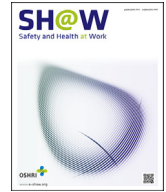




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Original Article

Sickness Presenteeism among the Self-employed and Employed in Northwestern Europe—The Importance of Time Demands

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ABSTRACT

Background: European policymakers encourage individuals to become self-employed because it is a way to promote innovation and job creation. It can be assumed that health and well-being among the self-employed and managers in small-scale enterprises are particularly crucial in this enterprise group because the smallness of the enterprise makes its members vulnerable. Earlier studies have indicated that the self-employed have a high working pace and work for long and irregular hours, indicating that it can be difficult to stay at home because of sickness. The purpose of this study is to investigate the occurrence of sickness presenteeism among the self-employed in relation to the organizationally employed and to analyze whether any differences can be explained by higher work demands among the self-employed.

Methods: The study is based on the fifth European survey on working conditions (2010) and includes the northwestern European countries in the survey. The questions cover a wide range of topics designed to meet the European Union's political needs. The main variables in this study are sickness presenteeism and several indicators of time demands.

Results: The results show that the self-employed report a higher level of sickness presenteeism than the employed: 52.4 versus 43.6%. All indicators of time demands are significantly related to the risk for sickness presenteeism, also when controlling for background characteristics.

Conclusion: The results confirm that the level of sickness presenteeism is higher among the self-employed and that high time demands are a major explanation to this.

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1. Introduction

In recent years, there has been growing interest in research examining sickness presenteeism (SP). This term refers to the phenomenon that individuals, despite complaints and ill-health that prompt them to take rest and sick leave, still go to work [1]. In the literature and research, two perspectives on SP are predominant. The North American perspective focuses on how illness is related to productivity loss at work [2], whereas the European perspective describes SP as attending work despite illness, which would have been a motive for sickness absence [1]. This study is based on the European perspective. It is claimed that SP causes considerably more productivity loss than sickness absence and that managing SP effectively can be a competitive advantage for an organization [3,4]. In addition, prospective studies show that SP is associated with poor future health outcomes such as poor self-

rated health and physical complaints [5,6]. Therefore, SP has emerged as an important area of research [7,8], and studies in different countries have shown that several occupational groups have large shares of employees who have gone to work when they ought to stay home for health reasons [9].

However, to the best of our knowledge, there is a limited number of studies regarding SP among the self-employed (SE). The SE are an interesting category in regard to the phenomenon of SP. The proportion of SE individuals in the employed labor force in Europe is approximately 15% [10]. The proportion is stable; however, the number of SE individuals in the services and public sectors as well as among those who do not employ workers has increased. Most of the SE individuals choose to stay SE and have good working conditions and job quality. However, approximately 20% of the SE report that they have no alternative for work and that they have lower levels of job quality and worse well-being than the former

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group of SE individuals (Ibid.). Earlier studies have also indicated that SE have a high working pace and work long and irregular hours [11–14], indicating that it can be problematic and frustrating to stay at home because of sickness. Mental health and well-being among the SE have been associated with better organizational performance [15] and persistence in entrepreneurship [16]. It can be assumed that SP and other health-related outcomes among the SE are particularly crucial in this enterprise group because the size of the enterprise makes its members vulnerable. Therefore, this study will analyze the occurrence of SP among the SE compared with the organizationally employed and will determine if possible differences can be explained by higher time demands among the SE.

Research shows that SP is a health problem that can be caused by both individual factors [17] and factors related to working conditions [5,7]. Johns [7] categorized potential determinants into factors concerning organizational policies (e.g., sick pay and attendance control), job design (e.g., job demands, ease of replacement, and teamwork), and presenteeism cultures (i.e., attitudes toward SP). According to Kinman and Wray [18], a wide range of factors, including limited entitlement to sick pay, strict absence of management policies, job insecurity, availability of replacement, competitive workplace culture, and high levels of work-related stress and time demands, has been found to contribute to SP [18]. However, although there is evidence of the impact of different work-related factors on SP, studies have rarely investigated the impact of these factors on SP within an established theoretical framework [8,19].

Three important aspects of work are demands, control, and support, and these may act as predictors of SP. Several studies have found positive relationships between different job demand factors and SP. In a study of academic employees, Kinman and Wray [18] found that job demands, control, support from managers, and work engagement were risk factors for SP. In particular, excessive job demands, such as high workload, fast working pace, and long working hours, increased the risk of SP. In a longitudinal study of nurses, Demerouti et al [20] found that job demands caused more SP. These researchers suggest that the perception of high job demands induces pressure to work overtime and underscores the importance of work-related pressure. These results are in line with the results of several other research studies showing associations between different job demand factors and SP [19,21–23,25].

When summarizing the aforementioned results, one can conclude that one of the most frequently referred factors of importance for the risk of SP is job demand factors related to time demands. This conclusion has been supported further in several other recent studies of SP. In a study of a random sample of the Danish workforce [26], researchers have found that time pressure (i.e., having a supervisory role and/or working more than 45 hours per week) increased the likelihood for SP. In a study of German teachers [27], a higher proportion of SP was found for teachers reporting an imbalance between workload and working time, as well as between working time and leisure time, and for those with an unpleasant working schedule. Merchant et al [28] found that SE individuals (nearly 90% employing fewer than 10 employees) work at least 50 hours a week, nearly double of those organizationally employed, and that they were less likely to have missed an entire day of work in the last four weeks. In a meta-analysis study [24], job demands and experienced stress exhibited the largest meta-analytic correlations with SP. These researchers concluded that a heavy workload, understaffing, overtime, and time pressure are factors requiring presence to address a high volume of work and meet tight timelines. An individual facing high job demands and stress may be induced to work for long hours when ill to compensate for possible decrements in productivity or resources (Ibid.).

The fact that job/time demand emerge as crucial factors for the occurrence of SP is of special interest for this study, which focuses on SP among the SE in comparison with organizationally employed individuals. As was shown in the beginning of the introduction and by other researchers [11–14], one of the most distinctive features for the SE in relation to the organizationally employed is that they have a high working pace and work for many hours. A possible consequence of this could be that because of greater time pressure, the risk for SP is higher for the SE than for the organizationally employed. If this phenomenon is true, it is also likely that factors measuring time pressure can explain the higher risk for SP among the SE.

In the light of the aforementioned discussion, the aim of this study is to analyze the occurrence of SP among the SE in relation to the organizationally employed and to analyze whether any differences can be explained by higher time demands among the SE. The following hypotheses will be tested: the SE have higher SP than the organizationally employed, and the SE experience a higher time pressure than the organizationally employed. The higher level of SP among the SE can be explained by higher time demands among the SE.

2. Materials and methods

The study is based on the Fifth European Working Conditions Survey (2010). The European Working Conditions Survey has become an established source of information on working conditions and employment. The survey, which consists of visiting interviews, has been conducted on six occasions since 1990 (1990, 1995, 2000, 2005, 2010, and 2015). Data cover all European Union member states, as well as (potential) candidate countries and the European Free Trade Association countries, and consist of representative samples from each country. The questions in the survey cover a wide range of topics designed to meet the European Union's political needs. Topics include types of employment, work–time arrangements, work organization, learning and education, physical and psychosocial risk factors, health and safety, employee involvement, work–life balance, income and financial security, and work and health.

This present study is based on the 12 northwestern European countries included in the data set: Belgium, Denmark, Germany, France, Ireland, Luxemburg, the Netherlands, Austria, Finland, Sweden, the United Kingdom, and Norway. When conducting comparative studies, it is always a question of which and how many countries should be included. On the one hand, it is a strength to cover many countries, but on the other hand, this increases the risk of including countries representing very different contexts. Although there are political, economic, and organizational differences between these countries, the motivation for including the 12 northwestern countries in the study is that they have more in common with each other than they have with the countries in southern Europe and countries located in the former Eastern Europe.

The dependent variable is SP and is measured using the following question: Over the past 12 months, did you work when you were sick (1 = yes and 0 = no)? The main indicators of time demands are the following questions: How many hours do you usually work per week in the main job (number of hours)? How many times a month do you work in the evening for at least 2 hours between 6:00 pm and 10:00 pm (number of times per month)? How many times a month do you work on Sundays (number of times per month)? and over the last 12 months, how often has it happened to you that you have worked in your free time to meet work demands (1 = never, 2 = less often, 3 = once or twice a month, 4 = once or twice a week, and 5 = nearly every day)? It is

Table 1

Sickness presenteeism, working hours, work in the evenings, work on Sundays, and work in free time among the self-employed and organizationally employed.

Sickness presenteeism and time demands	Self-employed	Organizationally employed
Sickness presenteeism (the last year, %)	52,4	43,6***
Working hours (number of hours, mean)	43,5	35,4***
Work in the evenings (times per month, mean)	6,8	3,2***
Work on Sundays (times per month, mean)	1,2	0,6***
Work in free time (1 = never to 5 = every day, mean)	3,0	2,0***
N (ca)	2200	16000

Percentage and mean values are presented.

*** $p < 0.001$.

** $p < 0.01$.

* $p < 0.05$.

not written in stone that these variables indicate time demands for all people, but in most cases, working long hours and frequently working in the evenings, on Sundays, and in free time are indicators of time demands.

Background characteristics are measured by age, gender (1 = woman and 0 = man), partner/spouse (1 = spouse/partner and 0 = single), children (1 = children in the household and 0 = no children in the household), and household economy. The last characteristic is measured using the following question: Thinking of your household's total monthly income, is your household able to make ends meet (1 = very easily, 2 = easily, 3 = fairly easily, 4 = with some difficulty, 5 = difficulty, and 6 = with great difficulty)?

The results are described and analyzed by calculating percentages, mean values, and correlation coefficients (Pearson) and by using a logistic regression. The regression analysis is carried out in three steps where Model 1 shows the result of a bivariate analysis of the relationship between employment status and the risk for SP, Model 2 controls for the indicators of time demands, and Model 3 controls for both time demands and background characteristics. Odds ratios (ORs) are presented as indicators of the relative risk of experiencing SP.

3. Results

This section analyzes the research hypotheses and is structured as follows. First, values on SP and variables measuring time demands are shown for SE and organizationally employed. Second, correlations between SP and variables indicating time demands are shown. Third, the relationship between employment status and the risk for SP when controlling for variables measuring time demands and background characteristics is analyzed.

As Table 1 shows, the SE report a higher level of SP than the organizationally employed: 52.4% versus 43.6%. The mean number of working hours is 43.5 among the SE and 35.4 among the organizationally employed. The SE have worked in the evenings on an average of nearly 7 days a month, which is more than twice as many days as for the organizational employees. It is also twice as common for the SE to work on a Sunday compared with organizational employees. Finally, the SE have, on an average, worked in their free time once or twice a month, and organizational employees have, on an average, worked in their free time less often. All the differences between the SE and organizationally employed are clearly

Table 2

Correlations between sickness presenteeism, working hours, work in the evenings, work on Sundays, and work in free time (Pearson)

Sickness presenteeism and time demands	Working hours	Work in the evenings	Work on Sundays	Work in free time
Sickness presenteeism	0.109**	0.085**	0.073**	0.171**
Working hours		0.299**	0.171**	0.275**
Work in the evenings			0.464**	0.264**
Work on Sundays				0.226**

** $p < 0.01$.

significant and indicate a higher level of SP and time demands among the SE.

In Table 2, correlations between SP and variables indicating time demands are shown. SP is significantly correlated with working hours and work in the evenings, on Sundays, and in free time. The higher the time demands—indicated by many working hours and considerable work in the evenings, on Sundays, and in free time—the higher the risk for reporting SP.

The results also show that the indicators of time demands are significantly correlated with each other. If a person reports a high time demand on one of these indicators, there is a high probability that he/she will also report a high value on the other variables indicating time demands. However, the correlations are not sufficiently strong to suspect multicollinearity, which would be the case if the correlation coefficients were approximately 0.8 or higher.

Table 3 shows how employment status is associated with the risk for SP when controlling for variables measuring time demands and background characteristics in a logistic regression. Model 1 shows the result of a bivariate analysis of the relationship between employment status and the risk for SP. Model 2 controls for the indicators of time demands, and Model 3 controls for time demands and background characteristics.

In a bivariate analysis, the SE have a significantly higher likelihood of reporting SP. When controlling for the indicators of time demands, this relationship becomes insignificant. This finding means that when holding the indicators of time demands at a constant level, there is no significant difference between the SE and organizationally employed with regard to the risk for reporting SP. The indicator that explains the most of the differences in SP between the SE and organizationally employed is work in free time (analyses not shown).

Table 3

Logistic regression. Risk for sickness presenteeism by employment status, variables measuring time demands, and background characteristics.

Independent variables	Model 1	Model 2	Model 3
Constant	0.773	0.346	0.298
Self-employed	1.423***	1.048	1.101
Indicators of time pressure			
Working hours		1.008***	1.011***
Work in the evenings		1.007*	1.007*
Work on Sundays		1.042**	1.032*
Work in free time		1.274***	1.286***
Background characteristics			
Age			0.991***
Gender (woman)			1.262***
Partner/spouse			1.050
Children			1.130***
Household economy			1.066***
R ² (Nagelkerke)	0.004	0.045	0.056

Odds ratios are presented.

*** $p < 0.001$.

** $p < 0.01$.

* $p < 0.05$.

All indicators of time demands are significantly related to the risk for SP: The more the hours worked and the more often an employee worked in the evenings, on Sundays, and in free time, the higher the risk for reporting SP. All these variables are also significantly associated with the risk for SP in Model 3 when controlling for background characteristics. Age is significantly associated with SP, that is, a higher age reduces the risk for reporting SP. Women report SP more often than men do. Civil status is not significantly associated with SP. Having children increases the risk for SP, and having difficulties in making ends meet significantly increases the risk for reporting SP.

The R^2 indicates that the percentage of explained variance increases substantially when the variables measuring time demands are included in Model 2, but not as much when the background characteristics are included in Model 3. Although the overall level of explained variance is relatively low, it seems likely that the indicators of time demands contribute mostly to the level of explained variance that exists in the models.

4. Discussion

The aim of this study was to analyze the occurrence of SP among the SE in relation to the organizationally employed and to analyze whether any differences could be explained by higher time demands among the SE. The results show that the SE have a significantly higher risk for reporting SP than the organizationally employed. This difference is explained by the variables measuring time demands, which indicates that the SE have a higher risk of reporting SP because they experience greater time demands. The present study provides new evidence regarding SP among the SE, which is a rarely researched area.

The fact that the SE report higher SP and higher time demands, expressed as working hours and more work in the evenings, on Sundays, and in free time, than the organizationally employed is not surprising. Several research studies have shown that the SE have a high workload and that they are subject to long and irregular work hours [11,12,14].

The regression results showing that all indicators of time demands are significantly related to SP are in line with the results of earlier studies. Several studies have found that job and time demand are crucial predictive factors for explaining SP [18,20,23,26]. The results are in line with the results of the study by Lohaus and Habermann [8] who suggest that the most important work-related variables include role demands, workload, time demands, time pressure, overtime, and work hours. According to Aronsson and Gustafsson [1], work-related factors also include replaceability, sufficient resources, conflicting demands, and control over pace of work. Based on empirical results, these researchers have formulated a model that states that illness and capacity loss are the strongest and most direct determinants of both sickness absence and SP. In this model, both personal and work-related demands influence an employee's decision to either go to work despite illness or choose sickness absence (*ibid.*).

The regression analyses indicate that the SE have a higher risk of reporting SP because of high time demands, especially related to work in free time. In addition, it can be assumed that personal factors, such as boundarylessness, and work-related factors, such as replaceability and insufficient resources, influence the decision of the SE to choose SP over sickness absence [1]. This statement is in line with that from a study by Johansen et al [9] showing that the most frequently reported reasons for SP include not burdening colleagues and feeling indispensable.

SE individuals are the enterprise owners and key persons because their opinions and values influence the approach to health and working environment issues. In addition, the SE often are

exposed to long and irregular work hours [11,12] along with high and conflicting work demands [29]. These circumstances can be hindering factors for the implementation of health-promoting measures for themselves and their employees (if they have employees). Earlier studies [30,31] have supported this conclusion; however, the studies have also observed that the SE were conscious about the importance of health-related issues and their relation to organizational outcomes. The results showed that they find supportive guidance and inspiration for working with healthy and psychosocial working conditions in their enterprises from enterprise networks and occupational health services. Therefore, it is important to stimulate more of such support for the SE and small-scale enterprises [32].

An interesting result is that the variable "work in free time" explained most of the differences in SP between the SE and organizationally employed. This result indicates that an important difference between the SE and organizationally employed, in relation to the risk of reporting SP, is that the SE more often have to work in their free time. In such a situation, a strategy to "protect" leisure time as much as possible could be going to work even when not feeling well. If one does not choose SP, there is a high risk that one has to catch up on work in their free time when they are well again, which means that the free time will be even more reduced.

4.1. Limitations and strengths

Analyzing statistics generated from comparative data is not without problems, and consequently, the results should be interpreted with a degree of caution. One problem is that is the framing of survey questions is context-dependent, meaning that certain questions may be understood and interpreted differently in different cultural and national contexts. Another problem is that the study is cross-sectional, which means that it is difficult to judge whether the associations found are causal, and if they are, in what direction. Measuring SP with a single item might also be considered a limitation, and further studies should develop and use more advanced measures of SP. However, despite this limitation, previous research has suggested that the single item works satisfactorily when attempting to measure SP. An additional limitation is that other individual and organizational factors, which have not been included in this study, can be predictors of SP. A strength in the study is the large harmonized European sample. The fact that the results are based on nationally representative samples from a large number of European countries means that it is possible to generalize the results to this region of Europe.

4.2. Implications

The present study revealed that the SE experience a high level of SP and that insufficient time demand factors are important predictors for explaining SP among the SE. Based on these findings, the following implications can be drawn. First, policymakers need to consider the significant differences in SP between the SE and organizationally employed and the influence of time demands on SP among the SE. Second, it is important in future research and evaluations of the SE to focus more on SP as a complement to other objective and subjective health-related outcomes. Third, in the light of high costs of SP for organizational productivity loss and associations between the SE and future ill-health, it is important to develop effective interventions for SP. At an organizational level, it is crucial to reduce workload and time demands for individuals to a manageable amount by a sufficient work organization and possibilities for the individual to influence decisions about his/her daily work. At an individual level, it is important for health programs to include information regarding the negative effects of SP and

measures for reducing stress. Fourth, because earlier research has shown that the SE and small-scale enterprises get limited support from external resources, such as occupational health services, it is of value to develop specific models for support concerning health and psychosocial working conditions for this enterprise group.

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Conflicts of interest

The authors report no conflicts of interest.

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