Manual

Short Form- Health and Labour Questionnaire
(SF-HLQ)

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1. Introduction

Background

In economic evaluations both costs and benefits of medical interventions are examined. The guidelines established for pharmaco-economic research stipulate that an economic evaluation be performed from a societal perspective, i.e., that all costs and benefits be included in the analysis, regardless of by whom the costs are borne or to whom the benefits accrue (1). In healthcare economics, costs are distinguished into direct and indirect costs. These are subsequently allocated to costs incurred within and outside the healthcare system, and may be shown as follows:

Figure 1. Distribution of costs in healthcare economics

<table>
<thead>
<tr>
<th></th>
<th>Inside the healthcare system</th>
<th>Outside the healthcare system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct costs</td>
<td>Medical costs</td>
<td>Patient costs</td>
</tr>
<tr>
<td>Indirect costs</td>
<td>Costs during life years gained</td>
<td>Production losses</td>
</tr>
</tbody>
</table>

Direct costs mainly consist of the costs of medical resources that are used, the medical consumption. Indirect non-medical costs are made up of costs of productivity losses caused by absence from work due to health problems. The questionnaire discussed in this manual concentrates on the assessment of productivity losses.

Costs in economic evaluations are valued in accordance with the concept of opportunity costs. Meaning that scarcity of resources necessitates trade-offs and, consequently, utilisation of resources for a certain target implies that an (next best) alternative for these resources must be given up.

Human resources (labour time) can be utilised for paid work as well as for unpaid work. E.g. individuals may prefer to spend less time on paid work thus resulting in extra time for leisure or volunteer activities, or family care. Productivity losses of paid work may be caused by absence from work due to health problems. This absence from work may be of short or long duration. Next to this, there are possibly productivity losses without absenteeism. E.g. someone is present at work despite a rising migraine. This health condition may cause a situation in which the amount of work that is realized after a working day is lower than usual. In these cases efficiency losses occur.
The Short Form Health and Labour Questionnaire (SF-HLQ) is a generic and validated measurement instrument to collect data of productivity losses related to health problems in individuals with paid or unpaid work.

The next paragraph discusses general features of the questionnaire and presents some remarks for the utilization of the questionnaire. In chapter 2 a comprehensive description is given of the questions of the SF-HLQ and methods for the registration and valuation of data. The SF-HLQ and the corresponding codebook are supplemented in appendices I and II respectively. In chapter 3 the user conditions are reported and a user registration form is attached in appendix III.

The Questionnaire

The SF-HLQ is suitable for evaluations in various diseases (episodic and chronic conditions, physical and mental disorders) and is completed by the patients themselves. The standard version of the SF-HLQ inquires about productivity losses that are caused by health problems in general. Depending on the disorder questions may be aimed at productivity losses caused by a specific disorder. This is only possible in situations that respondents are expected to be able to make a distinction between the target disorder and the remaining health problems and the distinction is essential within the study design. Fundamentally, if patients are randomised there is no need of this distinction.

The SF-HLQ consists of three modules (absenteeism from paid work, production losses without absenteeism from paid work and hindrance in the performance of paid and unpaid work). Possibly one of these modules does not apply in case of a specific disorder, and the module can simply be left out. For example, supposing that a study aims to evaluate the treatment of an acute appendicitis. It is implausible that efficiency losses are an important part of the indirect costs. In this case the module of productivity losses without absenteeism can be left out. This is contrary to a study in which the treatment in patients with migraine is evaluated. In spite of the inconvenience caused by this condition patients may tend to go to work, but productivity may be distracted.

At the end of the questionnaire a section with general questions is added. Co-morbidities may play an important role in specific disorders, e.g. chronic or emotional health problems, for the volume of productivity losses. In these cases we recommend to collect data on co morbidity. A list of 27 chronic disorders is included as is used by the Dutch Central Office of Statistics in the general section. Additionally, in this section questions regarding background variables (including sex, date of birth) are included. This section is required to be filled in only once, even if the measurements are performed more than once.
Random sample size, effect size and measurement moments

In an economic evaluation, the minimum group size and number of measurement moments depends on a variety of factors. The number of respondents in a random sample depends on the expected differences in healthcare consumption and production losses between the experimental group and the control group. Furthermore, next to costs, other effect measurements are included in an analysis of this kind (such as clinical effects, quality of life) which may be relevant to the number of respondents to be included. The recall period in the SF-HLQ is one month. However, if the respondents were absent for the complete month because of health-related problems, they are asked when this period of absence had started. Hence, data on long-term absence is collected.

When calculating the costs, it was assumed that the period of time during which the measurement was carried out, was representative for the period between two measurement moments. The optimum length of time between two measurement moments, number of measurements and number of respondents required depends on the difference in costs (and other effect measurements), the expected course of the disease and the treatment. Therefore it may be desirable to adjust the recall-period. However, longer recall-periods may induce chances of errors.

Implementation

The SF-HLQ can be conducted in writing and orally. The following options are available:

- The respondent completes the SF-HLQ independently; the questionnaire is sent by e-mail or mail, or is available through the website, together with written instructions on how to complete this.

- The respondent completes the SF-HLQ independently, after receiving oral instructions, by telephone or otherwise, on how to do so.

- Lastly, the SF-HLQ may be conducted by an interviewer, either by telephone or during a visit to the respondent’s home.
2. SF-HLQ: modules, scores and valuations

The SF-HLQ consists of three modules (absenteeism from paid work, production losses without absenteeism from paid work and hindrance in the performance of paid and unpaid work). The questionnaire uses the general term ‘health problems’. If preferable the questionnaire can also be made more disease-specific by distinguishing between the ‘target disorder’ and ‘other health problems’. In each case the questions pertain to the past month, except for Part 2 of question two, which asks about long absence from work. A ‘recall’ period of one month was selected, as studies show that the accuracy of the information is dependent on the period to which the questions pertain (2).

The three modules of the SF-HLQ are discussed in the following paragraphs.

Module 1: Absence from paid work

Questions 1 and 2 of Part I of the questionnaire jointly make up module 1 of the SF-HLQ.

The respondent is first asked whether or not he or she holds a paid job. A respondent with a paid job is asked about the number of days and hours he or she performs paid work. Next, they are asked about the number of work days lost due to health problems. If this number should exceed the period of one month, respondents are asked to state when they reported sick.

Scoring module 1

To calculate the indirect costs, the days of absenteeism are measured and valued as follows. The days of absenteeism over the past month are determined per respondent. If this period is shorter than the past month, the number of days of absenteeism for the past month can be based on the answer to the first part of question 2. Hence, the minimum number of days is 0, and the maximum 31. Based on the response to question 1, the number of hours worked per day can be determined, adjusted if necessary for part-time work in connection with the valuation of production losses. If one month is indeed representative for the absenteeism rate throughout the year, the number of days of absenteeism per year is subsequently calculated by multiplying the result by 12. If the respondent reports having missed more than a month of work, the number of days lost is counted from the day the respondent reported sick. Obviously, when calculating production losses, the number of hours worked per working week and the number of work days will again be taken into account.
Valuation module 1

There are two methods to value the measured absenteeism from paid work days. First, information on net income which is derived by question 8 of the SF-HIQ can be used to value the days of absence from work. The validity of these data should be checked. Outliers can be checked on the basis of the questions about the respondent’s occupation (question 1). Alternatively, the valuation may also be performed on the basis of the average production value per worker for the Netherlands. Desirably, production values by age and sex can be applied if (see table 2). A full work day is eight hours. The preferred method depends on the aim of the study and the study design.

For the determination of the value of lost production due to health problems, different approaches may be chosen. Two important alternative starting points are available (3). We recommend applying the method known as the ‘friction cost’ method for the valuation of production losses, as this is based on the actual production losses viewed from a societal perspective. This method is more in line with the methodology applied in economic evaluation (4). The method is based on the idea that everyone in the production process is replaceable. The indirect costs are thus limited to the production losses suffered in the period until the vacancy has been filled. The length of this so-called ‘friction period’ is dependent on the pace at which the vacancy is able to be filled, which in turn depends on, for example, the unemployment rate and the degree of mobility in the labor market. The length of time that is necessary to fill the vacancy can be taken as an indication of the friction period. According to the ‘human capital’ method the total production value to be generated by a person potentially last during a lifetime (until retirement). Consequently, the human capital approach generates potential rather than actual productivity costs, leading to unrealistically estimates of high productivity costs.(5)

For example, in case of an employee who is off work for, say, six months as a consequence of a hernia the indirect costs according to the friction cost method will be limited to any lost production time during the friction period. However, according to the human capital method the indirect costs are equal to this patient’s production value throughout this entire period (e.g. six months) while this approach ignores the possibility of replacement of long-term absenteeism.

The difference in volume of indirect costs resulting from application of either the friction costs or human capital method will increase the longer the period of absenteeism.

The second part of question 2 was added to obtain additional information about the length of the period of absenteeism if this should extend beyond the period of one month. If the days of absenteeism exceed the length of the friction period, production losses will remain confined to the friction period. On the basis of data on the estimated vacancy period of 2008, the friction period was calculated at 23 weeks, or 160 days. (6)
**Costs per friction period**

Table 2 shows the average costs per hour for 2008 and 2009 in the Netherlands, by age and sex. These costs have been calculated based on the average added net value per worker. These are averages for the entire group of employed persons in the relevant class, given the existing individual differences in income, labor productivity and number of hours worked. Studies have shown that a decrease in the amount of time worked (e.g. due to absenteeism) yields a less than proportional decrease in productivity (7, 8). The figures presented in table 2 are corrected for this elasticity of labour time. For periods of absenteeism (measured in calendar days, including weekends and holidays) that are shorter than the friction period, the productivity costs are calculated in the following manner. Take, for example, the case of a 37 year-old man who was off work for two weeks (14 days). A year is held to be made up of an average of 1540 working hours. The 2009 productivity costs are thus: 2/52 * 1540 hours * € 34.03 = € 2015.62

Please refer to Koopmanschap and Rutten for further specifics and information on calculating friction costs (3).

<table>
<thead>
<tr>
<th>Age</th>
<th>2008</th>
<th></th>
<th></th>
<th>2009*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Men</td>
<td>Women</td>
<td>Total</td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>15-19 years</td>
<td>9.02</td>
<td>9.39</td>
<td>8.52</td>
<td>9.27</td>
<td>9.65</td>
<td>8.76</td>
</tr>
<tr>
<td>20-24 years</td>
<td>17.03</td>
<td>17.27</td>
<td>16.72</td>
<td>17.51</td>
<td>17.75</td>
<td>17.18</td>
</tr>
<tr>
<td>25-29 years</td>
<td>23.28</td>
<td>23.53</td>
<td>22.98</td>
<td>23.93</td>
<td>24.19</td>
<td>23.62</td>
</tr>
<tr>
<td>30 tot 35 years</td>
<td>28.02</td>
<td>28.84</td>
<td>26.79</td>
<td>28.80</td>
<td>29.65</td>
<td>27.54</td>
</tr>
<tr>
<td>35 tot 40 years</td>
<td>31.37</td>
<td>33.10</td>
<td>28.45</td>
<td>32.25</td>
<td>34.03</td>
<td>29.25</td>
</tr>
<tr>
<td>40 tot 45 years</td>
<td>33.00</td>
<td>35.67</td>
<td>28.27</td>
<td>33.92</td>
<td>36.67</td>
<td>29.06</td>
</tr>
<tr>
<td>45 tot 50 years</td>
<td>33.92</td>
<td>37.27</td>
<td>28.12</td>
<td>34.87</td>
<td>38.32</td>
<td>28.91</td>
</tr>
<tr>
<td>50 tot 55 years</td>
<td>34.64</td>
<td>37.99</td>
<td>28.45</td>
<td>35.61</td>
<td>39.06</td>
<td>29.25</td>
</tr>
<tr>
<td>55 tot 60 years</td>
<td>35.37</td>
<td>38.31</td>
<td>28.69</td>
<td>36.37</td>
<td>39.38</td>
<td>29.50</td>
</tr>
<tr>
<td>60 tot 65 years</td>
<td>35.42</td>
<td>38.07</td>
<td>27.88</td>
<td>36.41</td>
<td>39.13</td>
<td>28.67</td>
</tr>
<tr>
<td>65 tot 75 years</td>
<td>27.32</td>
<td>28.45</td>
<td>22.25</td>
<td>28.08</td>
<td>29.25</td>
<td>22.87</td>
</tr>
<tr>
<td>&gt;=75 years</td>
<td>20.78</td>
<td>21.46</td>
<td>18.21</td>
<td>21.36</td>
<td>22.06</td>
<td>18.72</td>
</tr>
<tr>
<td>Mean to gender</td>
<td>29.20</td>
<td>31.61</td>
<td>25.24</td>
<td>30.02</td>
<td>32.49</td>
<td>25.94</td>
</tr>
<tr>
<td>Overall mean</td>
<td>29.20</td>
<td></td>
<td></td>
<td>30.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on 2008 and concerted to 2009 on the basis of the general price index figure.

**Module 2: Production losses not due to absenteeism from paid work**

The questions 3, 4, 5 and 7 of the SF-HLQ are related to module 2 (see also appendix I).
Individuals with health problems are sometimes forced to miss work because of these problems. However, it is often the case that they go to work, but perform less well because of their health problems. Research has shown that some 7% of all employees report experiencing hindrance at work as a result of health problems. This illustrates just how considerable this cost component is, although consensus has not yet been reached on the quantification hereof. This does not mean, however, that describing and, where possible, quantifying production losses should be considered unimportant.

Question 3 selects between persons who are hindered by health problems in performing paid work, and those who are not. For those reporting that they are not hindered by health problems, it follows that there are no production losses not due to absenteeism as a result of health problems. The remaining questions in module 2 may be skipped. Those reporting adverse effects on their job performance due to health problems are requested to complete questions 4 through 7. Question 6 is a descriptive instrument by which the hindrance can be evaluated (see module 3).

There are two methods by which to calculate production losses not caused by absenteeism. The HLQ method uses direct estimates of production losses caused by time ‘lost’ due to health problems on work days (see figure 3). In question 7 the respondent is asked to estimate the number of hours he or she would have to work in order to compensate for the time ‘lost’ due to health problems on work days.

Figure 3  Question to determine production losses not due to absenteeism based on the “HLQ” method

(7) If you had to catch up on all the work you were unable to perform over the past two weeks because of health problems, how many hours work would you be forced to make up?

............... hours

(The days on which you failed to work at all because you reported ill do not count.)

Question 4 and 5 together constitute an alternative method proposed by Osterhaus et al (9). Here, the production losses are determined on the basis of two questions. In question 4, individuals are asked about the number of days of hindrance due to health problems. In question 5, they are asked about their estimated efficiency on these days.
Figure 4  Questions designed to determine production losses not due to absenteeism based on the ‘Osterhaus’ method

(4) On how many days during the past month did you perform paid work, although you were bothered by health problems?

....................... days *(Please do not count the days on which you did not work at all because you reported sick.)*

(5) Please rate **how well** you performed on the days you went to work even though you were suffering from health problems.

((1 indicates a much worse performance than usual and 10 that your work was not affected.))

1 2 3 4 5 6 7 8 9 0

very poor performed as usual

**Scoring module 2**

The SF-HLQ contains two methods for calculating production losses that are not the result of absenteeism. The lack of a gold standard renders it difficult to validate these measurement methods.

The number of hours of efficiency loss is calculated using the HLQ method on the basis of the number of hours stated in the answer to question 7.

According to the method proposed by Osterhaus, the number of days of hindrance leading to production losses is multiplied by one minus the efficiency for these days. A respondent may, for example, indicate that he or she was bothered by health problems on three work days, and rate their efficiency at eight. The production loss is in that case 3*(1-0.8) * 8= 0.6 work day, or 4.8 hours based on an eight-hour workday. In cases of respondents indicating to work less or more hours a day this will be accounted for in the calculation.

**Valuation module 2**

The answer to question 7 is used to make a quantitative estimate according to the HLQ method (in euros) of the production losses without absenteeism (‘presenteeism’). The hours are valued at the average income per hour on the basis of the responses to question 8 on income, combined with the results of question 1 on the number of work days and hours per week. Production losses
without absenteeism may also be valued on the basis of the average production value by age and sex, as stated in table 2.

The HLQ method for determining production losses without absenteeism may yield an underestimation of the actual costs of production losses. Question 7 explicitly asks to estimate the number of hours the respondent requiring to catch up on the production losses. Consequently, this may ignore the possibility that production losses can not be compensated within normal work hours. Additionally, costs incurred because colleagues or temporary workers are required to take over from the individual in question might not be included. However, whether or not it is possible to make up for lost hours of work strongly depends on work features such as type of work, type of organization, degree of autonomy, etc. On the other hand, estimating productivity losses according to the Osterhaus method may generate an overestimation since respondents may judge their efficiency by the potential amount of work they could have done rather than by the normal amount of work they usually do.

Question 9 is a general question on the basis of which the population can be divided into six different categories.

Figure 5 Question to classify persons without a paid job

(9). Which of the following situations applies best to your case?

- I have paid work
- I run the household (and, if applicable, care for the children)
- I am retired or have taken early retirement.
- I am still at school
- I am (partially) unfit for paid work because of health problems and have been assessed as am % incapacitated for work
- I do not have paid work for other reasons
  *(E.g. involuntary unemployment or volunteer work.)*

**Module 3: Hindrances in performing paid and unpaid work**

In this module, a distinction is made between hindrances in performing paid or unpaid work. In conclusion, it is examined to what extent any hindrance in performing unpaid work has led to the substitution of unpaid work in the household.

Question 3, 6 and 10 of the SF-HLQ relate to the hindrance experienced in performing paid and unpaid work. As described earlier, the answers to question 3 are used to select between respondents who are hindered by, and those not hindered by health problems. The answers may
also be used to determine the hindrance score for paid work. The range for this score is from zero to a maximum of 2.

Figure 6  Question to determine the hindrance score in the case of paid work

(3) Was your job performance adversely affected by health problems during the past month?

☐ No, not at all  (go to question 8))
☐ Yes, slightly
☐ Yes, very much

Question 6 is a descriptive instrument comprised of 7 items designed to evaluate the specific problems affecting production. These 7 items relate to the effect of health problems on concentration, work pace, the need to be alone, making decisions, postponing and transferring work to others. The respondent can choose from four possible answers: (almost) never, sometimes, often and (nearly) always.

Figure 7  The seven items by which to evaluate production

(6) Below are a number of statements that may apply to people in the paid work force with health problems. Please indicate how often each statement was applicable to you during the 2 weeks.

I went to work, but as a result of health problems…….

<table>
<thead>
<tr>
<th>Statement</th>
<th>almost never</th>
<th>some times</th>
<th>often</th>
<th>nearly always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had concentration problems</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had to work at a slower pace</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had to work in seclusion</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had more difficulty making decisions</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had to postpone work</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others had to take over my work</td>
<td>☐</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had other problems, namely:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>..................................................................................................................</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 10 relates to the hindrances experienced in performing unpaid work. Respondents are asked to indicate whether they have carried out any of the four unpaid activities listed in this question. The response ‘performed this activity’ is followed by two possible choices, namely was hindered in doing so by health problems, or was not. The response ‘did not perform this activity’ was
followed by the question of whether the inability to perform the task was due to health problems of whether there were other reasons.

**Figure 8  Hindrance in performing unpaid work**

(10) Did you undertake any of the following activities during the past two weeks, and did health problems play any part in this?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Performed this activity without being bothered by health problems</th>
<th>Performed this activity, although bothered by health problems</th>
<th>Did not perform this activity because of health problems</th>
<th>Did not perform this activity for reasons other than health problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Household work <em>(e.g. preparing food, cleaning the house, doing the wash.)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Going shopping <em>(e.g. daily groceries, shopping, visit to bank or post office.)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Odd jobs <em>(e.g. maintenance work on house, garden, bicycles and vehicles.)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Specific activities for or with the children sharing your household <em>(e.g. personal care, play, taking the children to school, helping with their homework.)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Scoring hindrance module 3*
Question 3 is used as an indicator for hindrance in performing paid work due to health problems, the hindrance score. The hindrance score for paid work is arrived at by weighting the responses as follows: 'no, not at all = 0, yes, slightly = 1 and 'yes, very much' = 2. The score range is 0 to 2. The distribution of the responses per item in question 6 offer a description of the specific problems encountered in performing paid work. In the unweighted situation, the weights for the categories are as follows: never=1, sometimes=2, often=3, and always=4. The efficiency score is derived by adding up the unweighted items of the responses: the minimum score is 6, the maximum is 24.

The scores for the items on hindrance in performing unpaid work are: Performed activity, hindered = 1; Performed activity, no hindrance, = 0; Did not perform activity, due to health problems = 2; Did not perform, for other reasons = 0.

The total hindrance score for unpaid work is derived by adding up the item scores. This hindrance score is a measure of the hindrance experienced as a result of health problems during the performance of unpaid work. The minimum score per item is zero and the maximum is 2. The total score is arrived at when the scores of all 4 items are added together. The total score ranges from 0 to 8.

Question 11 is concerned with the question of whether the household and other tasks normally carried out by the respondent, were postponed or carried out instead by other members of the household, family or friends and/or paid help. These data can provide insight into the shift in unpaid work in the household and/or substitution of tasks by the formal healthcare organization.

Figure 9  Question on substitution of unpaid household work

(11) Was it necessary for others to take over and perform your usual household tasks during the past month in connection with health problems?

No
Yes, namely (more than one answer is possible):
• family members for................ hours
• other persons receiving no pay for................ hours
• home care for............... hours
• other paid care for............... hours

Scoring substitution unpaid work (question 11)
The answers to question 11 are used to calculate the number of hours of unpaid work that may possibly have to be taken over by other unpaid and/or paid help. To this end, the number of hours of unpaid work performed by ‘family members (item 1) and ‘others’ (item 2) are categorized as
‘unpaid help’ (what is known as ‘informal’ help). The hours of unpaid work that are taken over by professional home care services (item 3), ‘family care services (item 4) and/or other professional, paid help (formal help). The responses to this question can be considered an indicator of the severity of the disorder or treatment and the effect on the respondent’s functioning in the household.

Valuation substitution unpaid work

Different methods exist to valuate unpaid work. The method according to the replacement value theory is based on the idea that, by performing the work personally, costs are saved that would otherwise have been incurred to hire an individual who offers those services on the market. This is the preferred method, as in this case, the (lost) production is weighted equally, regardless of whether an individual holds a paid job or not. To value production losses in unpaid work, we use as an indication the average gross hourly wage earned by a domestic worker. The ‘opportunity cost’ approach values unpaid work hours by trading these off against the net income earned by an individual performing paid work. A significant disadvantage to this method is that this market wage is able to be determined only for those in a paid job.
3. User conditions

This questionnaire was developed by the Institute for Medical Technology Assessment (iMTA), Erasmus University Rotterdam. The questionnaire may be used on the following conditions.

Permission for use

Permission to use the questionnaire and manual must be obtained in advance. To apply for such permission, contact the address provided at the bottom of the page, or complete and submit the enclosed registration form to the same. In principle, permission for use will be granted. There are no financial conditions attached to use of the questionnaire. However, the following conditions must be observed when using the questionnaire, whether such use is for commercial or scientific purposes.

Conditions for use

- The copyright notice on the title page must be reproduced in cases where the questionnaire is largely or wholly used as is. If an altered version of the questionnaire is used, this version should be stated as source material.
- The source is required to be explicitly stated in all publications as follows: Hakkaart-van Roijen L, Short Form- Health and Labour Questionnaire. Institute for Medical Technology Assessment, Erasmus University Rotterdam.
- The liability notice printed on the title page must always be included when using the manual and questionnaire.
- Changes are permitted to be made to the questionnaire without prior consent. However, it should be very clear that these changes were made by the user.
- The user shall indemnify the Institute for Medical Technology Assessment, Erasmus University Rotterdam and the author of this edition against claims from third parties arising from and/or related to the use of this edition by the user, in the event of changes and or translation, or due to errors, omissions and misinterpretations or any consequences of this.
- To assess the use of the questionnaire and the purpose to which this is used, please fill in the registration form as fully as possible (see appendix III).
- A copy of all manuscripts, articles or other publications featuring this questionnaire or containing results obtained with the help of this instrument shall be made available to the author.
- For the purpose of further (validation) studies, we may request the user – in consultation – to place part of the research at the disposal of the authors, specifically the scores for the individual questions in the questionnaire, as (if gathered) those for the questions on sex, age, diagnosis, living situation, educational attainment and work status. The data made available on the basis of the three preceding items will be treated confidentially by the authors.

For questions and comments, please Consultation:
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4. References

Appendix I: Questionnaire

Short Form- Health and Labour Questionnaire

SF-HLQ
This questionnaire concerns the consequences of health problems for employment in a paid job and for unpaid work (e.g. household chores). These questions pertain to the period covering the past month. Health problems refer both to your physical and emotional problems.

**Date:** ... - .. - 20..

1. Do you currently hold a paid job?
   - No, *(go to question 9)*
   - Yes;
     How many hours does your contract specify? .................. hours per week
     Over how many days are these hours distributed? ............... days
     What is your occupation? ...............................................................

2. Did health problems oblige you to be off work at any time in the past month?
   - No
   - Yes, I missed ................. days of work
     *(One week has a maximum of 5 days of work)*

   Were you off work for a period longer than the past month because of health problems?
   - No
   - Yes, I reported ill on................. .......................... *(go on to question 8)*

People with health problems sometimes have to miss work because of these problems. Another possibility is that a person goes to work, but is unable to perform as well as he should because of health problems. Questions 18 through 22 focus on these aspects.

3. Was your job performance adversely affected by health problems during the past month?
   - No, not at all *(go to question 8)*
   - Yes, slightly
   - Yes, very much

4. On how many days during the past month did you perform paid work, although you were bothered by health problems?
   - ................. days *(Please do not count the days on which you did not work at all because you called in sick.)*
5. Please rate how well you performed on the days you went to work even though you were bothered by health problems.
   (1 indicates a much worse performance than usual and 10 that your work was not affected.)
   
   1 2 3 4 5 6 7 8 9 10
   much worse performed as usual
   
6. Below are a number of statements that may apply to people in the paid work force with health problems. Please indicate how often each statement was applicable to you during the past month.
   
   I went to work, but as a result of health problems.......
   
   I had concentration problems
   I had to work at a slower pace
   I had to work in seclusion
   I had more difficulty making decisions
   I had to postpone work
   Others had to take over my work
   I had different problems, namely:
   
   ..........................................................................................  
   
7. If you had to catch up on all the work you were unable to perform over the past month because of health problems, how many hours of work would you be forced to make up?

   ...................... hours
   (The days on which you failed to work at all because you reported ill do not count).

8. What is your own net income from paid work?
   (This refers to the amount you actually receive. We are interested only in your income, i.e. exclusive of, if present, your partner's income)
   
   €............per week
   €............per 4 weeks
   €............per month
   €............per year
   Don't know/don't wish to reveal
9. Which of the following situations applies to you? If more than one applies, indicate the situation that applies most to your case.

□ I have paid work
□ I run the household (and, if applicable, care for the children)
□ I am retired or have taken early retirement.
□ I am still at school
□ I am (partially) unfit for paid work because of health problems and have been assessed as being ......................% incapacitated for work
□ I do not have paid work for other reasons
(E.g. involuntary unemployment or volunteer work.)

10. Did you undertake any of the following activities during the past two weeks, and did health problems play any part in this?

a. Household work (e.g. preparing food, cleaning the house, doing the wash.)
   □ Performed this activity without being bothered by health problems
   □ Performed this activity, although bothered by health problems
   □ Did not perform this activity because of health problems
   □ Did not perform this activity for reasons other than health problems

b. Going shopping (e.g. daily groceries, shopping, visit to bank or post office.)
   □ Performed this activity without being bothered by health problems
   □ Performed this activity, although bothered by health problems
   □ Did not perform this activity because of health problems
   □ Did not perform this activity for reasons other than health problems

c. Odd jobs (e.g. maintenance work on house, garden, bicycles and vehicles.)
   □ Performed this activity without being bothered by health problems
   □ Performed this activity, although bothered by health problems
   □ Did not perform this activity because of health problems
   □ Did not perform this activity for reasons other than health problems

d. Specific activities for or with the children sharing your household (e.g. personal care, play, taking the children to school, helping with their homework.)
   □ Performed this activity without being bothered by health problems
   □ Performed this activity, although bothered by health problems
   □ Did not perform this activity because of health problems
   □ Did not perform this activity for reasons other than health problems
   □ Not applicable
11. Did other people take over and perform your usual household tasks in the past month in connection with health problems?

No

Yes, namely (more than one answer is possible):
- family members for..................... hours
- other persons receiving no pay for..................... hours
- home care for..................... hours
- other paid care for..................... hours

…………………………………………………………………………………………………………….
General questions

1. Sex:
   - male
   - female

   Date of birth: ............_............_.........................

What is the highest level of education that you have completed?

   Primary school (lower school, special education)
   Lower vocational education (e.g. LTS, LHNO, LEAO, domestic training school)
   Lower general secondary education (e.g. VMBO, ULO, MULO, MAVO)
   Secondary vocational education (e.g. MTS, MEAO, MHNO)
   Senior general secondary education (e.g. HBS, MMS, HAVO, VWO, gymnasium)
   Higher professional education (e.g. HTS, HEAO, HHNO)
   University

   Other, namely:
   ...........................................................................................................................................................................................

2. What is your current civil status?

   Single
   Married/long-term cohabitation
   Divorced
   Widow(er)

3. Below is a list of chronic conditions and disorders. Please indicate the conditions you have or had during the past year?

   Asthma, chronic bronchitis or COPD
   Infection of the nasal cavity, frontal sinus cavity or CCCCC
   Severe heart condition or myocardial infarction
High blood pressure

Stroke, or the consequences of a stroke

Gastric or duodenal ulcer

Severe intestinal disorders lasting for longer than 3 months

Gall bladder stones or gall bladder infection

Liver disease or liver cirrhosis

Kidney stones

Severe kidney disease

Chronic bladder infection

Prolapse

Diabetes

Thyroid disease

Persistent (longer than 3 months) back problems, or herniated disc

Joint degradation (arthritis) of the knees, hips or hands

Joint inflammation (rheumatism) of the hands and/or feet

Other chronic rheumatism, lasting longer than 3 months

Epilepsy

Other neurological diseases, such as Parkinson’s disease

Multiple sclerosis

Dizziness and falling

Migraine

Malignancy, cancer
Overstressed, depression, severe nervousness

Chronic skin disease or eczema

Injury due to an accident in and around the house, during sports, at school, work or in traffic

We are grateful to you for taking the time and making the effort to complete this questionnaire. If you have any comments, remarks or suggestions, please let us know.
<table>
<thead>
<tr>
<th>Variable name</th>
<th>Description</th>
<th>Values</th>
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<tr>
<td>INVULDAT</td>
<td>Date of completion</td>
<td></td>
</tr>
</tbody>
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| HLQ1A         | Do you currently hold a paid job? | 1 = no  
2 = yes  
999 = missing |
| HLQ1B1        | Hours specified in contract | Number greater than 0  
-1 = no paid work  
999 = missing |
| HLQ1B2        | Number of days per week | Number greater than 0  
-1 = no paid work  
999 = missing |
| HLQ1C         | Description occupation | Text |
| HLQ2A         | Missed work in past month? | 1 = no  
2 = yes  
-1 = no paid work  
999 = missing |
| HLQ2B         | Number of days off work? | Number greater than 0  
0 = no missed work  
-1 = no paid work  
999 = missing |
| HLQ2C         | Off work for longer than a month? | 1 = no  
2 = yes  
-1 = no paid work  
999 = missing |
| HLQ2D         | Date reported ill | |
| HLQ3A         | Hindrance in performance paid work? | 1 = no, not at all  
2 = yes, slightly  
3 = yes, very much  
-1 = no paid work  
-2 = off work for longer than 1 month (HLQ2C=2)  
999 = missing |
| HLQ4A         | Performed how many days of paid work while bothered by health problems? | Number greater or equal to 0 and smaller or equal to 31  
-1 = no paid work  
-2 = off work for longer than 1 month (HLQ2C =2 )  
-3 = paid work, no hindrance (HLQ3A = 1) |
| HLQ5A         | Rating of how well (efficiently) you performed on the days you went to work even though bothered by health problems. | Whole number between 1 and 10  
-1 = no paid work  
-2 = off work longer than 1 month (HLQ2C = 2) |
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<th>-3 = have paid work, no hindrance (HLQ3A = 1)</th>
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<td></td>
<td>1 = almost never</td>
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<td></td>
<td>2 = sometimes</td>
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<td>4 = nearly always</td>
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<td></td>
<td>-1 = no paid work</td>
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<td></td>
<td>-2 = off work longer than 1 month (HLQ2C = 2)</td>
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<td>-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<td>HLQ6B</td>
<td>.. worked at a slower pace</td>
<td></td>
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<td></td>
<td>1 = almost never</td>
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<td>2 = sometimes</td>
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<td>3 = often</td>
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<td>4 = nearly always</td>
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<td>-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<td>1 = almost never</td>
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<td>-2 = off work longer than 1 month (HLQ2C = 2)</td>
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<td>-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<tr>
<td>HLQ6D</td>
<td>.. problems with making decisions</td>
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<td>1 = almost never</td>
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<td>2 = sometimes</td>
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<td>3 = often</td>
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<td>-2 = off work longer than 1 month (HLQ2C = 2)</td>
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<td>-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<td>HLQ6F</td>
<td>.. had work performed by someone else</td>
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<td>Text</td>
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<tr>
<td>HLQ6G2</td>
<td>Problem described</td>
<td>1 = almost never&lt;br&gt;2 = sometimes&lt;br&gt;3 = often&lt;br&gt;4 = nearly always&lt;br&gt;-1 = no paid work&lt;br&gt;-2 = off work longer than 1 month (HLQ2C = 2)&lt;br&gt;-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<td>HLQ7A</td>
<td>Number of hours needed to work to catch up?</td>
<td>Number greater than 0&lt;br&gt;-1 = no paid work&lt;br&gt;-2 = off work longer than 1 month (HLQ2C = 2)&lt;br&gt;-3 = have paid work, no hindrance (HLQ3A = 1)</td>
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<tr>
<td>HLQ8A</td>
<td>Personal net income from paid work</td>
<td>Number greater than 0 (in euros)&lt;br&gt;-2 = won’t say&lt;br&gt;-1 = no paid work&lt;br&gt;999 = missing</td>
</tr>
<tr>
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<td>Frequency</td>
<td>1 = per week&lt;br&gt;2 = per 4 weeks&lt;br&gt;3 = per month&lt;br&gt;4 = per year&lt;br&gt;-2 = won’t say&lt;br&gt;-1 = no paid work&lt;br&gt;999 = missing</td>
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<td>Situations</td>
<td>1. paid work&lt;br&gt;2. run the household&lt;br&gt;3. retired / early retirement.&lt;br&gt;4. still at school&lt;br&gt;5. (partially) unfit for paid work because of health problems&lt;br&gt;6. no paid work for other reasons&lt;br&gt;999 = missing</td>
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<td>% incapacity for work</td>
<td>Number greater than 0&lt;br&gt;-1 = not incapacitated for work&lt;br&gt;999 = missing</td>
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<td>Household work</td>
<td>1. Performed this activity without being bothered by health problems&lt;br&gt;2. Performed this activity, although bothered by health problems&lt;br&gt;3. Did not perform this activity</td>
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|   |   | because of health problems  
|   |   | 4. Did not perform this activity for other reasons  
|   |   | 999 = missing  
|    |   |   |
| HLQ10B | Groceries | 1. Performed this activity without being bothered by health problems  
|   |   | 2. Performed this activity, although bothered by health problems  
|   |   | 3. Did not perform this activity because of health problems  
|   |   | 4. Did not perform this activity for other reasons  
|   |   | 999 = missing  
|    |   |   |
| HLQ10C | Odd jobs | 1. Performed this activity without being bothered by health problems  
|   |   | 2. Performed this activity, although bothered by health problems  
|   |   | 3. Did not perform this activity because of health problems  
|   |   | 4. Did not perform this activity for other reasons  
|   |   | 999 = missing  
|    |   |   |
| HLQ10D | Activities with own children | 1. Performed this activity without being bothered by health problems  
|   |   | 2. Performed this activity, although bothered by health problems  
|   |   | 3. Did not perform this activity because of health problems  
|   |   | 4. Did not perform this activity for other reasons  
|   |   | 5 = not applicable  
|   |   | 999 = missing  
|    |   |   |
| HLQ11A | Household tasks assumed by others | 1 = no  
|   |   | 2 = yes  
|   |   | 999 = missing  
|    |   |   |
| HLQ11B | Number of hours taken over by family members | Number greater than 0  
|   |   | -1 = HLQ11A = 1  
|   |   | 999 = missing  
|    |   |   |
| HLQ11C | Number of hours taken over by other unpaid help | Number greater than 0  
|   |   | -1 = HLQ11A = 1  
|   |   | 999 = missing  
|    |   |   |
| HLQ11D | Number of hours home care | Number greater than 0  
|   |   | -1 = HLQ11A = 1  
|   |   | 999 = missing  
|    |   |   |
| HLQ11E | Number of hours other paid help | Number greater than 0  
|   |   | -1 = HLQ11A = 1  
|   |   | 999 = missing  
|
| ALG1A | Sex | Male=1  
Female=2  
Missing=999 |
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<tbody>
<tr>
<td>ALG1B</td>
<td>Date of birth</td>
<td>Date</td>
</tr>
</tbody>
</table>
| ALG1C | Educational attainment | 1. Primary school (lower school, special education)  
2. Lower vocational education (e.g. LTS, LHNO, LEAO, domestic training school)  
3. Lower general secondary education (e.g. VMBO, ULO, MULO, MAVO)  
4. Secondary vocational education (e.g. MTS, MEAO, MHNO)  
5. Senior general secondary education (e.g. HBS, MMS, HAVO, VWO, gymnasium)  
6. Higher professional education (e.g. HTS, HEAO, HHNO)  
7. University  
8. Other |
| ALG1D | Other, namely | Text |
| ALG2A | Civil status | 1=Single  
2=Married/long-term cohabitation  
3=Divorced  
4=Widow(er) |
<p>| ALG3A | Asthma | 1=YES |
| ALG3B | Infection of the nasal cavity | 1=YES |
| ALG3C | Severe heart condition or myocardial infarction | 1=YES |
| ALG3D | High blood pressure | 1=YES |
| ALG3E | Stroke, or the consequences of a stroke | 1=YES |
| ALG3F | Gastric or duodenal ulcer | 1=YES |
| ALG3G | Severe intestinal disorders lasting for longer than 3 months | 1=YES |
| ALG3H | Gall bladder stones or gall bladder infection | 1=YES |
| ALG3I | Liver disease or liver cirrhosis | 1=YES |
| ALG3J | Kidney stones | 1=YES |
| ALG3K | Severe kidney disease | 1=YES |
| ALG3L | Chronic bladder infection | 1=YES |
| ALG3M | Prolapse | 1=YES |
| ALG3N | Diabetes | 1=YES |</p>
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<tr>
<td>ALG3P</td>
<td>Persistent (longer than 3 months) back problems</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3Q</td>
<td>Joint degradation (arthritis) of the knees, hips or hands</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3R</td>
<td>Joint inflammation (rheumatism) of the hands and/or feet</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3S</td>
<td>Other chronic rheumatism, lasting longer than 3 months</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3T</td>
<td>Epilepsy</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3U</td>
<td>Other neurological diseases</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3V</td>
<td>Dizziness and falling</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3W</td>
<td>Migraine</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3X</td>
<td>Malignancy, cancer</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3Y</td>
<td>Overstressed, depression, severe nervousness</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3Z</td>
<td>Chronic skin disease or eczema</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG3AA</td>
<td>Injury due to an accident in and around the house, during sports, at school, work or in traffic</td>
<td>1=YES</td>
</tr>
<tr>
<td>ALG4</td>
<td>Comments</td>
<td>Text</td>
</tr>
</tbody>
</table>
Appendix III REGISTRATION FORM FOR THE USE OF THE SF-HLQ

In order to be able to assess by whom this questionnaire is used and to what purpose, we request you please to complete this form and return this to the address below

Date:........................................................................................................................................

Name:........................................................................................................................................

Organization/institution:............................................................................................................

Address:......................................................................................................................................
.....................................................................................................................................................
.....................................................................................................................................................

Postcode:.................................................................................................................................
Place:............................................................................................................................................

Telephone number:.................................................................................................................
Fax number:..............................................................................................................................
E-mail address:............................................................................................................................

Purpose of the study:
...................................................................................................................................................
.....................................................................................................................................................
.....................................................................................................................................................

Are you using other measurement instruments next to the SF-HLQ (If so, which others?)
.......................................................................................................................................................
.......................................................................................................................................................
.....................................................................................................................................................

What is the approximate size of the proposed study population?
.........................................................................................................................................................
.....................................................................................................................................................
.....................................................................................................................................................

When will you be finished with the study?
.....................................................................................................................................................
.....................................................................................................................................................
.....................................................................................................................................................

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