepts that express emotional states like feeling down in the dumps, tired, worn out, feeling full of pep etc. seem to capture a wide variety of interpretations, to some extent age specific ones. Some of the questions are double barrelled. The Norwegian translated instrument uses only *one* term to describe the states in each question.

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1 Introduction and background

The need for increased comparability of health data from surveys between different European countries has been on the agenda for Eurostat for many years. Internationally, different agents have been active in this process and the work in progress is increasingly being coordinated.

One of the initiatives from Eurostat is the development of a European health survey as a part of a European Health Statistical System for the EU-area. The European Health Interview Survey (EHIS) consists of four modules. The primary outcome of this work is gathering experiences from testing one of the modules i.e. the module on health status. A total of collected experiences from different countries will hopefully create a better foundation for adjustment and improving the questionnaire that has been developed to measure health and disability.

1.1 Short history of EU's initiatives on comparable health survey data

At the European level, the process of producing comparable data in the area of public health statistics by means of surveys was realized in several steps. The first achievement in the development of Health Interview Surveys (HIS) in a coordinated way across Europe, was a module on health in the European Community Household Panel (1994-2002). This was the first attempt at harmonising the annual HIS data collection in the EU with the same questions in all the member states. Although the same questions may not ultimately be measuring the same underlying health concepts, the results of these surveys were the starting point for extra efforts to achieve better comparable EU wide data on health and disability. The second step was the collection by Eurostat on 12 (now 18) items on health from national surveys (on self-perceived health, chronic conditions, present and former smoking, physical action, in-patient care, out-patient care, etc.). However, the frequency and completeness of the data are not the same in all Member states.

The third step (in 2002) was a module on disability related to working conditions that was included in the European Labour Force Survey (LFS) and analysis of this is still ongoing. A fourth major step was a decision to include the Minimum European Health Module (MEHM) in the annual Eurostat social survey on Statistics on Income and Living Conditions (SILC), which began in 2003. MEHM provides general indicators for perceived health and for disability. The module was developed with cross-national comparability in mind and because of its brevity; it can easily be included in the topical surveys, e.g. on labour or income when supporting variables on health are needed.

Finally, the fifth step was to build a framework for a regular collection of harmonised data by means of survey modules on health, named the European Health Survey System (EHSS). The European Health Interview Survey (EHIS) is planned to run every five years and includes the following modules: health status, health care, health determinants, and background variables. There is flexibility as to how these are implemented in member states. They may be run as a separate survey or included in existing national surveys (i.e. health interview survey, labour force survey, other household surveys).

1. 2 The module on health status

This is one of four modules in the European Health Interview Survey (EHMS). It was developed in 1998 by EuroReves, but has later been revised. The EHMS module covers the following indicators:

- Self-perceived health (global)
- Limitations in the last 6 months due to health problems (global)
- Chronic conditions (global and detailed);
- Physical and sensory functional limitations
- Personal care activities
- Household care activities
- Other daily activities
- Mental health

This project aims at developing a Norwegian version of "The European Module on Health Status" through translation and qualitative/realistic testing. The project is coordinated and mainly financed by the European Commission, with additional funding from Statistics Norway. This report documents the work in developing a Norwegian version of the module questionnaire. The goal was to develop a questionnaire that was both robust and well adjusted and that can easily be implemented as part of future surveys, or be run as a separate survey. We have used cognitive interviews combined with a realistic mini scale field test. In the field test, the interviewers used behavioural coding to evaluate the way respondents answered the questions. Eurostat has given the overall premises for translation and adjustment. The field test was run as personal face-to-face interviews/ computer assisted personal interviews, CAPI.

Statistics Norway, represented by the Division for Health Statistics and the Division for Data Collection Methods, applied for funding to do this project summer 2004. The project started in December 2004, after dicussions with Eurostat regarding financing and specifications of the task.

There has been close collaboration between health and survey-methodological experts in this project. The Division for Health Statistics has had the main responsibility for the translation work and for adjusting the instrument. The division has also contributed actively in the qualitative test-work. The Division for Data Collection Methods has had the main responsibility for testing, but has also been closely involved in the translation and adjustment work. Both divisions have cooperated with the Division for Sample Surveys in the preparatory work for the field test.

2 Project Objectives and Phases

2.1. Project Objectives

The main goals for this project have been:

- To identify efficient methods to secure a high-quality translation of the questionnaire, so that the conceptual meaning in the survey questions are kept.
- To test qualitatively the questionnaire in target groups, to secure a high-quality survey instrument.
- To carry out a mini scale field test by testing the survey design – in particular to achieve knowledge of the interviewers' evaluation of the respondents' response process.

When measuring *health and disability* in a population, the structuring of survey questions should be considered along different dimensions; health, chronic diseases, functional limitations, emotional states etc. The challenge is to develop valid and reliable measurements, and at the same time develop a questionnaire where the questions are comprehended as meaningful and relevant for most respondents.

To be able to match self-evaluations of health across populations the questions need to be comprehended basically the same way, so that the persons interviewed are answering questions in the same manner and with the same reference. The qualitative testing will supply us with valuable information on how Norwegians perceive different health concepts and functional limitations related to capacity.

To *ensure quality in the questionnaire* intensive quality testing is necessary. This project gives a qualitative or in-depth testing of the module. This testing will hopefully elicit a greater understanding of the information the respondents bring to their responses on aspects of their health. The goal is to establish whether the questions are understood as intended, or if there are problems in the question-answer process related to specific questions.

It is essential to *test the questionnaire on real respondents*, and on representatives for actual target groups. It is dangerous to assume that the questions are comprehended in the same way by all age groups and in all sections of the population. The questionnaire should therefore be tested on different user groups with different characteristics. In this project, this is secured by selecting groups with different characteristics and probably different perception of good/bad health and life situations as such. The questionnaire was tested on three different target groups: old-age pensioners, middle-aged people with low education and immigrants.

Cognitive interviewing is an information rich test technique. Only a few interview protocols produce a huge amount of information. A small number of interviews can uncover flaws, and gives us a chance to correct and adjust the questionnaire before "going into the field". It is, however, difficult to predict how indicated problems will apply in a larger sample.

Realistic field-testing is carried out with a fairly larger sample compared to in-depth interviews, and within an authentic environment. The cognitive interviewing takes place in a laboratory setting. These two methods are chosen because we believe that findings from the field test will indicate how the detected errors will apply in a somewhat larger scale.

2.2 Project phases

The project is divided into five phases:

1. Translation
2. Pre-testing of the survey instrument
3. In-depth cognitive interviews in target groups
4. Realistic field testing with behavioral coding, including interviewer debriefing
5. Analysis and reporting

Notes on project accomplishment: Phase 1 was somewhat prolonged because the professional translator recruited to do the back-translation was not available at the required time. The project was stopped in the summer months leading to a higher workload when the project started rolling again i.e. the transition from initial testing to more systematic test work. The project phase 3 and phase 4 overlapped in time. The end-phase has been work intensive. Analysis and reporting work were done parallel.

2.2.1 Translation

The questionnaire, with relevant instructions, was translated from the source language, English; into Norwegian by two separate teams. Each team had a person with an professional health background. One team was comprised solely of persons from Statistics Norway while the other team was from the National Institute of Public Health. Translated versions from both teams were compared and discussed. After a process of discussion and adjudication, we agreed on a joint version of the questionnaire. In addition, we used a bilingual expert to check whether we had captured the meaning of the health concepts. A professional translator then translated this version back to English.

The translation work was logged, and the log together with the translation, were sent to Eurostat for approval. This work was done in the spring 2005.

Annex 1: Back translation of initial questionnaire (English)
Annex 2: MEHM – two translated versions
Annex 3: Translation template sheet
Annex 4: Notes from translation checker
Annex 5: Final translation of questionnaire (Norwegian)

2.2.2 Pre-testing of the questionnaire

We chose to pre-test the questionnaire by use of *cognitive interviews*. We were allowed to recruit respondents through the National Insurance Administration and their local offices. We selected the respondents randomly, and invited them to participate in a test interview. Each person received a letter of invitation with relevant information, and the name of a contact person for signing up for an interview.

During the pre-test phase, we focused on the respondent's comprehension of health concepts in the questionnaire, and we were especially interested in testing the questions concerning need for care. The pre-test demonstrated that we had to revise the wording in some of the questions. There were also some response categories that did not match, and some problems related to the sequence of questions. Based on the testing and earlier feedback discussions we agreed on a final version of the questionnaire to be tested further in the cognitive interviews and in the field test.
The pre-testing was done in August - September 2005.

2.2.3 Cognitive interviews with respondents in target groups

The revised questionnaire was after the pre-tests exposed to a more systematic qualitative testing on respondents in selected groups. The test persons were recruited on a voluntary basis.

- *Group 1* consisted of old-age pensioners. This was a heterogeneous group concerning health and need for care. One group consisted of old-age pensioners 75 years and older. Another group consisted of old-age pensioners between 65 and 70 years of age
- *Group 2* consisted of middle-age respondents between 50 and 65 years of age
- *Group 3* consisted of younger respondents between 20-40 years of age. We were especially interested in coming into contact with immigrants with a non-western background

In the interviews, there was a sequence of concept mapping with card sorts. The test persons were encouraged to think aloud and associate freely around concepts used in the questionnaire. Another sequence was a systematic go through of the questionnaire with mapping of the four cognitive phases – *comprehension, information retrieval, judgement* and *response.* In this sequence, the respondent was encouraged to think aloud and explain how he/she was thinking from the question was posed until he/she arrived at an answer. The think aloud sessions were supported by planned and spontaneous follow-up questions (probes) from the moderator[2]. The cognitive interviews were used to indicate respondent problems in the four cognitive phases, due to possible errors in the survey instrument.

Anne Sundvoll conducted the cognitive interviews with secretarial help from staff in the Department for IT and Data Collection (see preface). The project leader – Jorun Ramm - was invited to observe the interviews. The test persons were informed that the interviews were taped. This work was carried out in November - January 2006.

Annex 6: Letter of invitation to the cognitive interviews
Annex 7: Guide for cognitive interviewing

2.2.4 Face-to-face interviews with behavioural coding

The revised questionnaire was programmed in Blaise and we made instructions for the interviewers. A sample of 400 persons was drawn from the Population Registry. Eight experienced interviewers from the Division for Sample Surveys were selected to carry out 40 face-to-face interviews. The objective was to test the questionnaire in a close-to-authentic setting.

The interviewers were instructed to do behavioural coding parallel to posing questions and register the respondent's answers. The behavioural coding was done according to a pre-defined list with seven codes. The instruction of the interviewers was done in a telephone conference before going into the field. After data collection, a new telephone conference was arranged for debriefing. The interviewers shared their experiences with the project group and made suggestions for improvements. This work was done in October - December 2005.

Annex 8: Letter of invitation to participate in the field test
Annex 9: Instructions to the interviewers
Annex 10: Show cards

[2] The moderator is in charge and coordinates the cognitive interviews.

2.2.5 Analysis and feedback to Eurostat

The analysis work consisted of the following parts:

- Analysis of the cognitive interviews. Going through secretarial notes and tapes
- Analysis of answers from the face-to-face interviews
- Summing up the debriefing session with the interviewers
- Analysis of the material from the behavioural coding
- Produce the project report

The analysis work was done in January to February 2006.

3 Translation

3.1 Quality evaluation of the source instrument

The development of the European Health Status Module began in 1998 with the Euro-REVES project "Setting up a coherent set of health expectancies for the European Union" funded under the European Health Monitoring Programme (1999).

The first phase of development work was choice of indicators:

- Agreement on the health domains and underlying health concepts
- Systematic review of scientific literature on methodology of health status measurement
- A systematic review of instruments that are in current use in Europe and how far they meet methodological recommendations
- Instruments currently recommended were chosen
- Global (single item) and more detailed instrument chosen for each domain.

Nine indicators were chosen: chronic morbidity (global and detailed), activity limitations (global), perceived health (global), physical and sensory functional limitations, personal care activities, household care activities, other activities, mental health. An instrument to measure cognitive functional limitations was omitted pending recommendations from the SHARE (Survey on Health, Ageing and Retirement in Europe) project.

The second phase involved assembling the global and detailed indicators in the EHSM in English and translation into other European languages. The English version of the module was created by deciding the order of instruments and adding in introductory text and filters for rapid throughput of healthy individuals. On the instruments on activities, there were inserted filter questions at the beginning of each of the "activity" instruments so that those individuals who were fully functioning in all the activities could be moved quickly through the questions. Translation guidelines were prepared so that translators understood and translated according to the underlying health concepts. By the end of the second phase, the module was translated into five European languages: Danish, English, French, German and Italian (EuroReves 1999).

In the translation guidelines, it is stated that it is necessary to describe the minimal requirements concerning validation of the instrument in the source language before going through the quality evaluation of a translation in the target language. If there is any doubt whether the quality evaluation in the source language is sufficient, the quality evaluation should be redone for the instrument after it has been translated to the target languages. The module on health status is developed in English and the objective for selecting and designing the instrument is therefore set. Statistics Norway has not revised the questionnaire in the source language. This project aims at testing how the instrument functions in a Norwegian context. *Revision and recommendations are primarely based on the translated instrument.* It can be difficult to distinguish between the effects of translation and the effects of the original instrument in the source language. This will, however, be commented on in the discussions and recommendation chapter.

3.2 Ensuring quality in the translation process

One approach to developing comparable instruments is a source-to-target approach (as in this project). A parallel design is used in the EU-SILC project. Within this design a concept definition of each question (and answer) is given, but the actual wording of the questions is left to the instrument designers own discretion. In either approach, it is mandatory to have worked out and agreed upon the concepts of health that are to be measured in the survey. In this project, the questionnaire from

Eurostat was set and we performed a source to target language translation. Weaknesses in the original English questionnaire will in this case also be reflected in the translated version.

Eurostat has given directives regarding translation (ref. Guidelines and Conceptual translation Cards). The conceptual cards were short explanatory texts on concept meaning, time reference, specification of what should be included and what should be omitted. Clear definitions of the concepts in the instruments are essential for making a valid translation.

As stated in the guidelines: there is no gold standard on how to proceed. However, the guidelines supplied clear recommendations on how to ensure comprehensive translation of the instrument from the source language to the target language. One of the criteria for translation work was that the translation teams should include persons with background from health (statistics), with good understanding of the health concepts used in the questionnaire. The health experts should especially focus on translation of the conceptual meaning in the health concepts, rather than doing a word-by-word translation.

The challenge from the point of view of Norwegian health statistics is to develop good instruments on self-perceived health, health problems and disability that is anticipated as meaningful for a cross section of the Norwegian population.

3.3 Translation procedure

The guidelines state that it is recommendable to centralize coordination, monitoring and evaluation of the translation process in conjunction with a national study. In Statistics Norway, the core project group consisted of two experts who coordinated the translation work.

It is also stated that initial or forward translation of the health status questionnaire from source to target language should be done by one or preferably at least two independent translators. It is sometimes recommended to use professional translators. Our previous experience from translating the National Health Interview Survey Questionnaire into English is that professional translators are more true to the original wording of questions and therefore less flexible in finding good formulations that will flow in an interview setting. Literature also shows that experiences with using professional translation agencies differ. We have *n*ot recruited a professional translator in this project.

Statistics Norway has chosen an approach with two independent translation teams. Each team included a health expert and a methodological expert. All had good knowledge of English. As stated in the guidelines, translators should have target language as mother tongue and be fluent in source language (English). They should have translation experience, be culturally embedded and open towards the theme under study. It was said that translators familiar with health issues may more readily grasp the concepts under study. On the other hand, it is said that translators with a strong health science background may hold their own, independent view of things, which could result in just the opposite, i.e. considerable deviation from the underlying health concepts.

3.3.1 Initial translation

In this project, two translation teams were established. One team with an expert from health statistics and an expert with survey design and methodological background. Team 1: Jorun Ramm (Division for Health Statistics) and Elisabeth Gulløy (Division for Data Collection Methods). A second team was established with a health expert from the National Institute of Public Health and an expert with background from survey and methodological work. Team 2: Heidi Lyshol (National Institute of Public Health) and Anne Sundvoll (Division of Data Collection Methods). Both teams translated the questionnaire independently. The health experts focused especially on ensuring that the health concepts were translated adequately with reference to the conceptual translation cards. The experts

with survey methodological background focused especially on question structure, response scales/categories and linguistics in the questions and the general flow of the questionnaire as a whole.

The instructions (translation cards) provided by Eurostat were translated into Norwegian before translating the questionnaire. This was a useful warm up exercise and made the team more competent for the actual translation of the questionnaire. They were also extremely useful as a reference in the discussions.

3.3.2 Panel adjudication

The experts within each team translated the questionnaire independently, discussed and adjusted the versions. Divergence in the translations between the two teams was thoroughly discussed in the project group. This group consisted of two independent experts, the national study coordinator, and one of the translation team leaders. When deciding on a final instrument the study objective and design was central. We checked the translation of the different versions against each other, discussed deviations, and finally agreed on a joint version of the questionnaire.

3.3.3 Translation checking

The checking was performed by a bilingual survey methodologist; Trine Dale from Division for Data Collection Methods. She has broad experience from planning and developing health and level of living surveys and a background from communication. The results from the checking procedure were, however, not fully in line with the previous discussions in the project group. We noted that the checker commented more on language and technical, methodological issues than on whether we had grasped the health concepts in the initial English version. See annex 4 for notes. The main message in the feedback given was that some of the concepts used in the translation of specific questions were too formal and “old-fashioned”. An oral approach was recommended. This was taken into consideration when revising the questionnaire. She also commented on the original English questionnaire with regards to use of double-barreled questions and unbalanced response scales.

3.3.4 Back translation

After this first revision, the questionnaire was translated back to English. Statistics Norway’s language expert, Grete Borge, performed the back-translation. However, back-translation is not always recommended, and our experience was that the work performed was of a rather technical nature. Literature also shows that back-translation sometimes shifts the focus back to literal translation and does not necessarily serve the goal to produce a conceptual equivalent to the original instrument.

The translated document was sent to Eurostat for commenting and approval. Many of the comments made by Eurostat were caused by an imprecise back-translation – i.e. leaving out text etc. (see chapter 6.1 for a more detailed description). We developed a translation template sheet (Annex 3) on the basic health concepts, short passages of text from the questionnaire and response scales. This exercise was useful as it raised our consciousness on the process leading to the actual choice of Norwegian terms. Summing up, both the comments from the checker and the back-translation gave valuable information that we could feed back into the questionnaire. Following the translation, we performed three pre-test interviews where we particularly tested concepts and terms that had been discussed in the translation process. The description of the revision based on results from the pre-test is described in chapter 6.2.

4 Testing methods

This project is a synthesis of different development and test methods. *Cognitive interviewing*, which is a qualitative method to test a questionnaire, was performed parallel with a mini-scale *realistic field test* with behavioural coding. The interviewer's use of *behavioural coding* in the face-to-face interviews has given valuable additional information to the protocols from the cognitive interviews. To interpret and supplement the material from the behavioural coding we used telephone conferences for *interviewer debriefing* and logged the interviewer's experiences and thoughts based on the fieldwork.

Cognitive interviews produce a lot of information about problems encountered, and give information on means/clues on how to solve them. Even problems occurring in *one* interview can prove important since the problem can occur more frequently in a larger survey. By using both methods, we are able to both detect potential sources of errors, and study the range of such problems.

4.1 Cognitive interviewing

Cognitive interviewing is an *interview and observation technique* that takes place in a laboratory environment. A trained moderator leads the interview. The moderator uses an interview guide to structure the conversation. There is also a secretary present observing the test person and taking notes. The interviews are taped. Use of cognitive interviewing monitors the respondent's cognitive process. This is a suitable method for getting insight into the process preceding the answer to specific survey questions i.e. from the reading of a question to the arrival at an answer.

The method usually involves a limited number of respondents. A weakness with the method is that the volunteers recruited for test interviews are not representative for the survey population as a whole. They are often higher in education and more willing to take on challenges compared to the average survey respondent. This can lead to an underestimation of the severity of the problems detected. On the other hand, if a question does not "work" in the cognitive interviews, it will probably also cause problems in the field.

Cognitive techniques are used to study the cognitive processes that the respondents use to answer survey questions; in particular the process of *comprehension, information retrieval, judgement* and *response.* The respondent goes through different mental steps to reach an answer. The Tourangeau and Raisinski Model; the Psychology of Survey Response (Tourangeau, 1984) gives a description of the four cognitive steps:

Fig. 1: Overview of the four cognitive steps of survey response and specific respondent processes

Component	Specific process
Comprehension	Attend to questions and instructions Represent logical form of questions Identify questions focus (information sought) Link key terms to relevant concepts
Retrieval	Generate retrieval strategy and cues Retrieve specific, generic memories Fill in missing details
Judgement	Assess completeness and relevance of memories Draw inferences based on accessibility Integrate material retrieved Make estimate based on partial retrieval
Response	Map judgement onto response category Edit response

Source: Tourangeau, 2000

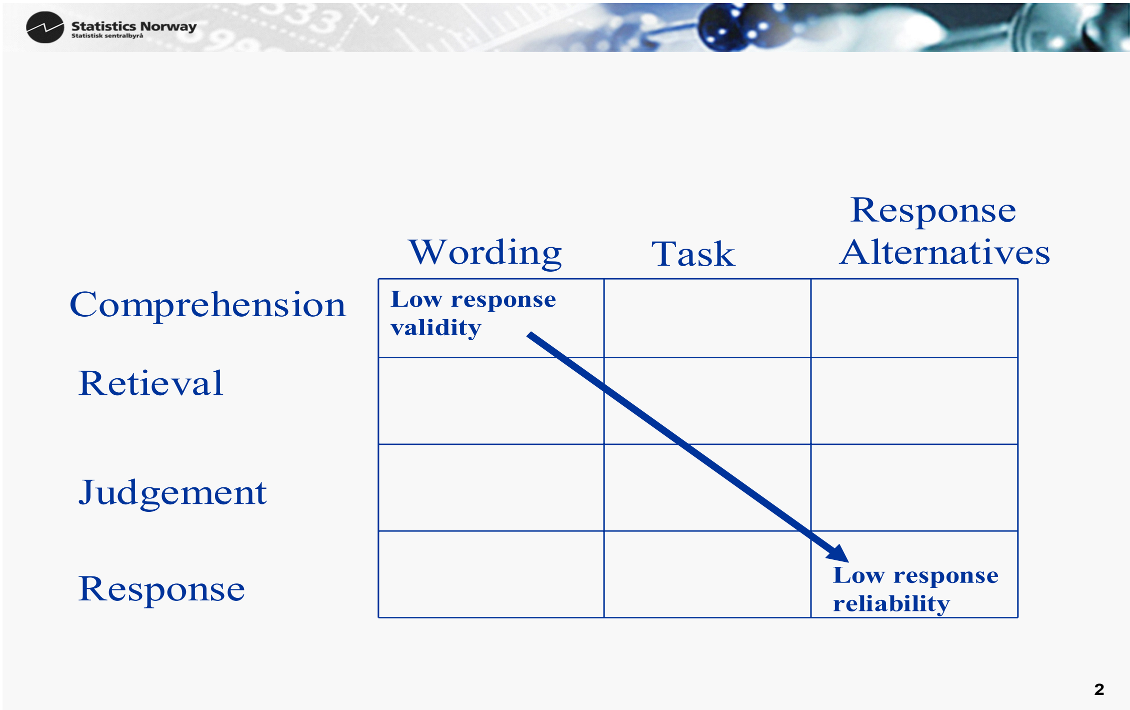
Instructing the interview person to think aloud and verbalize his/her thoughts gives a better understanding of what problems the respondent meets in the process of interpreting and comprehending the question, selecting relevant information from his/her memory and judging and adjusting an answer that corresponds with the predefined answering alternatives. The moderator is free to ask follow-up questions or to probe to make the respondent elaborate on his/her thoughts and provide context information.

Three golden rules can be stated:

- If the respondent has problems in the initial *comprehension* phase, this is often related to ambiguous concepts or imprecise specifications in the survey question. In general: There is a problem with the wording of the survey question.
- If the respondent has problems with either the phases of *information retrieval* or *judgement* then this is probably due to a considerable respondent task.
- If the respondent has problems in the cognitive phase of *response,* it is due to inexhaustive or incomplete list of response alternatives.

Figure 2 illustrates the link between cognitive "challenges" and where to search to correct the source of error.

Figure 2: Overview of the four cognitive steps and possible response errors



Source: Statistics Norway

Cognitive interviewing by think aloud
As already indicated, cognitive interviewing consists of a toolbox of different techniques. The think aloud technique requires some training of the respondent in verbalizing his/her thoughts. By instructing the test person to think aloud we get insight into the cognitive process. As this might be an unfamiliar activity to many people, it is necessary with some warm up activity, usually an example.

The advantages of the think aloud technique are several; freedom of interviewerimposed bias, minimal interviewer training requirements, and an openended interview format.

By testing questions by the "think aloud" technique one can explore:

- Clarity: Does the respondent understand the survey questions correctly?
- Comprehensiveness: Are the words/terms used in the questions known by all the respondents? Are all the response alternatives clear and unequivocal for the respondent? Are all required response alternatives listed? Is the question reasonable and is it really needed? Is the length of the recall period feasible?
- Acceptability: Are questions ethically and morally approved, i.e. are questions not too sensitive? Do questions affect privacy?
- Is the response burden acceptable? Is the respondent able to answer the survey questions?
- Are different questionnaire routings flowing like a natural conversation?

Cognitive interviewing by follow up questions and probes
Think aloud and targeted probesing often support interviews. In this approach, the moderator asks follow-up questions or probes to make the respondent elaborate further on his/her thoughts. The moderator listens carefully to the respondent and encourages the respondent to continue by posing neutral probes like; "Tell me what you're thinking", "Can you tell me more about that?".

The advantage of verbal probing is that the interviewer maintains control of the interview, the interviewer can focus on particular areas that appear to be relevant, and it implies easy training of the respondent.

The probing can be done concurrently (question by question), or retrospectively. The probes can be of a very general nature or rather specific, depending on the required information. Different kinds of probes can be used e.g. comprehension probes, information retrieval probes or response category selection probes to cover different aspects of the question – answer process.

E.g. If the question under study is, *"to what extent have you been limited in activities people usually do?"*

- Comprehension probe: please, tell me what you understand by *"activities people usually do"*
- Information retrieval probe: how did you retrieve this information?
- Response category selection probe. When answering the question, were you able to find the exact response category from the list or did you have to choose between two or more response categories?

Concept mapping by card sorting
The technique of "card sorting with mapping of concepts" is a systematic means to determine the ways in which respondents think about key topics. It is used to determine how individuals organize concepts, and in particular, what they believe a concept means to them and what it includes or excludes.

4.1.1 A note on the use of cognitive interviewing in this project

There are different ways of conducting cognitive interviews. We mainly combined the following techniques:

- Respondent verbalizes his/her thoughts when he/she answers the questions (think aloud).
- Semi-structured discussion about the questions (concurrent probing).
- Respondent tells in his/her own words how he/she understood the questions (paraphrasing).

Pre-test. Introductory cognitive interviews

The objective of the pre-testing was to check the respondents' comprehension and judgement of the different health concepts used in the questionnaire in an exploratory manner. The method of concept mapping was applied i.e. handing cards with written concepts to the respondent. The respondent was then asked to explain what the concept meant to him/her in his/her own words.

The questions were also tested by "think aloud" technique to explore if the concepts used were familiar, if the response alternatives were clear, if the response burden was acceptable etc. The think aloud session was accompanied by targeted follow up questions.

4.2 Behavioural coding

Cognitive interviews are often conducted in a laboratory setting and use of follow up questions and probing are frequently interrupting the interview flow when going through the questionnaire. As opposed to this in depth technique, field testing is set in a realistic environment and the interviews are performed without disturbing the interview flow. An authentic field test is a pre-requisite to a realistic test of a survey - the field test should be as close to the coming design as possible (Haraldsen, 1999). In a survey setting it is, however, possible to collect and monitor respondent's reactions to questions at the same time as the question is asked, without disturbing the interview flow. This technique used is called *behavioural coding*.

With reference to general literature on behavioural coding this is about interviewer and respondent interaction. It is a technique to evaluate questionnaire wording, interviewer performance, and the interview process as a whole. Codes for *interviewer behaviour*, regarding how the questions are read e.g.; exact, with slight change, changes the meaning of the question, does not complete reading the question and codes describing the *respondent behaviour* e.g.: interruption, clarification, qualified answer, inadequate answer, does not know and refusal are used. Behavioural coding consists of a set of observation codes that are intended to capture problems with question wording or answering alternatives (values). The method is usually applied on a small number of respondents.

4.2.1 A note on the use of behavioural coding in this project

We have restricted us to an interview evaluation of the respondents answering process. The chosen method therefore only allows for analysis of the behaviour of the respondents and not that of interviewers. This means that we have no insight into interviewer effects. That is interviewers varying ability to ask questions clearly and their varying propensities to code respondent behaviour. When the interviewers are coding respondent behaviour it is also difficult to reveal or identify problems when the respondent gives an acceptable answer to the question, but has misinterpreted that actual question or when the respondent chooses to answer without asking for clarification even though he/she did not understand the question.

When doing behavioural coding the interviewers are performing a sort of "instant-calibration" of the cognitive process of understanding the question, gather information, judge information, and format an answer. We have used the following seven codes to describe respondent behaviour (Haraldsen 1999):

1. The respondent asks for the question to be read again
2. The respondent asks for clarification or explanation of the question
3. The respondent misunderstands the question (and answers in a way that demonstrates this)
4. The respondent perceives the question as sensitive
5. The respondent uses a long time to reach an answer
6. The respondent seems unsure about his/her answer
7. The respondent gives an imprecise answer that does not correspond to the alternatives given

Codes 1 to 3 correspond to the cognitive step of question comprehension. Code 5 points at information retrieval or information judgement (task). Codes 6 to 7 refer to the process of editing the retrieved information and forming a response.

5 Methods applied and practical issues

5.1 Cognitive testing

5.1.1 Pre-test

We chose to pre-test the questionnaire by use of *cognitive interviews* (see chapter 4 for description of the methods). The subjects for the pre-testing were recruited from the National Insurance Administration and their local offices. We approached people randomly, and invited them to participate in a test interview. Each person received a letter of invitation with relevant information, and the name of a contact person for signing up for an interview. Three respondents were recruited. In the interviews, we particularly tested concepts and terms that had been discussed in the translation process. The questionnaire was adjusted on basis of the information obtained during the pre-test. The adjusted and final version of the questionnaire was used in the cognitive interviews.

5.1.2 Cognitive interviews

We selected three target groups for cognitive interviewing. Old-age pensioners, middle aged people with low education and immigrants. This was done to be able to test the questionnaire on people with different characteristics. It is important that a questionnaire, that has the whole population as target group function in all groups. Nine persons were recruited for this exercise.

In the pre-test, we focused primarily on the comprehension of concepts, while in the cognitive testing focus shifted to wording, format etc. Each interview lasted for approx. one and a half hours. The test persons were given a “gift voucher” for NOK 400 each.

A guide was developed to structure the cognitive interviews (Annex 7). We decided to cover themes and concepts that were discussed in the translation process.

We applied a method of concept mapping (card sorts) to check how concepts that are used in the questionnaire are comprehended and understood. The cards were used to make the respondent place concepts in relation to each other. This technique was applied on general concepts (i.e. health, long standing/temporary illness, etc.) and the concepts describing emotional states. When going through the questionnaire each test person was posed the questions in the questionnaire and asked follow up questions.

5.2 Field testing with behavioural coding

It was a challenge to develop a method for interviewer coding of respondent behaviour that would not negatively affect the interviews, and to find strategies for overcoming practical barriers. Eight experienced interviewers were selected to do a mini scale field test of the questionnaire. The interviewers recruited for the field test were not familiar with the method of behavioural coding. Thus, specific instructions were given in an organized telephone conference with the interviewers.

The gross sample for the field test was 400 individuals. The sample was selected according to the selection plan developed by Statistics Norway, but the areas included in an adjusted plan were limited to areas in and around the major cities of Oslo, Trondheim and Bergen. The respondents were between 18 and 79 years of age. Each interviewer received a list of 50 potential respondents. An advance letter was sent to the respondents (Annex 8) announcing that an interviewer from Statistics Norway might contact them within a specific period. Through this letter, the respondents were informed that this would be a test interview and that the purpose was to test a questionnaire developed by Eurostat. It was decided *not* to inform the respondents about the coding activity.

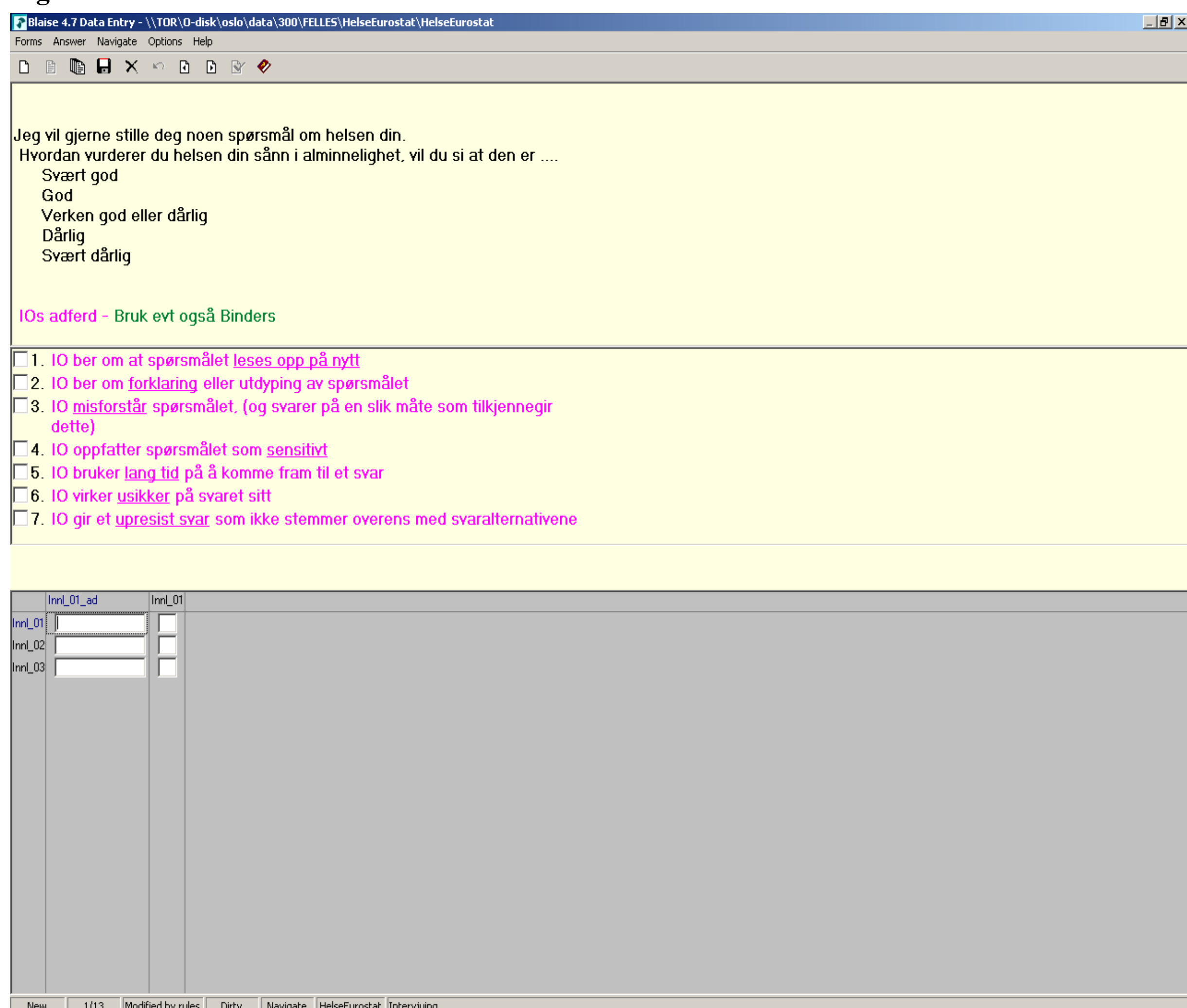
5.2.1 Behavioural coding in Blaise

For the behavioural coding, eight experienced interviewers interviewed approximately five respondents each, a total of 39 interviews. The interviewers were instructed to register the respondent's answers as usual. For each question they also registered the relevant code(s) for the respondent's behaviour from the list of seven codes (see chapt. 4.2.1 for list of codes). More than one code could be registered per question. Two additional codes were automatically generated by Blaise; 8. "refuses to answer" and 9. "don't' know" depending on the response.

5.2.2 Technical solution

The questionnaire was programmed in Blaise. The behavioural codes were used by the interviewers during the field-test interviews. For every question, the interviewers had to answer a follow-up question related to the respondent's answering process. At the same time as posing the questions, the interviewer marked off relevant behavioural codes. Technically, we chose a solution with two following screen windows. The behavioural codes appeared in screen 1 and the response alternatives appeared in screen 2. The interviewers were instructed to press <enter> to switch between the screens.

Figure 3: Screen 1 in Blaise



5.2.3 Interviewer briefing and debriefing

The interviewers are key people in collecting data and they get a lot of valuable information in the process of being in the field. They have a multi-dimensional job. They are tracking potential respondents, motivating them for an interview and performing standardized interviews. During the interview phase, they probe to register valid answers. We wanted to get insight into the information

that the interviewers capture when in the field. That is how they judge the respondents answering process for themes like self-perceived health, health problems and need for help and care. Is there a lot of insecurity and fumbling in finding an appropriate answer? Do the respondents use a long time to reach an answer? Etc. Through initial briefing of the interviewers before going into field, and debriefing after they had performed the interviews, we got valuable information about their experiences.

Mini training course
An introductory telephone conference with the selected interviewers was held prior to the fieldwork. The interviewer coordinator who is familiar with the interviewers arranged this "mini training course". In this conference, the interviewers were informed about the background of the survey and the object of testing, use of behavioural codes etc. We also discussed problems that they might encounter as a result of the extra task doing the coding and invited them to ask questions or express doubts they might have. Some of the interviewers expressed concern about the extra time used for each question to register the behavioural codes. It was said that some respondents might question this. However, the interviewers were encouraged to "cling to" their experience and use common sense when evaluating their respondents.

Each interviewer was paid 2 hours preparation time, performing a test interview and reading the instructions. Most of the interviewers had read the questionnaire and some had tested it on acquaintances. In this session, we discussed some of the health concepts and the use of different time references in the questionnaire (Annex 9 – Interviewer instruction). We also discussed practical matters such as; where to sit so the respondent would not see the screen, what to say if high activity on the computer was commented, etc. All interviewers had a positive attitude, and were looking forward to get started. We announced that there would be a debriefing conference after the interviews about their experiences in the field.

Views and feedback from interviewers
The agenda for the debriefing session after completion of interviews:

1. Experiences from the field work in general.
2. How they experienced performing the behavioural coding.
3. Questionnaire - which questions functioned well and which did not function so well.
4. Suggestions for improvements.

The interviewers were encouraged to contact both elderly and younger people. However, some of the interviewers reported that they concentrated on contacting the eldest respondents on their lists to be able to test the questions on personal care.

None of the interviewers encountered major difficulties during the interviews. The interviewers expressed that they were unfamiliar with performing the behavioural coding parallel with the interviewing, but that they became increasingly comfortable with the task as they were going along. They had also made use of the free-text comments during the interviews (Annex 9).

One of the reasons for the difficulty or the challenge doing the coding was that the behavioural codes were registered in a different screen windows. This deviates from the practice they are used to, during ordinary interviews. This is connected to how many times they have to press different buttons to progress in Blaise (e.g. <enter>). Several of the interviewers reported in the debriefing that they had made mistakes by pressing <enter> too early and that they had to go back and correct.

It was also said that the interviewers were unsure about the criteria for when to register for instance "Respondent used a long time reaching an answer". There were different practices among the interviewers related to what was considered "long time" as they were given no specific time reference.

Following the debriefing conference, a short note was published in the weekly report to the interviewer staff in Statistics Norway (translated):

On commission from Eurostat Statistics Norway has translated and adjusted a questionnaire about health and disability. The questionnaire is one of four modules in the European Health Interview Survey (EHIS) that is under development and testing. As an important part of the development and testing of the module on disability, cognitive interviews have been conducted with persons in selected target groups. In Statistics Norway, eight experienced interviewers have conducted 39 interviews in peoples' homes. The respondents were drawn from a general population sample aged 18-79 years. The interviewers used behavioural codes to register the respondent's answeringprocess when searching for information to answer the questionnairequestions. Before and after the field test telephone conferences with the interviewers were arranged. The fieldwork terminated in week 50 (2005). The interviewers have given us valuable information and suggestions for improvement of the questionnaire.

6 Results

6.1. Translation

In the translation of the EMHS the challenge has been to find precise linguistic formulations in Norwegian (that includes concepts, wording and sentence building) that capture the underlying meaning of the concepts in the source language questionnaire. The translation process is described in more detail in chapter 3. Two teams translated the questionnaire, independently. The translated versions were discussed and adjusted. Focus was on ensuring an adequate translation of health concepts and making sure that question structure, response scales/categories, and the general flow of the questions were functioning well. The instructions (translation cards) were translated into Norwegian *before* translating the questionnaire.

An independent expert checked the initial translation. The notes from this work are documented in Annex 4. Generally, the comments by the translation checker concerned the wording of questions. A translation template sheet was developed (Annex 3) on the basic health concepts, short passages of text from the questionnaire and the response scales. This was a useful exercise for structuring the questionnaire and for consistent use of terms. A back translation of the initial translated questionnaire into English was sent to Eurostat for review. The experiences from setting up a translation template and the checker's and Eurostat’s comments were discussed and fed back into the questionnaire. The revised version resulting from this work was used in the pre-testing.

In the pre-tests, we concentrated on testing the interpretation of concepts, semantics and response scales. We performed three test interviews where we particularly tested out concepts and terms that had been discussed in the translation process. This concerned, among other issues, the translation of “activity” and the use of the dichotomy bodily-emotional or physical-mental when describing health problems and the distinction between long lasting and temporary health problems. The results and corrections based on the pre-tests are described in more detail in chapter 6.2.

Notes from the translation checker:
The comments from the checker focused on the use of specific concepts. Some of the concepts were seen as formal and the checker commented that an oral format in the interviews would be better. The use of double-barreled questions and unbalanced response categories in the original English questionnaire was also commented on. Some of the translated terms in the questionnaire for “activity” and “problem” were seen as formal and other terms were suggested. The project group had, however, a different view thinking that the proposed terms might be suitable for young people, but that the terms chosen could be more widely used independent of age.

Back translation and comments from Eurostat:
The back translation of the initially translated document proved to be “a hasty piece of work”. This was reflected in many of the comments given on the translated document by Eurostat. In some of the questions on functional limitation and household care activities, some sequences of text were left out (i.e. quest. 5, quest. 7b). However, *some* wordings and conceptual problems were captured. These were improved in the final version. One comment concerned the initial translation of quest. 3: “limitations in activities people usually do”. We changed the formulation in order to broaden the focus on “what people usually do”, not referring to the person’s activity primarily. In the initial translation of quest. 3, we had not fully grasped the time reference. The initial translation was back translated as “in the past 6 months (or longer)”. It was commented by Eurostat that a limitation of 3 weeks could be interpreted as “yes” if we use this time reference. In the revised version, we added a text that stresses the fact that the time reference of 6 months or longer refers to the duration of the activity limitation.

The initial translation of the question:
Have you been limited because of a health problem in everyday activities or doings in the past six months (or longer)? Have you been severely limited, somewhat limited, or not limited at all?

The final version (back translated):
Have you had difficulty performing normal every day activities the past 6 months or longer due to health problems? Would you say you have had .. great difficulty, moderate difficulty or no difficulty at all? THE QUESTION IS ABOUT DIFFICULTIES THAT HAVE LASTED THE WHOLE SIX MONTH PERIOD OR LONGER.

The comment to quest. 4 was caused by an incorrect back translation. The Norwegian initial version had the text :

Have you or have you ever had the following diseases? In the final version we use the text: Have you ever had …..?

In quest. 8 Eurostat commented that "the way you felt" was not included in our question. We responded that there is some uncertainty as to what the concept "the way you felt" will capture. In the introduction to the question it is stated that the health problem or "way you felt" should have lasted for the past six months or longer. We believe that this phrase can lead to inclusion of short-term unspecific causal factors i.e. temporary lack of motivation, time squeeze, high level of ambition, mood variations, stress etc. by some respondents. We have instead tried to operationalize the concept to cover lasting physical and mental health problems, which we believe is more specific and precise.

The initial back translation: Because of your health, have you had to cut down on school or your work activities? Think about both bodily and emotional health problems.

In the final Norwegian version (back translated):
Have you had to cut down on school or work activities because of long standing physical or mental health problems?

6.1.1 Translating the questionnaire - documentation

MEHM - Minimum European Health Module
The Minimum European Health Module (MEHM) is a part of the EU-SILC survey that was translated, piloted and implemented in a full-scale survey in Norway in 2004. In the translation of the MEHM-questions in EU-SILC the countries were provided with a concept definition of each question (and answer). The actual wording of the questions was left to the countries own discretion. This is different from the work being done in this project where we have a source-to-target approach. This has led to a difference in wording for the MEHM in the two surveys.

The two questions designed to measure general health and long standing illness have slightly different wording and the question on functional limitations is significantly different (see Annex 2 for the two Norwegian translations back translated). The translation of quest. 1 on self-perceived health is identical. The answering categories are the same and the neutral mid-alternative has the same wording in Norwegian in both versions. The EU-SILC version of quest.2 on chronic conditions is translated in accordance with the question formulation used in our National HIS. A source to target translation of the questions have given a slightly different wording in this project.

The EU-SILC version has several filters in quest.3. Only those who answer "yes" in quest. 2 about long-standing illness are asked quest. 3a; if disease or health problem led to limitation in daily activities. If "yes" on limitation, quest. 3b. is asked; whether the limitations have lasted for 6 months or more. If the respondent answers "yes" to this question, he/she is asked quest. 3c. about how limited he/she has been.

The instrument proposed for source to target translation in this project was:

For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been severely limited, limited but not severely or not limited at all?

The expression "Have you been limited" is not possible to translate directly into Norwegian. We also had some problems with the expression "in activities people usually do". This was difficult to give a reference. Translating and finding acceptable expressions in Norwegian and capturing the meaning in this question has proved hard. The question had to be reworded in the Norwegian translation.

In the initial translation of quest. 3 we had not fully grasped the time reference. However, in the revised version we have added a text that stresses the fact that the time reference of 6 months or longer refers to the duration of the activity limitation, not the health problem. The revised question (back translated):

Quest. 3. Have you had difficulty performing normal every day activities the past 6 months or longer due to health problems? Would you say you have had .. great difficulty, moderate difficulty or no difficulty at all? THE QUESTION IS ABOUT DIFFICULTIES THAT HAVE LASTED THE WHOLE SIX MONTH PERIOD OR LONGER.

The word *difficulty* can be translated either as "vansker" or "problemer". The concepts are interchangeable in Norwegian and the use of the different concepts is more related to preference than actual difference in meaning. We initially chose the word "vansker", but feedback from the translation checker signalled that this concept might be seen as too formal. As this is the term used in our National Health Survey, it was hard to let it go. As we use the term, "health problems" repeatedly in the questionnaire we found it more consistent to keep the term "vansker" when we ask about difficulties and not "problemer".

There were some discussions on the use of terms for describing long-standing illness as opposed to temporary illness. In the discussions we talked about "health problems that will pass" as temporary health problems. In the instructions to the interviewers we chose the term closest to describing health problems that are of a passing character, thinking that health problems that come and go, are recurrent or that are seasonal, would then be captured in the concept of long standing illness.

Another problematic concept in the translation was "activity". The meaning of the word *activity* in English does not mean the same as the Norwegian word *"aktivitet"* which is the most likely Norwegian translation. "Activity" is often associated with an actual act that requires physical input, while the English term doings/task has a more passive meaning. We saw a danger with the term "activity". This might be associated with leisure time activities and physical training and would not be natural to use when describing personal care and household care activities. In the section about personal care we used the term "gjøremål" (doings/tasks/activity), while in the section on household care activities we used both "gjøremål/aktiviteter" and in the section about everyday activities we used "aktivitet" (activity), exclusively.

A result of the translation checkers comments was that we went through the questionnaire and tried to shape up the language and simplify it where possible. In the sequence on personal care activities, we changed the formulation chosen for "by yourself" from "på egen hånd" to "selv". The meaning of the concepts is more or less the same and it captures the notion of having done the activity by oneself. This was done all through the relevant sections. On the questions about having received "help", we added, "help from others". This was done because the formulation "have help" has no exclusive reference to persons in Norwegian as it has in English. The Norwegian concept would capture help by using devices or other means, which we believe was not the intention. The change was made to underline that we meant help received *from other people*.

In the questions on help in the section about personal care activities, the response categories in the original English version do not correspond well with the question text (quest. 6b). The translation checker also commented on this. A back-translation of the question used in the final version is shown below (final Norwegian instrument):

Quest. 6b. Do you usually get help from others or do you do it yourself?
- gets help from others
- does it myself

The same problem occurred in question 7b in the section on household activities. The question text is identical to quest. 6b, but the response categories are different. As in the same question on personal care the text and the answering categories do not correspond well in this section either. We changed the response categories as shown below

Quest. 7b. Do you usually get help from others or do you do it yourself?
- does it myself
- is sometimes or always done by others

A proposal for a better formulation would be to ask *Do you usually do it yourself or is it sometimes or always done by someone else?* This would also correspond to the proposed response categories in the original English version.

In question 8.1 we had discussions on the translation of "Because of your health or the way you felt". The formulation was seen as woolly and not specific enough as the concept of "health" is given varying content and "the way you felt" was not directed at physical and mental health problems exclusively, but could capture both mood variations and stress. We wanted a clearer and more targeted formulation. We thought it better to relate the reduction in activities to health problems. However, we were in doubt whether to use the terms bodily/emotional health problems or physical/mental health problems in the question formulation. In the initial translation, we used bodily/emotional health problems, but this was changed to physical/mental health problems in the final revised version. This was mainly based on the experiences from the pre-test (see below).

In question 8.1b about whether the respondent currently has problems we moved the time reference from the end to the beginning of the question. This was done to stress the connotation of *now*. Questions 8.1 c. and d. were sharpened somewhat as we changed the formulation in the initial questionnaire to simplify the language. This had no consequence for the question meaning (i.e. from "å være i stand til å utføre arbeid eller skolearbeid " to "å kunne arbeide eller gjøre skolearbeid").
In question 8.2 we changed the initial expression of "trappe ned på" (cut down on) and used a more simple term instead "redusere" (reduce).

In the translation of the concepts on emotional states, we found that the Norwegian language probably does not give so many nuances for different concepts as the English language. Some of the states were overlapping and difficult to distinguish from each other. As commented by the translation checker, some of the questions in the original English instrument are double-barrelled. This led to problems with keeping them apart and giving them a clear content.

MOS Short Form-36

It was stated in the translation cards that the official translation should be sought. There exists an official Norwegian translation of MOS Short Form-36. The copyright is in the hands of Loge and Kaasa (Loge 1998). Statistics Norway has not been involved in this work and has critical remarks both to the design of the instrument in English and to the Norwegian translation. It has been difficult to get insight into the translation process behind the official Norwegian instrument.

In this project we have tried to balance between the already existing “official” version and at the same time allow for an independent translation of the instrument. In the English instrument, we have some problems with the questions referring to more than one state e.g. downhearted and depressed or calm and peaceful. In the translation into Norwegian, we tried to find *one* concept reflecting both states. We are not sure whether this was a successful exercise. During the adjudication process, we have (hopefully) found the best balance between the two versions available. Based on the translation procedure performed in this project with two independent translation teams, that both have methodological and health background, we naturally give our own translation more weight.

The final question in the questionnaire “Would you describe yourself as being usually” was changed in the translation process. Primarily, due to an unbalanced response scale without a neutral midpoint. We used the first four answering alternatives and inserted a midpoint in this scale “neither happy nor unhappy”. Despite the fact that two of the response categories were double barreled, we decided to keep both concepts as in the original English version.

6.1.2 Pre-testing. Adjustments in the questionnaire

The pre-test demonstrated that we had to revise the wording in some of the questions. There were also some response categories that did not match and some problems related to the sequencing of questions.

The pre-test showed that the proposed Norwegian translations of “activity” were interchangeable. The test persons had no problem relating to either term. We have therefore used both terms in the revised version. The Norwegian term chosen for “difficulty”, which was commented by the translation checker as formal, were not problematic for the test persons to understand. It was said that the one term was equally as good as the other. In the revision of the questionnaire, we used both terms, but we tried to be consistent in the use within each section.

In the question on chronic diseases, we changed the routing on the questions. Quest 4c. about whether the “health problem had been diagnosed by a doctor” was exchanged with question 4b. if the respondent “had had the disease for the past 12 months”. This was partly due to feedback from the test persons and partly to “tidy up” and keep questions with the same time reference together. After the pre-test the sequence routing is

4. Chronic diseases: Here is a list of health problems …..
a. Have you ever had any of them?
b. Was this condition diagnosed by a doctor?
c. Have you had it for the past 12 months?
d. For this condition did you take drugs or have you had treatment in the past 12 months?

Information wise this will not be a substantial deviation from the English original. Analytically, it is possible to extract information about “diagnosed by a doctor” relevant for the diseases the respondent has had during the past 12 months.

We made a few adjustments in the question sequence on physical and sensory functional limitations. In the question on *climbing stairs,* we added “one floor” because the pre-test revealed insecurity as to how many steps the activity would involve. This was done to make the question easier for the respondent to process.

In the question on the capacity to *lift and carry* one of the test persons said that she was able to lift, but not carry a full shopping bag. This led to a comment to the interviewers following the question that the respondent has to be able to both lift *and* carry to answer that he/she did not have a problem. We also kept the formulation a “full shopping bag”, but left out the example of 5 kg. This information was not seen as useful as “a full shopping bag” most certainly is a heavy one. This was done to simplify and shorten the question and keep the focus on “lift and carry”.

In question 8.1 we had discussions on the translation of “Because of your health or the way you felt”. We were in doubt whether to use the terms bodily/emotional health problems or physical/mental health problems in the question formulation. We thought perhaps that the concept physical or mental health problems would be unfamiliar terms and not in daily speech. The pre-test demonstrated that these terms were unproblematic for the test persons. It was therefore decided to use physical/mental health problems. The chosen terms are also considered more precise terms from our point of view.

8.1 Have you had to cut down on activities in relation to school- / paid work due to lasting physical or mental health problems?

Because the pre-test persons were unsure about what we actually asked about when asking if they had to reduce on activities in relation to school and work we chose to specify “work” to cover paid work so there would be no misunderstandings.

Common phrases in one language can be hard to translate and to capture the true meaning of. It was somewhat problematic to find a matching Norwegian translation of the expression in question 8.4 “getting out and about”. A back translation of the chosen expression was “getting out among people” This expression was used in the initial questionnaire, but was changed on basis of feedback from the pre-tests as some of the test persons found the chosen expression hard to understand. It was changed to “getting out and be able to move from place to place”.

The questions on emotional states were kept unchanged after revision.

6.2 Cognitive interviews

The guide developed for use in the cognitive interviews set the standard for how they were conducted. (Annex 7 Guide to cognitive interviewing). In the interviews, there was one sequence with concept mapping with card sorts and another sequence where the test persons were asked the questions in the questionnaire systematically with probing or follow-up questions from the moderator. The purpose of this exercise was to map the four cognitive phases – *comprehension, information retrieval, judgement* and *response.* In the concept mapping, we chose themes and concepts that we had discussed in the translation process, and tested whether these might incur problems in understanding in different age groups.

We thought that some of the diagnoses in the list might be difficult to comprehend. We specifically focused on the diagnoses of allergy, allergic asthma and other asthma as we thought it might be difficult to distinguish between them. The last questions in the questionnaire covering mental health were hard to translate, as the nuances in some of the concepts in English were difficult to capture in Norwegian. It was also considered necessary to check out what the respondents understood by the different concepts on emotional states.

6.2.1 Old-age pensioners

The group consisted of four persons. Two were recruited from a senior-centre in Oslo. Both were over 75 years of age. The two others were just below 70 and were recruited from the Kongsvinger area (rural). The group consisted of three women and one man.

Concept mapping with card sorting in age groups 65+ (seniors) and 75 years + (elderly)

Your health in general: In the senior group the concept of "your health in general" was interpreted as a general state, how one feels - that one feels well. In the group of elderly "your health in general" was primarily associated with bodily problems. The concept of health was also seen to capture mental aspects, but this was somewhat overshadowed by bodily problems. "Good health" means, according to the test persons, to feel good and to be well. To be in good health was seen as not being bothered with anything that stops one from being involved in activities of daily life.

Long-standing health problems vs. temporary health problems: Among the seniors "long lasting health problems" was seen as something chronic that does not go away. Rheumatism or serious mental problems were mentioned as examples. The concept of "temporary health problems" was easier to understand - when having temporary health problems you are "able to see the light …. at the end of the tunnel" i.e. there is hope that one will get well, eventually. In the group of elderly "long-lasting health problems" was seen as a recurring, lasting state. Conditions that can make it difficult to perform activities of daily life. "Temporary health problems" can, according to the seniors, last for a long time, but one will eventually get well again.

Physical/bodily health problems vs. mental/emotional health problems: The seniors exemplified "physical health problems" as bad knees or hips that need replacing etc. "Mental health problems" was seen as a condition that can occur after an abortion, or as an effect of a divorce. The test persons defined "physical health problems" to cover bodily functions, while" mental health problems" exclusively meant mental conditions. The elderly viewed "bodily health problems" as problems walking or problems with different body movements (e.g. bending down, doing cleaning etc). Chronic problems with knees, hips and back were mentioned. "Physical health problem" was viewed as much the same. In this group "emotional health problems" was seen as emotional strains and strong images, for instance when watching poverty, war, famine etc. on the television. "Mental health problem" was seen to be something other than emotional strain, but was related. Continuous restlessness and recurrent nightmares were mentioned as examples. Another example that was mentioned was to feel watched - that someone is watching you especially.

During the card sorting sequence with seniors on emotional states it was said that the concept "harmonisk" (harmonic i.e. calm and peaceful) was difficult to give meaning to. One of the test persons explained it by being able to restrain one self and control rapid changes in spirits. To be "glad" (happy) was said to be a state that is difficult to define. One can be "glad" (happy) by having a relation to another person or by having material things. This is different from "livsglad" (happy and interested in life), which describes a state you are in over a longer period - that one is happy and loves life. To be "full av tiltakslyst" (to feel full of pep) and "overskudd" (have a lot of energy) were seen as synonymous. The test persons related this to have the energy to do things. To be "motløs" (feel down in the dumps) was explained by giving up. The state "å være trett" (to be tired) was seen as being tired *of* something. The test persons also said that one could be physically or mentally "utslitt" (worn out). Mentally tired was seen as being almost the same as being "motløs" (feeling down in the dumps). The concept discontent was seen in relation to "lite livsglad" (being unhappy and not interested in life). A person that is "lite livsglad" (unhappy and not interested in life) was described as a person that has a gloomy perspective on life.

The elderly saw to be "nervous" as being unable to do things on your own, or to be alone. One can feel "utslitt" (worn out) after a hard day's work. To have "a lot of energy" was explained with reference to days where one is able to perform all one's doings and activities, e.g. take a shower or go shopping. The seniors saw "utslitt" (worn out) as an extreme state i.e. one has to have been tired for a long time. To be full of "overskudd" (full of pep) was seen as a state of having a lot of "guts", have the initiative to plan new activities, and look ahead. To be "harmonisk" (harmonic i.e. calm and peaceful) was perceived as being content, satisfied and happy - to have a good relation to oneself and those close. One test person had no associations with the term "harmonic" and felt it somewhat strange. The terms "full av tiltakslyst" (full of pep) and "overskudd" (have a lot of energy) was seen as related terms and somewhat overlapping. One of the test persons meant that one would feel full of pep if one has a lot of energy. To be "trøtt" (tired) was perceived as a more temporary state compared to "utslitt" (worn out), that was seen as a more stable state.

Going through the questionnaire question by question

Your health in general: The eldest group interpreted "good health" as absence of obstacles in every day life. Bad health was related to need for care. In the senior group "health" was related to peers health and was primarily seen as a self-evaluation based on physical health.

Long-standing health problem: The eldest test persons had no problem understanding the concept. While there was some uncertainty as to what should be defined as a long-standing health problems in the senior group. The test persons exemplified long-standing health problems by back problems or arthritis.

Limitations for at least 6 months due to health problems: The time reference "for at least the past 6 months" was misunderstood by the seniors. Sick leave for parts of the period was seen as having "moderate difficulty".

Chronic diseases: Hypertension was an unknown term for the oldest test persons. They misinterpreted the concept. One person saw it as being the same as to hyperventilate. The diagnosis migraine was perceived as recurrent headache. The seniors had no problem understanding the diagnoses. However, they wanted more alternatives in the list to choose from e.g. hymnological anemia, chronic obstructive lung disease etc.

Physical and sensory functional limitations: The questions on physical and sensory functions were not seen as problematic to answer in the oldest group. The questions on eyesight, hearing and mobility were clear and easy to understand. However, use of progressive glasses can make it difficult to climb or descend stairs. One test person was only able to climb stairs if able to use a banister. A tap to turn is perceived as an old-fashioned water tap. Most people have more modern taps that do not involve the screw movement. One of the respondents was able to lift a shopping bag, but not to carry it.

Personal Care Activities: The oldest test person said that she had problems with several activities, but she had adjusted and found solutions so that she was able to manage on her own. She had installed a handle in the toilet, a chair in the shower so that she could sit down showering, and she used a long shoehorn to be able to take on or off shoes or stockings on her own. The seniors perceived the questions as relevant, as long as the target group is elderly. It was noted that the category "elderly" is a very heterogeneous group.

Household Care Activities: In relation to these activities, the testing showed that the oldest test persons adjust their activities to a level they are able to manage. If it is difficult to stand by the stove and cook, they buy ready-made food or they go to the local café. The same goes for shopping. The test persons buy the amount they are able to carry and go several times. This means that they have problems performing the activity of e.g. cooking or shopping, and reflect that they actually would need help. Doing laundry, especially bed linen, was mentioned as an activity that is performed more seldom than they ideally would have wished. The reported problems in the senior group did not lead the respondents through the detailed questions on need for help or care. The test persons performed these activities by themselves without difficulty. The questions are however perceived as relevant. Occasional heavy housework was associated with cleaning the ceiling or walls. This was seen as a heavy activity related to the movements these activities involve.

Other daily activities: The elderly test persons said that it was difficult to know what reference period to use. This created some uncertainty in how to answer these questions. The seniors had some difficulty differing between long-standing health problems and temporary health problems. Otherwise, the questions were comprehended as intended.

Psychological distress and well-being: For comments, see the card sorting sequence above.

6.2.2 Middle-aged people

This group consisted of three persons between 50 and 65 years of age, two men and one woman. The men were employed, and the woman was not working, and received disability pension.

Concept mapping and sorting of cards

Your health in general: The employed men associated the concept of "your health in general" with whether they were well and felt in good health, and to the fact that they were able to function normally in their professional and family life and in all other activities. Health was considered in relation to mastery and capacity. The woman that was on disability pension related the concept of "your health in general" to feeling completely well, i.e. without problems.

Long-standing health problems vs. temporary health problems: "Long standing health problems" was seen as problems that cannot be cured, while “temporary health problems” are curable. This can be either physical or mental health problems. It was also said that "temporary health problems" express states that are passing, e.g. a broken leg. "Long standing health problems" expresses a state of lasting problems without the prospect of getting well.

Physical/bodily health problems vs. mental/emotional health problems: All the test persons mentioned "physical health problems" as problems related to functioning of the body. The term "mental health problems" has to do with the mental picture. This can be nervousness, symptoms of stress, problems with communication or problems being around other people, or to function as a part of a family or among fellow beings. It was said that the concepts of "physical health" and "mental health" are a natural part of everyday language.

Emotional states: To be "veldig nervøs" (very nervous) was seen as almost a pathological state - that one is devastated. It has nothing to do with excitement or challenges. To be "harmonisk" (harmonic i.e. calm and peaceful) was related to how one is seen by others. That one has a way of being and behaving that is perceived as comfortable and joyful i.e. being well balanced. To be "glad" (happy) expresses something more than not being unhappy. It is about humour and joy. To be "full av tiltakslyst" (full of pep) is a function of being content and happy. This was seen as being a positive engine for one self and in relation to others. To have "mye overskudd" (a lot of energy) means that one is able to take initiative. Being full of pep and having a lot of energy is described as concepts that go "hand in hand". To be "glad" (happy) means that one feels happy with the state of things/one's situation - feels no strain and has no major worries. To be "livsglad" (happy and interested in life) means that one is happy with life and feels love for oneself, is content and feels safe. To be "motløs" (downhearted and depressed) describes a state where one has tasks that one does not master. One is reserved and do not wish to take initiative or be involved in problem solving. To be "trøtt" (tried) can mean to be short of sleep. It can also mean to be tired of life, i.e. not happy. The state is similar to ”utslitt” (worn out), and is of a more permanent nature. The state "utslitt" (worn out) can be an effect of work overload – that one is unable to produce. This can be a temporary state or a more permanent one, but compared to ”trøtt” (tired) ”utslitt” (worn out) is a stronger and a more lasting state.

Going through the questionnaire question by question

Your health in general: The past year was used as reference. The evaluation was based on physical capacity in general and absence of illness or disease. The test persons foremost thought about physical states/health. One said that he considers good physical health as a pre-requisite for good mental health.

Long-standing health problem: The test persons did an evaluation of their status and concluded on basis of this. Problems with seeing close-up were not classified as a lasting health problem. Long standing was understood as serious. There were uncertainty as to whether high blood pressure should be classified as a long-standing health problem.

Limitation in everyday activity for at least the past 6 months: Those active in working life did not see ordinary everyday activities as including tasks and meetings in organisations or clubs, or household

activity. The retired woman mentioned housework and child minding. Partly limited was seen as having moderate problems.

Chronic diseases: They found it difficult to differ between allergic asthma, other asthma and allergy. Migraine or frequent headache was explained with recurrent headache, more frequent than once a week. Emphysema, arthritis and arthritis were also unfamiliar concepts for the test persons. Chronic obstructive lung disease was mentioned as a suggestion for supplementing the pre defined list of diseases and health problems.

Physical and sensory functional limitations: Some of the test persons were unsure about whether they could say that they can see newspaper print clearly. The test persons spent some time reaching a valid answer to this question. Some of the test persons said they have trouble hearing a conversation between several people if there is a lot of background noise. Without background noise there is no problem.

Personal Care Activities: The questions on personal care were seen as irrelevant. The youngest test person felt that these questions are more in line with the needs of the parent generation.

Household Care Activities: More than one of the male test persons said that they have no physical problem preventing them from doing these activities, but there might perhaps be other mental "barriers". This was said with some shyness that gave us the impression that the questions about activity at home, about performing housework and the like, captures the traditional gender pattern in household work chores.

Other daily activities: The concept "cut down" on an activity was understood as a reduction in the activity of performing paid work - but not covering the transfer from full job activity to receiving social benefits.

The middle-aged test persons reported problems in dealing with all the different activities in the question at the same time. They had to think about both work and educational activities, think back for several years and find out if they ever had reduced such activity due to long-standing illness. As already indicated, these test respondents had problems judging if their illness were long standing or temporary. Hence, they had a lot of information to “digest” and relate to at the same time.

Psychological distress and well-being: See sequence on sorting cards above. On a follow up question to the cards that were presented on emotional states one of the test persons said that he would have liked to answer "all the time" on some of the questions (c & d), but felt that he had to moderate himself. He meant that it might seem odd to say that one is happy all the time. What does it mean to be happy all the time anyway? It can be difficult to judge how happy one must have been and for how long the past four weeks to be able to answer one or the other alternative.

6.2.3 Young immigrants

The group consisted of two persons; one woman and one man. They were both between 20 and 40 years of age, living in Oslo, with background from Pakistan.

Concept mapping and sorting cards

Your health in general: The test persons gave a wide interpretation of the concept of "your health in general". This was seen as both bodily and mental problems. The test persons thought in general terms - how one feels in everyday life, if one has any specific diseases, symptoms, bothers or not. It was mentioned that health also captures weight problems and eating disorders.

Long standing health problems vs. temporary health problems: The concept of "long standing health problems" was explained by either congenital impairment, inherited illness or chronic, more permanent problems one gets that last for the rest of one’s life. “Long standing health problems” was

also associated with serious, long lasting illness. The concept of "temporary health problems" was interpreted as health problems that come and go in the sense that the problems are recurrent. Health problems can also be something that one has for a long time that has little impact.

Physical/bodily health problems vs. mental/emotional health problems: It was said that the concepts of "physical" and "mental" health are used in ordinary language. “Physical health problems” are related to bodily problems - in joints, muscles and skeleton, blood etc. “Mental health problems” are seen as depression, anxiety or nervousness.

Diagnoses: When sorting cards with different diagnoses there were some problems differing between allergic asthma and other asthma. One person had a clear view of the diagnosis allergy (.. the body reacts to external influence, e.g. pollen, animals etc.), but there were some problems related to distinguishing between allergic asthma (.. as allergic that the respiratory system is bothered, reaction with consequences for breathing) and other asthma (.. bothers one is born with or that is caused by pollution). Migraine was seen as more than ordinary headache, e.g. light or sound sensitivity, nausea and vomiting. Frequent headache was interpreted as ordinary headache that has a frequency of several times a week or daily.

Emotional states: The mapping showed that to feel "veldig nervøs" (very nervous) as connected to achievements. A job interview that will be of importance to a person's future can generate nervousness. It was said that the concept "harmonisk" (harmonic i.e. calm and peaceful) was problematic. Feeling harmonic was described as being active and "sparkling". It was also said that the concept probably gives meaning on an individual basis, but that it was difficult to verbalize a description of the concept and to find good synonyms. Harmonic was also described as a state where everything is going according to plan and that one is feeling no stress. The state "utslitt" (worn out) was seen as more dominating and serious than the state of being "trøtt" (tired). Worn out was seen as being closer to "burnt out" - that one has no strength left and has a feeling of emptiness. Trøtt (tired) was seen as a passive state and a state of wanting to relax and showing little initiative. One has to have "mye overskudd" (a lot of energy) to be "full av tiltakslyst" (full of pep). "Full of tiltakslyst" (full of pep) was hard to understand. One of the test persons saw it as related to be able to make decisions or willingness to perform a task. The test persons meant that being "glad" (happy) expresses something other than being "harmonisk" (harmonic i.e. calm and peaceful). As mentioned earlier it was difficult for the test persons to explain this state. One of the test persons characterized people that are "livsglad" (happy and interested in life) as people that have "everything in place" (under control) and tackle their life.

<u>Going through the questionnaire question by question</u>
Your health in general: The concept of “health” was understood as a general concept covering both physical and mental issues. Good health was understood as absence of all types of problems. The test persons gave, however, a strict definition of someone being in "very good health". One has to be physically fit and never have had any bothers. One of the test persons had reference to other persons when she evaluated her own health and how she functions doing everyday activities. There was also a component of evaluation based on personal history - i.e. she was comparing herself today with her state a few years ago. She said that it is usual to start with a notion of very good health and then subtract from this experienced problems or bad physical shape.

Long standing health problem: In one of the interviews there was some uncertainty as to what should be considered as lasting or temporary health problems. The other test person said that he saw the question as being about serious illness. He did not consider other types of health problems.

Limitation in everyday activities: One of the test persons comprehended the question as being about illness. The concept of normal every day activity (activities people usually do) was seen as covering job, housework and leisure time activities. It reflects what persons in this target group do during an ordinary day. Both test persons considered a period stretching at least 6 months back.

Chronic diseases: The mapping of diseases showed that the concept cataract was unknown. It was suggested by one of the test persons that we should perhaps include an explanatory text. The medical terms emphysema, arthritis and arthrosis, osteoporosis were unfamiliar, but understood from the context. Arthritis and arthrosis were perceived as infection or inflammation. The term osteoporosis was also unknown, but understood to be related to the less technical term "benskjørhet" which is in more ordinary use to describe the same illness. Bronchitis was understood as lung problems. Sciatica and kidney stone were mentioned as common health problems that should be included in the list. One of the test persons was unsure about what was meant by chronic anxiety and depression. The test person saw chronic conditions as serious states that require admission to hospital. The time reference on this question was commented, "Have you ever had…" One test person was unsure about whether he should consider his whole life.

Physical and sensory functional limitations: "On the other side of the road" was seen as a more clear and easy reference than 4 metres. One of the test person's associated '"a screwtap" with the main tap in the house. He said that he does not get associations to other taps in the house, e.g. in the bathroom. He believed that the concept "screw tap" could be hard to understand for an immigrant. One of the test persons saw the questions in this sequence as unnecessary, e.g. walk 500 metres without problems, walk a staircase up or down and stretch out an arm to shake hands etc. The test person said that filter questions were needed in this sequence.

Personal Care and Household Care Activities: One test person felt the questions as being of less relevance to persons that are young and without any health problems. It was said that young people do not necessarily perform activities such as cooking, laundry, etc. and that this has other causes than health. The word "innkjøp" (shopping) was seen as unfamiliar and difficult to understand. It was suggested to use the term "handle" instead. One of the test persons saw "heavy housework" as moving furniture, redecorating etc. - heavy lifting.

Other daily activities: Both test persons misinterpreted the first question in this section. One reason was that the term "activity" was focused. This was seen as physical activity in the sense of physical training. It was therefore difficult to relate the question to usual activities in a job or doing schoolwork. The text indicates activity as "what people usually do". The other test person had problems with the Norwegian translation "trappe ned på " (to cut down on). It was said that one should use normal words not phrases. It was also commented that the question did not have any time reference. One of test persons said that it was natural to think one or two years back. The other test persons said it was natural to think 12 months back when answering. Both test persons thought the question too long, with too much information to consider at the same time. One test person suggested removing "activity related to" in the question.

In this question, one test person limited the question to be about "private activities" like training, gatherings etc. in the leisure time. The other test person included seeing friends in leisure activities and saw "social activities" as more formal events like weddings etc. In the question about if they were able "to get out and about" the test persons were unsure about the content/meaning. One of the test persons saw the question as covering both physical and mental problems, but saw "getting out and about" as capturing physical problems primarily. The other test person interpreted "getting out and about" as not having a social dimension.

Psychological distress and well-being: See card sorting sequence above.

General comments: The questions in the questionnaire were not perceived as sensitive, nor were they difficult to answer. However, the test persons experienced that several of the instruments were not fit to describe their situation and suggested that some of the questions should be posed to elderly people and persons with functional difficulties. This concerns particularly the questions on personal care and activities at home.

6.3 Mini scale field-test

One of the issues in this project was to gather knowledge on the interview situation, and to get insight into how the *interviewer* comprehends the respondents' answering process. Health information is considered sensitive information. Experience shows, however, that health is a theme that appeals to participation, evokes enthusiasm and makes people open up. More openness around health and focus on public health in society in general has also made it easier to talk about "own" health.

Each interviewer performed approximately five interviews each (visits in peoples homes). The interviewers completed 39 interviews of a planned number or 40. The interviewers were instructed to pick persons with varying characteristics from their lists. In the final sample, there was a slight overweight of women, but it had a good spread as to age. Mean interview time was 18,5 minutes.

6.3.1 Interviewer's experiences in the field

The interviewers shared their experiences in a debriefing session. More than one interviewer commented that the respondents were responsive and open about their health problems. It was also commented that nobody reacted with shyness or rejection when asked about their history of sickness or when talking about mental health.

The interviewers did not see the predefined list of diseases or health problems as exhaustive and felt it should be possible to register additional diseases. Diagnoses that were mentioned, were diseases in the skeleton or muscular system. Better instructions following the diseases were also asked for.

Some of the interviewers experienced that respondents were ridiculing some of the questions as they felt that it was obvious that they could do the activities in question i.e. "Can you stretch out an arm and shake hands", "Can you feed yourself without difficulty", and "Can you use the toilet". It was seen as rather silly to map basic and fundamental physical functions in people that say that they are in good health.

Many of the interviewers said that they had had problems with the sequence following question 8.1. It was said that there is a need for a filter question that excludes old-age pensioners, people on disability pension, people seeking employment and homemakers.

The interviewers also suggested introducing a show card in question 10. "Do you see yourself as usually being". The respondents were not able to remember the answering alternatives. Respondents were only able to remember the number of the alternative that was most suited for their situation, but were not able to remember the wording of the alternative.

More generally, the interviewers suggested developing more filters/skips in the questionnaire, alternatively to merge some of the activities. They also felt that we could spend more time developing good introductory texts and "transition texts" so that the respondents could better understand why the questions had to be asked. It was also commented that more effort should be directed into linguistic issues and felt that the language was somewhat "staccato" or not flowing well in some of the questions.

6.4 Results from the behavioural coding

In 39 interviews there were registered behavioural codes 142 times, mean 3.6 registrations per interview. In addition, "don't know" was registered once. An analysis of the coding material shows that one of the eight interviewers used behavioural codes more frequently compared to the coding practiced by the others. Another interviewer had a more restrictive practice. Overall, there is an even distribution of the use of codes. The use of codes during the interviews, is as expected, not equally distributed on the instruments in the questionnaire. The instruments in the sections daily activities and mental health released more use of codes compared to other sections.

Minimum European Health Module

In the first part of the questionnaire covering the questions on health, long-standing illness and functional limitations, there is a quite frequent use of codes, altogether eighteen registrations. The most frequently used codes were

- The respondent uses long time to reach an answer (7 registrations)
- The respondent seems unsure about the answer given (4 registrations)
- The respondent asks for clarification or explanation of the question (3 registrations)

The three introductory questions in the interview are global/general. It is largely left to the respondent to give them a content. It is therefore not surprising that some of the respondents are using time to retrieve relevant information. Some searched for reference, asking the interviewer for additional information and were unsure about the answer given.

Frequent registration on codes can also be related to procedural effects. Some of the interviewers might have been particularly focused and eager doing the coding in the introductory phase of the interviewing. The fact that the interviews were introduced as *test* interviews, can also have caused the respondents to view the questions more critically.

Registrations on the codes about asking for repetition of the question, clarification/explanation and misunderstanding the question implies that the questions are not fully comprehended by the respondents or that they are difficult to interpret or perceive. This can be related to concept understanding. Difficult or wide/abstract concepts can give a problem with interpretation. There were five registrations on codes signifying problems in the interpretation and retrieval phases in this section. Three of the registrations were made for the question on limitations due to health problems.

Table 1: Minimum Health module. Use of behavioural coding. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderstands question
Global questions on health				
1_health in general		2		
2_long standing illness			1	
3_limited in activities people usually do			2	1

Retrieval of relevant information from memory and judging/editing this information according to the information that is needed to answer the question seemed problematic for some of the respondents. The cognitive interviews have shown that the phase judging/considering is considerable. Considering wide/abstract concepts/expressions like "your health in general" and a long reference period "have you ever had", represent a considerable task for the respondents to process.

Table 1 continued	Sensitive question	Long time to reach an answer	Unsure about answer	Imprecise answer - not using answer alternatives
Global questions on health				
1_health in general		5	1	
2_long standing illness			2	1
3_limited in activities people usually do		2	1	

The questions demand that the respondent makes a judgement of general health, and of whether he/she ever had a long-standing illness/health problem, and differ between long standing and temporary

health problems. There were seven registrations signifying that the respondent uses a long time to reach an answer. In the free text comments from the interviewers following this code it was said that two respondents spent some time telling the interviewer about their history of illness before answering. The registration on unsure about the answer and imprecise answer indicates that there were some problems in the evaluation and formatting process. This might be a result of problems placing the information in the predefined answering categories.

Chronic diseases

Table 2 shows the distribution of behavioural codes on the questions mapping sickness history/health problems. Most registrations were made on the codes for

- The respondent uses long time to reach an answer (13 registrations)
- The respondent seems unsure about the answer (5 registrations)

Table 2: Chronic diseases. Use of behavioural coding. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderstands question	Sensitive question
Chronic disease or health problem					
4a_2 ever had asthma			1		
4_3a_ever had allergy					
4_3c_diagnosed allergy					
4_6a_ever had hypertension			1		
4_8a_ever had stroke					
4_10a_ever had arthritis/arthrosis					
4_11a_ever had osteoporosis					
4_12a_ever had ulcer					
4_12b_had ulcer past 12 months					
4_14c_diagnosed migraine					
4_15a_ever had anxiety/depression					
4_15b_had anxiety/depression past 12 months					
4_16a_ever had other illness			1		

A few respondents asked for clarification of the questions. Registrations were made on the diagnoses of asthma and hypertension. The free text comment following the need for clarification on asthma showed that the respondent had hay fever and were unsure if this should be classified as allergic asthma. The coding section was concentrated around codes that indicate problems in the retrieval phase.

Table 2 continued	Long time to find an answer	Unsure about answer	Imprecise answer - not using answer alternatives
Chronic disease or health problem			
4a_2 ever had asthma			
4_3a_ever had allergy		1	
4_3c_diagnosed allergy	1		
4_6a_ever had hypertension	3	1	
4_8a_ever had stroke		1	
4_10a_ever had arthritis/arthrosis		1	
4_11a_ever had osteoporosis	1		
4_12a_ever had ulcer			1
4_12b_had ulcer past 12 months	1		
4_14c_diagnosed migraine	1		
4_15a_ever had anxiety/depression	1	1	1
4_15b_had anxiety/depression past 12 months			1
4_16a_ever had other illness	5		

Thirteen registrations were made on “used long time to reach an answer”. This is an expression of time used searching for relevant information from memory and making an evaluation (judgment) of this information. All the questions have a life-time approach and this increases the response burden. The behavioural code that the respondent seems unsure about the answer given had five registrations. Of the predefined diagnoses, hypertension and chronic anxiety and depression had most registrations on this behavioural code. The free text comment following the registration on hypertension showed that the respondent was unsure about whether she should answer yes as the blood pressure was a little high, but was getting better.

The respondents were allowed to mention two diagnoses in addition to the predefined diagnoses in the questionnaire. The following diagnoses were mentioned in the openended questions:

thrombosis in foot
congenital hip dysphasia
back problems
not able to differ between colour gradations
stiff neck
eczema
women’s disease
incontinence
stiffnes in the muscular system

Physical and sensory functional limitations

In the sequence on functional limitations, there were twenty registrations altogether. The behavioural codes that were used most frequently were

- The respondent seems unsure about the answer (7 registrations)
- The respondent gives an imprecise answer that does not correspond with the pre defined answering alternatives (5 registrations)

Table 3 shows that the questions on physical and sensory functional limitations incurred few problems in the interpretation and comprehension phases, while there were somewhat more problems in relation to the respondent’s judging phase.

Behavioural codes that signify difficulties in the first phases of the cognitive process i. e. problems comprehending the question and retrieval of information from memory were registered on the questions with reference to physical distance. The questions on “see someone at a distance of 4 metres”, "walk up/down a flight of stairs", “walk 500 metres” needed clarification. The question about seeing someone at a distance of 4 metres (across the road) had two registrations on repetition of question and two registrations on being unsure about the answer given. This indicates problems estimating physical distance. In the free text comment following the behavioural coding on seeing the interviewer reported that one respondent walked across the floor to check if he could see clearly from a distance of 4 metres. The question on “lift and carry a full shopping bag” also needed explaining.

Table 3: Physical and sensory functional limitations. Behavioural codes. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderstands question	Sensitive question
Functional limitations					
5a_1_see newspaper print					
5a_2_see newspaper print with aids					
5b_1_see 4 metres		2			
5b_2_see 4 metres with aids					
5c_1_hear conversation					
5c_2_hear conversation with aids					
5e_1_walk 500 metres			1		
5f_1_climb stairs			1		
5g_1_grasp					
5g_2_grasp with aids					
5h_1_turn tap					
5k_bend down					
5l_lift and carry			1		

All the questions about capacity had dichotomous answer alternatives; yes/no. The behavioural coding indicated that there might be a problem formatting an answer that meets the predefined response alternatives. This shows that some of the respondents were unable to answer a clean "yes" or "no" to the questions. Altogether seven registrations were made on the behavioural code "seems unsure about the answer" and an additional five registrations were made on giving an imprecise answer not corresponding with the answering alternatives.

Table 3 continued

	Long time to find an answer	Unsure about answer	Imprecise answer - not using answer alternatives
Functional limitations			
5a_1_see newspaper print		1	1
5a_2_see newspaper print with aids	1		
5b_1_see 4 metres		2	
5b_2_see 4 metres with aids			1
5c_1_hear conversation		1	1
5c_2_hear conversation with aids			1
5e_1_walk 500 metres			1
5f_1_climb stairs			
5g_1_grasp	1		
5g_2_grasp with aids		1	
5h_1_turn tap		1	
5k_bend down	1		
5l_lift and carry		1	

The free text comment following the registration on the question about if the respondent was able to grasp or handle a small object showed that the respondent was able grasp an object, but it was painful. In the free text comment following the registration on the question about hearing, the respondent told the interviewer that he had a telephone designed for people with hearing problems and also explained how it functioned.

Personal Care and Household Care Activities

When we reach the part of the questionnaire covering need for help in performing personal care and household care activities there were few registrations on the behavioural codes.

The codes used imply problems in the phase of interpreting the question. Of six registrations, half of them were concerned with need for an explanation or clarification of the questions. It was difficult to determine the content of the activity that caused problems for the respondents. The questions related to basic every day activities such as cooking, using the telephone etc. did not incur behavioural coding. There were two registrations on need for clarification related to doing occasional heavy housework and whether one is able to manage oneself or if help is needed when using the toilet. The free text comment registered on the question about using the toilet concerned that the respondent not always, but *sometimes* needs help using the toilet. This indicates that the predefined answering alternatives do not cover her situation.

Table 4: Personal care and household care activities. Behavioural coding. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderst ands question	Sensitive question
Personal care and household care activities					
6_toilet_b			1		
6_toilet_d			1		
7_shopping_a					
7_heavy housework_a			1		
7_heavy housework_d					
7_heavy housework_c					

The coding indicates few problems in the formatting phase. There was one registration on the code for being unsure about the answer on the question concerning shopping. And two registrations on using a long time to reach an answer on the instrument that measures problems with doing heavy housework.

Table 4 continued

	Long time to find an answer	Unsure about answer	Imprecise answer - not using answer alternatives
Personal care and household care activities			
6_toilet_b			
6_toilet_d			
7_shopping_a		1	
7_heavy housework_a			
7_heavy housework_d	1		
7_heavy housework_c	1		

Other daily activities

In the questions on activities in relation to work, school or leisure activities there are sixteen registrations on behavioural codes altogether implying that there were some problems understanding and answering these questions. The most frequently used codes were

- The respondent asks for clarification or explanation of the question (7 registrations)
- The respondent seems unsure about the answer (5 registrations)

The distribution of registrations on codes in table 5 shows that in relation to the questions on work or school or leisure activities there is a more frequent registration on codes capturing problems interpreting. Altogether nine registrations were made on behavioural codes that indicate problems comprehending the questions. The registrations were evenly distributed on the activities covered. This

is an indication that the questions trigger some uncertainty and signal a need for a more precise definition of the activities in question, time reference and specification of type of reduction. Free text comments were actively used by the interviewers in this sequence and they were all related to the current "status" of the respondent: "receiving disability pension", "not working", "retired early", "retired, but still working a little", "old age pensioner since the age of 65" etc.

Table 5: Other daily activities. Behavioural coding. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderstands question	Sensitive question
Activities of daily life					
8.1_work/school activities			2		
8.1a_work/school activities					
8.1d_work/school activities		1			
8.2_leisure/social activities			2		
8.2a_leisure/social activities				1	
8.2b_leisure/social activities			1		
8.3_getting out and about			1		
8.3d_getting out and about			1		

Other free text comments concerned additional explanations for reduced activity. One respondent said that her problems getting out and about were caused by spouse's illness and that this was putting limitations on what she can do. Another respondent commented that it is difficult to move around in the winter time when the surface is slippery due to a previous hip operation. Hence, she uses a crutch with a spike.

Table 5 continued	Long time to find an nswer	Unsure about answer	Imprecise answer - not using answer alternatives
Activities of daily life			
8.1_work/school activities	1	2	
8.1a_work/school activities		1	
8.1d_work/school activities			
8.2_leisure/social activities		1	
8.2a_leisure/social activities			
8.2b_leisure/social activities			
8.3_getting out and about	1		
8.3d_getting out and about		1	

Psychological distress and well-being

The last questions about mental health show an escalated use of behavioural codes. Altogether fifty-eight of 142 registrations, or 40 per cent of the registrations, are released in relation to these questions. It is well known that mental health is a difficult area to cover in surveys. This result confirms this. The codes show that respondents have difficulty with the concepts used. The most frequently used codes were:

- The respondent uses long time to reach an answer (21)
- The respondent asks that the question is read again (13)
- The respondent asks for clarification or an explanation of the question (11)
- The respondent seems unsure about the answer given (6)

It is worth noting that the behavioural code " The respondent perceives the question as sensitive" and the code for "don't know" were registered on two occasions only, for the whole questionnaire. The question on feeling downhearted and depressed was perceived as sensitive by one respondent.

This coding practice indicates that the respondents, from the interviewer's point of view, had problems through the whole question-answer process, and that the questions are not functioning optimally. Altogether twenty-six registrations were made on behavioural codes that indicate problems in the cognitive phases of interpreting or comprehending the questions and in the information retrieval phase. In this phase the most frequent registrations were on the questions covering the states; "feeling down in the dumps" and "feeling very nervous".

Table 6: Psychological distress and well-being. Behavioural coding. Number of registrations.

	Don't know	Asks for quest. to be repeated	Asks for clarification of quest.	Misunderstands question	Sensitive question
Psychological distress and well-being					
9a_very nervous		4			
9b_down in the dumps		3	1	1	
9c_calm and peaceful		2			
9d_down-hearted and depressed		1	1		1
9e_happy			1		
9f_full of pep			3		
9g_lot of energy	1	1			
9h_worn out		1	2		
9i_tired			1		
10. self-evaluation		1	2	1	

The coding practice on the cognitive phases of retrieving information and formatting/editing a response was significant. There were twenty registrations on respondent uses long time to reach an answer, six registrations on respondent being unsure about the answer given and two registrations on giving an imprecise answer.

Table 6 continued	Long time to find an answer	Unsure about answer	Imprecise answer – not using answer alternatives
Psychological distress and well-being			
9a_very nervous	3	1	
9b_down in the dumps	1		
9c_calm and peaceful	1	1	1
9d_down-hearted and depressed	1	1	
9e_happy	1		
9f_full of pep	1	1	
9g_lot of energy	6		
9h_worn out	3	2	
9i_tired	3		1
10. self-evaluation	1		1

The question about how the respondent views him-/herself on a more general basis released six registrations in the behavioural coding. Four registrations signified that the respondents had problems in the comprehension and retrieval phase. There was also one registration on the code on giving an imprecise answer that did not correspond with the predefined answering alternatives implying that the alternatives given were not suited to capture the respondents answer or that they were difficult to relate to.

6.4.1 An additional comment question at the end of the questionnaire

From the cognitive interviews we experienced that the questionnaire ended a bit abrupt. As the letter of invitation sent to potential respondents and the interviewers announced the interview as a test-interview, they indirectly invited the respondents to form a view about the questions and the interview as such. For this reason we found it useful to add an extra question at the end of the interview asking

the respondents if they wanted to give a comment or if they had anything they wanted to add. 32 respondents out of a total of 39 gave a comment:

- 5 respondents had no comment or nothing to add
- 7 respondents said that the questions were clear and straight forward:
    - positive to differentiated answering alternatives - not only yes/no alternatives
    - the show cards were useful
- 1 person responded that it was difficult to know what information we wanted - status quo?
- 1 person wanted to fill in with information about the family situation, not only information about respondent
- 2 persons found the questions about work difficult to answer (reduction of paid work?)
- 5 persons commented on the questionnaire's relevance for different age groups:
    - the questionnaire is not suited for younger people
    - the interview sounds like an application for home-based care and need for help
    - many of the questions are most relevant for older people
- 1 person expressed concern for our health system's functionality in the years to come concerning nursing and care for the elderly.

The interviewers were encouraged to use free text comments during the interview. Some of the interviewers made a statement after the interview. These statements are listed below:

- The respondent feels that the questions in this questionnaire are more suitable for a higher age group, about 60 or 70 years, not her age group. Clearly defined question formulations. Easy to know what to answer.
- The respondent has a disease that gives good days and bad days. He feels that he is unable to communicate the whole picture. The respondent thinks that the questionnaire covers cognitive problems inadequately.
- The respondent has participated in many surveys. He feels that this survey is different because the questions are less personal.
- Health problems mentioned by the respondent were mentioned after the interview was completed. The respondent perceived the information as sensitive. He was not used to talk about these matters. However, the respondent was very open and friendly.
- The respondent claimed that the questions are more suitable for those that have minor or temporary health problems, and are not as suited for those with serious, long-standing health problems.
- The respondent has recently done surgery on a hip. She thought 8 days in hospital was too short. In the hospital she was surrounded by "angels", when transferred to a rehabilitation centre things changed dramatically. Here she was treated impersonally and the personnel had little time for the individual, - gloomy conditions.

7 Discussion and recommendations

In this chapter, we will try to sum up experiences from the translation process, the pre-testing, the cognitive interviews, the behavioural coding and the interviewer debriefing. The comments from the cognitive interviews document qualitative problems in the cognitive phases of comprehension, retrieval, judgement and response that need to be addressed. The results from the field test point at the range of the problems incurred in a more qualitative manner. Recommendations for revision of the questionnaire follow each question. Some of the comments concern problems encountered in the Norwegian instrument and some of the comments concerns the original English instrument.

7.1 Mini European Health Module

Quest. 1: How is your health in general? Is it *very good, good, neither good nor bad, bad or very bad?*

The behavioural coding on the question on self-perceived health indicates problems with the respondent task. In this question, it is largely left to the respondent to give the question content. Use of difficult or wide/abstract concepts can result in a problem with interpretation i.e. in the phase where the respondent is trying to find out what to consider when answering the question. The cognitive interviews showed that the test persons had varying references when talking about "own health in general". In the eldest group, health was perceived as being able to do everyday activities and not needing care. The senior group related health primarily to physical conditions and had peers health as reference. The middle-aged group thought about mastery of every day activities and capacity when thinking aloud around the self-perceived health question. Young immigrants, on the other hand, saw health as capturing both physical and mental problems and the notion of being physically fit. These results give an indication of the respondent's task answering this question.

Quest. 2: Do you have any longstanding illness or health problem? *Yes, no*

In the question about long standing illness, there was behavioural coding on the cognitive phases indicating difficulties in the retrieval and judging phases. The cognitive testing showed that some of the test persons struggled with the definition of "long standing illness" and were unsure about which health problems to include and which to exclude. The eldest test persons did not seem to have any problem with this. Both the senior test persons and the middle-aged test persons expressed difficulty in differing between long standing and temporary health problems. The middle-aged persons and the young immigrants saw long standing health problems as serious health conditions.

The translation of this question is different from the EU-SILC translation, as they have chosen the wording from the Norwegian National Health interview survey. The choice of terms is merely a question of preference.

Quest. 3: For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been *severely limited, limited but not severely or not limited at all*?

In the question on limitations due to health problems there were registrations on behavioural codes indicating both problems in the comprehension phase and in the judging and formatting phases. The cognitive test interviews showed that there were problems relating to the time reference "for at least the past 6 months". In the oldest test group, the time reference was misunderstood. Among the middle-aged, there was some insecurity as to what specific activities were meant when asking for "activities people usually do". Some related limitations to work activities (especially male test persons), while some of the women were thinking about housework and child minding. The young immigrants thought the expression covered job, housework and leisure time activities and saw the activities as a reflection of what people their age usually do during an ordinary day.

The behavioural coding also indicated that some respondents had problems formatting an answer. This might be a result of difficulty placing the retrieved information in the predefined answering categories of the severity of their problems. Some of the test persons in the cognitive interviews commented on the question being too long and containing too much information.

In the translation of this question, we had some problems finding a good formulation. Both the phrases "for at least the past 6 months" and "in activities people usually do" were difficult to translate in a manner that secured a flowing language in Norwegian. The result was a rewording of the question. However, we believe that if the respondents are in good health and have no diseases or health problems, they should be filtered past question 3 about limitations. The question contains too much information and some respondents even feel it irrelevant. The solution chosen for the Norwegian EU-SILC project to split the question into subquestions should be considered. In this project this solution has been too bold for us to suggest as this has been a source to target language translation. We have respected the original English version, where the question should be posed to all.

- Consider the Norwegian translation used in the EU-SILC. This should also be considered in a revised version of the English instrument.

7.2 Chronic diseases

Quest 4: Here is a list of health problems:
4a: Have you ever had any or them? Yes, no
If chronic disease:
4b: Have you had it in the past 12 months? Yes, no
4c.: Was this condition diagnosed by a doctor? Yes, no
4d: For this condition did you take drugs or have you had treatment in the past 12 months? Yes, no

Diagnoses: Allergic asthma, asthma (excluding allergic asthma), allergy (excluding allergic asthma), diabetes, cataract, high blood pressure (hypertension), heart attack, stroke, cerebral haemorrhage, chronic bronchitis, emphysema, rheumatoid arthritis (arthrosis), osteoporosis, gastric or duodenal ulcer, cancer (malignant tumour including leukaemia and lymphoma), migraine or frequent headache, chronic anxiety or depression, other (specify).

In the question on chronic diseases, we changed the routing of the questions. Quest 4c. about whether the "health problem had been diagnosed by a doctor" was moved up and exchanged with question 4b; if they had "had the disease for the past 12 months. This was partly due to feedback from the test persons in the pre-test and partly a need to "tidy up" and keep the questions with the same time reference together. After the pre-test the sequence routing is

4. Chronic diseases: Here is a list of health problems …..
4a. Have you ever had any of them?
If chronic disease:
4b. Was this condition diagnosed by a doctor?
4c. Have you had it for the past 12 months?
4d. For this condition did you take drugs or have you had treatment in the past 12 months?

Information wise this will not diverge substantially from the English original. Analytically, it is possible to extract information about "diagnosed by a doctor" relevant for the diseases the respondent has had during the past 12 months.

Experiences from the field test show that the respondents were familiar with most of the diagnoses mentioned in the list. A few respondents asked for clarification of the diagnoses of *allergic asthma*, *allergy, and hypertension*. However, the diagnosis of hay fever was difficult to place for one respondent. The findings from the field test on diseases match more or less the results from the cognitive interviews. In the cognitive interviews, some of the middle-aged test persons had problems

understanding some of the diagnoses. The immigrant group perceived many of the diagnoses as unfamiliar. There were sequences in the cognitive interviews demonstrating that mainly the same diagnoses as those that incurred behavioural coding; *allergic asthma* and *allergy,* were difficult to differentiate between. In addition, the concept of *hypertension* was misunderstood by one of the test persons.

The behavioural coding showed, however that many of the respondents had problems in the information retrieval and judgement phase. This is an indication of a significant respondent task or a high response burden. Time reference for these questions is life long, and the respondents would use time going back and searching his/her memory for relevant information.

In the debriefing session with the interviewers, it was said that the pre-defined list of diseases or health problems was not exhaustive and that it should be possible to register additional diseases that the respondents wanted to report. Better instructions following the diseases were also asked for.

- Change routing of the questions in the instrument. A consistent time reference is easier for the respondents to relate to and the information gathered in the question is not changed in a disqualifying manner.
- It should be considered whether explanatory texts about some of the diagnoses should be added in the question formulations and/or that "subdiagnoses" covered by the medical term should be listed. E.g. seasonal allergy.
- An explanatory text of diagnoses should be developed as a source for the interviewer to consult during the interview in case of questions, at least if the interviewers are not health professionals.

7.3 Physical and sensory functional limitations

The translation of the questions on vision and hearing were straight forward – word by word. None of the respondents seemed to have problems connected to weaknesses in the translation. The problems that incurred were related to the original question text in the English version. There also seem to be a problem with the double-barrelled questions. It should perhaps be considered to shape up the questions, and eliminate one of the movements covered as this increases clarity and make the questions easier to answer.

Judging from the behavioural coding quite a few questions in this section were registered with codes signifying problems in the judging and formatting phases. There was also a significant registration on codes that indicated problems arriving at an answer. Respondents also had difficulty placing their own capacity within the frame of the predefined answering alternatives. Some needed the activities described or exemplified to be able to answer. The comments from the test persons in the cognitive interviews concerning the whole question section confirmed this. The middle-aged test persons saw the yes/no-answering alternatives as not capturing their problems and they had difficulty giving valid answers to the questions. This is partly because they had additional information that they felt relevant that the answering alternatives did not capture.

- Restrict use of double-barrelled questions.
- Consider gradation of response scales.

Quest 5a: Can you clearly see newspaper print without glasses, contact lenses or aids? ***Yes, no***

There seemed to be no problem comprehending this question. The behavioural codes registered concerned the formatting phase and indicate problems finding suitable answering alternatives. The cognitive interviews showed no problem for the eldest test group, while the testing among middle-

aged people showed that they found it difficult to answer a clean “yes” or “no” to this question. In this age group health problems are emerging. Some respondents might have beginning problems and are in a phase of realizing their limitations, but are not mentally ready to answer “yes” I have a problem with this. The cognitive interviews confirmed this. This was especially evident when interviewing male test persons.

- A gradation of the answering alternatives might be considered.

Quest. 5b: Can you clearly see the face of someone 4 metres away (across a road) without glasses, contact lenses or aids? *Yes, no*

The behavioural coding in this question indicated that there was a problem comprehending as some respondents asked for clarification of the question. Free text comments indicate that the problems were related to the estimation of physical distance. There were also registrations on codes showing that respondents were unsure about the answer given. This indicates problems in the formatting phase making the information retrieved match the response alternatives given.

- Although an example is already in the question (across the road), better solutions to the problem of estimating physical distance might be considered
- A gradation of the answering alternatives might be considered.

Quest. 5c: Can you distinctly hear what is said in a conversation with several people without a hearing aid or other aids for hearing? *Yes, no*

Cognitive interviews with middle-aged people showed that some of them had problems giving valid answers to the questions on functional limitations. They felt that the yes/no-answering alternatives did not capture or differentiate enough to capture their problems i.e. have no problem hearing without background noise. In the field test there were registered codes signifying problems in the formatting/response phase.

- There should perhaps be a note on background noise in the question as this obviously affects the capacity of hearing. A text in the actual question or at least a note in the instructions to the interviewers should be included.
- A gradation of the answering alternatives might be considered

Quest 5e: Can you walk 500 metres without any difficulty and without a stick or other walking aids? *Yes, no*

In the field test, this question was registered with two codes. One registration on the code for need for clarification or explanation and one on the code for giving an imprecise answer that does not correspond to the answering alternatives given. As in the question on seeing, this can be related to the difficulty estimating physical distance. There were no comments to this question in the cognitive interviews.

- A gradation of the answering alternatives might be considered
- An example indicating a distance of 500 metres might also be considered

Quest. 5f: Can you walk up and down a flight of stairs without any difficulty and without a stick or other walking aid? *Yes, no*

Due to findings in the pre-test, we decided to add “one floor” in the question text because a test person questioned how many steps the activity would involve. This was done to make the question easier for the respondent to process.

The behavioural coding showed one registration on need for clarification or explanation of the question. In the cognitive interviews, it was noted by one of the eldest test persons that the use of progressive glasses made it necessary to adjust before climbing or descending stairs. Another test person was only able to climb stairs if a banister was available. The translation cards note that necessity to lean on a banister shall be registered as difficulty, but it is not integrated in the question text.

- Add explanatory text about the length of the stairs (e.g. one floor) to avoid hesitation when answering the question.
- The results from the testing show that it is essential that the interviewer read the instruction text that use of banister should be noted as difficulty. It is not sufficient to have it as an instruction to the interviewers. This is to help the respondents chose a relevant answering alternative and to avoid hesitation.

Quest. 5g: Can you use your fingers to grasp or handle a small object like a pen without any difficulty and without any aids? ***Yes, no***

In the field test, there were two registrations on behavioural codes indicating problems in the retrieval and formatting phases. The free text comment in the field test showed that one respondent was able to grasp, but this involved much pain. There were no comments to this question in the cognitive test interviews.

- The result indicates that the answering alternatives do not capture all possible difficulties.

Quest. 5h: Can you turn a tap or unscrew the lid of a jar of coffee without any difficulty and without any aids? ***Yes, no***

In the translation of this question, we were careful to choose an example of a jar without vacuum. This because the movement measured would be the same, but the strength needed would be significantly different. Even people without health problems sometimes have difficulty with this.

In the cognitive interviews it was said by one of the immigrants that the notion of "screw tap" or a tap you have to turn might be difficult to understand for immigrants as most modern households have taps that are opened and closed with a different movement. This is also relevant for other people living in modern houses and might be a problem for young people that have few references to screw taps.

In the field test, we had one registration on the respondent being unsure about the answer given. This indicates a problem in the formatting phase.

- On basis of the experiences from the testing we suggest to eliminate the double-barelledness and in this manner increase the clarity of the question and just ask if the respondent is able to open a jar with a screw lid (e.g. coffee jar)
- A gradation of the answering alternatives might be considered

Quest. 5k: Can you bend and kneel down without any difficulty? ***Yes, no***

This question also captures more than one movement. In the translation process, we had a problem translating "kneel down". In the initial translation, we chose the expression "squat". This was changed to "go down on your knees" as this was seen as a closer to the original English text.

The behavioural coding showed that one of the respondents used a long time to reach an answer to this question. The cognitive testing gave no additional information.

Quest. 5l. Can you lift and carry a full shopping bag weighing 5 kilos without any difficulty? *Yes, no*

In the pre-test interviews one of the test persons said that she was able to lift, but not carry a full shopping bag. On basis of this, we integrated an explanatory text to the interviewer that the respondent has to be able to *both* lift and carry to answer “yes” to this question.

In the behavioural coding, the question was registered with codes for need for clarification and unsure about the answer, signifying problems both comprehending and formatting an answer. Again, the respondent has to imagine the weight of a “full shopping bag” and consider whether he/she would be able to lift and carry it.

- A suggestion for revision of this question would be *only* to ask if the respondent is able to carry a full shopping bag because this would also imply that he/she is able to lift it. This solution would also eliminate the double-barelledness of the question.

Quest. 5m. Can the subject make him-/herself clearly understood by others without any difficulty? *Yes, no*

In the pre-test interviews, we interviewed a man with a stutter. We were able to understand him, but had to make an extra effort. The obvious answer to this question would be “no” - he could not make himself clearly understood. Despite this, it was felt that it might be too dramatic to tick off this alternative. After all, we were able to understand him. One might consider a gradation of the answering alternatives.

- Consider gradation of the answering alternative.

7.4 Personal Care Activities

In the cognitive interviews it were expressed that many questions in this section and the section on household care activities were not suited for healthy persons and should only be asked to elderly persons and persons with functional difficulties.

In the translation process, we had some discussions on translating the concept “activity. In Norwegian, we have two interchanging concepts for activity: "aktivitet" and "gjøremål". The pre-testing demonstrated that the test persons were familiar with both terms. The cognitive interviews with young immigrants showed, however, that "activity" was understood as physical training. One of the concepts is, as the immigrant group noted, more related to doings with an active element while the other concept points more towards activities one does on a regular basis. We therefore chose to use the most passive term in the personal care sequence, a combination in the household care section, while the term implying physical input was used in the sequence on other daily activities.

Quest. 6a: Do you usually have difficulty doing any of these activities by yourself? *Yes, no, uncertain*
If yes/uncertain:
Quest. 6b: Do you usually have help or do you do it by yourself? *Has help, no help*
If help:
Quest 6c: Do you have enough help to do this activity? *Yes, no*
If no help:
Quest 6d: Do you need help to do this activity? *Yes, no*

Activities: eating, getting in and out of bed or chair, dressing and undressing, using toilets, bathing or showering.

The focus in the translation cards is on whether the respondent is asked if he/she is able to do specific activities and whether the respondent has an unmet need for personal assistance. However, supply of aids and practical solutions (ergonomic) will also be of great help for persons with problems doing

basic everyday activities. The questions do not consider whether the respondent is using aids or technical devices or has special equipment. The cognitive interviews with old-age people showed that some of the test persons had special devices to help them manage these activities or had found practical solutions themselves to the problems they have. One of the elderly test persons said she had difficulty with several activities, but that she had found solutions to practical problems i.e. a handle in the toilet, chair in the shower etc. Ability to adjust and good functional practical solutions delay the need for personal assistance. This is not captured in the questions. A vivid example was the person that used a long shoehorn to take on and off stockings and shoes because she was unable to bend down. The other test groups commented that the questions had little relevance to them.

The questions related to basic everyday activities did not incur very much behavioural coding. However, the registrations were concentrated around comprehension of the questions and formatting an answer. The registrations were in connection with the activity using the toilet and need for help when going to the toilet. One respondent commented that she *sometimes* needed help using the toilet (free text comment).

- The questions on personal care do not consider whether the respondent is using aids or technical devices or has special equipment or the supply of this. The testing showed that physical adjustment delays the need for personal assistance. This might be considered in the revision of the questions.
- The question on need for help to do an activity with yes/no as answering alternatives does not capture the answer of *sometimes* given by one of the respondents in the field test.
- The originally proposed answering alternatives in question 6b to the question “Do you usually have help or do you do it by yourself? Has help, no help in the English version do not correspond well with the question text.

7.5 Household care activities

Quest. 7a Do you usually have difficulty doing any of these activities by yourself? ***Yes, no, uncertain***
If yes/uncertain:
Quest. 7b. Do you usually have help or do you do it by yourself? ***Activity always done by subject alone, activity sometimes or always done by someone else***
If activity always done by subject alone:
Quest. 7c. Do you need help to do this activity? ***Yes, no***
If activity sometimes or always done by someone else:
Quest. 7d. Could you do this activity without any difficulty if you had to or wanted to? ***Yes, no***
If no:
Quest. 7e. Do you have enough help to do this activity? Yes, no

Activities: preparing meals, using the telephone, shopping, doing laundry, light housework, occasional heavy housework, taking care of finances.

In the cognitive interviews, the group of middle-aged people showed that the questions on household care seemed to incur a problem with gender specific work division. Male test persons felt uncomfortable when asked these questions. They did not do the activity themselves, but this was not due to a lack of capacity. However, this does not lead to errors answering the question as they would anwer “yes” to “could you do this activity if you had to without any difficulty if you had to or wanted to” captures this.

Of specific activities, it was only commented on the activity of occasional heavy housework. It was said that there might be an age dimension in what was comprehended as "heavy housework". In the group of young immigrants, heavy housework was seen as lifting and moving furniture, redecorating etc. The elderly and middle-aged exemplified heavy housework as vacuum cleaning, cleaning windows etc.

The behavioural coding signifies problems in the retrieval and judging phase concerning the questions on heavy housework and shopping. In the cognitive interviews, the young immigrants commented that the concept used for shopping in Norwegian was unfamiliar, although it is a concept in ordinary spoken language.

- The originally proposed answering alternatives in question 7b to the question “Do you usually have help or do you do it by yourself?” in the English version, do not correspond well with question text. A proposal for an improved formulation of the question would be to ask, “Do you usually do *it* yourself or is it sometimes or always done by someone else?” This would also correspond to the response categories proposed in the original English version in question 7b.

7.6 Other daily activities

The questions in this section did not flow well neither in the cognitive interviews nor in the field test. Our experience from the cognitive testing was that these questions involved a lot of fumbling. Generally, the questions in this section were difficult for the respondents to answer, as there was no time reference or other reference to compare the reduction in activity to. In addition, the questions covers several dimensions.

Quest. 8.1: Because of your health or the way you felt, have you had to cut down on school or work activities? ***Yes – I have had to cut down school or work activities, no – I have not had to cut down school and work activities, not applicable – never at school/work for health reasons, not applicable – never at school/work for other than health reasons***
If yes or no:
Quest. 8.1a: (Because of your health or the way you feel) do you currently have any difficulty with these activities? ***Yes – I have difficulty with school or work activities, no – I do not have difficulty with school and work activities, not applicable – no longer at school /work for health reasons***

In the translation process, we discussed the phrase “your health or the way you felt". In the introductory text to the question, it is stated that the health problem or "way you felt" should have lasted for the past six months or longer. Even so, we believe that "the way you felt" can be interpreted to cover short-term unspecific causal factors i.e. temporary lack of motivation, time squeeze, high level of ambition, mood variations, stress etc. We have instead tried to operationalize the expression in line with the terminology used earlier in the questionnaire covering lasting physical or mental health problems. We believe this to be more precise and targeted.

In the cognitive interviews respondents that were not under education or involved in paid work were confused when asked this question. The two alternatives listed under “not applicable” were that the respondent is *never* at school/work for health reasons or for other than health reasons. There is no response alternative for people that are *not* involved in school/work now, but have been recently.

In the specification from Eurostat it is said that *“If subject is unemployed and looking for work, retired for non health reasons, has decided not to engage in the labour market and stay at home looking after children or a disabled person, code as “not cut down”. At this point we are interested in eliminating any who have* ***never*** *worked/been at school as current school/work questions will not be applicable”*.

Again, there is uncertainty as to the time frame. Should a person that has been out of work for health reasons (i.e. receiving disability pension) for instance two years ago be registered as “having had to cut down on school and work activities”. This was particurlaly a problem for those who had recently changed status.

The behavioural coding showed that there were problems both in comprehending the questions as respondents asked for clarification and in the judgement and formatting phases as respondents used long time to reach an answer and seemed unsure about the answer given. The free text comments following the coding showed that many of the codes were generated by respondents that were recently retired or on disability pension. Among the middle-aged test persons, the concept "cut down" was understood as a reduction in the activity of performing paid work - but not the transfer from full job activity to receiving social benefits. They also had a problem dealing with all the different activities at the same time. The respondents had to think about both work and educational activities, think back for several years and find out if they ever had reduced such activity due to long-standing illness. Hence, they had a lot of information to "digest" and relate to at the same time. The young immigrants also signalled that the question contained too much information.

A reference period is essential. As questions in the questionnaire both refer to a life-long perspective i.e. "have you ever", "past 12 months" and "currently" it is difficult for the respondent to know what time frame to relate to when he/she is posed these questions. Are the interview persons invited to go long back in memory or are they not to consider periods of reduced activity if they are active again? The question following the introductory question is asking for the current situation (8.1b). But then again should previous reduction that is relevant for the current situation be counted? To be able to answer this question the answering alternatives need to be read loud: "yes, no, no longer at school/work for health reasons".

- There is a need for specification and increased clarity in this question. We propose use of "lasting physical or mental health problems" instead of "your health and the way you felt".
- The question needs a reference, e.g. have you had to cut down on school or work activity compared to your situation the previous year, or e.g. compared to your situation 6 months ago?
- The information given as a footnote in the original English version needs to be integrated in the question text. Probably, it would instead be useful with a filter question based on this information as the interviewers are unable to make the filter function while interviewing. In future versions this problem needs to be solved.

Quest. 8.2: Because of your health or way you felt, have you had to cut down your usual leisure and social activities? ***Yes-I have had to cut down leisure and social activities, no- I have not had to cut down leisure and social activities***

The behavioural coding in the field test indicated problems in the comprehension phase. There were both registrations on need for clarification and respondent misunderstood the question. The comments in the cognitive interviews on question 8.1 also apply for this question.

Quest. 8.3: Because of your health or the way you felt, have you had to cut down getting out and about?

The translation of this question incurred some problems to find a phrase covering "getting out and about". Common phrases in one language can be hard to translate and capture the true meaning of. The back translation of the chosen expression in Norwegian was "getting out among people". This expression was used in the initial questionnaire, but was changed on basis of feedback in the pre-tests as some of the test persons found the chosen expression hard to grasp. It was changed to "getting out and being able to move from place to place".

The behavioural coding in this question indicated problems in comprehending the question and in the judgement and formatting phases. A free text comment showed that one respondent said that winter and slippery surfaces led to reduced activity. Other free text comments concerned additional explanations for reduced activity. One respondent said that her problems getting out and about were caused by spouse's illness and that this was putting limitations on what she can do.

In the cognitive interviews, the immigrant test persons were unsure about the meaning/content of the phrase of "to get out and about". One of the test persons saw the question as covering both physical and mental problems, but saw "getting out and about" as capturing physical problems, primarily.

- The phrase "getting out and about" is not intuitive. There might be a need for further clarification of this expression. More generally, the use of phrases can make translations imprecise.
- The results from the tests show that there might be a need for stressing that the question is meant to capture one's own capacity, maybe in the introductory text to the questions.

7.7 Psychological distress and well-being

Quest. 9: How much, during the past 4 weeks did you feel [very nervous[? *All the time, most of the time, some of the time, a little of the time, none of the time.*

In the translation process and also as an effect of own preferences and the language checkers comments we chose to eliminate the double-barelledness in the questions and only use *one* term to describe the states in each question. The translation checker also put a question mark on the varying terminology as in "Have you felt ….." and "Did you feel ….". Have you felt is referring to one time or another the past 4 weeks, while did you feel is more pointing to a specific point in time during the reference period of 4 weeks. This should perhaps be made more consistent in the original instrument.

Regarding the questions on moods and the extract from MOS SF-36 there were many registrations on behavioural codes indicating that these were difficult for the respondents to answer. The questions are developed for use in a self-completion questionnaire and are not suitable in a face-to-face interview setting.

There was an escalation in the use on behavioural codes in this section. The codes used signify problems in comprehension of the questions i.e. respondent asks for the question to be repeated and for clarification of the question. There were also problems in the retrieval/judgement phase i.e. the respondent uses long time to reach an answer. The code for giving an imprecise answer was also used quite frequently in this section. Questions on mental health are known to be difficult to answer. The free text comments demonstrated that there were some problems giving meaning to the concepts e.g. one respondent wondered about the difference between feeling worn out and lazy, and another commented that he is always tired before bed time.

In the cognitive interviews, we had a card sorting sequence on the concepts on emotional states. This exercise demonstrated varying interpretations on the concepts. There was especially a problem differing between "feeling full of pep" and "having a lot of energy". The cognitive interviews with different groups indicated that there was an age effect on how the respondents interpreted the different states.

The states that released most registrations on behavioural codes in the comprehension phase were "feeling very nervous", "feeling down in the dumps, "feeling full of pep" and "feeling worn out". In the retrieval and judgement phases, most registrations concerned "having a lot of energy", "feeling worn out", "feeling very nervous" and "feeling tired".

From the cognitive interviews, we know that the answering categories were somewhat difficult to relate to: *How much of the time for the past 4 weeks have you felt ….. all the time, some of the time, a little of the time or none of the time.* The behavioural coding also showed registrations on giving an imprecise answer not corresponding to the answering alternatives given.

Quest. 10: Would you describe yourself as being usually … happy and interested in life, somewhat happy, somewhat unhappy, unhappy with little interest in life, so unhappy that life is not worthwhile?

This question was changed in the Norwegian translation. This was primarily due to an unbalanced response scale with two positive and three negative alternatives. We chose the first four alternatives and inserted a neutral midcategory “neither happy nor unhappy”. This was based on our own judgement and also recommended by the translation checker.

The behavioural coding showed modest registration of codes. The codes registered imply problems in all phases of the cognitive process. Many of the test persons and the interviewers commented that there is a need for show cards in this question. It was said that it is hard to keep track of the answering alternatives.

- The response scale should be balanced.
- Recommend to introduce show cards in this question

The translation checker commented that there is a need for a concluding question of a different nature at the end of the questionnaire. We added a question at the end, since this was an announced test interview, asking if the respondent had any comments or something he/she would like to add.

8 Conclusion

This project has shown that it is challenging to develop robust questions that measure different aspects of physical and mental health, and to reach the goal of well functioning instruments in different languages in order to produce comparable statistics. When translating an instrument for comparable statistics there is an evident trade-off between international comparison and national considerations.

Experts in the field of health and survey methodology translated the module on Health Status into Norwegian. The involvement of several people with different characteristics and professional backgrounds covered different ways of thinking around concept meaning, linguistic and semantic issues. We believe this has been a strength in the translation process. Many opinions and views underlines the importance of having a core coordination group. We restricted the revision to two rounds as continuous revision by experience results in incidental mistakes and misunderstandings. We did the first round of revision on the basis of information from the back translation (template), comments from the translation checker and comments from Eurostat. A second round of revision was done after the initial pre-testing where we concentrated on testing concepts that had caused discussion in the translation process.

In the initial translation document, the checker commented on language in some of the questions. A job was done to tighten up the language and to simplify some of the expressions used in the questions. Feedback from both the cognitive testing and the interviewer debriefing was that the language was not flowing well in some of the questions.

When translating and testing a questionnaire one never reaches perfection, but one is constantly getting closer. Viewing the translation process as a whole, we might say that we should have revised the questionnaire more actively during the test process. What held us back was that we were concerned about a too large linguistic deviation from the original English version. Retrospectively, we believe that we could perhaps have translated more freely.

The testing of the module stretched over a long period. The cognitive interviews produced a lot of information on different concepts and gave us information as to how people think when answering different survey questions. It was useful to get insight into some of the pitfalls and the range of misunderstandings and varying interpretations that might occur in questions that seem simple and easy to understand at first sight. With reference to the National Health Interview Survey, which contains questions parallel to the ones in this project, this was a very interesting and useful exercise.

It was also evident that there was an age dimension on how the test persons answered some of the questions. The thinking aloud technique applied, gave information on the different references the test persons had when answering the questions. By pushing things to extremes, one could say that the eldest group was the most knowledgeable on diseases and none of them questioned the relevance of the questions on personal and household care. The middle-aged test group requested more gradation of the response scale in the questions about function and activity. Being only allowed to give a clean yes or no was not sufficient. This could signify that they felt a need to explain or to give additional information on *why* they had difficulty with certain functions or activities. The young test persons had focus on being physically fit and active. Chronic diseases were seen as a very serious matter (almost requiring hospitalization). When discussing diagnoses, eating disorders was mentioned.

The results from the mini scale realistic field testing was thought to supplement the findings in the cognitive interviews. The behavioural coding gave information on which cognitive phases the problems were concentrated in for each question. Information from the cognitive interviews gave additional information about specific problems that had been noted by the respondents in the field test. This was useful information when interpreting the behavioural coding. The field test gave information about the range of problems. Counting the registrations on each code per question or per section gave indications on the range of problems in a realistic survey setting.

The interviewers agreed that the first part of the questionnaire was flowing relatively well in a real life interview setting, but that the interview became increasingly staccato when progressing through the questionnaire. This impression was also confirmed by the results from the cognitive interviews and the behavioural coding.

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Annexes

Annex 1 **Back translation of the initial questionnaire (English)**

Annex 2 **MEHM - EU-SILC and EMHS translations**

Annex 3 **Translation template sheet**

Annex 4 **Notes from translation checker**

Annex 5 **Final Norwegian translation of questionnaire**

Annex 6 **Letter of invitation to the cognitive interviews**

Annex 7 **Interview guide for cognitive interviews**

Annex 8 **Advance letter announcing the field test**

Annex 9 **Instructions to the interviewers**

Annex 10 **Show cards**

Back translation of initial questionnaire (English)

European Health Interview Survey 2005

Conceptual translation cards for Core Health Module
Version 16-1-05

This document is a guide to the translation of the Core Health Module. It has been prepared in order to obtain a complete understanding of the question formats and the basic health concepts, in addition to the direct translation. This is necessary in order to provide a good basis for comparison between different countries. Short, but important comments have been provided after the English version of the questions. These comments should be read and translated to ensure that the nuances are fully understood.

Introduction

I would like to ask you some questions about your health.

(Mini European Health Module)

1) How would you say your health is, in general? Would you say that it is very good, good, neither good nor poor, poor or very poor?

- The reference is to *general* health, not current health condition. The question should not measure temporary health problems.
- The respondent is not asked to compare his/her own health with the health of other people at the same age or with his/her previous or future health condition.
- Answer categories: The middle category should, as far as possible, be translated into a neutral description.

2) Do you have any long-standing illnesses or health problems? *Yes/No*

- **Do you have (or do you suffer from) …**
- **Long-standing (or chronic):** Temporary problems should not be included
- **Illnesses or health problems (or conditions):** In addition to illnesses, symptoms of poor health and/or health problems should be included

3) Have you been limited because of a health problem in everyday activities or doings in the past six months (or longer)? Have you been severally limited, somewhat limited, or not limited at all?

- **In the past six months [or longer]:** This question measures long-term limitations. The time refers to the activity limitation, not of the health problem.
- To what extent [how much] have you been limited because of health problems: This only refers to limitations caused by health-related problems, not caused by economic, cultural or other problems.
- Everyday activities [activities that people normally do]: People who experience long-standing limitations because of health problems have gone through an adaptation process that may have resulted in a lower activity level. A reference point is necessary in order to identify current limitations. Thus, the activity limitations are compared to a generally accepted population standard that is relative in relation to cultural and social expectations. It refers only to activities people normally do.

Chronic diseases

4) This is a list of diseases and health problems (GIVE THE RESPONDENT TWO CARDS WITH A LIST OF DISEASES)
   a) Do you have or have you ever had any of these diseases?

[FOR EVERY CHRONIC DISEASE WITH POSITIVE RESPONSE, ASK FOLLOW-UP QUESTION]

   b) Have you had this disease in the last 12 months? Yes/No
   c) Has a doctor ever said that you have this disease? Yes/No
   d) Have you taken medication or been treated for this in the last 12 months? Yes/No

	a) Yes/No	b) Yes/No	c) Yes/No	d) Yes/No
Allergic asthma				
Asthma (excluding allergic asthma)				
Allergy (excluding allergic asthma)				
Diabetes				
Cataract				
High blood pressure (hypertension)				
Heart attack				
Stroke, cerebral haemorrhage				
Chronic bronchitis, emphysema				
Rheumatic arthritis (arthrosis) (joint disease)				
Osteoporosis / brittle bone disease				
Gastric ulcer or duodenal ulcer (stomach ulcer)				
Cancer (malignant tumour including leukaemia and lymphoma)				
Migraine or frequent headache				
Chronic anxiety or depression				
Other (specify)				

Physical and sensory limitations

5. The following questions relate to situations and activities in everyday life[1]. INTERVIEWER: DO NOT INCLUDE TEMPORARY HEALTH PROBLEMS

a) Can you clearly see newspaper print without glasses, contact lenses other aids[2]? Yes/No*
   If No: Can you clearly see newspaper print with glasses, contact lenses other aids[2]? Yes/No/Does not have glasses or other aids[2]
   * *if the answer is "I am blind or cannot see at all", go to c)*

b) Can you clearly see the face of someone four metres away (on the other side of the street) without glasses, contact lenses or other aids[2]? Yes/No
   If No: Can you clearly see the face of someone four metres away (on the other side of the street) with glasses, contact lenses or other aids[2]? Yes/No/Does not have glasses or other aids[2]

c) Can you clearly hear what is said in a conversation between several people without a hearing aid or any other aids? Yes*/No
   If No: Can you clearly hear what is said in a conversation between several people with a hearing aid or any other aids? Yes/No/Does not have a hearing aid or any other aids
   * *if the answer is "Yes, without a hearing aid or any other aids", go to e)*

d) Can you clearly hear what is said in a conversation with another person without a hearing aid or any other aids? Yes/No
   If No: Can you clearly hear what is said in a conversation with another person with a hearing aid or any other aids? Yes/No/Does not have a hearing aid or any other aids

e) Can you walk for 500 metres without difficulty and without a walking stick or any other aid [3]? Yes/No
   If No: Can you walk for 500 metres without difficulty with a walking stick or other aid? Yes/No/Does not have aids[3].

f) Can you walk up and down a flight of stairs[4], without a stick or any other aid[3]? Yes/No
   If No: Can you walk up and down a flight of stairs with a stick or other aid[3]? Yes/No/Does not have aids[3].

g) Can you use your fingers to grab or handle a small object, for instance a pen, without difficulty and without using any aids? Yes/No

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[1] Functional limitations are limitations in body functions. The activities/situations are included to help the respondent or interviewer assess the level of functionality. In some cases technical aids are possible. Thus, two questions are asked; capacity with and without aids. In other cases, help from other people may be possible, but this should be coded as "has difficulty". The purpose is to map the respondent's own capacity.

[2] Visual aids include magnifiers, aids for the weak-sighted (Braille) etc.

[3] Aids include orthopaedic shoes, walking sticks, rollators/walking frames, leg splints, crutches and prosthesises. If the respondent needs to hold someone's arm, this should be counted as difficulty.

[4] If a banister is required, this should be counted as difficulty. The number of steps is irrelevant, the reference is to an average flight of stairs.

[5] The intention is not to record if the respondent is able to use specially adapted aids. The intention is to record the use of general equipment in the home. Disabled people may have special cranes, but the question relates to any crane, not a specially adapted one.

If No: Can you use your fingers to grab or handle a small object, for instance a pen, without difficulty and with the use of aids? Yes/No/Has not aids.

h) Can you turn on the tap[6] or unscrew the lid of a jar[5] without any aids? Yes/No
    If No: Are you able to turn on the tap[6] or unscrew the lid of a jar[5] with aids? Yes/No/Has no aids

i) Can you bite and chew on hard foods, such as a firm apple? Yes/No

j) Can you stretch out one arm and shake hands with someone without difficulty? Yes/No

k) Can you bend and squat without difficulty[5]? Yes/No

l) Can you lift and carry a shopping bag weighing 5 kilos (5 litres of milk) without difficulty [1]? Yes/No

[Ask the nest question to the person answering on behalf of the respondent, otherwise fill in yourself]

m) Can the respondent make himself/herself understood[6]? Yes/No

- **Think about activities/situations:** A physical or sensory limitation can be measured with reference to various activities/situations. The activity/situation is mentioned to help the respondent and interviewer assess the capacity level. Thus, a distance (4 metres, 500 metres), the number of steps or the weight of the shopping bag should not be taken literally.
- **Everyday activities:** The respondent may not necessarily have any experience from the proposed situation. Therefore, the limitations are measured as the *ability to carry out* an activity ("are you able to/would you be able to if you had to") instead of actual performance ("do you").
- **Do not include temporary difficulties.** The purpose is to record long-term limitations. This wording is used to avoid having to specify a time period in the question.
- **Can you:** The respondent may not necessarily have any experience from the proposed situation. Therefore, the limitations are measured as the *ability to carry out* an activity ("are you able to/would you be able to if you had to") instead of actual performance ("do you").
- **Without glasses or other aids:** The purpose is to exclude limitations due to financial reasons as the reason for not owning the most common technical aids (such as glasses, a hearing aid or walking stick).

[5] If help from others is required, or if trolley is needed when shopping, it should be counted as difficulty.

[6] Only physical conditions should be taken into account, not difficulties due to language differences between the respondent or the person answering on behalf of the respondent, and the interviewer.

Personal care

Now on to some questions about everyday personal care.
INTERVIEWER: DO NOT INCLUDE TEMPORARY DIFFICULTIES

6. This is a list of activities [Show card].

a) Do you normally[7] have difficulties doing any of these activities on your own? Yes/No/Not sure

[If no to all – go to next section. If yes or not sure – ask]

b) Do you normally get help[1], or do you do this on your own?
(i) Gets help[8] [go to c)]
(ii) Does this on my own/gets no help [go to d)]

c) Do you have <u>sufficient</u> help to do this activity? Yes/No
[Go to next question]

d) Do you need help to do this activity? Yes/No

		If the answer to a) is yes or don't know/not sure		
	a) Yes/No/Not sure	b) Gets help/Does this on my own/gets no help	c) Yes/No	d) Yes/No
Eating				
Getting in and out of a bed or chair				
Dressing and undressing				
Using the toilet[9]				
Bathing or showering				

[7] Normally is included to avoid temporary difficulties.
[8] Includes activities which are done with the help of others, for instance feeding.
[9] Includes sitting down and getting up from the toilet, taking clothes on and off and staying clean, or arranging a catheter or colostomy.

- **Do not include temporary difficulties** and **Do you normally:** The focus is on long-standing disability. The wording is used to avoid specifying a time period.
- **Do you:** The activities are basic personal care activities and things the respondent *must* do. Independence is related to what the respondents do (not what they think they can do). We therefore ask about *reported ability* (do you) instead of *anticipated ability* (can you), which is closer to *actual ability*.
- **Has difficulty:** Describing the extent of difficulty beyond "no/some difficulty" is problematic.
- **Does it on his/her own:** Without any help from other people. The purpose is to ensure that the limitations are not due to financial reasons or other issues (such as lack of personal help).
- **Do you need help** and **Do you get sufficient help:** If there is a need for help or further help, this is a measure of a need that is not met.

Household activities

I now want you to think about various household activities.
INTERVIEWER: DO NOT INCLUDE TEMPORARY DIFFICULTIES

7. This is a list of activities [Show card].

a) Do you (normally[10]) have difficulty carrying out any of these activities on your own[11]? Yes/No/Not sure

[If no to all – go to next section. If yes or not sure – ask]

b) Do you normally get help[1], or do you do this on your own?
(i) The activity is always carried out by respondent on his/her own [go to c)]
(ii) Gets help/the activity is sometimes carried out by someone else[12] [go to d)]

c) Do you need help to do this activity? Yes/No
[go to next question]

d) Could you carry out this activity without any difficulty if you had to or wanted to? Yes/No[13] [If yes, go to next question]

e) Do you get <u>sufficient</u> help to do this activity[14]? Yes/No

		If the answer to a) is yes or not sure			
	a) Yes/No/Not sure	b) Always carried out by respondent on his/her own/Gets help/sometimes or always carried out by someone else	c) Need help Yes/No	d) could if he/she wanted to. Yes/No	e) sufficient help Yes/No
Cooking					
Using the telephone					
Shopping					
Doing laundry					
Light housework					
Heavy housework (occasionally)					
Pay bills /financial matters					

[10] Normally is included to avoid temporary difficulties.
[11] If the respondent says that he/she never carries out the activity in question, register as "don't know/not sure" and go to the next question.
[12] This may include division of the activity in the household (a spouse/partner or other household members), for instance part of the activity or the whole activity [sometimes].
[13] This means: "I cannot do this on my own" or "I *can* do this on my own, but with difficulty".
[14] This question should identify needs that are not met, or the need for further help for the respondent to carry out the activity satisfactorily.

- **Think about some household activities:** Activities that are necessary in order to live independently and maintain a normal household.
- **Do not include temporary difficulties and "Do you normally":** The focus is on long-term limitations, not temporary difficulties. This wording is used to avoid having to specify a time period in the question.
- **Do you:** When it comes to personal care (6), the focus is on reported ability (do you…) rather than anticipated ability (can you …), which is closer to actual ability. However, it could be the case that the respondent *is able to* do the activity, but chooses to let other people do it, for instance by hiring a cleaner. We will get back to this in a later question.
- **Has difficulty:** Describing the extent of difficulty beyond "no/some difficulty" is problematic.
- **On his/her own:** Without help from another person. The purpose is to ensure that the limitations are not due to financial reasons or other issues (such as lack of personal help).
- **Would you be able to carry out this activity without any difficulty if you had to or wanted to:** This ensures that the respondents who choose to let other people carry out the activity, even if they don't have any difficulty doing it themselves, are recorded as "no limitations".
- **Do you need help** and **Do you get sufficient help:** If there is a need for help or further help, this indicates a measure that is not met.

Other everyday activities

8. Now on to some questions about other everyday activities. INTERVIEWER: DO NOT INCLUDE TEMPORARY DIFFICULTIES

8.1 Because of your health, have you had to cut down on[15] s*chool or your work activities*? Think about both physical and emotional health problems.

(i) Yes - I have had to cut down on school- or work activities
(i) No - I have not had to cut down on school- or work activities
(iii) NOT RELEVANT - Never at school/work because of health problems
(iii) NOT RELEVANT - Never at school/work due to other reasons

[IF (iii) OR (iv) GO TO NEXT ACTIVITY = 8.2]

8.1.a Do you currently have difficulty with these activities?

(i) Yes, I have difficulties with school or work activities
(ii) No, I have no difficulties with school or work activities at the moment
(iii) NOT RELEVANT - Not at school/work due to health problems

[IF (i) YES GO TO B, OTHERWISE GO TO NEXT ACTIVITY = 8.2]

8.1.b Do you use any aids or special equipment to do school/work activities? Yes/No

8.1.c Do you get help[16] from others to be able to do your school/ work activities? Yes/No

8.1.d Do you need *more help*[2] to be able to do your school or work activities? Yes/No

8.2 Because of your health, have you had to cut down on your normal *leisure activities or social activities*? Think about both physical and emotional health problems (i) Yes - I have had to cut down on *leisure activities or social activities* (ii) No - I have not had to cut down on *leisure activities or social activities*

8.2.a Do you currently have any difficulty with these activities?
(i) Yes
(ii) No
(iii) No longer takes part in leisure activities or social activities due to health reasons

[IF (i) YES GO TO B, OTHERWISE GO TO NEXT ACTIVITY = 8.3]

8.2.b Do you use any aids or special equipment[17] to take part in leisure activities or social activities? Yes/No

[15] If the respondent is unemployed and looking for work, or retired, has decided not to take part in the labour market, or at home with care activities. Should be coded as (ii) No - I have not had to cut down on such activities.

[16] Help may for instance include an additional member of staff at a place of work, specially adapted equipment in a factory, a business that, due to health reasons, allows for flexible hours or place of work, an assistant teacher or a private teacher. We would like to know whether the respondent actually receives help, not what kind of help.

[17] Includes wheelchair, special vehicle etc.

8.2.c Do you get any help[18] from other people to be able to take part in leisure activities or social activities?
Yes/No

8.2.d Do you need *more help*[2] to be able to take part in leisure or social activities?
Yes/No

8.3 Because of you health, have you had to cut down on getting out and about? *Think about both physical and emotional health problems* (i) Yes - I have had to cut down on getting out and about (ii) No - I have not had to cut down on getting out and about

8.3.a Do you currently have any difficulty getting out and about?
(i) Yes
(ii) No
(iii) No longer gets out and about due to health reasons

[IF (i) YES GO TO B, OTHERWISE GO TO NEXT SECTION = 9]

8.3.b Do you use any aids or special equipment[1] to be able to get out and about?
Yes/No

8.3.c Do you get any help[19] from other people to be able to get out and about?
Yes/No

8.3.c Do you need *more help* from other people to be able to get out and about?
Yes/No

[18] Help may for instance include an additional member of staff at a place of work, specially adapted equipment in a factory, a business that, due to health reasons, allows for flexible hours or place of work, an assistant teacher or a private teacher. We would like to know whether the respondent actually receives help, not what kind of help.

[19] Help may for instance include an additional member of staff at a place of work, specially adapted equipment in a factory, a business that, due to health reasons, allows for flexible hours or place of work, an assistant teacher or a private teacher. We would like to know whether the respondent actually receives help, not what kind of help.

- **Think about other everyday activities/situations:** Activities that are not included in personal care and household activities.
- **Do not include temporary difficulties:** The focus is on long-term limitations, not temporary difficulties. This wording is used to avoid having to specify a time period in the question.
- **Because of your health (includes physical and emotional difficulties):** The focus is on health-related limitations, not limitations due to financial reasons or other issues.
- **Have you had to cut down on:** Participation in these activities can be reduced and may therefore be carried out without difficulty, *without* necessarily being due to health problems, for instance part-time work.
- **Do you use any aids or special equipment?** We are only interested in whether the respondent receives help, what kind of help.
- **Do you need more help:** A measure of a need that is not met.

Stress and well-being

Finally, I would like to ask you about your feelings and your mood.

9. How much of the time have you felt very nervous in the past four weeks? SHOW CARD WITH THE FOLLOWING ALTERNATIVES:

All the time, most of the time, some of the time, a little of the time, none of the time
[REPEAT FOR ALL THE FOLLOWING THEMES:]

Have you felt so down that nothing could cheer you up?
Have you felt in harmony?
Have you felt down?
Have you felt happy?
Have you felt full of initiative?
Have you had a lot of extra energy?
Have you felt exhausted?
Have you felt tired?

- **This question is taken from the "Mental Health Inventory (MHI 5)" from SF36 and the SF36 item on vitality. SF36 has been translated into many languages, and the official translation should be used. Such translations have been undertaken and evaluated in the IQOLA project (see http://www.iqola.org/).**

10. Do you consider yourself as a person who is normally …:

(i) happy and interested in life
(ii) somewhat happy
(iii) neither happy nor unhappy
(iv) somewhat unhappy
(v) unhappy without much interest in life

[THANK THE RESPONDENT)

Annex 2

MEHM - EU-SILC and EMHS translations

1. How is your health in general? Is it very good, good, neither good nor bad, bad or very bad?

SILC (Norwegian): Hvordan vurderer du din egen helse sånn i sin alminnelighet. Vil du si at den er svært god, god, verken god eller dårlig, dårlig , svært dårlig.

SILC: How is your health in general? Would you say it is very good, good, neither good nor bad, bad or very bad.

………………………

EHSM (Norwegian): Hvordan vurderer du helsen din sånn i (sin) alminnelighet. Vil du si at den er meget god, god, verken god eller dårlig, dårlig

EHSM: How is your health in general? Would you say it is very good, good, neither good nor bad, bad or very bad

…………………………………………………………………………

2. Do you have any longstanding illness or health problem? Yes/no

SILC (Norwegian): Har du noen langvarig sykdom eller lidelse, noen virkning av skade eller noen funksjonshemming? Ja/nei SKAL REGNES MED SELV OM DET ER SESONGBETONT ELLER OM DET KOMMER OG GÅR

SILC: Do you have any longstanding disease or illness, any effect of injury or disability? Yes/no CONSIDER ALSO PROBLEMS THAT ARE SEASONAL AND COMING OR GOING

…………………..

EHSM (Norwegian): Har du noen varige lidelser eller helseproblemer? Ja/nei

EHSM : Do you have any long-standing illness or health problem? Yes/no

………………………………………………………………………….

3. For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been *severely limited, limited but not severely or not limited at all*?

SILC (Norwegian)– hvis ja i spml *2*:
Medfører dette begrensninger i dine daglige aktiviteter? Ja/nei.
Har disse begrensingene vart i 6 måneder eller mer? Ja/nei
Vil du si at du opplevde store begrensinger eller noen begrensinger? Store begrensninger/noen begrensninger

SILC – if yes in quest. 2:
Does this lead to limitation in your daily activities? Yes/no
Have these limitiations lasted for 6 months or more? Yes/no
Would you say that you have experienced much limitations or some limitiations? Much limitation/some limitation
……………..

EHSM (Norwegian): Har du hatt vansker med å utføre alminnelige hverdagsaktiviteter siste 6 måneder eller lengre på grunn av helseproblemer? Vil du si at du har hatt …store vansker, moderate vansker, eller ingen vansker? SPØRSMÅLET GJELDER VANSKER SOM HAR VART I HELE SEKSMÅNEDERS PERIODEN ELLER LENGRE.

EHSM: Have you had difficulty performing normal every day activities the past 6 months or longer due to health problems? Would you say you have had .. great difficulty, moderate difficulty or no difficulty at all? THE QUESTION IS ABOUT DIFFICULTIES THAT HAVE LASTED THE WHOLE SIX MONTH PERIOD OR LONGER.

Translation template sheet

LIST OF TERMS	TRANSLATION	BACK-TRANSLATION	COMMENTS
How is your health in general very good good neither good nor bad bad very bad	Hvordan vurderer du helsen din sånn i alminnelighet svært god God verken god eller dårlig Dårlig svært dårlig	How would you say your health is, in general very good good neither good nor poor poor very poor	We assume that the expression "how is your heatlh" in Norwegian will reflect a doctors opinion to a greater extent than when we use the term evaluation which reflects IO's own opinion and underlines the subjective dimension. The scales used for this question varies. In our HIS we use a different term than for instance the introductory question on health status in the copyright Norwegian translation of SF-36. The panel discussions concluded that the term used in the HIS might be conceived as somewhat formal, and that the chosen term is in spoken language today. Old people would perhaps say that the chosen term is somewhat stronger. We are unsure whether this will have any impact on the response pattern.
Do you have .. .. a longstanding illness or healthproblem .. temporary problems ..for at least the past 6 months ..	Har du … … varige sykdommer elller helseproblemer .. forbigående problemer .. de siste 6 månedene eller lenger ..	Do you have .. .. long-standing illnesses or healthproblems .. temporary problems ..in the past six months or longer ..	Plural indicates that we want the respondent to reflect on all possible health problems he/she might have
.. to what extent have you been limited because of a health problem in activities people usually do? Would you say you have been severely limited, limited but not severely or not limited at all .. in activities people usually do severely limited limited, but not severely not limited at all	Har du opplevd at din evne til å utføre vanlige aktiviteter eller gjøremål er blitt begrenset på grunn av helseproblemer ……? Har du opplevd store begrensninger, noe begrensninger, eller ingen begrensninger i det hele tatt i vanlige aktiviteter/gjøremål store begrensninger noe begrensninger ingen begrensninger i det hele tatt	Have you been limited, because of a health problem, in everyday activities or doings……...? Have you been severely limited, somewhat limited, or not limited at all ..in everyday activities .. severely limited somewhat limited not limited at all	We have changed the structure of the question to ensure better flow in Norwegian. "Have you been limited" is translated into something like "Have you experienced limitation due to a health problem". Weight is put on activity ie. activities usually performed in everyday life We will explore the response categories and look at the respondents comprehension of nuances in wording

LIST OF TERMS	TRANSLATION	BACK-TRANSLATION	COMMENTS
Chronic diseases Have you ever had …	**Kroniske sykdommer** Har du eller har du noen gang hatt ..	**Chronic diseases** Do you have or have you ever had …	
Physical and sensory functional limitations Can you clearly see newspaperprint .. Can you distinctly hear .. Can you bend and kneel down .. ..without any difficulty	**Fysiske og sansemessige begrensninger** Kan du se avisskrift tydelig .. Kan du høre tydelig .. Kan du ...bøye deg og sitte på huk .. .. uten vansker	**Physical and sensory limitation** Can you clearly see newspaperprint .. Can you clearly hear … Can you … bend and squat .. .. without difficulty	The panel has decided on the term we use in our HIS. We notice that the translation checker views our choice as formal and old-fashioned. However, these questions will be most relevant for persons of a certain age and we do not concider the choice of terms as problematic.
Personal Care Activities Do you usually have difficulty doing any of these activities .. by yourself .. have enough help Do you need help .. feeding yourself	**Personlig pleie/egenomsorg** Har du vanligvis vansker med å ivareta noen av disse aktivitetene eller gjøremålene .. på egen hånd .. får nok hjelp Trenger du hjelp .. spise	**Personal Care Activities** Do you normally have difficulties doing any of these activities .. on your own .. have sufficient help Do you need help eating	We had a discussion on whether to choose the concept "aktivitet" or "gjøremål" (activity). The concept of "aktivitet" implies more physical input, than the concept of "gjøremål". The latter concept was also concidered as a concept mainly in use among the elderly. We assume that enough and sufficient are interchangable terms in english These questions focus on a person's ability to perform the activities by themselves. The context is already stated in the survey question and we see no reason to repet this
Household Care Actiivities .. preparing meals .. taking care of finances .. if you had to or wanted to Do you have enough help	**Gjøremål i hjemmet** .. lage mat ..betale regninger/husholdnings-økonomi .. dersom du måtte eller ønsket det Får du nok hjelp…	**Household Activities** .. cook .. pay bills/financial matters .. if you had to or wanted to Do you get sufficient help	In Norway "preparing meals" will be understood as a more workintensive activity than "cooking". We have chosen the latter term. The panel has decided upon using a more specific activity "pay bills" in addition to the proposed term "taking care of finances". We assume that enough and sufficient are interchangable terms in English

LIST OF TERMS	TRANSLATION	BACK-TRANSLATION	COMMENTS
Other daily activities Because of your health or the way you felt .. have you had to cut down do you currently have any difficulty with these activities .. school/work activities .. leisure and social activities .. getting out and about	**Andre hverdagsaktiviteter** .. på grunn av helseproblemer. Tenk både på kroppslige og følelses-messige helseproblemer. .. måttet trappe ned Har du noen vansker med disse aktivitetene nå for tiden .. skole- og arbeidsaktiviteter .. fritids og sosiale aktiviteter .. komme deg ut blant folk	**Other everyday activities** Because of your health... Consider both physical and emotional health problems .. have you had to cut down Do you currently have difficulty with these activities .. school and work activities .. leisure and social activities .. getting out and about	A word for word translation does not flow well in Norwegian."Because the way you felt" - is a very general and unspecific expression and will capture day to day changes in mood etc. It is difficult to know what we are actually measuring. We have chosen to use a more general term "because of your health" and then define more precisely "due to both physical and emotional problems".
.. any devices, technical aids or special equipment no longer … for health reasons Do you receive someone's help Do you need more help	.. noen hjelpemidler eller spesialutstyr ikke lenger ….. på grunn av helseproblemer Mottar du hjelp av andre Trenger du mer hjelp	..any aids or special equipment no longer ….. due to health problems Do you get any help from other people .. Do you need more help ..	
Psychological distress and well-being How much .. .. during the past 4 weeks .. felt so down in the dumps, nothing could cheer you up .. felt calm and peaceful .. down-hearted and depressed .. been happy .. feel full of pep ..have a lot of energy .. feel worn out .. feel tired	**Stress og velvære** Hvor stor del av tiden .. .. de siste 4 ukene … .. vært så langt nede at ingenting har kunnet muntre deg opp .. følt deg harmonisk .. følt deg nedfor .. følt deg glad .. følt deg full av tiltakslyst .. hatt mye overskudd .. følt deg sliten .. følt deg trett	**Stress and well-being** How much of the time .. .. in the past four weeks .. felt so down that nothing could cheer you up ..felt peaceful .. down .. felt happy .. felt full of initiative .. had a lot of extra energy .. felt exhausted .. felt tired	The panel has decided to eliminate the double barrelled questions because we are not happy with this solution. This could perhaps be an issue for testing. "Full of pep" and "lot of energy" are very similiar expressions in Norwegian.

LIST OF TERMS	TRANSLATION	BACK-TRANSLATION	COMMENTS
All the time most of the time some of the time a little of the time none of the time	Hele tiden Mesteparten av tiden En del av tiden Litt av tiden Ikke i det hele tatt	All the time most of the time some of the time a little of the time none of the time	In the copyright translation of SF-36 used in our HIS (a version from 1998) is based on a six level response scale. The EMHS version must be a newer version?
happy and interested in life somewhat happy …………….. somewhat unhappy unhappy with little interest in life so unhappy that life is not worthwhile	tilfreds og livsglad nokså tilfreds verken tilfreds eller utilfreds nokså utilfreds utilfreds og uten særlig livsgnist	happy and interested in life somewhat happy neither happy nor unhappy somewhat unhappy unhappy without much interest in life	The panel has decided on using a balanced midpoint in the answerscale and suggests to skip the most negative scenario. We think that the scale is scewed towards the negative alternatives: this answering alternative is not included in the Norwegian translation

Notes from translation checker

Comments on European Health Status Module Translation

Please highlight or ring correct option. Enter any comments about the translation in the boxes. If you have a lot of comments please enlarge the boxes.

What language have you checked? _____Norwegian____________________

.1. (How is your health in general?)
.Was this a true translation of the question and response categories **Yes**/No

.2. (Do you have any longstanding illness or health problem?)
.Was this a true translation of the question and response categories ***Yes*** / *No*

.3. (For at least the past 6 months, to what extent have you been limited because of a health problem in activities people usually do?)
Was this a true translation of the question and response categories ***Yes*** / *No*
*if No please enter reasons in the box below

.4. (Chronic diseases)
. Was this a true translation of the question and response categories ***Yes*** /*No*

.5. (Physical and sensory functional limitations)
. Was this a true translation of the question and response categories *Yes* / ***No***

. Some words used are rather formal or old-fashioned ie. gjøremål /vansker. More modern terms should be used ie. aktiviteter/problemer.

.6. (Personal Care Activities)
.Was this a true translation of the question and response categories *Yes* / ***No***

Only minor change necessary. The word "care" has been translated to "ta vare på", a correct translation, but the connotation is a bit different. "klare seg" is better here. The terminology used is a bit old-fashioned and formal here too, "ivareta", "tilstrekkelig", "gjøremål" and "vansker". 6b. There is not a good correspondence between the question and response categories in the original English version. Eng: I) have help ii) do it myself. Alternatively, the wording of the question should be changed: have help/not have help. This is changed for the better in the Norwegian version

.
.7. (Household Care Activities)
. Was this a true translation of the question and response categories ***Yes*** / *No*

The terminology is a bit formal here too. Recommend a more oral format.
7b. There is not a good correspondence between the question and response categories in the original English version.
Eng. I) done by subject alone ii) sometimes or always done by someone else. This is changed for the better in the Norwegian version

.
.8. (Other daily activities)
. Was this a true translation of the question and response categories *Yes* / *No*

See point 7

The translation is OK, however there are problems with this question - Many of the questions are double barreled . This will make the results hard to analyze and compare.
calm **and** peaceful
down-hearted **and** depressed
Also there is a variation between "Have you felt" (like one time or another the last 4 weeks) and "Did you feel" (when?? a specific point in time??) Why this variation in terminology?

10.

Translation OK, but question is problematic:
Unbalanced scale- 2 positive and 3 negative alternatives (no mid-point)
Alternatives (i) and (iv) happy/unhappy **and** interested/little interest - double barreled
The last alternative (v) makes up a very depressing ending of a questionnaire/question sequence. An interview should not end by asking people if they are suicidal - very unfortunate. Suppose there is need for a concluding question of a different nature.

Final Norwegian translation of questionnaire

European Health Interview Survey 2005

Innledning

Jeg vil gjerne stille deg noen spørsmål om helsen din.

(Mini European Health Module)

5) Hvordan vurderer du helsen din sånn i alminnelighet? Vil du si at den er svært *god, god, verken god eller dårlig, dårlig eller svært dårlig*?

6) Har du noen varige sykdommer eller helseproblemer? *Ja/Nei*

7) Har du hatt vansker med å utføre alminnelige hverdagsaktiviteter siste 6 måneder eller lengre på grunn av helseproblemer? Vil du si at du har hatt… store vansker, moderate vansker, ingen vansker? *Spørsmålet gjelder vansker som har vart i hele seksmånedersperioden eller lengre*.

Kroniske sykdommer
Nå går vi over til noen spørsmål om sykdommer og helseplager.
8) Her er en liste over sykdommer og helseproblemer [GI IO TO KORT MED LISTE OVER SYKDOMMER]
Har du noen gang hatt disse sykdommene? Jeg begynner med [allergisk astma]. Hva med …..
Har en lege noen gang gitt deg denne diagnosen? Ja/nei
Har du hatt denne sykdommen i løpet av de siste 12 månedene? Ja/Nei
a) Har du tatt medisiner eller fått behandling for denne sykdommen i løpet av de siste12 månedene? Ja/Nei

b)

	a) Ja/Nei	b) Ja/Nei	c) Ja/Nei	d) Ja/Nei
Allergisk astma				
Annen astma				
Allergi				
Diabetes/sukkersyke				
Grå stær				
Høyt blodtrykk				
Hjerteinfarkt				
Slag eller hjerneblødning				
Kronisk bronkitt, emfysem				
Reumatisk artritt/artrose/ betennelse i ledd				
Osteoporose/benskjørhet				
Magesår/sår på magesekk eller tolvfingertarm				
Kreft,ondartet svulst inkludert leukemi og lymfekreft				
Migrene eller hyppig hodepine				
Kronisk angst eller depresjon				
Andre sykdommer eller helseproblemer? (spesifiser)				

Fysiske og sansemessige begrensninger

5. De neste spørsmålene gjelder syn, hørsel og bevegelighet[20]. INTERVJUER: REGN IKKE MED FORBIGÅENDE HELSEPROBLEMER

n) Kan du se avistekst tydelig uten briller, kontaktlinser eller andre hjelpemidler[21]? Ja/Nei/Er blind og kan ikke se i det hele tatt. *Visuelle hjelpemidler inkluderer forstørrelsesglass, hjelpemidler for svaksynte (brailleutstyr) og lignende.*
Hvis nei: Kan du se avistekst tydelig med briller, kontaktlinser eller andre hjelpemidler [2]? Ja/Nei/Har ikke briller eller andre hjelpemidler[2]
* *hvis svar "Jeg er blind eller kan ikke se i det hele tatt", gå til c)*

o) Kan du se ansiktet til noen som står 4 meter unna - på andre siden av veien- tydelig uten briller, kontaktlinser eller andre hjelpemidler[2]? Ja/Nei *Visuelle hjelpemidler inkluderer forstørrelsesglass, hjelpemidler for svaksynte (brailleutstyr) og lignende.*

Hvis nei: Kan du se ansiktet til noen som står 4 meter unna (på andre siden av veien) tydelig med briller, kontaktlinser eller andre hjelpemidler[2]? Ja/Nei/Har ikke briller eller andre hjelpemidler[2]

[20] Funksjonelle begrensninger er begrensninger i kroppslige funksjoner. Handlingene/situasjonene er eksempler for å hjelpe IO eller intervjuer til å vurdere funksjonsnivået. I noen tilfeller det aktuelt med tekniske hjelpemidler. Derfor stiller vi to spørsmål; kapasitet med og uten hjelpemidler. I andre tilfeller er det aktuelt med hjelp fra andre personer, men dette skal kodes som "har vansker". Målet er å kartlegge IO's *egen* funksjonsevne.
[21] Visuelle hjelpemidler inkluderer forstørrelsesglass, hjelpemidler for svaksynte (brailleutstyr) og lignende.

p) Kan du høre tydelig hva som blir sagt i en samtale mellom flere personer uten høreapparat eller andre hjelpemidler? Ja*/Nei
Hvis nei: Kan du tydelig høre hva som blir sagt i en samtale mellom flere personer med høreapparat eller andre hjelpemidler? Ja/Nei/Har ikke høreapparat eller andre hjelpemidler
* *hvis svar "Ja, uten høreapparat eller andre hjelpemidler", gå til e)*

q) Kan du høre tydelig hva som blir sagt i en samtale med en annen person uten høreapparat eller andre hjelpemidler? Ja/Nei
Hvis nei: Kan du høre tydelig hva som blir sagt i en samtale med én annen person med høreapparat eller andre hjelpemidler? Ja/Nei/Har ikke høreapparat eller andre hjelpemidler

r) Kan du gå 500 meter uten vansker, uten stokk eller andre hjelpemidler[22]? Ja/Nei
Hvis nei: Kan du gå 500 meter uten vansker, med stokk eller andre hjelpemidler? Ja/Nei/Har ikke hjelpemidler[3]. *Hjelpemidler inkluderer ortopedisk fottøy, spaserstokk, rullator/gåstol, benskinner, krykker og proteser. Hvis det er nødvendig å holde noen i hånden skal det regnes som vansker.*

s) Kan du gå opp og ned en trapp en etasje[23] uten vansker, uten stokk eller andre hjelpemidler[3]? Ja/Nei *Hvis det er nødvendig å støtte seg til et rekkverk, skal det regnes som vansker.*
Hvis nei: Kan du gå opp og ned en trapp uten vansker, med stokk eller andre hjelpemidler[3]? Ja/Nei/Har ikke hjelpemidler[3].

t) Kan du bruke fingrene til å gripe eller håndtere en liten gjenstand, som en penn[5] uten vansker og uten hjelpemidler? Ja/Nei
Hvis nei: Kan du bruke fingrene til å gripe eller håndtere en liten gjenstand, som for eksempel en penn,[5] uten vansker med hjelpemidler? Ja/Nei/Har ingen hjelpemidler.

u) Kan du skru på en kran[6] eller åpne et glass med skrulokk[5] (for eksempel et kaffeglass) uten vansker og uten hjelpemidler? Ja/Nei
Hvis nei: Kan du skru på en kran[5] eller åpne et glass med skrulokk[5] ,(for eksempel et kaffeglass) uten vansker, med hjelpemidler? Ja/Nei/Har ingen hjelpemidler

v) Kan du bite av og tygge hard mat, eks. et fast eple uten vansker? Ja/Nei

w) Kan du strekke ut en arm og håndhilse på noen uten vansker? Ja/Nei

x) Kan du bøye deg og gå ned på knærne[24] uten vansker? Ja/Nei

y) Kan du løfte og bære en full handlepose[1] uten vansker? Ja/Nei
(instruks i spørsmålet: IO må kunne både løfte og bære for å registrere et "ja"

---

[22] Hjelpemidler inkluderer ortopedisk fottøy, spaserstokk, rullator/gåstol, benskinner, krykker og proteser. Hvis det er nødvendig å holde noen i armen skal dette regnes som vansker.

[23] Hvis det er nødvendig å støtte seg til et rekkverk, skal dette regnes som vansker. Antall trappetrinn har ingen betydning, det dreier seg om en gjennomsnittlig trapp.

[5] Vi er ikke ute etter å registrere om IO er i stand til å bruke spesielt tilrettelagte hjelpemidler. I stedet er vi ute etter å registrere bruken av vanlige innretninger/utstyr i hjemmet. Funksjonshemmede kan ha spesialkraner, men spørsmålet dreier seg om en helt vanlig kran, ikke spesielt tilrettelagte typer.

[24] Hvis det er nødvendig med hjelp fra andre, eller hvis man er avhengig av en trillebag når man skal handle, skal dette regnes som vansker.

[Still neste spørsmål til den som svarer på vegne av IO, eller fyll ut selv]
z) Kan IO gjøre seg forstått[25] uten problemer? Ja/Nei

Personlig pleie/egenomsorg

Nå kommer noen spørsmål om hvordan du klarer deg i hverdagen.
INTERVJUER: REGN IKKE MED FORBIGÅENDE VANSKER.

6. Her er en liste over ulike gjøremål [Vis kort].

e) Har du vanligvis[26] problemer med å utføre dette selv? Ja/Nei/Usikker
Jeg begynner med [å spise]
[Hvis nei på alle – gå til neste bolk. Hvis ja eller usikker – spør]

f) Får du vanligvis[1] hjelp av andre eller gjør du dette selv?
(i) Får hjelp[27] [gå til c)]
(ii) Gjør det selv [gå til d)]

g) Får du nok hjelp av andre til å klare dette? Ja/nei
[Gå til neste aktivitet]

h) Trenger du hjelp av andre til å klare dette? Ja/nei

		Hvis svar på a) er ja eller vet ikke/usikker		
	a) Ja/nei/usikker	b) Får hjelp/ får ikke hjelp/gjør på egen hånd	c) Får nok hjelp Ja/nei	d) Trenger hjelp Ja/nei
Spise				
Sette deg/reise deg fra en seng eller en stol				
Kle på /kle av deg				
Bruke toalettet[28]				
Bade eller dusje				

[25] Ta kun hensyn til fysiske forhold , og ikke vansker som skyldes språkforskjeller mellom IO, den som svarer for IO, eller intervjueren.
[26] Vanligvis er tatt med for å utelate forbigående vansker.
[27] Inkluderer når aktiviteten/gjøremålet utføres med hjelp av andre, for eksempel at respondenten blir matet.
[28] Omfatter det å sette seg på og reise seg fra toalettet, ta av og på klærne og holde seg ren, eller å ordne med kateter eller kolostomi.

Husholdningsaktiviteter/ gjøremål i hjemmet

Nå vil jeg at du skal tenke på ulike aktiviteter og dagligdagse gjøremål.
INTERVJUER: REGN IKKE MED FORBIGÅENDE VANSKER.

7. Her er en liste over ulike gjøremål [Vis kort].

e) Har du vanligvis[29] problemer med å utføre noen av disse aktivitetene selv[30]? Ja/Nei/Usikker

[Hvis nei på alle – gå til neste bolk. Når ja eller usikker – spør]

f) [Lager du mat] selv eller blir det av og til eller alltid gjort av andre?
(i) Gjør det selv [gå til c)]
(ii) Blir av og til eller alltid gjort av andre[31] [gå til d)]

g) Trenger du hjelp av andre til å [lage mat]? Ja/nei
[gå til neste aktivitet]

h) Kan du [lage mat] selv dersom du måtte eller ønsket det? Ja/Nei[32] [Hvis ja, gå til neste aktivitet]

e) Får du nok hjelp til å [lage mat][33]? Ja/nei

		Hvis svar på a) er ja eller usikker			
	a) Ja/nei/ usikker	b) Gjør det selv eller blir av og til eller alltid gjort av andre	c) trenger hjelp Ja/nei	d) kunne hvis måtte eller ønsket det Ja/nei	e) nok hjelp Ja/nei
Lage mat					
Bruke telefonen					
Gjøre innkjøp					
Vaske klær					
Lett husarbeid					
Tyngre husarbeid					
Betale regninger/ holde orden på økonomien					

[29] Vanligvis er tatt med for å utelate midlertidige problemer.
[30] Hvis respondenten sier at han/hun aldri gjør den aktuelle oppgaven; noter svaret som "vet ikke/usikker" og gå videre til neste spørsmål.
[31] Dette kan omfatte deling av aktiviteter innad i husholdet (i forhold til ektefelle/partner eller andre husholdsmedlemmer), for eksempel deler av gjøremålet eller noen ganger hele gjøremålet.
[32] Dette betyr: "Jeg kan ikke gjøre det på egen hånd" eller "Jeg *kan* gjøre dette på egen hånd, men med vansker".
[33] Dette spørsmålet skal synliggjøre utilfredsstilte behov, eller behov for ytterligere hjelp for å utføre gjøremålet/aktiviteten til personens tilfredshet.

Andre hverdagsaktiviteter

8. Nå kommer noen spørsmål om andre hverdagsaktiviteter. INTERVJUER: REGN IKKE MED FORBIGÅENDE VANSKER

8.4 Har du måttet trappe ned på[34] *aktiviteter i forbindelse med skole eller lønnet arbeid på grunn av varige fysiske eller psykiske helseproblemer*?
(i) Ja
(ii) Nei
(iii) UAKTUELT - Aldri vært på skole/i arbeid av helsemessige årsaker
(iv) UAKTUELT - Aldri vært på skole/i arbeid av andre årsaker enn helse

[HVIS (iii) ELLER (iv) GÅ TIL NESTE AKTIVITET = 8.2]

8.1.a Har du for tiden noen vansker med å arbeide eller gjøre skolearbeid?

(i) Ja, jeg har for tiden vansker med å utføre skole- eller arbeidsaktiviteter
(ii) Nei, jeg har for tiden ingen vansker med skole- eller arbeidsaktiviteter
(iii) UAKTUELT - Er ikke lenger på skole /i arbeid av helsemessige årsaker

[HVIS (i) JA GÅ TIL B, ELLERS GÅ TIL NESTE AKTIVITET = 8.2]

8.1.b Bruker du noen hjelpemidler eller spesialutstyr for å kunne arbeide eller gjøre skolearbeid?
Ja/Nei

8.1.c Får du hjelp[35] av andre for å kunne arbeide eller gjøre skolearbeid?
Ja/Nei
Eksempler: støttekontakt eller personlig assistent
8.1.d Trenger du *mer hjelp*[2] for å kunne arbeide eller gjøre skolearbeid?
Ja/Nei

8.5 Har du måttet redusere dine vanlige *fritids- eller sosiale aktiviteter* på grunn av varige fysiske eller psykiske helseproblemer. (i) Ja (*ii*) Nei *(iii) Deltar ikke i fritids-/sosiale aktiviteter*
8.2.a Har du for tiden noen vansker med å delta på slike aktiviteter?
(i) Ja
(ii) Nei

[HVIS (i) JA GÅ TIL B, ELLERS GÅ TIL NESTE AKTIVITET = 8.3]

8.2.b Bruker du noen hjelpemidler eller spesialutstyr[36] for å delta i fritids- eller sosiale aktiviteter? Ja/Nei
Spesialutstyr inkluderer rullestol, spesialkjøretøy mv.
8.2.c Får du hjelp[37] for å kunne delta på dette?
Ja/Nei

---

[34] Dersom IO er arbeidsledig og arbeidssøkende, alderspensjonist, har bestemt seg for *ikke* å delta i arbeidsmarkedet eller er hjemmeværende med omsorgsansvar: Skal kodes som (ii) Nei – jeg har ikke måttet trappe ned på aktiviteter.

[35] Hjelp kan eksempelvis inkludere en ekstra medarbeider på en arbeidsplass, spesialtilpasset arbeidsredskap på en fabrikk, en virksomhet som av helseårsaker tilrettelegger for fleksibel arbeidstid eller fleksible kontorløsninger, en hjelpelærer eller en privatlærer. Vi ønsker å vite hvorvidt IO faktisk mottar hjelp, ikke hva slags hjelp.

[36] Inkluder rullestol, spesialkjøretøy osv.

[37] Hjelp kan eksempelvis inkludere en ekstra medarbeider på en arbeidsplass, spesialtilpasset arbeidsredskap på en fabrikk, en virksomhet som av helseårsaker tilrettelegger for fleksibel arbeidstid eller fleksible kontorløsninger, en hjelpelærer eller en privatlærer. Vi ønsker å vite hvorvidt IO faktisk mottar hjelp, ikke hva slags hjelp.

Hjelp kan eksempelvis inkludere en ekstra medarbeider på en arbeidsplass, spesialtilpasset arbeidsredskap på en fabrikk, en virksomhet som av helsemessige årsaker tilrettelegger for fleksibel arbeidstid eller fleksible kontorløsninger, en hjelpelærer eller en privatlærer.

8.2.d Trenger du *mer hjelp*[2] for å kunne delta på dette?
Ja/Nei

8.6 Har du måttet redusere på det å komme deg ut, og bevege deg fra sted til sted på grunn av varige fysiske eller psykiske helseproblemer. (i) Ja (ii) Nei
8.3.a Har du for tiden noen vansker med å komme deg ut, og bevege deg fra sted til sted?
(i) Ja
(ii) Nei

[HVIS (i) JA GÅ TIL B, ELLERS GÅ TIL NESTE BOLK (9)]

8.3.b Bruker du noen hjelpemidler eller spesialutstyr[1] for å komme deg ut, og bevege deg fra sted til sted?
Ja/Nei
Spesialutstyr inkluderer rullestol, spesialkjøretøy mv.

8.3.c Får du hjelp[38] av andre for å være i stand til å komme deg ut, og bevege deg fra sted til sted?
Ja/Nei

8.3.d Trenger du *mer hjelp* for å være i stand til å komme deg ut, og bevege deg fra sted til sted?
Ja/Nei

Stress og velvære

Til slutt vil jeg spørre deg om følelsene dine og humøret ditt de siste fire ukene.

9. Hvor stor del av tiden har du [*følt deg veldig nervøs]* de siste fire ukene? GI KORT MED FØLGENDE SVARALTERNATIV:
Hele tiden, mesteparten av tiden, noe av tiden, litt av tiden, ikke i det hele tatt

[REPETER FOR ALLE DE VIDERE TEMAENE:]

vært så langt nede at ingenting har kunnet muntre deg opp?
følt deg harmonisk?
følt deg motløs?
følt deg glad?
følt deg full av tiltakslyst?
hatt mye overskudd?
følt deg utslitt?
følt deg trett?

[38] Hjelp kan eksempelvis inkludere en ekstra medarbeider på en arbeidsplass, spesialtilpasset arbeidsredskap på en fabrikk, en virksomhet som av helseårsaker tilrettelegger for fleksibel arbeidstid eller fleksible kontorløsninger, en hjelpelærer eller en privatlærer. Vi ønsker å vite hvorvidt IO faktisk mottar hjelp, ikke hva slags hjelp.

10. Ser du deg selv som en person som vanligvis er…:

(i) tilfreds og livsglad
(ii) nokså tilfreds
(iii) verken tilfreds eller utilfreds
(iv) nokså utilfreds
(v) utilfreds og lite livsglad

11. Har du noen kommentar eller er det noe du ønsker å tilføye til slutt?

[TAKK IO]

Letter of invitation to the cognitive interviews

Oslo, 22.08.2005
Your ref.: , Our ref.:
Executive Officer: Anne Sundvoll, phone 21 09 42 31
Division for Data Collection Methods

Invitation to a test interview!

In connection with the development of a European Health Survey, Statistics Norway (SSB) has translated questions about health and health problems into Norwegian. We are now going to test how most people in Norway perceive the questions.

We therefore wish to invite you to our premises in the centre of Oslo for an in-depth interview. In this interview, you will be asked the questions in this translated questionnaire. We want feedback from you on whether you are able to understand specific concepts and sequences in the question text and how you would go about answering the questions.

We hope you can spare some time to participate. The in-depth interview will last for about 1-1 ½ hours. Coffee and a snack will be served. You will receive a gift voucher for NOK 400 for assisting us.

The staff in Statistic Norway has an obligation to respect privacy, and handle and store information with confidentiality. The information we gather through the in-depth interviews will be treated according to laws and regulations, and will only be used in the work of making our survey a better one.

If you have any questions in connection with the interview, please contact Statistics Norway by Anne Sundvoll
E-mail: anne.sundvoll@ssb.no, or phone 21 09 42 31 (mobile 400 20 382).

Best regards,

Gustav Haraldsen
Head of division

Anne Sundvoll
Senior adviser

Annex 7

Interview guide for cognitive testing

1. General documentation

Task:	User testing of the health status questionnaire supplied by Eurostat
Number or test persons:	12
Criteria for testing:	Recruiting people on disability benefits/old-age pensioners and young immigrants
Duration:	1- 1 1/2 hours
Goal:	To test comprehension of questions - wording and basic health concepts
Gear:	Camera, videotape, questionnaire, cards

2. Introduction

2.1 Welcome

- Have you ever participated in any other surveys from Statistics Norway?
- Serve coffee/tea, cake
- Give a more thorough presentation:
  - Who is performing the work and why. Orientation about the project
  - What kind of work we usually involve in

2.2 Presentation of the study object and methods/technique used

2.2.1 Background

- Help identify weaknesses and possible problems in the question-answer process.
- Document and report back to Eurostat.

2.2.2 Practical matters

- It is impossible when developing questionnaires to have the whole overview of how the questions are comprehended by different groups in the population.
- You are one of several test persons
- Inform about how the interview is organised. Focus first on
  - different concepts used in the questionnaire
  - Warm up in thinking aloud (example)
  - Go through the questionnaire – question by question
  - The discussion will last about 1 to 1 ½ hours
  - Inform about gift voucher for NOK 400
  - Questions so far?

2.3 Formalities

- Test person, a secretary, a moderator to lead the discussion, and in some interviews an observer
- The discussion will be videotaped, in order for us to have the opportunity to go back and refresh our memory on comments given, if needed:
    - makes it easier for us to analyze
    - can consult the source if necessary
    - the videotape will be deleted when we are finished, at latest after one month
    - you will probably forget that there is a camera present as soon as we get going
    - written material used during the interview will be destroyed as soon as the testing is finished
    - questions? Are you ready to get started?

3. Card sorting and thinking aloud (15-20 min)

3.1 Cards with concepts

- We will now give you cards with different concepts. For every concept I would like you to tell me what you understand with the concepts:

Your health in general
Long standing health problems
Temporary health problems
Bodily health problems
Emotional health problems
Physical health problems
Mental health problems

- I will now give you cards with illness and/or health problems. Moderator puts the cards across the table. Can you describe these diagnoses or health problems in your own words?

Allergic asthma
Asthma (excluding asthma)
Allergy (excluding allergic asthma)
Diabetes
Cataract
High blood pressure (hypertension)
Heart attack
Stroke, cerebral haemorrhage
Chronic bronchitis, emphysema
Rheumatoid arthritis/arthrosis
Osteoporosis
Gastric or duodenal ulcer
Cancer (malignant tumour including leukaemia and lymphoma)
Migraine or frequent headache
Chronic anxiety or depression

- I will now give you some cards with concept describing emotional states. Moderator: I want you to sort the cards, and describe every state to me.

To be in harmony (calm and peaceful)
To be happy
Feeling full of pep
Have a lot of energy
To be happy and interested in life

To feel down in the dumps
To be tired
To feel worn out
To feel very nervous
To feel downhearted and depressed
To be unhappy with little interest in life

- Moderator: Try to organise the cards I hand you in relation to each other on the table in front of you - as you find natural

3.1 Going through the questionnaire question by question by thinking aloud

- Give a warm up example so that the test person understands what we are about to do
- Read question by question and ask test person to answer while he/she tries to reason aloud about how he/she reached the answer. The purpose is to uncover possible problems in the questionnaire
- The moderator follows up with spontaneous probing. Asks for elaboration, and asks respondent to inform about the cognitive process of reaching the answer given.

4. Follow-up questions (10 min.)

- What kind of impression do you have of the interview?
- Were there questions that were difficult to answer?
- Were there questions you felt were sensitive?

5. Summing up (5 min.)

- The secretary gives a brief summary of the main points
- Have we understood you correctly?
- Do you have any comments or something you would like to add?

Annex 8

Advance letter announcing the field test

Oslo, November 21, 2005
Executive Officer: Bjørn Are Holth
Division for Sample Surveys

Pilot Survey on Health

Between November 28 and December 16, an interviewer from Statistics Norway will contact you about a survey about health. The survey is a part of a larger international project. Statistics Norway is carrying out the interviews in Norway. You are one of 400 persons selected to participate in a small pilot survey. The sample is drawn from the National Population Register. The sample constitutes a representative picture of the population in Norway aged 18 to 79 years. **The main subject areas covered by the survey are health and need for personal care.** The interviewer will your ask questions about health and functioning. The results from the survey will be used in work developing and refining methods and questions in the area. Your participation will be of great help in future development work.

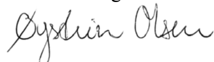
The interviewers and the staff in Statistics Norway are committed by professional confidentiality. The supervisor of protection of privacy matters, approved by The Data Inspectorate, controls that laws and regulations concerning privacy matters are respected. Participation in the survey is voluntary. To ensure results of high quality, it is of great importance that the persons who constitute the sample are willing to participate.

To shorten the interview, we will merge survey data with register data on education and income. The technical personnel merging the data files, are not able to identify create a connection between interview persons and register information.

One year after termination of data collection, all names and addresses are removed from the survey data file. The interviewed persons' official ID-number will be replaced by a number code that makes it impossible to link the survey data with register data. We will never publish or pass on information given in the interviews.

If you have questions, you are welcome to contact us, free phone number: 800 83 028, or on e-mail: feltvakten@ssb.no. More general questions, about how privacy matters and confidentiality are handled in Statistics Norway, can be directed to our supervisor of protection of privacy matters, phone number 21 09 000 or e-mail personvernombud@ssb.no.

With kind regards



Øystein Olsen
Director General

Ole Sandvik
Head of division

Statistisk sentralbyrå
Statistics Norway

Test survey on health, Eurostat 2005

0721-0

Instructions

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Interviewer coordinator:	Gretha Røyne	21 09 46 97
Programming:	Hilde Degerdal	21 09 42 01
Sample:	Glenn-Erik Wangen	21 09 46 78
Planner:	Bjørn-Are Holth	21 09 44 73

1. About the survey

The statistical office in EU, Eurostat, has developed a questionnaire about health and disability for use in different European countries. The questionnaire is one of the modules in the European Health Interview Survey that is under development. Eurostat has commissioned Statistics Norway to translate, adjust and now test the module on health status in Norway. In Statistics Norway, Division for Health statistics (by Jorun Ramm) and Division for Data Collection (by Anne Sundvoll) are responsible for adjusting and testing the questionnaire. The test work is comprised of two parts with different methodological approaches. One part of the testing is qualitative interviews (cognitive interviews with selected respondents). The other part is a small-scale field test. In order to collect experiences from you, as the interviewer, concerning answering behaviour during the interviews we introduce behavioural coding as a method to structure this information. In this way, we will get a better picture of how the questionnaire functions. We want to gather all of you performing the pilot to a joint telephone conference some time in week 50 for feedback from you. The data you send will be analyzed.

1.1. What is this survey about?

This survey covers health and disability issues. The introductory part contains a general mapping of respondents' health. This is followed by a sequence on chronic or long-standing illness or health problems. Further, there are questions on vision, hearing and mobility. At the end of the questionnaire, there are questions on personal care and limitations related to activities at home, in work life/school and in social settings.

There are many countries doing parallel work as Norway i.e. testing of the same questionnaire. We have established contact with Finland. Results from all the countries will be presented on a joint Eurostat meeting in 2006. By conducting the test interviews and doing the behavioural coding you give an important contribution to the final report.

1.2. Object

Object for the field test
We want a total of 40 performed interviews by face-to-face interviews (visits). That means that every interviewer must perform five interviews each during the field period.

How to motivate the respondent
This survey is a part of a larger European development project. It is very important to develop good instruments and measures on health status and different types of health problems. This test will give an important contribution to knowledge about how well we have succeeded in developing these measures and how well we have succeeded in adjusting these questions culturally to a Norwegian way of thinking and society. The data will be sent Eurostat together with the qualitative dataset that we collect from the in-depth interviews with respondents in selected groups. It is important that we get sufficient data to generate knowledge on how we in a best possible way should formulate questions that capture health problems among Norwegians. Those who have been selected to participate have a unique opportunity to contribute in making the question set as well functioning as possible.

2. Carrying out the survey

2.1. Sample

The gross sample for the pilot is 400 individuals. The sample is selected according to the selection plan of Statistics Norway, but is limited to areas in and around the major cities of Oslo, Trondheim and Bergen. The universe consists of persons between 18 and 79 years of age. This means that all that have their 18th birthday within the end of this calendar year may be selected.

2.2. Method for collection: face to face and use of behavioural coding

All interviews shall be conducted as *visits*. This is because you will do a behavioural coding of the respondent's behaviour during the interview. We only conduct interviews in and around the major cities - Oslo, Trondheim and Bergen.

For each question, it will pop up a list of seven behavioural codes. These **shall not be read aloud**, but are codes meant for you so that you can code the respondent's behaviour while they are trying to find an answer to the question. The codes to use are the following

1) IP asks for the question to be **read again**

2) IP asks for an **explanation** or clarification of the question

3) IP **misunderstands** the question, (and answers in a manner that demonstrates this)

4) IP perceives the questions as **sensitive**

5) IP uses **long time** to find an answer

6) IP seems **unsure** about the answer given

7) IP gives an **imprecise answer** that does not correspond with the answering categories

You assess or make a judgment of the respondent's way of answering and **mark off the relevant behavioural codes** for the "codes" that describe the respondent's behaviour after each question in the questionnaire. Then you must then press <Enter> to change to a new window screen where you mark off the answer to the question as usual, when performing ordinary interviews.

If none of the codes are relevant for a question, do not mark off any of the codes in the list, but just press <Enter>, and register the answer to the question as usual, then proceed to the next question. If there are special incidents, or if the respondent has problems or difficulties that you would like to give information about, you can make a free text comment. This is optional, but we will read all the comments carefully and process the knowledge you write about the questions in the interview.

We have chosen not to inform the respondents about the behavioural coding because we want the interview environment to be realistic, and more or less similar to an ordinary interview. This is why you have to practise on coding in advance, so that you are able to do the coding relatively fast. You will do the behavioural coding parallel with the registration of the answer the respondent gives to the question. Codes 1 to 4 describe how the respondent interprets and comprehend the question. Codes 5 to 7 describe retrieval and judgement of information and formulation of the answer.

2.3. Interview time

The interview time is estimated to approx. 60 minutes. This estimation includes the time you use doing the behavioural coding.

2.4. Field period

The field period is from 28. November til 18. Desember 2005.

2.5. Letter to respondents

A letter of invitation is sent by mail from Statistics Norway in week 47. The letter informs the person is selected for participation in a survey, but that not all will be contacted for an interview.

2.6. Information about the respondents

Your respondents are marked with an X in the list.

2.7. Preparatory time

You will be paid 2 hours for preparation, i.e. to read the instructions and perform a test interview. You can charge the costs on us. In addition, there will be time reserved for telephone conferences, ½ hour in the preparation phase and 1 hour for feedback after the data collection is completed. These costs can also be charged on us without you asking specifically.

2.8. Planning and performing the interviews

All will perform five interviews each. You yourselves chose from your list of 50 potential respondents. If any of the respondents that are contacted cannot/will not participate, send in the report form on these in addition to the five interviews you perform.

2.9. What happens with the data – merging with registers, anonymisation, delision

By the end of 2006, we will delete all names and addresses from the files, so that identification of the individual respondent is no longer possible. This information is given in the letter to the respondents.

2.10. Non response and transitions

The codes for non-response and transitions shall be used.

2.11. Initial contact with respondent and introductory text

Proposed introductory text:

> Good evening, my name is (...interviewers name....) I am calling from Statistics Norway, is it possible to talk to (.....respondent's name....)?
> We have recently sent you a letter about you being selected for participation in a pilot survey about health. Have you received the letter? We would like to visit you for an interview. Do you have an opportunity one of the coming days?
> Or also.......
> We will assure you that all the answers you give in the interview will be treated in confidence, and that it will never come out what you have answered to any of the questions.

Of course, you can make up your own introductory text. Be careful it is important that the content is the same and that the meaning is captured and communicated the respondent. The most important thing is that the respondent agrees to do an interview.

3. More general information about the questionnaire

3.1. Feedback on the questionnaire and question formulations

Programming errors you detect must be reported back to Statistics Norway as soon as possible, so that we can correct them. Remember not to give such information in the free text comments. These will not be read before after the data collection is finished.

Other questions or comments to the questionnaire can be directed to Grete Røyne during the whole field period. The things we cannot change while in the field, we will comment in an extra instruction if needed. All comments and suggestions are useful for the final report we are going to write for Eurostat.

3.2. Instructions to specific questions

Question 1 – How do you is your health in general....
We refer to health in general, not current health. The question is not meant to measure temporary of passing health problems.

Question 2 – Do you have any longstanding illness or health problems?
All problems related to bad health shall be counted in, not only diseases.

Question 3 – For at least the past six months have you difficulty performing ordinary every day activities .. because of health problems?
We are only referring to health related problems as cause – not limitations or difficulties due to financial, cultural or other non-health reasons.

Question 5a – Can you clearly see newspaper print.....
We are referring to seeing, to be able to see. Not whether the respondent is able to read.

Question 7a – Do you usually have problems with ….. activity....?

Cooking?
We are referring to preparing own food. It in doubt, use the code ”unsure”.

Use the telephone?
It refers to the telephone the respondent normally use..

From question 8.1 – Have you had to cut down on work...? 8.2. and 8.3.
If respondent is on rehabilitation after illenss, it is up to the respondent to judge if this condition shall count as temporary or longstanding. We are mapping need for help. We understand that the respondent might feel reduced after an illness, without having an actual need for help. That means that the questions will not be suited for all.

Show cards

CARD 1

1. Allergic asthma
2. Other asthma
3. Allergy
4. Diabetes
5. Cataract
6. High blood pressure
7. Heart attack
8. Stroke, cerebral haemorrhage
9. Chronic bronchitis, emphysema
10. Rheumatoid arthritis (arthrosis)
11. Osteoporosis
12. Gastric or duodenal ulcer
13. Cancer (malignant tumour, leukaemia or lymphoma)
14. Migraine or frequent headache
15. Chronic anxiety or depression
16. Other diseases or health problems

CARD 2

1. Feed yourself

2. Getting in and out of bed or chair

3. Dressing and undressing

4. Using toilets

5. Bathing or showering

CARD 3

1. Preparing meals
2. Using the telephone
3. Shopping
4. Doing laundry
5. Light housework
6. Occational heavy housework
7. Taking care of finances

CARD 4

1. All the time
2. Most of the time
3. Some of the time
4. A little of the time
5. None of the time

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