Productivity losses without absence: measurement validation and empirical evidence

W.B.F. Brouwer *, M.A. Koopmanschap, F.F.H. Rutten

Institute for Medical Technology Assessment, Erasmus University Rotterdam, PO Box 1738, 3000 DR Rotterdam, The Netherlands

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Abstract

Productivity losses without absence are scarcely discussed in the literature. In this paper, the construct validity of three different measurement instruments for productivity losses without absence is investigated. The data were collected under employees of a Dutch trade firm, not in specific patient groups. On an average day, over 7% of the respondents were working with health problems, indicating that productivity losses without absence is quite a common problem. The amount of production losses related to these health problems are relatively small. However, for specific patient groups, the costs related to these productivity losses may be substantial. © 1999 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Productivity costs without absence; Measurement methods

1. Introduction

In economic evaluations of health care interventions, indirect non-medical costs or productivity costs often play an important role when the prevalence of the illness involved concerns people with paid or unpaid work. The incorporation of these costs in economic evaluations has been much debated. Two questions, whether they

* Corresponding author. Tel.: +31-10-408-8584; fax: +31-10-408-9094.
E-mail address: brouwer@bmg.eur.nl (W. B. F. Brouwer)
should be counted (for example, Refs. [3,9]) and if so how they should be estimated (for example, Refs. [1,4,5]), have been extensively discussed in the literature. Recently, the consensus for incorporating these societal costs seems to be growing (for example, Refs. [2,4]). Attention is usually focused on costs related to absence from paid work. However, it is obvious that absence from paid work is not the only situation causing production losses related to disease. Besides impaired ability to perform unpaid work, people may be at work while not being in optimal health. Mild (chronic) diseases or the onset of acute infectious diseases are examples of situations in which people may not function to their normal ability, yet are not impaired ‘enough’ to stay at home. These productivity losses without absence are potentially important, yet almost neglected in economic evaluations of health care.

Only two attempts to estimate the costs related to this productivity drop were found in the literature. One was developed by Osterhaus et al. [6] and was later adapted by Van Roijen et al. [8], and the other was developed by Van Roijen et al. [7]. The adapted Osterhaus method (O method) and that of Van Roijen (VR method) were compared in estimating productivity costs without absence due to migraine, and showed substantially different estimates, i.e. 968 versus 277 million Dutch guilders, respectively [7]. This shows these costs can be substantial for certain diseases and that more investigation is needed on how to realistically estimate these costs.

In this paper, we compare the O method, the VR method and an alternative experimental method, the QQ method, which aims at measuring the quantity and quality of work performed on a daily basis. We investigate the construct validity of these methods using data of employees of a Dutch trade firm. Section 2 presents a brief introduction of the three methods. In Section 3, the instruments and data used in this study are discussed. Section 4 discusses the results of the three methods, while Section 5 concludes the article.

2. Brief introduction of the three measurement methods

The adapted O method for determining the efficiency losses due to illness, as used in the Dutch Health and Labour questionnaire, consists of two questions. We have chosen to use this ‘adjusted O method’, to be able to compare the outcomes in relation to the VR method with the earlier comparisons [7,8]. The O method asks how many days during the past 2 weeks one went to work while suffering from health problems and, on a VAS scale, the average efficiency on these days. A difficulty with this method is that the efficiency indication may not necessarily be interpreted as the amount of work respondents did compared with normal, but rather what they could do compared with normal, although it is not clear how subtle this difference is. If full utilization of labour time is not required on average (i.e. one does not work at full capacity at all times), using the average efficiency

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1 The three measurement methods used in the study are presented in full in Appendix A.
should be counted (for example, Refs. [3,9]) and if so how they should be estimated (for example, Refs. [1,4,5]), have been extensively discussed in the literature. Hours without creating new production losses is ignored. The term efficiency may induce respondents to consider quality losses as well, but it is unsure to what extent these contribute to the final score.

The VR method also asks people to indicate on how many days they were less able to perform their work over the past 2 weeks, and how many extra hours they would have had to work to make up for the work they lost during the days feeling ill at work. This should provide an indication about how much production was actually lost, and the number of hours needed to make up for it enables a monetary valuation of the lost production (‘replacement value’). Here, productivity losses that can be recovered during normal working hours do not count as production losses, since only extra hours are asked for. Shifting production from one day (with health problems) to another day (without or with less health problems) is thus seen as costless recovering lost work. The VR method may underestimate production losses, however, if not all work can be made up for later on. For example, redistribution of work over colleagues ensures that the collective workload is finished on time because colleagues make up for lost work during regular hours and some types of work cannot be made up for, for instance in a production line. Still, these two situations do not have to be costless. Redistribution of work reveals some slack in the organization or working extra time of some employees (not necessarily the person less productive), which is not without costs and neither are unrecoverable production losses. These situations may cause missing values or zero answers in the VR method, while they do lead to indications of impaired productivity on the O method. An additional problem in interpreting VR answers is that it is unclear if the extra hours indicated represent hours worked at normal performance level or the reduced level that respondents may be still experiencing. Consequently, the answer probably is a conservative estimation of production losses, but still difficult to interpret exactly.

The QQ method was developed in an attempt to more precisely measure the consequences of illness while working. First, on a daily basis, respondents are asked to indicate on a VAS scale from 1 to 10 how much work they actually performed during regular hours compared with normal (quantity scale). It is a question about output rather than efficiency, indicating how much work had to be made up for during overtime or regular worktime, or was lost. Translating the answer into costs again has the possibility of overestimating true costs involved if it is possible to make up for lost work during regular hours. Fluctuations in daily performance level are explicit in this method.

Second, the quality of the work performed on a day is indicated on a VAS scale from 1 to 10 (quality scale). One can imagine that not all losses are quantitatively expressible and a quality indication may therefore provide valuable additional information. However, the quality scale raises new questions as well, especially on how to treat answers on this scale. Straightforward multiplication of the quantity and quality components may provide an indication of total performance, translating qualitative into quantitative losses. However, although this combination seems adequate as a first attempt to combine qualitative and quantitative losses, it
remains unclear whether it is the correct way. Still, it should be noted that, for some types of work, qualitative production losses seem more relevant than quantitative losses, e.g. for schoolteaching.

Comparing the three methods described, it seems that the O method measures the production capacity of the respondent, leading to a maximum indication of production losses. The VR method measures the amount of recoverable lost production, that has not yet been made up for. This appears to provide a minimum estimate of production losses. The quantity scale of the QQ method is expected to yield estimates in between that of the O and VR methods.

3. Methods

We aimed at establishing construct validity of the three measurement methods, basing our hypothesis on the expectations derived from Section 2 and previous experience. Construct validation is tested by examining whether different methods measure the underlying quantity (production losses) in expected ways. Here, it is expected that the VR method will yield the lowest results in terms of hours lost (with a relatively high number of ‘zero’ answers), the O method would yield the highest results, and the results from the quantity scale of the QQ method would lie between these two estimates, more close perhaps to O results than to VR results. Furthermore, the quality scale of the QQ method was used to estimate qualitative losses due to illness at work.

The data were collected in a Dutch trade firm. The questionnaire ‘Consequences of Illness’ was sent to all employees of this firm. In this diary, people were asked to indicate for each day of a particular week whether they had been less productive at work due to health complaints. Respondents could indicate on two different scales how the quantity of work performed related to normal and how the quality of the work performed related to normal (QQ method). At the end of the week, people were asked to answer the questions of the O method and the VR method (see Appendix A). The latter questions allude to the period of 1 week only, to make the answers comparable with the daily answers. A golden standard, i.e. individual data on daily production, to compare the different answers with, was unavailable due to anonymity of respondents. This is why validation on the basis of construct validity was chosen.

The total number of employees was 216. The relevant questions were sent to all employees five times. The diaries were sent four times in the months June and July 1997, with 1 week between each weekly diary. The fifth diary was sent approximately 3 weeks later in August 1997. The total number of returned diaries was 543, implying an overall response rate of 50%. Due to the anonymity of respondents, we could not further investigate the non-response.

One of the primary aims was to establish how many people indicated that they were less productive at work on an average day. This should give some indication of the importance of the phenomenon productivity losses without absence. Since all employees were potential respondents, all types of work were included in the study;
however, most of the respondents were engaged in work that was automatically replaced by colleagues and could not be made up for the next day.

Some characteristics of the respondents of the diary are presented in Table 1.

### 4. Results from the diary ‘Consequences of Illness’

Of the 543 ‘Consequences of Illness’ diaries returned, there were 57 in which it was indicated that on at least 1 day during the week, the respondent felt ill while being at work. This means 10.5% of the diaries were (in principle) useful for this study. After investigation, it was concluded that 53 diaries were consistently completed and could therefore be used in the analysis below. Analyzing this subgroup of 53 diaries, it turned out that the average age (42.2 years) was significantly higher than that of the other respondents (those not ill), which was 38.5 years ($P = 0.0008$) and that the group had a significantly higher proportion of women ($P = 0.0278$); 87% versus 77%.

Analyzing all 543 questionnaires, it could be concluded that on an average working day, 7.35% of the respondents indicated that they felt ill while being at work (minimum over five measurement moments, 5.43%; maximum, 9.49%). Just to give an indication of the commonness of the problem (at least in this firm), in the same sample, the self-reported absence due to illness was 2.85%. This absence rate is quite low and lower than the average absence rate the company registered itself, which was on average 4.5% for the relevant months (never below 4.15%), indicating that a relatively high amount of non-response may be from people that were absent from work. As already stated, we were unable to further investigate the non-response due to the anonymity of respondents.

The impact on production of productivity losses without absence is obviously smaller than the average of 7.35% of employees feeling ill at work might suggest, since the affected employees lose only a fraction of their normal production, as shown in Table 2.

In the diary, the respondents could tick one of the six specified diseases or tick a box for the category ‘other complaints’. Table 3 presents the results for the six disease categories that were indicated on at least 1 day.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Main characteristics of the respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequences of illness</td>
<td></td>
</tr>
<tr>
<td>Male respondents</td>
<td>117</td>
</tr>
<tr>
<td>Female respondents</td>
<td>416</td>
</tr>
<tr>
<td>Blanks</td>
<td>10</td>
</tr>
<tr>
<td>Average age, males (years)</td>
<td>35.0</td>
</tr>
<tr>
<td>Average age, females (years)</td>
<td>40.0</td>
</tr>
</tbody>
</table>
Table 2
Average scale scores, numbers of hours lost and relative impact according to the three methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Average scale answer (SD)</th>
<th>Average hours lost (SD)</th>
<th>Number of ‘zero’ hours lost</th>
<th>Total number of hours lost</th>
<th>% of total hours ill at work</th>
<th>% of total hours at firm level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osterhaus</td>
<td>8.77 (1.14)</td>
<td>1.72 (1.92)</td>
<td>15</td>
<td>91.4</td>
<td>6.32</td>
<td>0.59</td>
</tr>
<tr>
<td>Van Roijen</td>
<td>–</td>
<td>0.23 (0.73)</td>
<td>45</td>
<td>12.3</td>
<td>0.85</td>
<td>0.08</td>
</tr>
<tr>
<td>Quantity scale</td>
<td>8.93 (1.16)</td>
<td>1.54 (2.00)</td>
<td>20</td>
<td>81.6</td>
<td>5.64</td>
<td>0.52</td>
</tr>
</tbody>
</table>
Table 3
Causes of illness at work and frequency in days

<table>
<thead>
<tr>
<th>Causes of illness</th>
<th>Frequency in days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold or influenza</td>
<td>25</td>
</tr>
<tr>
<td>Back or neckproblems</td>
<td>8</td>
</tr>
<tr>
<td>Migraine or headache</td>
<td>17</td>
</tr>
<tr>
<td>Psychological complaints/stress</td>
<td>15</td>
</tr>
<tr>
<td>Stomach/intestines</td>
<td>7</td>
</tr>
<tr>
<td>Other complaints or combinations of complaints</td>
<td>42 (25 combinations)</td>
</tr>
<tr>
<td>Allergy</td>
<td>8</td>
</tr>
<tr>
<td>Flu/cold and headache/migraine</td>
<td>5</td>
</tr>
<tr>
<td>Headache/migraine and psychological complaints/stress</td>
<td>7</td>
</tr>
</tbody>
</table>

4.1. Comparing the three methods: construct validity

If one examines what is being asked in the VR method and the O method, it is clear that the answers of the respondents cannot be compared in a straightforward way. This is because, for the Osterhaus method, the number of working hours is also important. A score of 9 on the efficiency scale will be interpreted here as a loss of 0.1 × the normal hours of work per day. So, if a person indicates that he has been less productive for 3 days in a week and normally he works 8 h per day and his efficiency score was 0.9, the total loss will be calculated as: (1 − 9/10) × 8 h × 3 days = 2.4 h lost. When comparing the answers of the O method and the VR method, including such a correction for the number of hours worked, one can detect a correlation between the two variables, although they are far from equal. Fig. 1 presents the results, both for the VR method and the O method. The respondents are ordered by their score on the O method.

Production losses: O-method and VR-method

Fig. 1. Relation between the answers of the O method and those of the VR method.
Table 4
Results for several regression equations, relating production losses according to four methods

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Form</th>
<th>Number of observations</th>
<th>b (t value)</th>
<th>a</th>
<th>Multiple R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VR = b × O + a</td>
<td>53</td>
<td>0.15 (2.96)</td>
<td>-0.02</td>
<td>0.38</td>
<td>0.15</td>
</tr>
<tr>
<td>2</td>
<td>VR = b × O + a</td>
<td>8</td>
<td>0.47 (3.62)</td>
<td>0.33</td>
<td>0.83</td>
<td>0.69</td>
</tr>
<tr>
<td>3</td>
<td>O = b × Qt + a</td>
<td>53</td>
<td>0.89 (16.94)</td>
<td>0.36</td>
<td>0.92</td>
<td>0.85</td>
</tr>
<tr>
<td>4</td>
<td>O = b × QQ + a</td>
<td>53</td>
<td>0.55 (17.33)</td>
<td>0.23</td>
<td>0.92</td>
<td>0.85</td>
</tr>
</tbody>
</table>

A first observation may be that 15 people indicated 0 h lost in both methods. For the VR method alone, this number is 45, implying that nearly 85% of the respondents feeling ill at work indicated that they would need zero extra hours to make up for lost work. The (Pearson) correlation coefficient between the results is 0.38, which is close to the 0.41 value reported by Van Roijen et al. [8].

In a linear regression analysis, the relation between the results from both methods turned out to be significant. The results from that analysis (regression equation 1) and all other regression analyses are presented in Table 4.

The results from regression number 1 indicate that, since b is smaller than 1, i.e. 0.15, when the Osterhaus calculation of hours lost increases with 1 h, the Van Roijen method increases with 0.15 h (9 min). A t-test confirmed that O results are significantly higher than VR results (P < 0.0001). This evidence supports the prediction made in the previous section. Because including zero answers to the VR method in this analysis might be considered comparing two different regimes (since zero does not have to mean no production losses as explained in Section 2), we also performed the analysis after deleting all observations scoring zero in the VR method, which ensures only comparing observations in which an estimation of production losses was indeed possible. The resulting regression analysis indicates that the relationship between the results of the two methods becomes stronger when the zero answers on the VR question are deleted (regression equation 2, Table 4). This provides some evidence for our theoretical prediction; however, the low number of observations (n = 8) inhibits firm conclusions.

This result does indicate that the type of work examined may influence the correlation between the two methods. In this study, much of the work not performed by someone less productive was automatically replaced by a colleague or unrecoverably lost. The value of b, however, remains smaller than 1 (0.47), implying that marginally VR results are smaller than O results.

To further assess the construct validity, the results of the VR method and the O method have to be compared with those of the quantity scale of the QQ method, the Qt method. In Fig. 2, all three results are shown.
On average, the total amount of hours lost for the Qt method, O method and VR method, respectively, are 81.6; 91.4 and 12.3, as denoted in Table 2. On average, therefore, the Qt method yields lower estimates than the O method, but Fig. 2 demonstrates that, in individual cases, this may not be the case. If we examine the results from the Qt and the O methods, it turns out that from the 53 observations, both methods yielded the same result 25 times (14 times, both methods estimated the number of hours lost as zero). In 17 instances, the O method estimated the production loss higher than the Qt method, both methods yielded the same result 11 times (not zero) and Qt results were higher than O results 11 times, which is not in line with our expectations. The Pearson correlation coefficient was 0.92. The regression analysis, as denoted in Table 4, regression equation 3, shows that the 1 h extra in Qt will lead to ‘only’ 0.89 h increase in the O results. However, the latter will start higher, due to the positive intercept value. To analyze whether the Qt method estimates production losses significantly lower than the O method, we performed a one-tailed, two paired sample *t*-test on the results. For all 53 observations, $P = 0.04594$. We performed the same *t*-test for a subgroup of respondents. This subgroup was formed by the 39 respondents that indeed scored some actual production loss on either scale. By eliminating the zero–zero combinations, it was investigated whether these combinations distort the comparison of the two methods, which are obviously aimed at estimating real production losses. The difference remained just statistically significant ($P = 0.04596$). Two one-tailed, two paired sample *t*-tests of the 53 pairs of VR and Qt results and the 40 remaining pairs when deleting all ‘zero–zero’ combinations confirmed that the Qt method yields significant higher results than the VR method ($P < 0.0001$ for both tests). The Pearson correlation coefficient between the two methods was only 0.40, close to the correlation between VR results and O results.

![Comparison of the Qt-method, O-method and VR-method](image)

**Fig. 2.** Comparing the Qt method with the O method and the VR method.
One may conclude that, based on the concept of construct validity, there is some empirical evidence to support the hypothesis that Qt would lie between the O method and the VR method for this sample. In relation to the VR method, the results are clear, in the sense that the VR results are obviously lower than Qt results. The comparison between the Qt and the O method would benefit from more research, using a larger sample.

4.2. The QQ method: incorporating the quality component

As introduced in Section 2, the complete QQ method measures both quantity (Qt) and quality (Ql). To give an indication of how these two correlate, the average Qt and Ql answers are denoted in Fig. 3. These are the average scores per respondent on both the quality scale and the quantity scale. The Pearson correlation coefficient is 0.59 between these two variables. On average, the quality score was about equal to the quantity score: 8.97 versus 8.93. As mentioned in Section 2, it is unclear how these two quantities would result in a total productivity loss. One possible way is a ‘straightforward multiplication’ of the scale scores; however, there are many other possible combinations. The results from this ‘multiplication’ are presented in Figs. 4 and 5: Fig. 4 presents the Qt losses compared with the Ql losses, while in Fig. 5, the total QQ results are compared with the results from the O method. Table 5 contains an exemplary calculation of the final QQ score. Note that we use the scale scores linearly to produce the hours of work lost, as was done for the O method.

In Fig. 4, the quantity and quality losses are compared for the 53 respondents. The correlation coefficient between Qt and Ql is 0.71. In total, Qt losses amount to 81.6 h and Ql losses to 62.8 h. In Fig. 5, the total QQ score, calculated by means of multiplication, is compared with the O method. The correlation between the
number of hours lost calculated with the QQ method and the O method is 0.92. In a regression analysis, as denoted in Table 4, regression equation 4, the relation turns out significant. Calculating the total impact from illness at work with the QQ results (i.e. a total of 144.37 h ‘lost’), as already performed in Table 2 for the Qt, O and VR methods, the number of hours lost would become 10% of the total amount of hours worked by respondents while being ill. On the total sample or firm level, the impact may be considered modest: 0.93% of total hours worked.

Fig. 4. A comparison of Qt results with Ql results.

Fig. 5. Comparing the number of hours lost according to the QQ method and the O method.
Table 5
Example of the calculation of QQ scores

Imagine a respondent who has been ill at work for 1 day. His score on the quantity scale is 8 and his score on the quality scale is 7. This respondent works 8 h per day.
The Qt loss is calculated as: \((1 - \frac{8}{10}) \times 8 = 1.60\) h.
This means that we assume that this person effectively worked \(8 - 1.6 = 6.4\) h that day. This 6.4 h of work were performed at 70% of the normal quality level. Therefore, the quality loss of the performed work is calculated as: \((1 - \frac{7}{10}) \times 6.4 = 1.92\) h.
The final QQ score now becomes: \(1.60 + 1.92 = 3.52\) h.

5. Discussion

In this paper, we have investigated the construct validity of three measurement methods of productivity losses without absence. Statistical analysis indicated that our hypothesis, that Qt results would on average lie between VR results and O results, could not be rejected.

Compared with the Qt method and the O method, the VR method was a consequent outlier with a relatively high amount of zero answers. There are two possible explanations for these answers: making up for lost work during regular hours or the impossibility of making up for lost work. The specific type of work of most respondents in this study, in which making up for lost work later is impossible, leads us to suspect that many of the registered zeros in fact may imply that people cannot make up for lost work. If this is indeed the case, VR estimates of productivity costs without absence may be considered an underestimation, since not being able to make up for work lost (nor internal replacement) may be without cost. This shows the necessity of acquiring additional information in studies like these on the type of work of respondents, type of organization, possibilities for making up for lost work and replacement issues. The exact organisation of work in the firm in this study will certainly have had an impact on (relative) results. Measurement methods should give explicit attention to these aspects.

Both the Qt method and the O method ignore the possibility of making up for lost work later during normal hours and therefore may yield an overestimation in terms of costs. The Qt method provides somewhat more conservative cost-estimations than the O method, and the type of question asked may be considered to better indicate the real quantity of work lost. However, more research is needed to compare these methods further, preferably to a golden standard, i.e. daily individual production data. Also, respondents may be asked in more detail about the way they come up with an answer to the questions asked in the different methods.

A noteworthy result from this study is that illness at work is quite common. On an average day, over 7% of the respondents indicated to experience health problems while being at work. The total impact from the phenomenon productivity losses without absence at the firm level, however, is quite low in this study. This is because respondents that were ill at work still could perform most of their work. More research in other firms could provide insight on whether this result is similar to the
impact of productivity losses without absence in other firms. Even with the QQ estimates, this type of production loss is estimated to be maximally 0.93% of total work time in this firm. To give an estimation of the monetary impact, using an estimated value added of 80,000 Dutch guilders, this means a value of lost work time of 774 guilders per year per employee.

Finally, it seems worthwhile to further develop, validate and use these methods in different settings, including the QQ method, also in specific patient groups. Regarding productivity losses without absence, the process of making up for lost work (also by colleagues) and the quality of work should especially be investigated further. In that sense, the results presented in this paper are not final answers to how impaired productivity at work should be measured and valued, but give an indication of what elements are of importance, which measurement methods are available at this point and which problems are attached to the different methods.

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Appendix A

The questionnaire ‘Consequences of Illness’ covers production losses without absence through the QQ method on a daily basis. On all days, the exact Dutch phrasing was:

Op de schaal hieronder kunt u aangeven hoeveel werk u vandaag hebt gedaan in uw normale werktijd ten opzichte van een normale dag. Een 1 omcirkelen betekent dat u niets kon doen en een 10 betekent dat u evenveel als normaal kon doen.

1 2 3 4 5 6 7 8 9 10
Zo goed als niets Evenveel als normaal

Wilt u inschatten hoe de kwaliteit was van het werk dat u vandaag hebt gedaan ten opzichte van normaal. Een 1 omcirkelen betekent dat uw werk van zeer slechte kwaliteit was en een 10 betekent een even hoge kwaliteit als normaal.

1 2 3 4 5 6 7 8 9 10
Erg slechte kwaliteit Zelfde kwaliteit als normaal
Translated into English:
Could you indicate how much work you actually performed today during regular hours as compared to normal on the scale below?

```
1 2 3 4 5 6 7 8 9 10
Practically nothing  Normal quantity
```

Could you indicate the quality of the work you performed today as compared to normal on the scale below?

```
1 2 3 4 5 6 7 8 9 10
Very poor quality  Normal quality
```

At the end of the week the respondents had to complete the O method and the VR method. These questions covered the past week. The exact phrasing in Dutch in the questionnaire was:

Hoeveel dagen in de afgelopen week bent u wel naar uw werk geweest, terwijl u last had van gezondheidsproblemen?
LET OP: dagen dat u zich ziek gemeld heeft niet meerekenen 
 ............... dagen

Wij willen u vragen op de meetschaal hieronder te omcirkelen hoe efficiënt u volgens u gewerkt heeft op de dagen dat u wel op uw werk was terwijl u last had van gezondheidsproblemen. Op de meetschaal betekent 10 dat uw werk niet werd beïnvloed, 1 betekent dat u zeer slecht in staat was uw werk uit te voeren.

```
1 2 3 4 5 6 7 8 9 10
Maximaal inefficiënt Even efficiënt als normaal
```

Hoeveel uur zou u in de AFGELOPEN WEEK langer hebben moeten werken om het werk dat u niet hebt kunnen doen als gevolg van gezondheidsproblemen in te halen?
LET OP: dagen dat u zich ziek gemeld heeft niet meerekenen 
 ............... uur

Translated into English:

How many days during this past week did you go to work while suffering from health problems?
NOTE: Do not count the days on which you reported sick ............... days
Please circle on the scale below the degree of efficiency you consider yourself to have worked with on the days you did go to work while suffering from health problems. On this scale 10 means your work was not affected and 1 means that you were hardly capable of performing your work.

1 2 3 4 5 6 7 8 9 10

Very inefficiently As efficient as normal

How many hours extra would you have had to work to catch up on tasks you were unable to complete in normal working hours due to health problems IN THE PAST WEEK?

NOTE: Do not count the days on which you reported sick.

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

References