Sickness Presenteeism- antecedents and effects

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ABSTRACT

The present research project has investigated the Sickness presenteeism phenomenon, its frequency and severity. Furthermore, attendance pressure and work-related factors were assessed and effects on productivity at work uncovered. A sample of 50 blue and white collar workers at a French family company POK was used. The research supported the occurrence of sickness presenteeism at the company and relatively high frequency and severity (between 2 to 5 days) and most of the hypotheses stated. In addition, the outcomes of the study suggest that sickness presenteeism at POK appears most often as a consequence of high workload, work ethic, financial bonuses and low degree of replaceability. Low peer and supervisor support also encouraged engagement in sickness presenteeism, however career opportunities not. Beyond that, impact on the productivity loss was disclosed. In particular, the research showed support for four dimensions of productivity loss - quantity and quality of work, concentration and incidence of conflicts at work. The study findings indicate that nowadays, apart of sickness absenteeism, sickness presenteeism should be addressed by worksite health-promotion programs in order to keep a healthy and productive workforce. As a consequence of that, further recommendations to improve worksite health are discussed.
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I. INTRODUCTION

“80% of success in life can be attributed to simply showing up.” (Woody Allen)

In the last decades, changing workforce, higher unemployment, restructuring in both private and public sectors, slimming down of organisations and reduced job security are just some aspects of the transformation of the work environment. These changes have direct consequences for people regarding e.g. perceptions of stress on the job, time pressure and the health/sickness behaviour at work. Concerning the health related issues in the workplace, most of the researchers and practitioners were concentrating on decreasing absence rates through appropriate policies and programmes (Evans and Palmer 1997). Therefore the absenteeism literature concentrated on measuring the causes and monitoring absence, the legitimacy of absence, magnitude and expenses of absenteeism, design of control policies in order to improve attendance (Goodman et al. 1984). For example in Sweden the sickness compensation system changed since 1996, the benefit level decreased from 90% to 75% of income and the concept of occupational injury was made more restrictive. Since then, sickness absence rates and the reporting of workplace injuries decreased rapidly (Aronsson et al. 2000: 502).

However, sickness absenteeism is not the only factor having negative impact on productivity of employees and therefore being a costly problem for employers and organisations. As McKeivitt et al. (1997) state, there are only few studies examining low rates of sickness absence assuming low morbidity and no economic and managerial problem. This inadequate presumption of employees being present at work is equal being productive was corrected by the concept of ‘sickness presenteeism’ (SP). That is, the phenomenon of staff staying at work when they should be off sick (Unison 1999). We will use wording ‘sickness presenteeism’ and only ‘presenteeism’ meaning synonyms.

Therefore, an emerging field of current research in the area of worksite health is nowadays also considering ‘sickness presenteeism’ as an important topic for health promotion at the workplace. Central aspect of the research is the relationship between presenteeism and its consequences on productivity loss among employees (Hemp 2004, Lofland et al. 2004, Goetzel et al. 2004). The investigation of the concept of sickness presenteeism and its scope has broadened the research perspective (Aronsson & Gustafsson 2005). In addition, different forms and severity of health states related to sickness presenteeism and possible reasons to go to work despite feeling ill have enriched the current research area (Chapman 2005, Biron et al. 2006).

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1 Absenteeism refers to missing part or whole days of work due to personal illness, personal business, or other reasons. May be avoidable and unavoidable. (Absenteeism 2007)
This research project analys[es] the phenomenon ‘presenteeism’ at the firm called POK, a producer of firefighting equipment in France. We examine, if ‘presenteeism’ is a problem and exists at this company. In addition, we look at the potential attendance- pressure and work related factors that could encourage engagement in Presenteeism and of course the possible impact of Sickness Presenteeism on the perceived productivity loss of employees. To date research concentrates mostly on the analysis and quantifiable explanation of productivity loss caused by Presenteeism and neglects the importance of potential antecedents or influential factors of the ‘presenteeism’ by employees. Therefore in our study we were interested in both sides of the ‘presenteeism coin’ meaning the potential reasons and also consequences of sickness presenteeism. We think that our research approach may provide practitioners with a broader perspective on sickness presenteeism in order to address the ‘problem of SP’ among employees more effectively, e .g via health promotion programs.

Our project draws on existing sickness presenteeism research and conceptualizations of the term ‘sickness presenteeism’ which we will illustrate in the literature review. In addition, possible determinants and consequences of SP are presented. We then explain the research methodology used to derive our results. After, we discuss the main findings and conclude with practical implications for management of the problem ‘sickness presenteeism’. The limitations and problems experienced during collecting the data and suggestions for future research directions are exposed last.
II. LITERATURE REVIEW

2.1. What is ‘Sickness Presenteeism’?

The concept of presenteeism is widely used in the management literature although there are still numerous interpretations of the phenomenon as there is still no single definition of the term. Firstly, it is important to distinguish absenteeism from presenteeism. Secondly, the engagement into presenteeism can have manifold connotations and antecedents. Therefore, narrowing the term presenteeism via definition is an essential step in order to understand and read through this research report.

As already mentioned in the introduction, the most up to date research concentrates on Absenteeism - its costs, increasing levels and as an indicator of a prosperous and healthy organisation. As Rhodes and Steers (1990) state, 60% of absences are caused by illness and injuries and this in turn produce 132 million lost working days per year in the USA. Indeed, illnesses and injuries are the most direct determinant of Presenteeism as well. Thus Sickness Absenteeism (SA) and Sickness Presenteeism (SP) are considered mutual alternatives in that it whether an employee engages in SA or SP depends on a variety of factors (Caverley et al. 2007).

Mentioning the term sickness, a question related to types of sicknesses associated with SP occurs. Are these genuine, chronic or low level sicknesses? The reviewed literature and research results agree on certain types of sicknesses which are associated with sickness presenteeism. Physical illnesses such as allergies, headache, back/neck pain, stomach upset, cold/flu symptoms, asthma/breathing difficulties, as well as mental illnesses, e.g. depression and anxiety and perceptions of stress and sleep disorders are the most often medical conditions stated in relation with SP (Hemp 2004: 2, Caverley et al. 2007: 313, Goetzel et al. 2004: 404). However as the study by Kivimäki et al. 2005 reveals, sickness presenteeism was reported even among employees with a risk of serious coronary events. These risks are explained by the lack of taking short-term sick leave among unhealthy employees (which are identified as employees with higher risk of serious coronary events).

Although we have already referred to the term ‘sickness presenteeism’, indeed one needs to consider the context, the term presenteeism is used. Firstly, we used the words ‘sickness presenteeism’ to underline the association with health conditions and presenteeism of employees. In addition, there is a term ‘presenteeism’ which is mostly used to describe “…putting in excessive working hours as a perverse expression of commitment or a way of coping with nagging job insecurity” (Lowe 2002:1). Another possible interpretation of the term ‘presenteeism’ is ‘Malingering’ (pretending to be ill to avoid work) or pretending to ‘work’ while e.g. surfing on the internet. But the concept of ‘our sickness
presenteeism’ and the underlying research concentrates on the assumption that employees do not take their jobs easy and that most of them want to continue to work (Hemp 2004:2). Therefore, even little research has been taken on ‘working while being sick’ there is a number of definitions and conceptualisations. Some of the writers measured SP as the number of days where everyday work duties were impaired by health conditions, others defined it as ‘absence of sick leave in persons with health conditions (Sanderson & Andrews 2006). There is a number of definitions, all stressing different aspects of sickness presenteeism. A more business- driven definition was stated by an American consulting AON: “Presenteeism is a relatively new term used to describe workers who remain on the job but who are not as productive as usual due to medical conditions.” (Marlowe 2007) A more sophisticated and exact identification of the phenomenon is provided by Aronsson & Gustafsson (2005:503): “Sickness Presenteeism designates the phenomenon of people, despite complaints and ill health that should prompt rest and absence from work, still turning up at their jobs.” In our project report we will consider the second definition as it is the most often used among researchers of SP.

2.2. Why Sickness Presenteeism?

The interest towards Sickness Presenteeism by researchers, work- related health practitioners and companies grew in the past years mostly because of its increasing importance in the work- related context and its costs for the employer community. As the evidence shows, Sickness Presenteeism represents the indirect costs to the companies as the costs are not visible. As Figure 1 below demonstrates, SP accounts for 63 % of indirect medical costs at Bank One in the US in 2000. This implies that direct medical costs at Bank One represent only a fraction of the total company spending on health. Furthermore, it is obvious that Sickness Presenteeism is far more costly than its opposite Sickness- related Absenteeism and Disability (Hemp 2004:3-4). Furthermore, the American Productivity Audit reveals the total costs of presenteeism in the United States, which is more than 150 billion Dollar per year. For example, a study by advanced PCS- a supplier of health improvement services, discovers that lost productivity was noticeably higher for SP-72% than for sickness absenteeism which accounted for only 28% (Stewart et al. 2003).
Another concerning indicator that underscores the importance of sickness presenteeism is its frequency among the employees. A Canadian cross-sectional study conducted from 3825 participants showed that workers went to work despite sickness more than 50% of the time (Biron et al. 2007: 9). However, it is not only these alarming figures and their significant economic consequences that are raising the public and company interests towards SP, but also the future demographic change towards an older workforce resulting in more chronic minor illnesses and possibility of some illnesses spreading very fast-for example infections such as flu/cold and also growing competitive pressures in many sectors. In addition, a better ability to measure this ‘hidden costs’ of SP and therefore control these health conditions makes them a more topical issue as well (Chapman 2005).
2.3 Research on Sickness Presenteeism

This serious cost factor caused by SP has resulted in a considerable amount of research on possible costs and consequences of Sickness Presenteeism, but only a little research has been done regarding the potential reasons why people actually engage in sickness presenteeism. Therefore in the following section we will present a number of possible factors that can influence the engagement into SP.

2.3.1 Determinants of Sickness Presenteeism

Aronsson et al. (2000) in their study of different occupational categories uncover that mostly employees in a job, where the work result is highly dependent on the relationships with other persons reported high SP. These are occupational groups where the members of them have to provide care and welfare services, teach or instruct. Moreover, as the research highlights, persons who interrelate with young people, children, sick and elderly as their ‘client group’ report the highest engagement in SP, justified by employees as the more dependent and exposed groups (Aronsson et al. 2000:508).

Another determinant closely related to occupational group factor is the level of income. The occupational groups in the health, welfare and teaching sectors are characterized by lower levels of pay. Therefore they tend to get involved in SP because of the concerns of salary loss due to absence caused by the low level state of personal finances (Aronsson & Gustafsson 2005).

In addition, as already mentioned by Aronsson’s study (2000), health care sector employees tend to have higher levels of SP in comparison with other occupational groups. Another British study supports the ‘occupational group determinant’ in that it cites a general practitioners point of view by…”illness doesn’t belong to doctors…”, furthermore it enlarges the perspective by confirming that health professionals do not acknowledge their own illnesses because of the shame, concerns of confidentiality and also because of the possible future career risk if colleagues or employers would learn about it (McKevitt & Morgan 1997: 494).

Organisational determinants of Sickness Presenteeism

The previous study opens another set of factors that may cause sickness presenteeism among employees. Apart from the special reasons for health practitioners related to their specific mission to care and heal ‘other people’ not themselves, the cultural barriers in the form of norms, workplace culture and work ethics may play an important role in the decision to take/not take a sick leave. For example, in another British study over 80% of doctors and accountants/consultants stated they “worked through illness”, quoting organisational and cultural barriers not to take sick leave. The reasons stated
by respondents ranged from: pressures of work such as not letting colleagues down and causing them more work, commitment to the job, work cannot wait or cannot be delegated, no locums available, taking sick leave is disapproved of, workaholism (McKevitt et al. 1997: 297). These organisational and contextual pressures can be reinforced by organisational structure (e.g. lean production) or recent downsizing (Aronsson & Gustafsson 2005). An example of the effect of downsizing on the occurrence of sickness presenteeism is provided by a Swedish epidemiological study. It shows ‘medically vulnerable’ employee groups (with cardiovascular ailments) in the downsizing situation, engaging in SP (in form of a significant cutback of sickness absence) because of reduced employability perspective after potential loss of work (Theorell et al. 2003).

The findings of the aforementioned McKevitt et al. (1997) study were enlarged by the research from Grinyer & Singleton (2000). They determined two potential reasons why people do not take sick leave while feeling ill. First was in the context of a team, where the members of a team felt responsibility for the group and second, the employees were facing a trigger point system where after four illness occasions, they were invited for an interview to explain the reasons for being absent from work. The researchers took a multi-dimensional perspective on the process of choosing sick leave where an individual employee makes a risky selection between his/hers own health and a professional risk, for example regarding future career prospects. The additional organisational factor in this study was the trigger point system sickness absence policy, which was intended to decrease sickness absence. However the result was the increase in long-term sickness (Grinyer & Singleton 2000: 19). This study reinforces the notion that low levels of sickness absence do not necessarily report low morbidity as this relationship is mediated by social, cultural and organisational factors (McKevit et al. 1997, Grinyer & Singleton 2000). In addition, economic factors such as low sickness pay (mostly applied by organisations in order to decrease sickness absenteeism) may encourage attendance at work while sick (Chatterji & Tiley 2002: 686). Thus, as Bellaby (1999) states, the decision about sickness absence is a result of a number of issues such as a set of work rules and the attitudes of managers and co-workers. Hence, the choice is made on the foundation of constraints, for example bureaucratic and legislative context is important in a way that employee’s understanding of their rights and disposable resources shape their decisions and actions in undertaking sickness absence. Obviously emotional strain and stress and formal regulations may have harmful impact to employee’s health in the long-term prospect (Dew et al. 2004: 2275; Dwyer 1991; Nichols 1997).

From comments previously stated, it is obvious that SP may function as a substitute for sickness absenteeism, this statement was supported by the study of Caverley et al. (2007). This has a number of implications, for example regarding the severity (seriousness) of sicknesses (the illnesses for
absenteeism and presenteeism are the same), absenteeism may be a poor indicator for productivity loss and in the case of replacement of SA by SP, the work related factors associated with absenteeism are linked to SP as well. Further below, we will analyse the organisational and work- related factors in more detail (Caverley et al. 2007: 312).

As a consequence of the complexity of the Sickness Presenteeism phenomenon, we will now outline two Attendance- pressure factors which we measured in the present study.

**Attendance Pressure factors**

**Degree of replaceability**

The majority of the research on Sickness Presenteeism and its determinants supports the notion that the most often stated reason to go or stay at work are not enough resources (staff) to cover the absence (Aronsson & Gustafsson 2005, Caverley et al. 2007, Virtanen 1994), or no one can do the work apart of a particular person –high discretion or specificity of work. The ‘low degree of replaceability’ problem in the organisations and companies is associated with an organisational structure of understaffing and lean production. As Aronsson & Gustafsson (2005) and Aronsson et al. (2000) support with their research findings, low replaceability may be a result of slim organisation and also particularity of tasks.

Additional co-arguments are brought up for the low replaceability problem. As already mentioned in the British study with general practitioners, an interplay with cultural factors such as ‘unfairness to colleagues’ and also ‘patients have been already scheduled’ reinforces the importance of the ‘low replaceability’ determinant of SP (McKevitt et al. 1997). Therefore our first hypothesis is:

**1 Employees engage in presenteeism the lower their felt degree of replaceability.**

**Work/Role overload**

Work overload is the second most often stated attendance pressure factor in the reviewed literature related to reasons for employees to engage into Sickness Presenteeism. It means that workers experience high volume of work on a daily basis (Aronsson et al. 2000:508, Biron et al 2006: 11, Lewis and Cooper 1999, Lowe 2002:2). This determinant of Sickness Presenteeism is explained in a same way as the ‘low replaceability’ factor by a slimmed down organisational structure and as a consequence of previous downsizing (Aronsson & Gustafsson 2005: 960). Furthermore, closely related to work or role overload is ‘time pressure’ or tight deadlines, which is mostly measured together with the amount of workload (Osipow & Spokane 1998, Biron 2006). As the structure of today’s organisations is following
the lean path and work environments are more fractured, employees experience higher workloads with less recourses and therefore we hypothesize that:

**2 Employees engage in presenteeism depending on the role overload.**

**Work-related factors**

In the next section we will state three work-related factors, which are originally associated with sickness absenteeism. We made this choice, after we reviewed the findings from the Caverley et al. (2007) study, where they were significantly correlated with sickness presenteeism. However, we are not going to measure the ‘substitutionality’ of sickness presenteeism for sickness absenteeism. We know (from the figures provided by company- our case study) that the ‘presence at work’ is monetary rewarded and the sickness absence rates among respondents are lower than the national average, which indicates the existence of SP (Pilette 2005).

In addition, current literature also strongly emphasizes that sickness presenteeism is on the rise in the firms and that employees often substitute sickness absence with sickness presence for a number of reasons such as employment insecurity or fear of taking sick leave, explained in the previous section. In the present study we looked therefore at the relationship between sickness presenteeism and the following work factors: perceived career opportunities, peer support and supervisor support (Caplan et al. 1975).

**3a Employees who perceive low career opportunities report higher presenteeism.**

**3b Employees who perceive low supervisor support report higher presenteeism.**

**3c Employees who perceive low co-worker support report higher presenteeism.**

Apart of the above stated work-related factors associated with presenteeism, the current literature suggests significant relationships with other personal and work determinants such as high work-life conflict (Duxbury & Higgins 2001), professionalism and guilt, perceived seriousness of the ailment (Biron et al. 2006), rewards for low absence rates, job insecurity (Kristensen 1991) or low control over own labour market situation (Kivimaeki et al. 2005), as reasons to engage into sickness presenteeism.

As in our research, we also measured the effects of sickness presenteeism, we now will take a step further and review possible outcomes of sickness presenteeism.
2.3.2 Sickness Presenteeism and its consequences

As mentioned in the section ‘Why sickness presenteeism’, the interest towards SP is maintained by employers mostly because of the potential productivity losses by employees suffering illnesses and pain during being present at work. More employers are becoming aware of this particular form of productivity loss and that the extent of this can have considerable economic implications for them. Additionally, the improvement in the measurement of the productivity loss caused by SP increased the concerns of more and more organisations and firms gaining also hard facts which can be translated into monetary figures. This recent advancement made it easier to affect and purposely target sickness presenteeism, e.g. by health promotion programs (Chapman 2005).

Employer perspective

Productivity Loss and its measurement

As already stated in the beginning of the literature review, sickness presenteeism causes costs for employers in form of lost productivity (see figures in the section ’Why Sickness presenteeism’). This has been measured in the past decades by a number of instruments, mostly questionnaires. However the measurement of sickness presenteeism and its consequences for productivity loss is challenging, mostly because the estimation of on- the job productivity is not tangible as in the case of absenteeism (Mattke et al. 2007: 213). As a review of the SP measurement literature shows, different approaches are used in measurement of lost productivity. For example in the work of Lofland et al. (2004), they define eleven health-related productivity survey instruments, from them, only six measure productivity loss which can be translated into monetary figures. The other five capture absenteeism or presenteeism via a more qualitative mode which is useful in order to assess the lost productivity of different employee and disease groups. There are three main methods identified by up to date research, to capture the productivity loss. Firstly, an assessment of ‘Perceived Impairment’ (rating of illnesses and their perceived impact on the performance of day to day intellectual, physical and interpersonal actions, and other job demands). Secondly, comparative productivity or performance method measures SP in a way, how respondent’s productivity differs from that of others or the own common performance. Thirdly, there is also an opportunity to ask employees to rate their estimated number of unproductive time at work, however, only one study was identified using this measurement method (Mattke et al. 2007:214). An additional step in the process of the assessment of health related productivity loss is the conversion into the hard facts- the costs of SP. This can be done in three ways as well, such as ‘Salary conversion method’ (number of missed days/hours multiplied by daily wage). The next possible option is the ‘Introspective method’ where an illustration of the extent of SP productivity loss is estimated rather than the provision of exact figures, e.g. with the question like ‘how many full-time employees would you be able to cut if the productivity of the chronic ill employees grows by 20%?’. The last method is
the ‘Firm level measures’, which are very individual and dependant on the firm, using certain countermeasures, for example hiring of temporary workers or offer overtime payment to sustain the output are costs which can be put into the relation with its lost productivity (Mattke et al. 2007:215). To sum up, sickness presenteeism and its effects on productivity loss and therefore costs for employers is a recent topic in the health-related research. Even though the research instruments mentioned above have been validated there is still a scope for further research in this area, as the interest from the employer’s public towards exact SP cost estimates are growing strongly.

As already stated, the developed SP instruments are mostly measuring self perceived productivity losses in a form of diaries or interviews (Hemp 2004, Chapman 2005). Important for our literature review is the knowledge of what is actually been measured in the context of lost productivity. As reviews of a variety of developed SP and productivity loss instruments (e.g. Work limitations Questionnaire, Health and Labour Questionnaire, Work Productivity and Impairment Questionnaire, Stanford Presenteeism Scale, Health and Work performance Questionnaire) state (Lofland 2004), productivity has been estimated from different perspectives. In general, aspects such as quantity of work ‘volume of work completed’, the time required to finish a task, quality of work done but also other ‘work domains’ such as interpersonal relationships at the workplace, decision taking and concentration at work have been measured by the mentioned health-related workplace productivity loss instruments (Lerner et al. 2001, Burton et al. 2006, Goetzel 2003, Kessler et al. 2003). This opens up other dimensions of productivity impairment by health status, such as the magnitude of work deficit and type of the effect of SP. Therefore we decided to state the following four hypotheses to estimate the degree and the nature of the productivity loss caused by sickness presenteeism.

4a Employees with higher presenteeism will report negative effect on work quantity.

4b Employees with higher presenteeism will report lower work quality.

4c Employees with higher presenteeism will report higher level of conflicts.

4d Employees with higher presenteeism will report lower concentration.

To take a step further, the research review indicates that the displayed SP and productivity loss instruments also measure the variance of the impact of different illnesses and health risks on the productivity loss at the workplace. For example, depression is highly associated with work reduction concerning time management, interpersonal interaction and total amount of work (Burton et al. 2004: 41). Moreover, as Stewart et al. (2003) estimate, depressed employees cost American employers 44 billion dollars per year in lost time and the mean number of lost productive hours per week is 5.6 hours.
for employees with depression. Furthermore, in the same study, the headache was judged as the most common pain condition resulting in unproductive time, followed by back pain, arthritis pain and musculoskeletal pain. The average time loss due to the aforementioned conditions was for headache 3.5 hours per week and arthritis or back pain 5.2 hours per week (Stewart et al. 2003). Additionally, also health risks such as too high body mass index, poor diet, physical inactivity, high stress and lack of emotional fulfilment account for significant impact on the employee’s productivity (Boles et al. 2004, Burton et al. 2004). Figure 2 below, should give estimation about the Top ten most costly health conditions in the USA.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Prevalence</th>
<th>Average productivity loss</th>
<th>Aggregate annual loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migraine</td>
<td>12.0%</td>
<td>4.9%</td>
<td>$434,385</td>
</tr>
<tr>
<td>Arthritis</td>
<td>19.7</td>
<td>5.9</td>
<td>865,530</td>
</tr>
<tr>
<td>Chronic lower-back pain (without leg pain)</td>
<td>21.3</td>
<td>5.5</td>
<td>858,825</td>
</tr>
<tr>
<td>Allergies or sinus trouble</td>
<td>59.8</td>
<td>4.1</td>
<td>1,809,945</td>
</tr>
<tr>
<td>Asthma</td>
<td>6.8</td>
<td>5.2</td>
<td>259,740</td>
</tr>
<tr>
<td>GERD (acid reflux disease)</td>
<td>15.2</td>
<td>5.2</td>
<td>582,660</td>
</tr>
<tr>
<td>Dermatitis or other skin condition</td>
<td>16.1</td>
<td>5.2</td>
<td>610,740</td>
</tr>
<tr>
<td>Flu in the past two weeks</td>
<td>17.5</td>
<td>4.7</td>
<td>607,005</td>
</tr>
<tr>
<td>Depression</td>
<td>13.9</td>
<td>7.6</td>
<td>786,600</td>
</tr>
</tbody>
</table>

**Figure 2:** Impact of the ailments on prevalence, productivity loss and annual cost to the company in lost productivity. (Source: Lerner et al. 2004 in Hemp 2004:6)

**Employee perspective**

In the reviewed scientific literature no articles with sickness presenteeism and its consequences for individuals were identified. Apart from one, which measured the occurrence of serious coronary incidents such as myocardial infarction or coronary heart disease in a three years study among British civil servants. The research revealed that unhealthy employees (with coronary health risks) who failed to take short term sick leave, reported higher incidence of mentioned serious coronary events than employees with moderate level of sickness absence (Kivimäki et al. 2005). This implies that not taking sick leave while feeling ill can have serious detrimental effects on one’s health. However to date research did not invest much effort into estimating consequences of sickness presenteeism on the long-term health of individuals.
III. METHODOLOGY

3. 1 Objective of the study

Most of the research has focused on absenteeism and organizational features that could influence it (Goetzel et al. 2004). Others have tried to measure the productivity loss due to sicknesses (Mattke et al. 2007). This thesis is directed at the perception of employees engaging in SP, using the definition of presenteeism of Aronsson et al (2000) mentioned in the literature review.

The objective of this study was to investigate the existence, reasons and effects of sickness presenteeism in the chosen organization. Three research points were addressed.

A first intend was to ascertain the extent of sickness presenteeism, defining the type and severity level of sickness when personnel decide to stay at home/ leave the work.

A second aim was to provide an explanation as to why employees engage in presenteeism and the possible correlation with demographic data.

Finally this research was conducted in order to determine possible effects of presenteeism on employee performance and productivity while sick and present and work and the possible correlation with demographic data.

3. 2 Research design

Research site

This research was conducted at POK, a major manufacturer of fire fighting equipment based in France. The organization belongs to a cluster of three units employing overall 90 employees. The majority are blue collar workers (65) and most of them work in shift. The other 25 are sales managers, engineers and assistants. Due to the family size of the enterprise and the high overload, absenteeism is closely monitored and one of management’s goal to reduce.

Each operator working in shift is responsible for about 4 machines and is part of a work chain. Therefore for management regulat attendance at work is a high priority.
A measure to decrease absenteeism from 7% to 2% was implemented 3 years ago, in form of a presenteeism bonus obtained when not being absent a single day during 3 consecutive months. That measure was however unknown to us at the time of the study and revealed through the open ended questions of the survey.

Management was mainly interested in having a better understanding on possible effects of sickness presenteeism on the productivity and how employees generally perceive it.

**Procedure**

In order to investigate the antecedents and effects of presenteeism, a quantitative study was necessary. Due to the tight time frame available, the collection of data was done through online questionnaire (see Appendix A). Two computers were available in the main office with explanations on how to access the questionnaire on the internet. Participants were allowed two days to reply (15 to 17 of August) and this during normal office hours. Respondents were reminded in these explanations that the answers would remain confidential and anonymous as well as in the introductory page of the questionnaire. Note that some question were introduced in the questionnaire at the request of management, but not used for the correlation analysis of this thesis. The questionnaire was initially set up in English, translated by a co-author and revised by a manager of the organization (as given in Appendix B).

**Sample**

From 90 employees a total of 50 answered, resulting in a rate of 55.6%. One answer has been removed from the analysis showing too much inconsistency. The sample analysed included than 29 male and 20 female. Most were working full time (46), only three worked part time. The age of respondents ranged from 19 to 65 with an average of 36. Most were married (55%) and single (37%). The largest number, 67.5 % worked in production, 20.5% in administration and 12% were engineers.

**Measures**

The questionnaire consisted of Likert scale questions (indicating a level of agreement with a statement) all with five- scale measures (e.g. health: from poor to excellent) and two open ended questions. We gained information on health, presenteeism, attendance- pressure and work- related factors, and effects of presenteeism.
General Health
We used Health Canada measure to indicate employee’s self-reported health state. We asked the following question: “In general would you say that your health is (poor=4, fair, good, very good, excellent=0)”, (Health Canada 2004 in Caverley et al. 2007: 308).

Symptoms
As an introductory question and to focus the attention on the possible illnesses, respondent were asked which conditions they experienced in the last 12 months. Comparing with the absenteeism data provided by POK, these symptoms were the 8 most frequently reported illnesses: headache, allergies, back pain, stomach ache, cold/flue, depression, anxiety/stress and sleeping problems, with cold/flue being the most frequently reason reported for absenteeism. All symptoms were treated as separate variables with 0= not experienced, 1= experienced.

Presenteeism days
The extent of sickness presenteeism is first measured by asking employees how many days they had attended work despite feeling they should have taken the day off sick, over a period of 12 months. Responded were given 5 possibilities: never (=0), once (=1), 2 to 5 days (=2), 6 to 10 days (=3) or more than 10 days (=4) (Lowe 2002).

Frequency
The frequency of the illnesses associated with Sickness Presenteeism was acquired via question “During the last 12 months, whilst at work how often have you experienced the following?” Headache, Allergies, back pain, Stomach ache, Cold/Flu, Depression, Nervousness, Sleeping problems. The scale was ranging from Never (= 0) to All the time (= 4).

Pain level
The level of pain was recorded the same way as for frequency with a scale None (=0) to very severe (=4).

Effect of symptoms
The question “during the last 12 months, how often did the following symptoms effect your work” was measuring the extent of SP. This time, responded could chose for the 8 symptoms whether these occurred never (=0), once a quarter (=1), once a month (=2), once a week (=3) or daily (=4).
The open ended questions
Severity of illnesses related to Sickness Presenteeism was measured via one qualitative question: “At what point would you consider yourself too ill to stay at or go into work?” Another qualitative open-ended question asked participants for their reasons to engage in Sickness Presenteeism: “Please state the reasons you attended work whilst feeling unwell.” (Caverley et al. 2007:308).

Degree of replaceability
‘Degree of replaceability’ measures the chance to be replaced by other person or employee while absent. We measured this variable with the following question “When you are absent from work for up to a week, what proportion of your task remain when you return” (Aronsson & Gustafsson 2005: 961). The scale from the references was changed to fit a 5 scale measure: None (=0), 25% (=1), 50% (=2), 75% (=3), 100% (=4). The question was asked twice at different location in the questionnaire for a higher reliability. The answers of these two identical items were combined.

Work/Role overload and time pressure:
We measured Role overload/ time pressure by ten items adopted from Osipow & Spokane’s (1998) ORQ (Occupational role questionnaire). Role Overload “measures the extent to which job demands exceed resources (personal and workplace) and the extent to which the individual is able to accomplish workloads” (Osipow 1998: 2). The following statements were asked to be assessed: I am good at my job. At work I feel I’m expected to do too many different tasks in too little time. I feel that my job responsibilities are increasing. I am expected to perform tasks which I have never been trained. I have the resources I need to get my job done. I feel I have to take work home. I work under tight time deadlines. I wish I had more support to deal with my job demands. My job requires me to be constantly involved in a number of important areas consecutively. I believe I’m expected to do more work than is reasonable. These items were measured on the five- scale measure (mostly true=0, usually true, often true, occasionally true, never true=4). If the elements combined showed a correlation with sickness presenteeism, one would than be able to determine which of these antecedents rates the highest.

Work related factors
We asked several questions regarding work-related factors, such as perceived career opportunities, peer and supervisor support. All factors are measured with a 5 Likert scale ranging from definitely true (=0) to definitely false (=4) (except for one question, for which the points are reversed).
**Perceived career opportunities:**
We measured this variable with two questions adopted from Caplan et al. (1975), such as: “Career opportunities at POK are generally attractive.” And “There are few opportunities to move ahead in my job and career.” These were assessed by respondents according to five scale measure (definitely true, mostly true, not sure, mostly false, definitely false). Since the second question is introducing the concept in a reversed fashion, points are reversed in comparison to all other items.

**Supervisor support:**
The variable ‘supervisor support’ was captured by two items, also from Caplan et al. (1975): My supervisor goes out of his/hers way to do things to make my work life easier for me. And I can rely on my immediate supervisor when things get tough at work. Ones more, 5 scale measure was used for this measurement.

**Peer support:**
Three items addressed the peer support also adopted from Caplan et al. (1975): “I can rely on my co-workers when things get tough at work. My co-workers go out of their way to do things to make my work life easier for me. People I work with are helpful in getting the job done.” The same 5 scale measure was used for these statements.

The effects of presenteeism were asked with the question “If applicable, following from this, due to your symptoms above, whilst at work how often did they;” and options of answers were ranging from None of the time (=0) to all the time (=4).

**Work quantity**
The reduced amount of work was measured with two items “limit the amount of work you could do?” and “result in accomplishing less at work?” obtained from the work performance questionnaire (Kessler 2003:159).

**Work quality**
The effect on work quality were obtained from “negatively affect the quality of your work?” and “result in work quality lower than expected?” (Kessler 2003:159).
Conflicts
Conflicts at work were measured with the three items such as “Result in you becoming annoyed with or irritated by co-workers, supervisors, client, customers or others” obtained from the health and work questionnaire (Shikiar et al. 2004: 222).

Concentration
The limitation on concentration was asked with two items “Negatively effect your concentration?” and “negatively affect the accuracy of your work?” Concentration was measured in this way with the health and work questionnaire and the health and labour questionnaire (Shikiar et al. 2004:222, Hakkaart-van Roijen et al. 2000:13).

Demographic variables
Employees were asked about gender, age, marital status, employment status, number of children, height, weight and annual gross salary. Except gender, all other demographic variable were optional. The last three questions were skipped by most respondent such that one could not calculate the obesity which would have been a good measure for health. The age was therefore also an open ended question since needed in the computation of obesity.

Gender – Employees could select their gender: male = 0 and female = 1.
Age – Age was an open ended question.
Marital status – Respondents could choose from 6 options single = 0, married or cohabiting = 1, separated = 2, divorced = 3, widowed = 4
Children – Employees could select their number of children None = 0, One = 1, Two = 2, Three or more = 3.
Height and weight – These were open ended questions for the reasons mentioned above.
Employment status – Staff was ask to choose between full time = 0 and part time = 1.
Annual gross salary – Employees were asked their salary from pre-categorized options: from 0 to 10k = 0, from 10k to 20k =1, from 20k to 30k = 2, from 30 to 40 k = 3, from 40 to 50k = 4.

The time scale of 12 months
Depending on the purpose of the studies, many questionnaires developed on sickness absenteeism and presenteeism focus on the last 2 weeks to 2 months. For example, Lerner et al. consider in their study the difference in validity observed when measuring over different time periods (2001:77) and argue that the 4 week reporting period gave satisfactory result compared to the two week version, while two week
showed better results. In fact the longer the recall period, the more respondent tend to underestimate the effects of sickness presenteeism on their effectiveness (Goetzler 2003: 751). In the same source, Goetzler et al, disputes that the reporting period should take into account the type of the disease. For chronic conditions, a recall short period is satisfactory. Acute symptoms such as depression, allergies and stress necessitate a longer time frame.

Since we investigate several conditions at the same time, and because of the size of the population, we opted for a 12 months time scale.

**Data analysis**

Variables were controlled using standard regression with SPSS. The regression allows us to verify how strong elements correlate with each other. T-test were used to measure the impact of the different nature of populations.

**IV. RESULTS**

4.1 **Sickness presenteeism**

The answers collected among the sample showed a trend of good health. A percentage of 47% of employees described their health was excellent or very good and 51% reported that their health was good.

Further, the respondents could tick all symptoms they had experienced over the last 12 months. These are depicted in Table 1 with their corresponding proportion in the sample. Many reported several symptoms at together. Headaches concerning more than half of the sample, with 60% is the most reported symptom, followed by back pain with 40%, cold/flue 36% and anxiety/stress 34%. 20% of the respondents answered with no symptoms at all.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>60%</td>
</tr>
<tr>
<td>Back pain</td>
<td>40%</td>
</tr>
<tr>
<td>Cold/flu</td>
<td>36%</td>
</tr>
<tr>
<td>Anxiety/stress</td>
<td>34%</td>
</tr>
<tr>
<td>Sleeping problems</td>
<td>24%</td>
</tr>
<tr>
<td>Stomachache</td>
<td>20%</td>
</tr>
<tr>
<td>None of the above</td>
<td>20%</td>
</tr>
<tr>
<td>Allergies</td>
<td>8%</td>
</tr>
<tr>
<td>Depression</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Table 1:** Percentage of respondents in the sample reporting the suggested symptoms.
How often employees experienced these symptoms at work is summarized Table 2 below.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>A little of the time</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>All of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>34.70%</td>
<td>28.60%</td>
<td>32.70%</td>
<td>4.10%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Allergies</td>
<td>87.80%</td>
<td>10.20%</td>
<td>26.50%</td>
<td>12.20%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Back Pain</td>
<td>49.00%</td>
<td>12.20%</td>
<td>6.10%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Stomach Ache</td>
<td>57.10%</td>
<td>34.70%</td>
<td>10.20%</td>
<td>4.10%</td>
<td>6.10%</td>
</tr>
<tr>
<td>Cold/Flu</td>
<td>46.90%</td>
<td>42.90%</td>
<td>24.50%</td>
<td>4.10%</td>
<td>6.10%</td>
</tr>
<tr>
<td>Depression</td>
<td>93.90%</td>
<td>4.10%</td>
<td>6.10%</td>
<td>4.10%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>49.00%</td>
<td>34.70%</td>
<td>10.20%</td>
<td>18.40%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Sleeping Problem</td>
<td>73.50%</td>
<td>12.20%</td>
<td>6.10%</td>
<td>10.20%</td>
<td>4.10%</td>
</tr>
</tbody>
</table>

Table 2: Frequency of occurrence for each symptom.

As seen in the row corresponding to “never”, on average respondents have reported low occurrence of their symptoms. Headache and back pain are the most frequent symptoms while depression and allergies is the least recurrent. The table shows that 36.8% of headaches are happening “some of the time” and “most of the time”, and 38.7% when combining these two rows for back pain. This table clearly shows that employees do experience symptoms at work that can theoretically affect their productivity.

The pain level experienced for each condition is given in Table 3.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>None</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Very severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>34.70%</td>
<td>8.20%</td>
<td>42.90%</td>
<td>12.20%</td>
<td>2.00%</td>
</tr>
<tr>
<td>allergies</td>
<td>87.80%</td>
<td>10.20%</td>
<td>2.00%</td>
<td>4.10%</td>
<td>4.10%</td>
</tr>
<tr>
<td>Back Pain</td>
<td>49.00%</td>
<td>10.20%</td>
<td>24.50%</td>
<td>12.20%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Stomach Ache</td>
<td>55.10%</td>
<td>30.60%</td>
<td>10.20%</td>
<td>4.10%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Cold/Flu</td>
<td>53.10%</td>
<td>24.50%</td>
<td>14.30%</td>
<td>8.20%</td>
<td>4.10%</td>
</tr>
<tr>
<td>Depression</td>
<td>89.80%</td>
<td>6.10%</td>
<td>4.10%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>55.10%</td>
<td>24.50%</td>
<td>18.40%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Sleeping Problem</td>
<td>73.50%</td>
<td>10.20%</td>
<td>10.20%</td>
<td>4.10%</td>
<td>4.10%</td>
</tr>
</tbody>
</table>

Table 3: Level of pain for each symptoms experienced in the last 12 months.

These results show that those reporting moderate level of pain are mainly suffering from headaches (42.9%) and back pain (24.5%). Stomach aches affects respondents much less: 30.6% experience a mild level of pain, and only 10% have a moderate ache. Sever to very sever level of pain are given for headaches (together 14.2%) and back pain (16.3%). These results show that in this sample employees at work are affected by various symptoms that can affect their productivity.
How often the symptoms did effect the work of employees within the last 12 months is shown in Table 4.

<table>
<thead>
<tr>
<th></th>
<th>Headache</th>
<th>Allergies</th>
<th>Back Pain</th>
<th>Stomach Ache</th>
<th>Cold/Flu</th>
<th>Depression</th>
<th>Anxiety</th>
<th>Sleeping Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>36.70%</td>
<td>85.70%</td>
<td>46.90%</td>
<td>57.10%</td>
<td>55.10%</td>
<td>87.80%</td>
<td>53.10%</td>
<td>71.40%</td>
</tr>
<tr>
<td>Once a quarter</td>
<td>24.50%</td>
<td>8.20%</td>
<td>20.40%</td>
<td>20.40%</td>
<td>40.80%</td>
<td>10.20%</td>
<td>30.60%</td>
<td>14.30%</td>
</tr>
<tr>
<td>Once a month</td>
<td>18.40%</td>
<td>14.30%</td>
<td>14.30%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>6.10%</td>
<td>6.10%</td>
<td></td>
</tr>
<tr>
<td>Once a week</td>
<td>18.40%</td>
<td>2.00%</td>
<td>8.20%</td>
<td>8.20%</td>
<td></td>
<td></td>
<td>6.10%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Daily</td>
<td>2.00%</td>
<td>4.10%</td>
<td>10.20%</td>
<td>2.00%</td>
<td></td>
<td></td>
<td>4.10%</td>
<td>6.10%</td>
</tr>
</tbody>
</table>

**Table 4: Recurrence of the symptoms affecting work**

When leaving out “never” and “once a quarter”, those experiencing headaches at work more often count 38.8%, back pain 32.7%, and stomach ache 22.5%. Most feel that they never experience the symptoms or only “once a quarter” at the workplace representing 61.2% for headaches, 67.3% for back pain, 93.9% for allergies, 95.9 for cold and flu. Since cold/flu is the third most common symptom (as obtained from the general health), but experienced little at work, it can be probably explained by the fact that employees stay at home when having that particular condition.

The measure of SP, obtained by asking respondents how many times they have been at work while sick is summarized below:

<table>
<thead>
<tr>
<th></th>
<th>Days of presenteelism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>28.70%</td>
</tr>
<tr>
<td>Once</td>
<td>20.40%</td>
</tr>
<tr>
<td>2 to 5 days</td>
<td>40.80%</td>
</tr>
<tr>
<td>6 to 10 days</td>
<td>4.00%</td>
</tr>
<tr>
<td>More than 10 days</td>
<td>6.10%</td>
</tr>
</tbody>
</table>

**Table 5: Measure of SP**

Table 5 shows that in the sample 28.7% reported never coming to work while sick during the last 12 months. 20.4% of employees came just once. However 40.8% of the sample had between 2 to 5 full
days of SP, where employees consciously stayed at work while their condition authorized them to stay at home. These results show that in this sample SP is largely present.

When asked if the sickness absenteeism in the organization was lower or higher than the national average, 79.6% responded that it was lower and 20.4% at the same level. None though that absence was higher than the average national level. Overall, employees are conscious of the low absenteeism rate in their organization.

**Open-ended questions**

The first open-ended question inquired about the reasons employees attended work whilst feeling sick. The list of answers and their translation into English is given in Appendix C and the more recurrent themes are provided in Table 6.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Nb of Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overload</td>
<td>10</td>
</tr>
<tr>
<td>Professionalism</td>
<td>10</td>
</tr>
<tr>
<td>Money</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 6: Main reasons for attending work while sick

“Conscience professionnelle” translated here by professionalism is a typical French expression of work ethics that suggests a high stage of moral development, e.g. someone answered “my professionalism and my education”. Work overload and professionalism are the two most cited reasons by POK employees to engage in SP. Money comes next, which in our research site corresponds to the presenteeism bonus obtained after not missing a day in 3 consecutive months. Some answers use the word “salary” for example “the motivation of the salary, not to get noticed by management being absent”, but it is the same word that is meant (we questioned a couple of workers on the meaning). The value of the bonus is €100, which seems a small amount but is apparently appreciated, the gross salary of blue-collar workers being between €10.000-19.000 per year (earning the French national minimum wage SMIC).

The second question asked about when employees consider staying at home when feeling unwell. The detailed answers are provided in Appendix D and a summary in Table 7.
Table 7: Main reasons for staying at home

<table>
<thead>
<tr>
<th>Reason</th>
<th>nb of answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incapacity to move</td>
<td>16</td>
</tr>
<tr>
<td>Fever, flu</td>
<td>15</td>
</tr>
<tr>
<td>Contagious</td>
<td>4</td>
</tr>
</tbody>
</table>

The incapacity to move is a strong predictor for staying at home with responses such as for example “when I cannot get up” or “if I can’t stay on my feet”. Having fever or flu is the second main stated reason, e.g. “when I have a lot of fever”. Four employees reported their concerns about being contagious, e.g. “having an infection that could threaten others”.

4.2 Correlations of variables

Reliability of assembled items

The Cronbach’s coefficient gives the degree to which assembled questions measure the same concept. The 2 items for degree of replaceability had the highest Cronbach’s alpha of .97, while the 10 measures of work overload had a coefficient of .8. Regarding the work related factors, one item needed to be removed from the list “there are few opportunities to move ahead in my job and career”. After reflection, careers opportunities in the organization may be good in general but not for the individual. The coefficient alpha was thereafter .85. Supervisor support and co-worker support had individually coefficients above .80.

Main variables

Table 8 shows the means, standard deviation and reliability of scales for the main variables presented in the previous chapter.
### Table 8: Correlation and reliabilities

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>General Health</td>
<td>1.41</td>
<td>0.79</td>
<td></td>
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</tr>
<tr>
<td>2 Mean of symptoms</td>
<td>0.27</td>
<td>0.21</td>
<td>0.28</td>
<td></td>
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</tr>
<tr>
<td>3 Days of presenteeism</td>
<td>1.60</td>
<td>1.14</td>
<td>0.23</td>
<td>.45**</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4 Frequency level</td>
<td>0.59</td>
<td>0.46</td>
<td>.34*</td>
<td>.77**</td>
<td>.45**</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5 Pain level</td>
<td>0.68</td>
<td>0.54</td>
<td>0.27</td>
<td>.83**</td>
<td>.48**</td>
<td>.90**</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>6 Effects level</td>
<td>0.68</td>
<td>0.57</td>
<td>0.15</td>
<td>.76**</td>
<td>.45**</td>
<td>.83**</td>
<td>.78**</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7 Degree of replaceability (2 items)</td>
<td>2.11</td>
<td>1.36</td>
<td>0.09</td>
<td>.30*</td>
<td>.29*</td>
<td>0.21</td>
<td>.35*</td>
<td>0.28</td>
<td>.07</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8 Work overload (10 items)</td>
<td>2.00</td>
<td>0.73</td>
<td>-0.10</td>
<td>-.34*</td>
<td>-.21</td>
<td>-.28</td>
<td>-0.27</td>
<td>-3.7**</td>
<td>-4.1**</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Work related factors (6 items)</td>
<td>1.43</td>
<td>0.75</td>
<td>.32*</td>
<td>-.01</td>
<td>0.43</td>
<td>0.02</td>
<td>0.02</td>
<td>-0.03</td>
<td>0.18</td>
<td>-0.23</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Career opportunities (1 item)</td>
<td>1.71</td>
<td>1.04</td>
<td>0.20</td>
<td>0.01</td>
<td>0.19</td>
<td>0.15</td>
<td>0.17</td>
<td>0.07</td>
<td>0.06</td>
<td>0.11</td>
<td>0.59**</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>11 Supervisor support (2 items)</td>
<td>1.38</td>
<td>1.01</td>
<td>.37**</td>
<td>0.08</td>
<td>.52**</td>
<td>0.05</td>
<td>0.02</td>
<td>0.04</td>
<td>0.12</td>
<td>-4.5**</td>
<td>.77**</td>
<td>0.27</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12 Co-worker support (3 items)</td>
<td>1.36</td>
<td>0.88</td>
<td>0.18</td>
<td>-0.08</td>
<td>.59**</td>
<td>-0.06</td>
<td>-0.04</td>
<td>-0.10</td>
<td>0.19</td>
<td>-0.09</td>
<td>.88**</td>
<td>.40**</td>
<td>.45**</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 All effects (9 items)</td>
<td>0.84</td>
<td>0.84</td>
<td>.30*</td>
<td>.57**</td>
<td>.68**</td>
<td>.64**</td>
<td>.65**</td>
<td>.34*</td>
<td>.40**</td>
<td>.40**</td>
<td>0.04</td>
<td>-0.09</td>
<td>0.06</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Effects Quantity (2 items)</td>
<td>1.06</td>
<td>0.93</td>
<td>.36*</td>
<td>.50**</td>
<td>.56**</td>
<td>.57**</td>
<td>.58**</td>
<td>0.26</td>
<td>.44**</td>
<td>-.38**</td>
<td>-0.05</td>
<td>-0.20</td>
<td>0.01</td>
<td>-0.01</td>
<td>.93**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Effects Quality (2 items)</td>
<td>0.68</td>
<td>0.88</td>
<td>0.22</td>
<td>.54**</td>
<td>.66**</td>
<td>.61**</td>
<td>.62**</td>
<td>0.26</td>
<td>.40**</td>
<td>-.35*</td>
<td>0.00</td>
<td>-0.11</td>
<td>0.00</td>
<td>0.05</td>
<td>.93**</td>
<td>.85**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.93)</td>
</tr>
<tr>
<td>16 Effects Conflicts (3 items)</td>
<td>0.75</td>
<td>0.86</td>
<td>0.27</td>
<td>.51**</td>
<td>.66**</td>
<td>.59**</td>
<td>.61**</td>
<td>.32*</td>
<td>.34*</td>
<td>-.41**</td>
<td>0.15</td>
<td>0.03</td>
<td>0.16</td>
<td>0.13</td>
<td>.91**</td>
<td>.77**</td>
<td>.78**</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Effects Concentration (2 items)</td>
<td>0.91</td>
<td>0.96</td>
<td>0.27</td>
<td>.57**</td>
<td>.63**</td>
<td>.62**</td>
<td>.60**</td>
<td>.42**</td>
<td>.33*</td>
<td>-.32*</td>
<td>0.00</td>
<td>-0.11</td>
<td>0.00</td>
<td>0.04</td>
<td>.94**</td>
<td>.87**</td>
<td>.87**</td>
<td>.78**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.89)</td>
</tr>
<tr>
<td>18 Gender</td>
<td>0.41</td>
<td>0.50</td>
<td>0.20</td>
<td>.36*</td>
<td>.33*</td>
<td>0.26</td>
<td>.32*</td>
<td>0.21</td>
<td>.38**</td>
<td>-.26</td>
<td>0.12</td>
<td>0.11</td>
<td>0.21</td>
<td>0.01</td>
<td>0.21</td>
<td>0.13</td>
<td>0.26</td>
<td>0.18</td>
<td>0.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 Age</td>
<td>35.82</td>
<td>11.09</td>
<td>.28</td>
<td>-.15</td>
<td>-.08</td>
<td>-.06</td>
<td>-.26</td>
<td>-.19</td>
<td>-.28</td>
<td>0.05</td>
<td>-.16</td>
<td>0.22</td>
<td>-.05</td>
<td>-.38**</td>
<td>0.10</td>
<td>-.05</td>
<td>-.01</td>
<td>-.07</td>
<td>-.02</td>
<td>-.13</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Marital status</td>
<td>0.76</td>
<td>0.72</td>
<td>0.18</td>
<td>0.04</td>
<td>0.12</td>
<td>0.00</td>
<td>0.11</td>
<td>-.03</td>
<td>0.08</td>
<td>-.06</td>
<td>0.28</td>
<td>0.15</td>
<td>0.24</td>
<td>0.23</td>
<td>0.19</td>
<td>0.15</td>
<td>0.14</td>
<td>0.23</td>
<td>0.16</td>
<td>0.11</td>
<td>.34*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 Number of Children</td>
<td>1.08</td>
<td>1.00</td>
<td>0.28</td>
<td>-.17</td>
<td>0.11</td>
<td>-.21</td>
<td>-.20</td>
<td>-.26</td>
<td>-.02</td>
<td>0.00</td>
<td>.34*</td>
<td>.12</td>
<td>.30*</td>
<td>.30*</td>
<td>-.13</td>
<td>-0.17</td>
<td>-.06</td>
<td>-.08</td>
<td>-.19</td>
<td>-.03</td>
<td>.69**</td>
<td>.38**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Full time or part time</td>
<td>0.06</td>
<td>0.24</td>
<td>0.09</td>
<td>0.13</td>
<td>0.16</td>
<td>-.01</td>
<td>0.04</td>
<td>-0.06</td>
<td>0.17</td>
<td>-0.19</td>
<td>0.14</td>
<td>0.15</td>
<td>0.16</td>
<td>0.06</td>
<td>-.03</td>
<td>-.02</td>
<td>-.01</td>
<td>-.02</td>
<td>-.07</td>
<td>0.13</td>
<td>0.14</td>
<td>-.03</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>23 Role Classification</td>
<td>2.63</td>
<td>1.07</td>
<td>0.08</td>
<td>0.16</td>
<td>0.04</td>
<td>0.13</td>
<td>0.21</td>
<td>0.03</td>
<td>-.01</td>
<td>.42**</td>
<td>0.00</td>
<td>0.11</td>
<td>-.22</td>
<td>0.12</td>
<td>0.08</td>
<td>0.14</td>
<td>0.02</td>
<td>0.05</td>
<td>0.10</td>
<td>-.26</td>
<td>-.27</td>
<td>0.02</td>
<td>-.05</td>
<td>-.07</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed)
The mean score for general health was 1.39 (where excellent is 0) reflecting a good health among employees. The presenteeism days variable obtained a mean score of 1.6 that is in average answers where between one day of SP and 2 to 5 days. The mean for the degree of replaceability showed that in average respondents had 50% of their task remaining after being absent for a week. Overall work related factors had a mean of 1.43 indicating that statements were mostly true. Work overload had a mean of 2, suggesting that these items were in average “often true”.

The effects of SP had means close to 1, showing that on average respondents considered that SP had negatively affect each groups of variable “a little of the time”.

A few demographic data correlate with some of our main variable, however quite weakly.

Gender correlates weakly with the mean of all symptoms (r=.36, p=0.05). The weak relationship exists also with the pain level of sickness (r=.322, p=.05), presenteeism days (r=.33, p=.05), and with the degree of replaceability (r=.38, p=0.01).

Age correlate weakly with the general health (r=0.28, p=0.05) and supervisor support (r=.38, p=0.01).

The number of children correlates weakly with the work related factors (.34, p=0.05).

Since information on demographics has such low correlation (the coefficient are quite small) there is little reason to further investigate the relationship of demographic data with other variables in much detail.

### 4.3 Testing of hypotheses related to SP antecedents

Standard single regression analysis were carried out to test our hypothesis as reported below.

The first hypothesis is looking at the relationship between SP and the degree of replaceability.

<table>
<thead>
<tr>
<th>Hypothesis 1 (dependent variable: days of presenteeism)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of replaceability</td>
<td>.29*</td>
</tr>
<tr>
<td>F</td>
<td>4.2</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>R²</td>
<td>.10</td>
</tr>
</tbody>
</table>

* *p<.05
** **p<.01

**Table 9:** Dependency of presenteeism on the degree of replaceability.
As shown in Table 9, there is a weak association between presenteeism and the degree of replaceability (β=.29, p<.05). SP increases with employees’ feeling of being irreplaceable. The hypothesis 1 is partially observed.

The second hypothesis tests the relationship of SP and role overload.

<table>
<thead>
<tr>
<th>Hypothesis 2 (dependent variable: days of presenteeism)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role overload</td>
<td>-0.2</td>
</tr>
<tr>
<td>F</td>
<td>2.09</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>R²</td>
<td>0.053</td>
</tr>
</tbody>
</table>

*p<.05

**p<.01

Table 10: Dependency of presenteeism on the role overload

Table 10 depicts no link between SP and role overload. The hypothesis 2 is not supported.

Hypothesis 3a investigates a possible link between SP and career opportunity in the organization.

<table>
<thead>
<tr>
<th>Hypothesis 3a (dependent variable: days of presenteeism)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career opportunity</td>
<td>.19</td>
</tr>
<tr>
<td>F</td>
<td>.408</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>R²</td>
<td>.01</td>
</tr>
</tbody>
</table>

*p<.05

**p<.01

Table 11: Dependency of presenteeism on career opportunity

There is no significant relationship found between SP and career opportunity. Therefore hypothesis 3a is not supported. Note that career opportunity was measured only with one item since the second question gave unreliable results and was removed.

The next hypothesis 3b is looking at the dependency of SP on supervisor support.
Hypothesis 3b (dependent variable: days of presenteeism)

<table>
<thead>
<tr>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor support</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>Df</td>
</tr>
<tr>
<td>R²</td>
</tr>
</tbody>
</table>

*p<.05
**p<.01

Table 12: Dependency of presenteeism on supervisor support

SP does decrease in proportion to supervisor support. Note that the points accorded to the measure were decreasing with higher support. The hypothesis is therefore supported. Employees engage more in presenteeism when they have a lower quality of relationship with their supervisor.

Hypothesis 3c is concerned with the relationship of SP and co-worker support.

Hypothesis 3c (dependent variable: days of presenteeism)

<table>
<thead>
<tr>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-worker support</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>Df</td>
</tr>
<tr>
<td>R²</td>
</tr>
</tbody>
</table>

*p<.05
**p<.01

Table 13: Dependency of presenteeism on co-worker support

SP decreases with co-worker support (the points follow the same logic as above). Hypothesis 3c is also supported.
4.4 Testing of hypotheses related to effects of SP

Hypothesis 4a is testing the relationship between work quantity and SP.

<table>
<thead>
<tr>
<th>Hypothesis 4a (dependent variable: work quantity)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenteeism days</td>
<td>0.557**</td>
</tr>
<tr>
<td>F</td>
<td>21.1</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.31</td>
</tr>
</tbody>
</table>

* p<.05  
** p<.01  
*** p<.001

Table 14: Presenteeism affecting work quantity.

The hypothesis 4a is supported as work quantity decreases with higher SP. Note that due to the way points were attributed to the answers, the measure was increasing with lower quantity achieved.

Next, table 15 analyses the link of SP with work quality to test Hypothesis 4b.

<table>
<thead>
<tr>
<th>Hypothesis 4b (dependent variable: work quality)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenteeism days</td>
<td>0.657***</td>
</tr>
<tr>
<td>F</td>
<td>35.7</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.432</td>
</tr>
</tbody>
</table>

* p<.05  
** p<.01  
*** p<.001

Table 15: Presenteeism affecting work quality.

Work quality decreases with SP. Note here that points were increasing with lower work quality. The hypothesis 4b is supported.
Hypothesis 4c looks at the relationship between SP and conflicts at work. Results are given in table 16.

<table>
<thead>
<tr>
<th>Hypothesis 4c (dependent variable: Level of conflicts)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenteeism days</td>
<td>0.666***</td>
</tr>
<tr>
<td>F</td>
<td>37.39</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>R²</td>
<td>.443</td>
</tr>
</tbody>
</table>

*p<.05  
**p<.01  
***p<.001

**Table 16:** Presenteeism affecting the level of conflicts.

Conflicts increases with SP and hypothesis 4c is confirmed.

The effect of SP on the concentration is verified next with our last hypothesis 4d.

<table>
<thead>
<tr>
<th>Hypothesis 4d (dependent variable: Concentration)</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenteeism days</td>
<td>0.632***</td>
</tr>
<tr>
<td>F</td>
<td>31.2</td>
</tr>
<tr>
<td>Df</td>
<td>(1,47)</td>
</tr>
<tr>
<td>R²</td>
<td>.399</td>
</tr>
</tbody>
</table>

*p<.05  
**p<.01  
***p<.001

**Table 17:** Presenteeism affecting the concentration level.

Concentration decreases with SP and hypothesis 4d is confirmed.

Note that a multiple regression analysis to check the difference of relationships between SP and the 4 variable is difficult. These 4 elements also correlate between each other.

Due to the higher relationship between SP and effects rather than antecedent, one can look upon dependency of two demographic variable of interest: gender and work qualification. From table 8, gender seems to be the demographic variable correlating the most frequently. Also due to the difference
of task between blue and white-collar worker, it is of interest to check the dependency of production and non-production workers on SP and the four effects combined.

### 4.5 Dependency of two demographic variables on SP and effects of SP

A T-test was performed to analyse the difference of means between male and female on their response to engaging in SP and summarized in Table 18.

<table>
<thead>
<tr>
<th>Days of presenteeism</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29</td>
<td>1</td>
<td>1.035</td>
<td>-2.37</td>
<td>.022</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>1.75</td>
<td>1.164</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 18:** Independent sample test to determine if male and female report different SP

The table shows that female report a higher degree of SP which is significant only at the 5% level (the relationship is weak).

Next, a T-test was conducted to look at the mean difference of production and non-production workers on SP.

<table>
<thead>
<tr>
<th>Days of presenteeism</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>26</td>
<td>1.27</td>
<td>1.251</td>
<td>-.238</td>
<td>.813</td>
</tr>
<tr>
<td>Not production</td>
<td>23</td>
<td>1.35</td>
<td>1.027</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 19:** Independent sample test to determine if production and non production workers report different SP

There is no significant difference in SP between employees working in production and not.

The link between gender and the four effects combined is investigated in Table 20:

<table>
<thead>
<tr>
<th>Effects</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29</td>
<td>1</td>
<td>.639</td>
<td>-1.44</td>
<td>.156</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>1.75</td>
<td>1.044</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 20:** Independent sample test to determine if male and female impacts on the overall effects.
There is no significant difference on the effects of SP for men and women.

<table>
<thead>
<tr>
<th>Effects</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>T</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>26</td>
<td>.63</td>
<td>.65</td>
<td>-1.88</td>
<td>-0.06</td>
</tr>
<tr>
<td>Not production</td>
<td>23</td>
<td>1.07</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 21: Independent sample test to determine if production and non production workers report different productivity effects.

There is no significant difference on effects between both groups of employees working in production and not.

4.6 The symptoms and their impact on productivity loss

A further research could analyse if the relationship differs for various symptoms and the variety of effects.

The table 22 shows that some symptoms correlate only with certain effects but the coefficients are rather low. For example headache correlates weakly with quality of work (.367, p=.05). Back pain correlates with the four effects (.305, p=.05 for quantity, .423, p=.01 for quality, .374, p=.01 for conflicts and .388, p=.01 for concentration). Depression also correlates with the four effects. Little correlation is found for headaches, allergies and stress. A deeper analysis is however beyond the scope of the thesis. The number of respondents would need to be higher in order to see higher correlation coefficients.
<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Headache</td>
<td>0.59</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Allergies</td>
<td>0.08</td>
<td>0.28</td>
<td>-0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Back Pain</td>
<td>0.41</td>
<td>0.50</td>
<td>0.1</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Stomach Ache</td>
<td>0.18</td>
<td>0.39</td>
<td>0.18</td>
<td>-0.14</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Cold/Flue</td>
<td>0.33</td>
<td>0.47</td>
<td>0.31*</td>
<td>0.11</td>
<td>0.13</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Depression</td>
<td>0.02</td>
<td>0.14</td>
<td>0.12</td>
<td>-0.04</td>
<td>0.18</td>
<td>0.30*</td>
<td>0.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Anxiety/Stress</td>
<td>0.35</td>
<td>0.48</td>
<td>0.34*</td>
<td>-0.06</td>
<td>0.01</td>
<td>0.43**</td>
<td>0.22</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Sleeping Problem</td>
<td>0.22</td>
<td>0.42</td>
<td>-0.05</td>
<td>0.02</td>
<td>0.25</td>
<td>0.50**</td>
<td>0.15</td>
<td>0.27</td>
<td>0.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Effects Quantity</td>
<td>1.06</td>
<td>0.93</td>
<td>0.24</td>
<td>0.1</td>
<td>0.31*</td>
<td>0.17</td>
<td>0.38**</td>
<td>0.30*</td>
<td>0.21</td>
<td>0.34*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Effects Quality</td>
<td>0.68</td>
<td>0.88</td>
<td>0.37**</td>
<td>-0.02</td>
<td>0.42**</td>
<td>0.17</td>
<td>0.41**</td>
<td>0.39**</td>
<td>0.19</td>
<td>0.25</td>
<td>0.85**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Effects Conflicts</td>
<td>0.75</td>
<td>0.86</td>
<td>0.16</td>
<td>-0.03</td>
<td>0.37**</td>
<td>0.28*</td>
<td>0.21</td>
<td>0.55**</td>
<td>0.26</td>
<td>0.43**</td>
<td>0.77**</td>
<td>0.78**</td>
<td></td>
</tr>
<tr>
<td>12. Effects Concentration</td>
<td>0.91</td>
<td>0.96</td>
<td>0.27</td>
<td>0.07</td>
<td>0.38**</td>
<td>0.24</td>
<td>0.34*</td>
<td>0.40**</td>
<td>0.3</td>
<td>0.34*</td>
<td>0.87**</td>
<td>0.87**</td>
<td>0.78**</td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed)

Table 22: Correlation between effects and existence of symptoms
V. DISCUSSION

The aim of the present research project is to investigate sickness presenteeism phenomenon - its frequency and severity, work-related reasons for SP and consequences for productivity loss. The contribution of this study is in the replication of some previous findings of the SP scientific literature relating to motives and effects of SP.

5.1 Sickness Presenteeism

The study conducted at the company POK in France revealed a quite high number of days of sickness presenteeism. Nearly a half of the respondents stated to stay at work while feeling ill between two and ten days. 40% of employees of the whole sample reported to engage in SP between two and five days in the last 12 months, which is more than employees stating no SP (ca. 30%). In comparison with other studies, e.g. Aronsson et al. (2000) where 52% reported no sickness presenteeism and Caverley et al. (2007) found that only 28 % expressed no SP, our results indicate that SP was quite frequent at POK.

Our findings of occurrence of sickness presenteeism are reinforced by the types of ailments related to SP reported by respondents. Stomach problems, headache and backache are the most often stated illnesses while present at work. Our findings are therefore consistent with the previous research on SP (Caverley et al. 2007, Pilette 2004, Biron et al. 2007).

Moreover, the relative high frequency of SP can be supported by average level of sickness absenteeism at POK, which is approx. 4 days per year/per employee, less than a half of the national average SA level in France, which is 9.5 days per year/per employee (Absence rate 2007). There is a number of possible reasons that can explain high levels of sickness presenteeism.

This indicates our proposition (see literature review) that employees will tend to substitute sickness absenteeism with sickness presenteeism as the SP literature supposes in a case of low levels of SA (Caverley et al. 2007). That is, low levels of SA do not always indicate low morbidity of the workforce but rather replacement of SA in to SP (McKevitt et al. 1997, Pilette 2005).
Another significant argument for the engagement into SP among the workforce of POK is the sickness absence policy which practically encourages SP. The employees receive a bonus for a good attendance which is measured by a trigger point system. Meaning that once, an employee takes a day-off in a period of three months because of sickness, he/she looses a monetary price of 100 Euro. Money and financial situation is considered to be also one of the most often named reasons why employees of POK engage into SP, which they responded in the open ended qualitative question regarding the reasons for SP in our questionnaire. As Lowe (2002) and Grinyer & Singleton (2000) claim, rewarding good attendance or creating an organisational climate where sick leave is considered as a minus point on the performance appraisal possibly resulting into a risk of job loss, is more or less a guarantee of SP among the workforce.

Severity of the illnesses associated with sickness presenteeism played also a role in the decision taking of engaging or not in to SP at POK. The outcomes of the study show that employees’ perceptions about the seriousness of their state health contributed to sickness presence rather than an absence. The most often reasons for taking a sick leave were: “physical incapacity to leave home” and “high fever and contagious illnesses”. This quite high severity level of sicknesses was underlined by the research results measuring perceived levels of pain of the symptoms related with SP. The medical conditions associated with SP were perceived mostly as having low to moderate pain rank. This finding reinforces the notion that employees at POK do not consider illnesses such as headache, backache or stomachache as an adequate syndrom for taking sick leave. Our finding of ‘perceptions of severity of sickness presenteeism related ailments’ is consistent with the recent studies from Biron et al. (2007) and Caverley et al. (2007). In addition, the above displayed findings support Hemp’s (2004) argument, that ailments associated with sickness presenteeism are relatively mild.

5.2 Attendance pressure and work-related factors

In the present study ‘Low degree of replaceability’ had significant but only weak association with sickness presenteeism as a potential risk factor. This finding is in line with the most of the previous research findings (Aronsson & Gustafsson 2000, Aronsson et al. 2005, Biron et al. 2007).
The weak association of low degree of replaceability with SP in our study can be explained by the sample structure. As we already mentioned in the results section, majority of the respondents were blue-collar workers who work on the shift basis. This means they are paid by number of hours worked not by a piece rate or goals achieved. Their tasks are rather monotonous, and do not require high skilled workers. Therefore, one can assume, if a worker is feeling sick, there is no problem of being replaced by a healthy colleague or co-worker. However, as to date studies researching sickness presenteeism were mostly conducted in the public sector organisations among white collar employees, we cannot mention any supporting findings for this explanation.

On the other hand, there is still an association between the low degree of replaceability and higher sickness presenteeism, which we attribute rather to the responses of white-collar workers and interpret in relation with the stated factors asked by our qualitative question for reasons to come work while feeling ill. The motive of ‘Low degree of replaceability’ is reinforced by the following expressions of our respondents such as: ‘Not letting down other colleagues’, ‘Co-workers would have a hard time to finish work’ ‘Important meeting at work’ or ‘Morale’. (See appendices). The pattern of reasoning is here clear and highly congruent with to date research on SP and its antecedents. Our research context at POK indicates lean organisational structure, high specificity of work tasks among white collar workers (administrative staff and engineers) and strong work ethic. These factors interacting with each other create a supporting environment for engagement into SP as already referred by Aronsson & Gustafsson (2005), Aronsson et al. (2000), McKevitt et al (1997). Furthermore previous research indicates that high-skilled employees (white-collar workers) can not easily find someone while ill to do their work and therefore must catch up after returning back (Biron et al. 2006).

In addition, ‘Role overload’ in the hypothesis number two is not supported, but strangely enough stated in the open ended qualitative measure for reasons for SP. For example in a wording like: ‘Too much work’, ‘Not to be overloaded by work’, ‘Too much work and meeting’ or ‘Professionalism and work to be finished’. These qualitative statements continue to support previous research findings (e.g. lean organisational structure) and above mentioned reasoning for occurrence of SP, as high workload, deadlines, work commitments and morale are reflecting the most often stated reasons for SP in the current research (Aronsson et al. 2000, Caverley et al. 2007, Biron et al. 2006). This can be easily put into the context of the organisational climate and the corresponding values at work such as intense feelings of responsibility for the work and for others and high morale in a sense of ‘Professionalism’ and ‘being important for the company’.
These findings are highly consistent with McKeivitt’s (1997) research of health practitioners and their felt need to come to work while ill. Furthermore, as Grinyer & Singleton (2000) and Dew et al. (2004) demonstrate, decision taking regarding SP can be highly complex and constrained by cultural and social factors at work - in our case such as strong identification with the company and the products produced and family values at POK.

The inconsistency of findings regarding the variable ‘Role overload’ in the statistical analysis (not supported) and result of the qualitative question (overload mentioned as a reason for SP) can be explained with following reasons.

We developed our questionnaire in English language using variables with items already tested and validated in the Anglo- Saxon context. As our sample of respondents was at a French company, we needed to translate our questionnaire into French language. Therefore it may be possible that some language nuances could play a role in understanding the items by French respondents. Light differences in understanding the questions could cause different understanding of the variable (concept of the variable) which decreased validity of the instrument and resulted in no significance in the relationship of role overload and SP.

It could lie also on the nature of the sample, as the respondents may understand (not only because of the language) our items related to ‘Role overload’ differently than previous samples researched. Blue- collar workers may not even experience ‘role overload’ as mentioned above, as they are working in the shifts paid by hours worked. Therefore the small size of the sample and the high number of blue collar workers in relation to white- collar employees could influence the statistical analysis and result in different outcomes as expected.

Another explanation could provide the operationalization of research. As many blue- collar workers didn’t know how to fill out the online questionnaire, they needed assistance. The overall confidentiality was therefore disrupted. We assume that the respondents may not tick the ‘true’ answer. Moreover, respondents discussed their answers with the colleagues who didn’t yet filled out the questionnaire. Therefore we assume bias in the answers of some of the respondents at POK.

Our hypothesis regarding ‘career opportunities’ was not supported with our statistical analysis. At this point we need to say that this variable was only researched in the context of sickness
presenteeism once. Caverley et al. (2007) found in their research that employees who perceive low career opportunities tend to have higher rates on Sickness presenteeism. One need to underline here, that this variable was measured as a part of a substitution hypothesis for sickness absenteeism meaning that it was previously researched as an antecedent for sickness absenteeism. As our identical hypothesis was not replicated, we could think that this finding contradicts our statement regarding the occurrence of SP at POK. We assumed in the relation to low levels of SA and relatively high frequency of SP, that some of the respondents could substitute SA in to SP. The notion of 100 Euro bonus only reinforced our expectation. However as our finding indicates, career opportunities variable did not play any significant role in the decision making process regarding engagement into SP.

One possible explanation for our result is once more the high number of blue-collar workers in our sample. As their primary motivation to go to work is to ‘earn money’, they do not perceive ‘career opportunities’ as something related to their everyday job. In addition, the slim organisational structure and small size (one founder and boss) of the firm do not open opportunities for vertical career advancement for engineers or administrative staff, either. Therefore, one can assume that ‘career opportunities’ would not count as a consideration for sickness presenteeism in our sample at POK.

**Social support**

Both hypotheses relating to social support were confirmed. We postulated that low supervisor and co-worker support will encourage engagement in sickness presenteeism. As these two work-related factors were originally researched and associated with sickness absenteeism, we can interpret them (as above mentioned in the relation with ‘career opportunities’) that some respondents may substitute sickness absenteeism with sickness presenteeism and therefore these two work-related factors (peer and supervisor support) are also associated with sickness presenteeism. However as stated in the case of ‘career opportunities’, the association with SP was replicated only once by Caverley et al. (2007) therefore this outcome needs to be interpreted with caution.

Additional interpretation of present findings is that increased sickness presenteeism was associated with decreased social support at work. This indicates that quality of relationships at work may influence the decision taking whether to take sick leave or to stay at work while feeling
sick. As employees cannot rely on their colleagues to be replaced, they rather stay at work. We can speculate that the ‘social support’ as a work-related factor plays a role in the complex process of engaging in to SP. As Grinyer & Singleton (2000) argue, social pressure at the workplace can encourage SP and also sickness absence can be assessed by employees as a risk for the quality of social relationships.

5.3 Effects of sickness presenteeism

It was found that when engaging in SP, employees are aware of their decreasing performance. The productivity loss was measured through a decrease in work achieved, a lower work quality, higher conflicts with others, and decreased concentration. The questions corresponding to these measurement were taken of the health at work questionnaire (Shikiar et al. 2004: 222) and the health and productivity questionnaire (Kessler 2003: 159). However other questionnaires also assess these elements, for example the SF-36 measures concentrations and work quantity (Reed 2000:204, Wilson 2000: 241). The results of the correlation in our study show that each item correlates quite well with SP. This is in good accordance with these major studies mentioned above. One important characteristic of the survey explaining the support of our hypothesis is that the questions were designed to be appropriate for a broad range of occupations, for blue as well as white-collar workers (Kessler, 2003: 159). However the questions were enough focused to have a high construct validity. A few studies showing a good validity measure the effects with a 0-10 scale. Fortunately this change did not affect our ability to observe correlations. One can maybe also attribute the good correlation to the fact that effects were asked towards the end of the questionnaire. This might have given respondents enough time to search in their memory for days linked with SP. The relationship with demographic variables was difficult determine due to the low number of respondents. Research has focused on relating several SP effects to certain types of diseases. For example depression as found by Burton et al. is highly associated with work reduction in time management, interpersonal interactions and work quantity (2004: 41). This is indeed reflected in table 8, where it is shown that depression does associate with our four measured effects. Depression however touches a minority of employees as seen from the first measure of health. Steward et al. concentrating on several conditions found that symptoms resulting in the most unproductive time where in the order: headache, back pain, arthritis pain and musculoskeletal
pain (2003). Our results suggest that starting with the largest affects: depression, back pain, cold/flu and sleeping problems would result in the biggest production loss. If the number of respondent was much larger, at that point of the study, it would have been interesting to evaluate with a multiple regression analysis which symptoms did rate higher for each of the four effects. Also, other studies report lower productivity with high body mass index, poor diet, high stress (Boles et al. 2004, Burton et al. 2004). In our case no relationship was found for stress and productivity loss expect for concentration (weak link). Body mass index could have been measured with our questionnaire but most employees did not answer the related questions of height and weight.

5.4 Background variables

The background variables incorporated in the present research study did not show any explanatory value. We included age, gender, marital status, number of children, height and weight, employment status and annual gross salary. Therefore we are not going to further discuss these in the following sections.
VI. MANAGERIAL IMPLICATIONS

The findings of our study provide a wide scope for practical implications. Not only managers but also HR practitioners, occupational health and safety personnel should adopt a broader perspective when approaching the issues of health and productivity at the workplace and in the design of the sickness policies and employee assistance programs (EAP) at their worksites.

The existence of sickness presenteeism among employees and employers should be accepted and included as a part of a ‘BIG PICTURE’ of worksite health as Chapman (2005) proposes. SP should be acknowledged and addressed in a similar way as sickness absenteeism, injury and health risks, disabilities or other chronic illnesses. This implies that SP needs to be considered in Health Promotion programs among companies. In the following paragraphs, we will mention some suggestions, what can be done to minimise sickness presenteeism and its negative impact on employee’s productivity.

As sickness presenteeism is not a visible problem for decision makers in the businesses, a worksite investigation of existence of SP needs to be done in order to uncover the potential extent of SP and types of ailments related to it. Once the problem is disclosed, a plan of action can be developed in order to effectively tackle the problem of sickness presenteeism.

The first possible step is to review the existing sickness and absence policies and programs. This might reveal (as in our study) that sickness policies rewarding low sickness absence may cause higher sickness presenteeism which has a detrimental effect on the productivity of workers. In that situation one necessitates to establish cultural norms that improve SP. This means that employees should be encouraged taking sick leave once he/she feels really sick. Moreover, regular breaks and taking holidays need to be animated in order to avoid stress and resulting health states such as depression (Chapman 2005).

The next step should be directing the attention towards types and frequency of illnesses reported by employees while at work and affecting their productivity. Employers can raise the awareness of the different types of ailments, their treatment and adverse effects on work via a company-wide communication strategy with wellness newsletters, handout materials or via Intranet.

A third possible intervention to decrease sickness presenteeism is to add SP into employee assistance programs and worksite health promotion programs. This can be done via education and
training of employees. Providing them with information about possible health risks, how prevalent these health conditions are and how employees can handle them. The training addressing SP issues should give employees a real picture of possible consequences of SP (not just productivity loss but also long term health implications for them). It should also offer them help through preventive strategies such as providing them with better medical treatment (to minimise the work impairment by e.g. allergies, headache and backache), work-life balance practices (reducing the stress and therefore the potential of depression) and wellness programs in order to promote healthy lifestyle to decrease the health risks (e.g. high body-mass index). In addition, regular evaluation of SP extent should be used as an instrument for measuring effectiveness of the health promotion strategies (Pilette 2005).

However one needs to keep in mind that all these ‘well designed programs’ are considered as ‘costs’ by managers. Therefore, as already mentioned above it is necessary to evaluate the problem of SP in relation of ‘Return on Investment’ (Marlowe 2007). To date research instruments on productivity loss by SP are widely accepted and tend to disseminate among companies, thus the investment into health promotion programs is considered as being offset by productivity gains of healthier workforce.
VII. PROBLEMS AND LIMITATIONS OF THE RESEARCH

The present study contributes to the emerging field of research of sickness presenteeism. However it is important to name its main limitations.

The setting of this study presented several limitations that we would like to expose first. POK being a family business (in fact divided in three business units) with 90 employees, did limit the ability to obtain results with high correlation coefficients. In general, for such quantitative analysis the number of respondent would be ideally above 100. In our case, due to the high number of questions, the number of respondents should be even higher. Therefore the generalizability of the presented findings is limited.

Next, the questions were developed focusing on office staff rather than production worker who were in fact the majority of respondents. This might have several consequences. Blue-collar workers generally do not bring any work home, in comparison to office staff that might need to do so. Moreover, depending on their responsibilities, production workers might have a certain proportion of work left when they return after an absence but might not be recognized under the classification “management”. Overall, the questions to ascertain antecedents and effects might be more familiar to workers with a certain education level. Shift employees engaged in the chain work might have to do tasks that requires a high level of concentration but due to the repetitive nature do not perceive it as such. In essence the difference of the tasks, and the perception of sickness presenteeism might bring such a gap between blue and white collar employees that these should be considered as two independent population. Unfortunately the number of respondents in each of the groups was not sufficient to recognize any dependency.

It was the first time at POK that employees were given a questionnaire to fill out in the organization. One should maybe explain first that the business units having each less than 50 employees, no unionism and also no work council has been set up (joined decision of employees). Although employees did participate in many debates and do have a voice mechanism through personnel representatives, the survey provoked a general surprise among blue collar workers. Fortunately the time frame of two days was set up to answer the survey that did limit the discussion among employees. However one notices from the way respondents answered the open ended questions that they did already discuss some issue among each other. It is very difficult to determine the bias coming from that drawback. We assume that a paper based questionnaire
would not have solved this issue, and employees would probably have discussed answers in a similar way. One could also argue that paper based survey may not be given as much attention as a computer based one to fill out at work (reducing even more the number of answers).

The questions were developed from surveys written in English and tested on British or American workers. The translation into French may have caused some limitation hard to determine such as influencing the validity of each item question.

At POK, a presenteeism bonus is given to all employees who record no absence over three consecutive months. However, before opening the questionnaire to the workforce, when asked for the sickness policy and details on absenteeism, management did not mention the bonus. Only after analysing the open ended questions, a recurrent answer as to why people engage in sickness presenteeism was “for the money” which tackled our curiosity. The representative explained afterwards that this detail had escaped during our initial discussions since implemented for quite some time. This might also influence more largely the answers of blue-collar workers for whom the extra incentive could be more essential, adding a bias in the perception of sickness presenteeism.

The survey was based on asking respondents to remember their actions over a period of one year. Most absenteeism and presenteeism surveys however do limit the time frame to 2 months at most, the main reason being that people do better remember health issues over a shorter time frame. These surveys, such as HLQ, HPQ, HWQ to mention a few where tested on a much larger number of respondents, either within large companies or even outside the working environment on large population samples (Mattke, 2007). At POK, having a restricted sample to analyse, there was a risk that no one would report being sick over the last month, especially during the summer. Some research studies remove this obstacle by repeating the survey a couple of time during the year, and restrict the sickness time frame to a couple of weeks (Kessler 2004: S31).
VIII. DIRECTIONS FOR FURTHER RESEARCH

As sickness presenteeism is an emerging field of research, there is a broad scope of investigation at the time of writing. Hence we will outline a number of future research directions which we infer from our research findings.

Since presenteeism has a major importance for management, future research could explore if employees are being treated for their symptoms and if more help can be offered to diminish their symptoms. This is for example investigated in the first section of the health and productivity questionnaire (Kessler et al. 2003). In this survey, questions are asking about different symptoms and whether respondents received professional treatment, previously received any, or did never seek for a treatment. One could also ask respondents if they would like to be given help to improve their health. This topic is clearly confidential and such questions are best treated with an anonymous survey.

The organization offers a free immunization for cold/flu, but there do not seem to be policies assisting other illnesses. As many workers experience back pain and headaches, one would need to investigate if these are caused or significantly increased by specific work conditions. Noise from the factory could be one of the factors increasing headaches. Non-ergonomic chairs or a bad position while working with the machines could be a cause for back pain. One would also need to focus on stomach ache which is a recurrent symptom.

Our study suggests that a number of attendance pressure and work related factors are associated with sickness presenteeism. Financial bonuses for good attendance, work/role overload, low degree of replaceability and work ethic, they all encouraged employees to be present at work while sick. As the concept of SP is quite complex and just little research has been done regarding its antecedents, one of our recommendations would be to concentrate more on the personal and organisational factors which can significantly encourage engagement into sickness presenteeism. For example, personal financial situation or a risk of job loss and cultural and contextual factors (e.g. disapproval or punishment for taking sick leave) should be investigated in a broader context and in more diverse settings.

Finally one would need to investigate whether offering a presenteeism bonus is the best way to decrease absenteeism in this organization. Moreover was the absenteeism rate of 7% before
introducing the measure not acceptable in the first place? It is a difficult question to answer since employees seem to be happy about the extra incentives. However this solution might not be the best regarding their health. There might be long terms effects involved, which are certainly difficult to evaluate at this point. Therefore it would be highly interesting for research and also practice to look at the relationship of sickness presenteeism and sickness absenteeism. This may detect important consequences for the practice in order to address SP effectively and ‘on time’. Except the study by Kivimäki et al. (2005), little research has investigated the consequences of not taking short term sick leave. Therefore longitudinal studies are necessary to investigate this important research issue. Overall surveying employees regularly on the question is a good way to determine if SP is increasing, or if health conditions are stable.
IX. CONCLUSION

This project has contributed to a better understanding of sickness presenteeism within a French family business. An on-line questionnaire was used to investigate our research questions. It was found that employees engage in sickness presenteeism in large part due to a financial bonus discouraging absenteeism. Work overload, work ethic, a low degree of replaceability, as well as peer and supervisor support were found to be related to the presenteeism rate. As a consequence of working while being ill, a loss of productivity was found. Employees did report their perception of working less effectively (quantity, quality and concentration) and engaging in more conflicts at work. The major limitation of this study was the small number of respondents that resulted in low significance levels. To further research the mechanism and possible mediators a larger population is required. The sample also consisted of blue and white-collar workers having different working conditions and some questions of the survey might not be appropriate in this situation.

Recommendations to the organization include additionally investigating the underlying causes of symptoms such as headaches and back pain. It is of great important to determine whether the symptoms originate from bad working conditions. There are unforeseeable risks in the long term involved with encouraging presenteeism through the financial bonus.
BIBLIOGRAPHY


**Internet resources:**


APPENDICES
PRESENTEEISM

1. Presenteeism Questionnaire

As HR students we are currently in our last year of study and as such need to complete a final assignment based on presenteeism (Do employees attend work when they do not feel well enough and why?) within an organisation. In order for us to gain a true picture of what is happening in the working environment, your organisation have kindly allowed us to contact you.

In order for us to ascertain whether presenteeism exists within your organization, we would appreciate it if you could take a few minutes to complete the questionnaire which follows by close of play on Friday 17.8.2007.

Please rest assured that your answers will remain strictly confidential and will be used only for the completion of our assignment which will be submitted to our course tutor at the London School of Economics and Political Science.

Thank you in advance for taking the time to complete the questionnaire (6 pages).

Kind regards

Alexandra and Katarina

PRESENTEEISM

2. General health questions

Questions with (*) require an answer.

* 1. In general would you say that your health is:
(Please tick.)

- Poor
- Fair
- Good
- Very good
- Excellent
2. Have you experienced any of the following conditions in the last 12 months? (Please tick against those you have experienced.)

- Headache
- Allergies
- Back pain
- Stomachache
- Cold/flu
- Depression
- Anxiety/stress
- Sleeping problems
- None of the above

3. During the last 12 months, whilst at work how often have you experienced the following?

<table>
<thead>
<tr>
<th></th>
<th>All the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Allergies</td>
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<tr>
<td>Back pain</td>
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<tr>
<td>Stomachache</td>
<td></td>
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<tr>
<td>Cold/flu</td>
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<tr>
<td>Depression</td>
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</tr>
<tr>
<td>Anxiety/stress</td>
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<tr>
<td>Sleeping problems</td>
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</tr>
</tbody>
</table>

4. Following on from this, please indicate below by ticking the level of pain you have experienced for each of the conditions?

<table>
<thead>
<tr>
<th></th>
<th>Very severe</th>
<th>Severe</th>
<th>Moderate</th>
<th>Mild</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Allergies</td>
<td></td>
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<td></td>
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<tr>
<td>Back pain</td>
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<tr>
<td>Stomachache</td>
<td></td>
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<tr>
<td>Cold/flu</td>
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<tr>
<td>Depression</td>
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<tr>
<td>Anxiety/stress</td>
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<tr>
<td>Sleeping problems</td>
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</tr>
</tbody>
</table>
3. Presenteeism

1. When compared with the National average of 8.4 sickness days/year/employee, please tick below against the stated you believe best reflects the sickness absence level in your organization.
   - The absence in my organization is less than the National average
   - The same as the National average
   - The absence in my organization is greater than the National Average

2. How many days during the last 12 months have you attended work despite feeling you should have taken the day off sick? (Please tick against the applicable statement.)
   - Never
   - Once
   - 2 to 5 days
   - 6 to 10 days
   - More than 10 days

3. Please state the reasons you attended work whilst feeling sick.

4. When you are absent from work for up to a week, what proportion of your tasks remain when you return?
   - None
   - 25%
   - 50%
   - 75%
   - 100%

5. At what point would you consider yourself too ill to stay at or go into work?

   Please explain in a few sentences.
### 4. At work

#### 1. Please indicate, by ticking, your view of each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely true</th>
<th>Mostly true</th>
<th>Not sure</th>
<th>Mostly false</th>
<th>Definitely false</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career opportunities are generally attractive.</td>
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<tr>
<td>I can rely on my immediate supervisor when things get tough at work.</td>
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<tr>
<td>I can rely on my co-workers when things get tough at work.</td>
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<tr>
<td>My co-workers go out of their way to do things to make my work life easier for me.</td>
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</tr>
<tr>
<td>My supervisor goes out of his/hers way to do things to make my work life easier for me.</td>
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<tr>
<td>People I work with are helpful in getting the job done.</td>
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<tr>
<td>There are few opportunities to move ahead in my job and career.</td>
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</tbody>
</table>

#### 2. How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mostly true</th>
<th>Usually true</th>
<th>Often true</th>
<th>Occasionally true</th>
<th>Never true</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am good at my job.</td>
<td></td>
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<tr>
<td>At work I feel I'm expected to do too many different tasks in too little time.</td>
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<tr>
<td>I feel that my job responsibilities are increasing.</td>
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<tr>
<td>I am expected to perform tasks on my job for which I have never been trained.</td>
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<tr>
<td>I feel I have to take work home.</td>
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<tr>
<td>I have the resources I need to get my job done.</td>
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<tr>
<td>I work under tight time deadlines.</td>
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<tr>
<td>I wish I had more support to deal with my job demands.</td>
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<tr>
<td>My job requires me to be constantly involved in a number of important areas consecutively.</td>
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<tr>
<td>I believe I'm expected to do more work than is reasonable.</td>
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</tbody>
</table>
3. In relation to the strategy of your organization, which statement best reflects your understanding of how your role fits with this?

- I fully understand the strategy and how my role fits into the organisation
- I partially understand the strategy and how my role fits into the organisation
- I don't know the strategy or how my role fits into the organisation

4. Which of the following best describes your role classification.

- Administration/Commercial Management
- Administration/Commerical
- Production Management
- Production
- Engineering management
- Engineering

5. When you are absent from work for up to a week, what proportion of your tasks remain when you return?

- None
- 25%
- 50%
- 75%
- 100%
5. The effects of presenteeism

* 1. During the last 12 months, how often did the following symptoms effect your work?

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Daily</th>
<th>Once a week</th>
<th>Once a month</th>
<th>Once a quarter</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
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<td>Back pain</td>
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<tr>
<td>Stomachache</td>
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<tr>
<td>Cold/flu</td>
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<td>Depression</td>
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<tr>
<td>Anxiety/stress</td>
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<tr>
<td>Sleeping problems</td>
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</table>

* 2. If applicable, following on from this, due to your symptoms above, whilst at work how often did they:

<table>
<thead>
<tr>
<th>Outcome</th>
<th>All of the time</th>
<th>Most of the time</th>
<th>Some of the time</th>
<th>A little of the time</th>
<th>None of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit the amount of work you could do?</td>
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<tr>
<td>Negatively effect your concentration?</td>
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<tr>
<td>Negatively effect the quality of your work?</td>
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<tr>
<td>Negatively effect the accuracy of your work?</td>
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<tr>
<td>Result in you becoming annoyed with or irritated by co-workers, supervisors, client, customers or others?</td>
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<tr>
<td>Result in you accomplishing less at work?</td>
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<tr>
<td>Result in you becoming impatient with others at work?</td>
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<tr>
<td>Result in you getting in conflicts with others at work?</td>
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<tr>
<td>Result in work quality lower than expected?</td>
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</tbody>
</table>
### PRESENTEEISM

#### Demographics

1. Are you male or female?

2. How old are you?

3. What is your marital status?

4. How many children do you have?

5. Your height? (example 6'2")

6. Your weight? (lbs)

7. Do you work full time or part time?

8. What is your gross annual salary? (Optional)
7. Thanks

Thank you for completing the survey! We assure you that your information will remain confidential. You may e-mail us anytime with comments. We will also reply to your questions if you have any.

- Katarina & Alexandra
alg8fr@yahoo.fr
Appendix B: Questionnaire in French

1. Questions sur le présentisme

Le présentisme est le fait que les employés viennent au travail même si ils sont malades. Notre enquête cherche à comprendre pourquoi les employés y sont allés.

Afin de mieux cerner ce phénomène, votre organisation a bien voulu nous offrir la possibilité de vous interroger. Répondre au questionnaire suivant ne devrait pas prendre plus de 15min (10 pages en tout), merci d’y répondre avant le vendredi 18 Août.

Certaines questions peuvent paraître étranges et répétitives car d’origine académique.

Nous vous assurons de la confidentialité de vos réponses.

Groupement d’étude pour le présentisme de la London School of Economics.

Les questions précédées de (*) sont obligatoires. Veuillez répondre à chaque ligne pour les questions comportant plusieurs éléments (les questions 3 et 4).

2. Questions générales sur votre santé

* 1. En général, est-ce que votre santé est :
   (une seule réponse possible)

   - Excellent
   - Très bonne
   - Bonne
   - Juste suffisante
   - Mauvaise
   - Très mauvaise
   - Malade

   * 2. Veuillez remplir votre âge :

   * 3. Vous estimez-vous être en bonne santé ?

   * 4. Vous estimez-vous être en mauvaise santé ?
2. Est-ce que vous avez ressenti les symptômes suivants durant les 12 derniers mois?
(plusieurs réponses possibles)
- Mal de tête
- Allergies
- Mal de dos
- Mal au ventre
- Rhume/fèvre
- Dépression
- Angoisse/stress
- Insomnies
- Aucun des symptômes ci-dessus

3. Durant les 12 derniers mois, combien de fois avez-vous ressenti les maux suivants au travail?
Veuillez noter toutes les lignes avec la fréquence appropriée.

<table>
<thead>
<tr>
<th>Symptôme</th>
<th>Tout le temps</th>
<th>La plupart du temps</th>
<th>Quelques fois</th>
<th>Peu de fois</th>
<th>Jamais</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal de tête</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
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<tr>
<td>Mal de dos</td>
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<tr>
<td>Mal au ventre</td>
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</tr>
<tr>
<td>Rhume/fèvre</td>
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<tr>
<td>Dépression</td>
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<tr>
<td>Angoisse/stress</td>
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<tr>
<td>Insomnies</td>
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</tbody>
</table>

4. En relation avec les réponses précédentes, quel était votre niveau de douleur?
Veuillez répondre à toutes les lignes.

<table>
<thead>
<tr>
<th>Symptôme</th>
<th>Très sévère</th>
<th>Sévère</th>
<th>Modéré</th>
<th>Faible</th>
<th>Nul</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal de tête</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Allergies</td>
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<tr>
<td>Mal de dos</td>
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<tr>
<td>Mal au ventre</td>
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<tr>
<td>Rhume/fèvre</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Dépression</td>
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<tr>
<td>Angoisse/stress</td>
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<tr>
<td>Insomnies</td>
<td></td>
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</tr>
</tbody>
</table>
3. Présentéisme

* 1. Comparé à un niveau national de 9,5 jours de maladie/an/ employé, quel est le niveau d’absence qui reflète le mieux celui de votre organisation?
   - Le niveau d’absence dans mon organisation est inférieur au niveau national
   - Le niveau d’absence est équivalent
   - Le niveau est supérieur au niveau national

* 2. Durant les 12 derniers mois, combien de fois êtes-vous allé au travail bien que vous vous considériez comme suffisamment malade pour rester à la maison?
   - Jamais
   - Une fois
   - 2 à 5 jours
   - 6 à 10 jours
   - Plus de 10 jours

* 3. Quelles sont les principales raisons qui vous ont fait venir/rester au travail bien que vous étiez malade?
   1-2 lignes suffisent.

* 4. Quand vous êtes absent du travail pendant 1 semaine, quelle proportion de vos taches restent à effectuer à votre retour?
   - 0%
   - 25%
   - 50%
   - 75%
   - 100%

* 5. À quel moment vous sentez-vous trop malade pour venir au bureau?
   1-2 lignes suffisent.
4. Les conditions de travail

* 1. Quel est votre point de vue pour chaque affirmation suivante?

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Absolument vrai</th>
<th>Généralement vrai</th>
<th>Pas sûr</th>
<th>Généralement faux</th>
<th>Absolument faux</th>
</tr>
</thead>
<tbody>
<tr>
<td>Les opportunités de carrière dans mon organisation sont bonnes.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Je peux compter sur mon supérieur quand j'ai des problèmes au travail.</td>
<td></td>
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</tr>
<tr>
<td>Je peux compter sur mes collègues quand j'ai des problèmes au travail.</td>
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</tr>
<tr>
<td>Mes collègues font des efforts particuliers pour me rendre la vie plus facile au travail.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mon chef fait des efforts particuliers pour me rendre la vie plus facile au travail.</td>
<td></td>
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</tr>
<tr>
<td>Les gens avec qui je travaille m'aident à compléter mes tâches.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Il y a peu d'opportunité d'avancement dans mon travail et ma carrière.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* 2. À quel point êtes-vous d'accord avec les affirmations suivantes:

<table>
<thead>
<tr>
<th>Affirmation</th>
<th>Généralement vrai</th>
<th>Vrai d'habitude</th>
<th>Souvent vrai</th>
<th>Vrai occasionnellement</th>
<th>Jamais vrai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Je suis compétent(e) dans ce que je fais au travail.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Je sens qu'on me demande de faire trop de choses en trop peu de temps.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>J'ai le sentiment que mes responsabilités augmentent.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Je suis sensé faire des tâches pour lesquelles je n'ai jamais été formé(e).</td>
<td></td>
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</tr>
<tr>
<td>Je dois ramener du travail à la maison pour le finir.</td>
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</tr>
<tr>
<td>J'ai les ressources nécessaires pour accomplir mon travail.</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Je travaille avec des échéances serrées.</td>
<td></td>
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</tr>
<tr>
<td>Je souhaiterais avoir plus de support pour faire tout ce que l'on exige de moi.</td>
<td></td>
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</tr>
<tr>
<td>Mon travail m'expose à beaucoup d'environnements différents en même temps.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Je pense qu'on exige de moi plus de travail que raisonnable.</td>
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<td></td>
</tr>
</tbody>
</table>

* 3. En relation avec la stratégie de l'entreprise, quelle réponse reflète le mieux votre compréhension de votre rôle au sein de la société?

- Je comprends la stratégie et mon rôle au sein de mon organisation.
- Je comprends partiellement la stratégie et mon rôle.
- Je ne comprends ni la stratégie, ni mon rôle au sein de mon organisation.
**4. Quelle est votre activité?**
- Administration/Commercial - Management
- Production - Management
- Ingénieur - Management
- Ingénieur

**5. Quand vous êtes absent du travail pendant 1 semaine, quelle proportion de vos tâches restent à effectuer à votre retour?**
- 0%
- 25%
- 50%
- 75%
- 100%

---

**5. Les effets du présentisme**

**1. Durant les 12 derniers mois, combien de fois avez-vous ressenti les maux suivants?**

<table>
<thead>
<tr>
<th>Symptôme</th>
<th>Tous les jours</th>
<th>1 fois par semaine</th>
<th>1 fois par mois</th>
<th>1 fois tous les 4 mois</th>
<th>Jamais</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mal de tête</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mal de dos</td>
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<td></td>
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<tr>
<td>Mal au ventre</td>
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<td></td>
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<tr>
<td>Rhume/fêvèrê</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dépression</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anxiété/stress</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Insomnies</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

---

**2. En relation avec la question précédente, combien de fois ces symptômes ont-il eu les effets suivants sur votre travail:**

<table>
<thead>
<tr>
<th>Symptôme</th>
<th>Tout le temps</th>
<th>La plupart du temps</th>
<th>Quelques fois</th>
<th>Rarement</th>
<th>Jamais</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limité la quantité de travail que vous pouvez effectuer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affecté négativement votre concentration.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affecté négativement la quantité de votre travail.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affecté négativement la précision de votre travail.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vous a rendu irritable en face de collègues, supérieurs, clients.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Abouté à ce que vous réalisez moins de choses au travail.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Abouté à devenir impatient avec les autres.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abouté à une attitude conflictuelle avec les autres.</td>
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</tr>
<tr>
<td>Abouté à un travail de qualité inférieur à celui exigé.</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
6. Sur vous-même

* 1. Êtes-vous un homme ou une femme?

2. Quel est votre âge?

3. Quelle est votre situation familiale?

4. Combien d’enfants avez-vous?

5. Quelle est votre taille en cm?

6. Quelle est votre poids en Kg?

7. Travaillez-vous à temps partiel ou à temps plein?

8. Quel est votre salaire annuel brut? (réponse optionnelle)

7. MERCI!

Merci d’avoir pris le temps de remplir notre questionnaire!

- London School of Economics
Appendix C. Reasons for attending work whilst feeling unwell (original French language)

Je suis jamais malade
Conscience professionnelle
conscience professionelle.
Conscience professionnelle
La motivation du travail
Raisons morales
L'abondance de travail
Je suis rarement malade
Pas assez malade pour être en arrêt
Je suis rarement malade
Pour gagner ma vie
Parce que je reste debout
J'ai peu me lever Ma conscience
Je me sens apte à travailler
le salaire
aide que j'apporte à mes collègues ne pas accumuler de retard donc surcharge de travail au retour

pass d'arrêt de travail
Le travail est un contrat ce serait le transgresser
Si j'étais resté chez moi ils auraient eu du mal à finir les commandes

L'argent
l'argent
ma conscience prof.
Le salaire, l'ambiance
Motivation du salaire Ne pas se faire remarquer par la direction en étant absent

Trop de travail
Conscience professionnelle
L'argent est le principal et ne pas être débordé dans mon travail

Etant chef d'équipe, mes responsabilité au sein de l'entreprise
Je ne supporte pas d'être absent
Je croyais que le mal allait passer
Je me sentais suffisamment fort pour travailler, malgré le risque de contaminer des collègues.
Conscience professionnelle Travail à terminer
charge important de travail et indeplacable dans le temps.
Ma conscience et mon éducation
j'avais trop de travail et des réunions.
sans objet
charge de travail
La difficulté de laisser quelqu'un d'autre couvrir mon rôle.
LA PRESSION DE LA CHARGE DE TRAVAIL ET LE MANQUE DE PERSONNEL POUR COUVRIR MON TRAVAIL EN MON ABSENCE

je ne me sentirais pas mieux si je reste a la maison
ca n'est pas arrive

responsabilitees
je me suis cassee la jambe, mais j'avais une conference importante que j'avais deja preparee
Reasons for attending work whilst feeling unwell (English translation)

I am never sick
Professionalism
Professionalism
Professionalism
the work motivation
moral reasons
Overload
I am rarely sick
not enough sick to be on sick leave
I am rarely sick
to earn a living
because i stay straight (because I can get up)
I can get up and my professionalism
I feel good enough to work
the salary
help I provide to my colleagues, not falling behind, overload when returning to work
/
no sickness leave
Work is a contract, it would be transgressing it
if I stayed at home, they (colleagues) would have had a hard time to finish the orders
/
the money
the money
my professionalism
the salary, the working atmosphere
the motivation of the salary, not to get noticed by management being absent
/
too much work
professionalism
money is the most important (reason) and not to be overloaded
/
Being project leader, my responsibilities in the company
I cannot stand being absent
I thought the sickness would go away
I would feel strong enough to work, despite the risk to contaminate my colleagues
professionalism and work to be finished
overload that cannot wait
my professionalism and my education
I had too much work and meetings
Not applicable
WORK LOAD.
Difficulty in leaving someone else to cover my role.
PRESSURE OF WORKLOAD AND LACK OF OTHER STAFF TO COVER MY WORK WHILST I AM AWAY.
/
I wouldn't feel better if I stayed at home
has not happened
/
responsibilities
I broke my foot. but we just had an important conference which I had already prepared
Appendix D. At what point would you consider yourself too ill to stay at or go into work? (original French language)

Quand je peux plus marcher
Vertige, vomissement
En cas de douleurs insupportables.
Trop de fièvre
Mal de dos
Jamais
Trop de fièvre
Je suis rarement malade
Quand je ne peux pas rester debout
Je suis rarement malade
Quand je ne peux plus me lever
jamais
Fièvre supérieure à 39°
/
/
Ne plus tenir debout
Forte fièvre
Quand on est fièvreux
Lorsque le handicap physique est trop important, par exemple pour se déplacer
Maladie contagieuse
/
Grande fièvre
Grosse grippe
/
/
Si je suis cloué au lit ou que ma maladie est contagieuse
Quand je ne peux pas me lever
Quand je dois garder le lit
Mal de dos important
Si je ne peux pas me lever le matin à cause de douleurs trop intenses
/
Lorsque je suis bloqué physiquement
Fievre
Quand je ne peux pas sortir du lit
Il faut que je sois incapable de faire mon travail pour que je ne vienne pas travailler.
Vertiges et nausées importants Fièvre intense
Impossibilité de bouger du lit
Lorsque j'ai beaucoup de fièvre
Si je ne peux pas me lever ou me concentrer.
grande grippe, vertiges ou me sentir malade
PHYSIQUEMENT INCAPABLE DE QUITTER LA MAISON.
Ne pas etre assez bien pour conduire au travail, me sentir malade, avoir une infection qui pourrait menacer les autres.
SI LA MALADIE INSINUAIT QUE JE NE POUVAIS PAS ETRE AU TRAVAIL OU SI J'AVAIS QUELQUE CHOSE DE CONTAGIEUX
fievre
Avec de la fièvre je reste a la maison ou si je ne peux pas rester debout.
grand mal de tete
grippe
 quand je ne suis pas capable de me concentrer sur mes taches. quelques fois je peux encore faire des choses simple bien que malade, un bon signal est aussi quand je commence a devenir tres agressif avec mes collegues. cela montre que je ne peux pas supporter d'être malade et au bureau.
Fievre, se sentir mal, grand mal de tete, frissonner de froid. quand je ne peux pas me concentrer au travail. meme quand je suis trop fatigue, je reste a la maison et je vais au travail plus tard.
At what point would you consider yourself too ill to stay at or go into work? (English translation)

when I cannot walk any more
feeling dizzy, vomiting
in the case of unbearable pain
too much fever
back pain
Never
too much fever
I am rarely sick
when I cannot be standing
I am rarely sick
when I cannot get up
Never
fever above 39°C
/
/
when I cannot stay up
heavy fever
when one is feverish
when the physical handicap is too important, for example to move along
contagious disease
/
big fever
big flu
/
/
i am forced to stay in bed or my disease is contagious
i cannot stand up
when I must stay in bed
heavy back pain
if I cannot get up in the morning because of too intense pain
/
when I am physically not able to move
Fever
when I cannot get out of bed
I must be incapable of doing my work not to come working
feeling dizzy, intense vomiting, intense fever
impossibility to get out of bed
when I have a lot of fever
if I cannot get up or concentrate
Heavy flu, feeling dizzy or sick
PHYSICALLY UNABLE TO LEAVE HOME.
Not being fit to drive to work, feeling sick or having an infection that could threaten others.
IF THE ILLNESS MEANT THAT I COULD NOT PHYSICALLY ATTEND WORK OR HAD SOMETHING THAT MAY BE CONTAGIOUS.
fever
With fever I stay at home or if I can't stay on my feet.
Strong headache
flue
when I am not able to concentrate anymore on any tasks. Sometime I still can do simple things while ill. A good signal is also when I am getting very aggressive with my co-workers. It shows that I cannot stand it to be sick and at work.
Fever, feel bad, heavy headache, shiver with cold. when I can't concentrate on my work. even if I am too tired, I would stay at home and go to work later.
AUTORSHIP AND WORD COUNT

Autorship:

Alexandra Grandpierre (200622578)
Methodology
Results
Discussion- Effects of SP on productivity (p.38-39)
Problems and Limitations of Research
Further Research
Conclusion

Katarina Cibereova (200620565)
Abstract
Introduction
Literature Review
Discussion SP and Determinants of SP (p. 33-37)
Managerial Implications
Further Research

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