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Employees' professional situation and the abuse of sick leave absence in Poland

Łukasz Jurek 

Department of Economics and Finance, Wrocław University of Economics and Business, Wrocław, Poland

ABSTRACT

The propensity to abuse sickness leave is a complex issue conditioned by various individual and contextual factors. The aim of the article is to assess the effect of various work-related factors on the abuse of sick leave in Poland. Three categories of sick leave abuse were distinguished: compulsion, escape and recreation. The data were gathered using the CAWI survey. Statistical analyzes incorporated multivariable linear regression and structural equation modelling. The research sample consisted of 1067 respondents (full-time employees). Some work-related factors have a significant impact on the abuse of sick leave. These factors are: (1) motivational working conditions, (2) social working conditions, (3) qualifications and (4) form of ownership. The main conclusion is that the assessment of specific aspects of working conditions has a different impact on the declared abuse of sickness absence. A high assessment of the 'social' (interpersonal) aspect is associated with a low tendency to engage in unethical behavior, whereas a high assessment of the 'motivational' aspect is associated with a high tendency in this respect. Moreover, it was found that a low tendency to abuse is also expressed by people who highly assess their professional qualifications. Finally, abuses are committed relatively often by public administration employees.

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1. Introduction

The level of sickness absence has long been regarded as a reliable indicator of the health status of workers (Marmot et al., 1995). Nowadays, this approach is increasingly being abandoned and the important role of other (non-health related) factors is being emphasised. As a result, different perspectives in the study of sickness absence began to emerge. The *medical* approach focuses primarily on the health aspects of being absent. The *psychosocial* approach treats absence as a function of psychological and cultural factors. The economic approach, on the other hand, sees absence as the

CONTACT Łukasz Jurek  lukasz.jurek@ue.wroc.pl

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result of a rational decision, taking into account the potential costs and benefits of not working.

In theory, employees use sick leave according to their incapacity to work due to illness. In practice, however, there are 'deviations' from this optimal state, both upwards when sick leave is overused (absenteeism) and downwards when it is underused (presenteeism) (Hensing, 2004). The subject of interest in this article is the former 'deviation', i.e., when sickness absence is excessive and misused. Various terms have been used in the literature to describe this phenomenon: shirking, voluntary absenteeism, absenteeism without illness, chosen absenteeism. In this study, we use the terms 'sickness absence misuse' and 'sickness absence abuse'. They refer to the situation where sick leave (sickness absence) is used contrary to its intended purpose, i.e., for treatment or convalescence.

Abusing sickness absence is a growing problem in many countries. Taylor et al. (2010, p. 270), in their analysis of the situation in the United Kingdom, noted that *a new moral panic certainly appears to be upon us. Popular discourse insists that malingering is endemic in 'sick note Britain', with workers 'swinging the lead', or, to use the currently fashionable term, taking 'duvet days'.*

In recent years this problem has been the subject of a number of studies. These studies have mainly focused on comparing the level of absenteeism over different time periods. Eventual inconsistencies have been linked to 'circumstances' that (by their very nature) limit the motivation to work. So far, such circumstances have been shown to be: nice weather (Shi & Skuterud, 2015), important sporting events (Skogman Thoursie, 2004), birthdays (Thoursie, 2007), or simply Wednesday (Vahtera et al., 2001). Presumably, this type of abuse may also occur during long weekends (so-called 'bridging days'), but there is no empirical evidence to support this assumption (Böheim & Leoni, 2020a). Furthermore, absenteeism was also found to be positively associated with bar opening hours, suggesting that evening and (especially) night-time alcohol consumption contributes to the misuse of sick leave on the following day (Green & Navarro Paniagua, 2016).

In general, absenteeism is determined by a number of individual and contextual factors (Alexanderson, 1998; Miraglia & Johns, 2021). Individual factors include demographic variables (age, gender, ethnic group), personality traits and personal values, family situation, and health status (Alexanderson, 1998; Geurts, 1994). According to Ł. Jurek (2023), age is particularly important in this regard, as the propensity to abuse sickness absence is highest among the youngest employees and gradually decreases in older age groups. Regarding the context, in turn, absenteeism is related to numerous social, economic and institutional settings. First of all, workers, as rational beings, are sensitive to economic incentives. They tend to overuse sick leave as long as the perceived marginal benefits of absence exceed the perceived marginal costs (Kaiser, 1998). Thus, absenteeism is a function of the generosity of sickness benefits (Halima & Koubi, 2022; Johansson & Palme, 2002; Ziebarth & Karlsson, 2014). It applies also to employers. Their informal consent to the misuse of sick leave depends on the cost, in terms of both, work disorganization (Heywood et al., 2008) and sickness payments (Böheim & Leoni, 2020b; Pertold & Westergaard-Nielsen, 2018). Moreover, rational workers consider not only the financial but also the

non-financial consequences of their absence. The most important non-financial consequence is the risk of being fired. In general, the fear of dismissal acts as a disciplinary tool. It reduces avoidance (Shapiro & Stiglitz, 2011). Such a situation takes place in the case, for example, of a deterioration in the labour market (Bratberg & Monstad, 2015) or a change in employment protection (Bradley et al., 2014). Secondly, the rationality of behaviour is being modified by social norms (Elster, 1989). It applies also to absence behaviour. The propensity to abuse sick leave (as well as any other welfare benefit), is deeply rooted in a cultural background, both national (Miraglia & Johns, 2021; Pfau-Effinger, 2005) and local (Virtanen et al., 2000). It derives from the low level of so-called ‘benefit morale’, which is defined as *the individual reluctance to exploit the welfare state via benefit fraud* (Halla et al., 2010, p. 36). Finally, in accordance with social psychology, decisions (also those regarding absence) made by individual employee are not independent, but to some extent depend on the decisions of other employees in the workplace (organization) (Bazerman et al., 1983; Geurts, 1994). Due to the mutual obligations between co-workers, their decisions are interdependent. As so, social context of work is an important determinant of absence behavior.

An attempt to integrate this both aspects (individual and contextual) was made by R. Steers and S. Rhodes (Steers & Rhodes, 1978) in their process theory. It states that attendance is a function of two variables: (1) ability to work, and (2) motivation to work. Ability is involuntary, whereas motivation is voluntary element of absence. Motivation is shaped by two different forces: push and pull. Push forces are negative factors that discourage work and limit its attractiveness. Pull forces, in turn, are positive factors that encourage out-of-work activity. Moreover, these forces operate at three different levels: (1) macro (e.g., culture, welfare regime, labour market), (2) meso (e.g., working environment), and (3) micro (e.g., personal characteristics).

The subject of interest in this article is the first (micro) level, associated with professional skills, and the second (meso) level associated with working conditions. The research aim is to assess the effect of various work-related factors on the declared abuse of sickness absence in Poland.

The data used for the statistical analysis comes from a CAWI survey conducted in 2021. The survey distinguished eleven ‘circumstances’ that could potentially lead to abuse of sick leave, such as renovation, overwork or important administrative matters. Respondents indicated their propensity to abuse in each of these circumstances. Then work-related factors, both micro-level (level of job skills) and meso-level (characteristics of the work environment), were associated with declared abuse. Structural equation modelling (confirmatory factor analysis) was then used to reduce the number of dependent variables (the circumstances of sickness absence abuse) and independent variables (micro- and meso-level factors). Finally, linear regression was used to estimate the influence of certain predictors on the three basic categories of absence abuse: (1) compulsion, (2) escape and (3) recreation.

Although the relationship between work-related situation and sickness absence has been of interest to researchers for a long time, in some aspects the topic is still under-recognised. First, abuses can be of different kinds: can be forced by objective (but not health-related) factors, can result from a willingness to ‘escape from’

undesirable occupational activities, and also can result from a willingness to 'escape to' desirable non-occupational activities. It can be presumed that workers in different professional situations commit different types of abuse. Previous research has not considered this aspect. Secondly, to the best of our knowledge, many potentially important predictors of sick leave abuse have not been taken into consideration so far, such as the level of professional qualifications, such as professional experience, interpersonal skills or familiarity with new technologies.

The paper is divided into five sections. The first section discusses the findings of the previous research on the links between professional situation and sickness absence abuse. The second section discusses the source of the data and the characteristics of the research sample. The third section presents the author's research approach. The fourth section presents the estimation results of models showing the impact of the analysed factors on the different categories of abuse (compulsion, recreation, escape). The fifth (final) section contains conclusions and discussion.

2. Abuse of sick leave and work-related situation: literature review

The links between work environment and absenteeism have already been repeatedly confirmed. The findings so far show that particular measures of sickness absence (prevalence, length) vary substantially between workplaces, even within the same industry and within the same country (Ichino & Maggi, 2000). According to Szubert and Sobala (2003), the level of sickness absence is strictly dependent on working conditions (material, psychosocial, organisational). Using the example of a large privatised company in Poland, they showed that absenteeism changes with the modernisation of the organisation.

Of course, in some industries, the working environment and/or the nature of the job demands have a natural impact on the level of sickness absence. The most frequent users of sick leave are people who are overburdened with physical work (Andersen et al., 2018, 2021; Kowalczyk et al., 2020), especially in conditions involving monotonous movements or constant exposure to the effects of a harmful factor (Voss et al., 2001). The absence is additionally affected by material and organisational working conditions (Sundstrup et al., 2018; Thorsen et al., 2021), including in particular the ergonomics of workstations (Böckerman & Laukkanen, 2010), and shift work (Bernstrøm & Houkes, 2020). All these factors tend to cause various adverse health effects and therefore may lead to high absence. However, there can be also another, indirect influence, with an impact on job satisfaction and, subsequently, absenteeism (Miraglia & Johns, 2016).

There are also a number of non-health-related factors that shape absence behaviour. Based on their literature review, Miraglia and Johns (2021) distinguished two domains of work-related factors: (1) organisational, and (2) occupational. In the organisational domain they included: absence culture, group cohesion, psychological and demographic similarity between the individual and the work group or manager, workplace support and conflict, and organisational ethical climate. In the occupational domain, they included social expectations of attendance, social job demands, gender composition and trade unions.

Although the above list is very comprehensive, it is certainly not exhaustive. Several important work-related factors reported in the literature are missing. Four additional determinants are worth mentioning.

First, the size of the company. In general, the higher the number of employees, the higher the level of absence (CIPD, 2020). It can be assumed that there are more opportunities to abuse sickness absence in larger companies. Firstly, in a large team, it is relatively easy to arrange for a replacement during illness. Second, in large companies, people tend to be anonymous to each other and are not connected by strong personal ties, and it is therefore easy for them to burden others with additional tasks resulting from their own absence (Edwards & Ram, 2019).

Second, the form of ownership. In the public sector, the level of absence is higher than in the private sector (Løkke & Krøtel, 2020). In the UK it is almost twice as high (CIPD, 2020). J. Hansen et al. (2019) presented two possible explanations for this phenomenon. First, it is associated with job security, which is higher in the public sector. Second, it is associated with pressure on performance and profit, which is higher in the private sector.

Third, leadership. Absenteeism is largely dependent on the behaviour, style and attitude of leaders (Buzeti, 2022; Dietz et al., 2020; Løkke, 2022; Løkke & Krøtel, 2020; Schmid et al., 2017; Sørensen et al., 2020; Stengård et al., 2021). They have many tools to influence, such as general health and absence management, social modelling, etc. However, this factor is very complex and includes many other components that have been treated separately in other research, such as social capital and social norms (Clausen et al., 2020; A. S. K. Hansen et al., 2018; Løset et al., 2018), quality of interpersonal relationships and conflicts at work (Lakiša et al., 2021; Sterud et al., 2022).

Fourth, job satisfaction. The results of previous research indicate that absenteeism increases with a lack of support from colleagues and supervisors (North et al., 1996; Väänänen et al., 2003); an increase in stress and tension at work (Kristensen, 1991; Szubert et al., 2009); limited opportunities for career development and lower levels of participation (Melchior et al., 2003); and a decrease in overall job satisfaction (Marmot et al., 1995). This suggests that sickness absence is a result of frustration and helplessness. It becomes a form of escape from a toxic workplace, people and/or tasks.

However, there are a number of work-related factors that could potentially influence absence behaviour, but for some reason have not been the subject of research so far. One such factor is the level of professional qualifications. Are employees who rate their knowledge and skills positively more likely to abuse sick leave than those who rate them negatively? Another factor is the type of work. Who is more likely to abuse sickness absence: white-collar workers or blue-collar workers? The remaining factors are: position held, method of remuneration and work experience.

In summary, the work-related factors affect sickness absence in two ways. First, they affect the health of employees. Second, they affect employees' absence behaviour, including their tendency to abuse sick leave. However, it is still unclear under which circumstances abuse is most likely to occur and which work-related factors are associated with it.

3. Data source and sample characteristics

The abuse of sick leave is a problem that is still relatively poorly understood. Above all, there is a lack of empirical research on the issue. Research in this area is difficult to conduct due to the blurred distinction between justified and unjustified use of sick leave. Researchers are forced to observe high levels of caution in interpreting the available data, as it is never fully clear whether an absence is forced by an actual illness, or whether it is the effect of other non-health-related causes.

In Poland, the abuse of sick leave has not as yet been the subject of scientific research, and as a result the scale of the phenomenon is not known. The one available source of information on the topic are the results of spot checks carried out by the welfare authorities (ZUS). Unfortunately, the possibility of drawing conclusions on the basis of this data is severely limited as the spot checks are both selective and also cover only a narrow group of sick leave referrals (long-term sick leave absence).

The lack of reliable and complete data from public sources requires the sourcing of information in another way. One of the potential solutions is to use a survey-based study. Of course, the information gathered in this way does not reflect the actual state of affairs, and merely contains the declarations of respondents, which can to a lesser or greater degree diverge from reality, especially if difficult and/or morally questionable topics are covered (Bostyn et al., 2018). Nevertheless, this is also a valuable source of information, which, while it may not present the problem studied as it actually is, does reveal the way in which it is perceived by respondents.

The source material used in this article is from a survey study conducted in December 2021 by the research agency BBiAS. The information was gathered using the CAWI method, that is *via* an internet survey. The territory covered by the research encompassed the whole of Poland, and the participants were full-time employees covered by national health insurance. The research sample totalled 1067 respondents. The structure of the sample according to character and place of employment is presented in Table 1, while Table 2 presents the sample structure according to declared assessments of: employment conditions, own professional qualifications and the characteristics of the employer.

The random sampling was made up of national panels of respondents. It can be assumed that the randomised character of the sample provides grounds for generalisation of the results. The maximum measurement error was $\pm 3\%$ with a reliability level of 95%.

4. Abuse of sick leave in the light of declarations by respondents

Based on the results of prior research, eleven circumstances were isolated that particularly encourage the abuse of sick leave referrals. These are situations in which employees may feel a particular temptation to partake in unethical behaviour. These circumstances are:

CIR1: extending the period away from work e.g., during public holidays or long weekends,

CIR2: overtiredness and/or overwork (sick leave as additional rest),

CIR3: refusal to grant regular leave (sick leave as a form of retaliation),

Table 1. Sample characteristics according to character of work and workplace.

Characteristic	Description	n	%
Character of work	Blue-collar position (mainly physical work)	480	44.99
	White-collar position (mainly intellectual work)	587	55.01
Form of ownership	Public entity	304	28.49
	private entity	763	71.51
Number of employees	Micro (up to 10)	202	18.93
	Small (11–50)	313	29.33
	Medium-sized (51–250)	277	25.96
	large (above 250)	275	25.77
Work experience	Less than 1 year	214	20.06
	1–2 years	194	18.18
	3–4 years	209	19.59
	5–9 years	213	19.96
	10–14 years	101	9.47
	15 years or more	136	12.75
Reward	Fixed remuneration	773	72.45
	Variable remuneration	245	22.96
	Difficult to say	49	4.59
Position	Managerial staff, higher civil servant	76	7.12
	Office worker	306	28.68
	Service worker, salesperson	172	16.12
	Specialist (e.g., doctor, teacher, economist, architect, lawyer)	114	10.68
	Technician (e.g., mechanic, agent, assistant, IT specialist)	63	5.90
	Machine/device operator, assembly worker, driver and vehicle operator	80	7.50
	Industrial or construction worker, craftsman	86	8.06
	Worker carrying out simple work	82	7.69
	Other	88	8.25

Source: own elaboration.

CIR4: demonstrating dissatisfaction with working conditions (sick leave as a form of strike),

CIR5: escape from problematic work tasks and/or from cooperation with unliked people,

CIR6: a spontaneous escapade (e.g., fishing, mushroom picking, to a favourite team's match),

CIR7: a situation of higher necessity (e.g., an important family occasion),

CIR8: renovation work or other important work on the home,

CIR9: carrying out other paid work (e.g., an urgent task),

CIR10: the need to arrange an important administrative matter,

CIR11: caring for a loved one or an animal.

The respondents were asked to respond to each of these eleven cases and declare if they had ever taken sick leave in such circumstances. The results are presented in [Figure 1](#). Employees use sick leave the least often (8.43%) to demonstrate dissatisfaction with working conditions, and the most often (22.87%) in situations of higher necessity. Detailed results showing the distribution of responses in relation to individual variables are included in the [Appendix](#).

5. Method and research procedure

The aim of the research was to assess the influence of various factors related to professional situation on the abuse of sick leave in Poland. For structural equation

Table 2. Respondents according to subjective assessment of employment conditions, own professional qualifications and characteristics of the employer.

Category	Code	Description	Assessment				
			Very bad	Quite bad	Average	Quite good	Very good
Employment conditions and work atmosphere (ECON)	ECON1	Quality of relations with superiors	3.00	6.47	26.05	39.93	24.55
	ECON2	Quality of relations with co-workers	1.12	5.34	17.24	43.96	32.33
	ECON3	Satisfaction with remuneration	4.40	14.06	40.86	31.02	9.65
	ECON4	Satisfaction with non-material working conditions	4.78	12.37	33.55	35.99	13.31
	ECON5	Stability of employment	2.16	6.28	24.74	40.02	26.80
	ECON6	Satisfaction with position held	2.25	9.56	28.30	40.11	19.78
	ECON7	Prestige of profession/work	3.94	13.03	36.74	32.24	14.06
	ECON8	Opportunities for promotion	12.37	19.31	31.77	26.34	10.22
	ECON9	Opportunity to fulfil one's passion and professional interests	10.40	15.75	30.46	27.65	15.75
	ECON10	Motivation to work and level of engagement in delegated tasks	4.03	12.46	25.77	39.55	18.18
	ECON11	A sense of agency and an effect on events within the firm	7.12	16.87	32.33	29.80	13.87
	ECON12	Accordance between work and personal interests	7.22	12.93	28.96	31.77	19.12
Professional qualifications (PQUA)	PQUA1	Professional potential (assessment of one's own situation on the job market)	2.72	8.81	33.83	41.24	13.40
	PQUA2	Creativity and innovativeness	2.34	6.65	31.58	42.55	16.87
	PQUA3	Professional experience (practical skills, knowledge of the industry)	1.31	7.97	25.40	40.49	24.84
	PQUA4	Interpersonal skills (leadership skills, teamwork)	1.78	7.87	30.55	40.21	19.59
	PQUA5	Familiarity with new technologies (e.g., Use of computers)	0.75	4.03	20.99	41.05	33.18
	PQUA6	Knowledge of foreign languages	8.81	18.46	34.68	27.46	10.59
Characteristics of the employer (CEMP)	CEMP1	Company reputation	1.87	8.72	32.24	40.49	16.68
	CEMP2	Company management style	3.84	12.28	31.77	37.86	14.25
	CEMP3	Organisational culture (norms, routines, values)	1.97	10.78	29.90	38.24	19.12
	CEMP4	Social responsibility and ethically appropriate activities	1.78	9.09	31.40	39.83	17.90
	CEMP5	modernity and dynamic development	2.44	10.87	31.58	38.71	16.40
	CEMP6	Engagement in and care for matters concerning employees	4.69	11.90	30.74	35.52	17.15

Source: own elaboration.

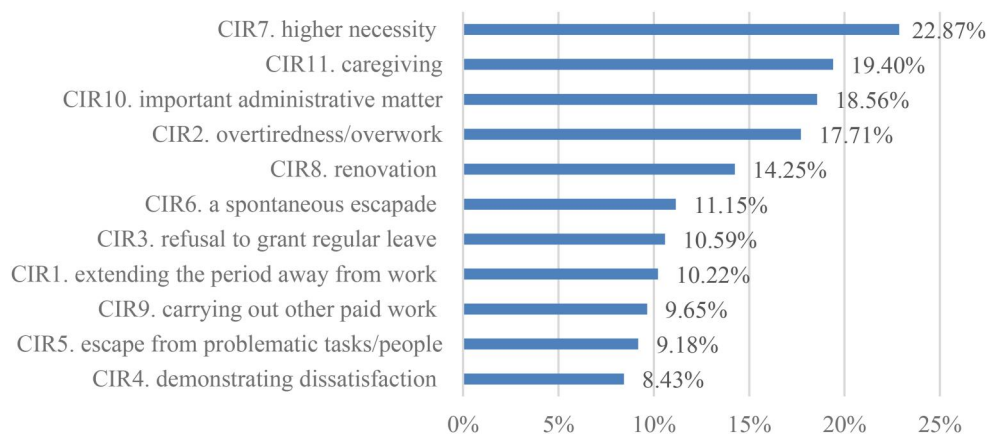


Figure 1. Abuse of sick leave absence according to circumstances. Source: own elaboration.

modelling, the MLR algorithm was used (maximum likelihood estimation with robust (Huber-White) standard errors), which is recommended when the assumption of a multivariate normal distribution is not met (Lai, 2018). Next, a series of multi-variable linear regression analyses were conducted, which were used to assess the influence of the predictors on individual categories of abuse. The statistical analysis was conducted using R software with the 'Lavaan' and 'car' package.

5.1. Dependent variable

Based on the classic Fraud Triangle concept (Cressey, 1953), the individual circumstances of abuse were grouped according to the type of motivational element into three intercorrelated subfactors (according to the division presented in Table 3), which were defined as 'categories' of abuse: COMPULSION, ESCAPE and RECREATION. At the stage of initial calculations, it was found that circumstance CIR4, that is sick leave as a form of demonstrating dissatisfaction with working conditions, was not correlated with the other circumstances, and as a result was excluded from further analysis. The obtained structural model estimates are presented in Table 4.

Table 3. Categories of sick leave absence abuse.

Abuse category	Circumstances of abuse
RECREATION	CIR1. extending the period free from work CIR2. overtiredness and/or overwork
ESCAPE	CIR3. refusal to grant regular leave CIR5. escape from problematic work tasks and/or cooperation with unliked persons CIR6. spontaneous escapade
COMPULSION	CIR9. other paid work CIR7. situation of higher necessity CIR8. renovation or other important work on the home CIR10. need to arrange an important administrative matter CIR11. providing care for a loved one or animal

Source: own elaboration.

Table 4. Results of structural model estimates for the dependent variable according to the three categories of abuse (RECREATION, ESCAPE and COMPULSION).

Latent	>	Circumstance	<i>B</i>	s.e.	<i>Z</i>	DPU	GPU	β	R^2
COMPULSION	->	CIR10	0.63	0.04	15.38***	0.55	0.72	0.63	0.40
COMPULSION	->	CIR7	0.57	0.04	15.18***	0.50	0.65	0.57	0.33
COMPULSION	->	CIR8	0.58	0.05	12.83***	0.49	0.67	0.58	0.34
COMPULSION	->	CIR11	0.53	0.04	13.30***	0.45	0.60	0.53	0.28
ESCAPE	->	CIR3	0.38	0.05	7.28***	0.28	0.49	0.38	0.15
ESCAPE	->	CIR5	0.43	0.05	8.01***	0.33	0.54	0.43	0.19
ESCAPE	->	CIR9	0.52	0.05	9.71***	0.42	0.63	0.52	0.27
ESCAPE	->	CIR6	0.47	0.05	9.47***	0.38	0.57	0.47	0.23
RECREATION	->	CIR1	0.48	0.06	7.96***	0.36	0.60	0.48	0.23
RECREATION	->	CIR2	0.48	0.06	8.65***	0.37	0.59	0.48	0.23

Note: > = Direction of effect of latent variable on circumstance; *B* = Non-standardised factor loading; s.e. = Standard estimation error *B*; *Z* = Statistic *Z*; DPU and GPU = 95% confidence intervals (appropriately lower and higher); β = Standardised factor loading; $X^2(32) = 57.10$; $p < 0.01$; $CFI = 0.98$; $TLI = 0.97$; $NFI = 0.96$; $IFI = 0.98$; $RMSEA = 0.03$; $90\%PU[0.02-0.04]$; $PCLOSE = 1.000$; $SRMR = 0.02$; $GFI = 0.99$; $AGFI = 0.98$. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: own elaboration.

In the COMPULSION category, the motivation for absence is the pressure related to the need to deal with an important and/or unpredicted matter that is in conflict with working hours. Such pressure is related to an important administrative matter or another situation of higher necessity, renovation work or the need to provide personal care for a loved one or an animal. In the ESCAPE abuse category, the motivation is the desire to ‘escape from’ unwanted work tasks, or ‘escape to’ desired activities which collide with working hours. This desire is related to various factors that either push away from work (push factors), such as avoiding unpleasant events and/or people, or attract towards absence (pull factors) such as the wish to participate in a spontaneous escapade (fishing, mushroom picking, to a favourite team’s match). In the RECREATION abuse category, the motivation to abuse sick leave is rest and recuperation. These circumstances take place in situations such as extending one’s free time away from work (e.g., a long weekend), or as a reaction to weariness, over-tiredness and/or over-work.

5.2. Independent variables

The independent variables used in the analysis were various factors related to the respondents’ professional situation. These factors can be divided into four groups. The first are variables related to the character of work and the place of employment. The second group are variables related to assessment of employment conditions and atmosphere at work. The third group are variables related to assessment of one’s own professional qualifications. The fourth (final) group are variables related to the assessment of the employer’s characteristics.

In order to reduce the number of variables in groups two, three and four, confirmatory factor analysis was conducted and latent variables were created.

Variables in the second group related to the assessment of employment conditions and atmosphere at work were grouped into two inter-correlated subfactors: MOTIVATIONAL COND and SOCIAL COND, according to the division presented in Table 5. The SOCIAL COND subfactor refers to the ‘social’ aspects of working conditions related to interpersonal relations and the feeling of job security. Meanwhile, the MOTIVATIONAL COND subfactor refers to the ‘motivational’ aspects of working conditions related to the feeling of satisfaction, prestige and opportunities for development. At the stage of initial calculations, it was found that

Table 5. Subfactors related to assessment of employment conditions and work atmosphere.

Latent variable	Assessment of employment conditions and work atmosphere
SOCIAL COND	ECON1. quality of relations with superiors ECON2. quality of relations with co-workers ECON5. stability of employment
MOTIVATIONAL COND	ECON3. satisfaction with remuneration ECON6. satisfaction with position held ECON7. prestige of profession/work ECON8. opportunities for promotion ECON9. opportunity to fulfil one’s passion and professional interests ECON10. motivation to work and level of engagement in delegated tasks ECON11. a sense of agency and an effect on events within the firm ECON12. accordance between work and personal interests

Source: own elaboration.

the ECON4 assessment, that is satisfaction with non-material working conditions, was not correlated with the other assessments in the group, and as a result was excluded from further analyses. The results of the obtained structural model estimates are presented in Table 6.

The variables in the third group, related to the assessment of one’s own professional qualifications, were grouped into one factor—QUALIFICATIONS - and the results of the obtained structural model estimates are presented in Table 7. The variables in the fourth group, related to the assessment of the employer’s characteristics, were grouped into one factor—EMP CHAR, and the results of the obtained structural model estimates are presented in Table 8.

Finally, the following independent variables were taken into consideration for the further part of the research:

Main variables:

- MOTIVATIONAL COND (latent variable),
- SOCIAL COND (latent variable),
- EMP CHAR (latent variable),

Table 6. Results of structural model estimates for the independent variable from the second group: assessment of employment conditions and work atmosphere (with the two subfactors MOTIVATIONAL COND and SOCIAL COND).

Latent	>	Assessment	B	s.e.	Z	DPU	GPU	β	R ²
MOTIVATIONAL COND	->	ECON9	0.80	0.02	34.86***	0.76	0.85	0.80	0.64
MOTIVATIONAL COND	->	ECON8	0.69	0.03	26.40***	0.64	0.74	0.69	0.48
MOTIVATIONAL COND	->	ECON12	0.76	0.03	28.83***	0.71	0.81	0.76	0.58
MOTIVATIONAL COND	->	ECON11	0.75	0.03	29.08***	0.70	0.80	0.75	0.56
MOTIVATIONAL COND	->	ECON7	0.74	0.03	27.72***	0.69	0.79	0.74	0.54
MOTIVATIONAL COND	->	ECON10	0.77	0.03	30.66***	0.72	0.82	0.77	0.60
MOTIVATIONAL COND	->	ECON6	0.75	0.03	28.31***	0.69	0.80	0.75	0.56
MOTIVATIONAL COND	->	ECON3	0.56	0.03	17.85***	0.50	0.62	0.56	0.32
SOCIAL COND	->	ECON2	0.70	0.04	19.64***	0.63	0.77	0.70	0.49
SOCIAL COND	->	ECON1	0.77	0.03	23.55***	0.70	0.83	0.77	0.59
SOCIAL COND	->	ECON5	0.55	0.04	13.85***	0.47	0.62	0.55	0.30

Note: > = Direction of effect of latent variable on assessment; B = Non-standardised factor loading; s.e. = Standard estimation error; Z = Statistic Z; DPU and GPU = 95% confidence intervals (appropriately lower and higher); β = Standardised factor loading; $\chi^2(43) = 446.47$; $p < 0.001$; CFI = 0.93; TLI = 0.91; NFI = 0.92; IFI = 0.93; RMSEA = 0.09; 90%PU[0.09–0.10]; PCLOSE = 0.000; SRMR = 0.05; GFI = 0.93; AGFI = 0.89. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: own elaboration.

Table 7. Results of structural model estimates for the independent variable from the third group: assessment of own professional qualifications (with one factor QUALIFICATIONS).

Latent	>	Assessment	B	s.e.	Z	DPU	GPU	β	R ²
QUALIFICATIONS	->	PQUA2	0.75	0.03	24.71***	0.69	0.81	0.75	0.57
QUALIFICATIONS	->	PQUA3	0.71	0.03	24.17***	0.65	0.76	0.71	0.50
QUALIFICATIONS	->	PQUA1	0.70	0.03	22.34***	0.64	0.77	0.70	0.50
QUALIFICATIONS	->	PQUA4	0.67	0.03	21.37***	0.61	0.73	0.67	0.45
QUALIFICATIONS	->	PQUA5	0.53	0.03	15.36***	0.46	0.60	0.53	0.28

Note: > = Direction of effect of latent variable on assessment; B = Non-standardised factor loading; s.e. = Standard estimation error; Z = Statistic Z; DPU and GPU = 95% confidence intervals (appropriately lower and higher); β = Standardised factor loading; $\chi^2(5) = 38.63$; $p < 0.001$; CFI = 0.98; TLI = 0.96; NFI = 0.98; IFI = 0.98; RMSEA = 0.08; 90%PU[0.06–0.10]; PCLOSE = 0.016; SRMR = 0.03; GFI = 0.99; AGFI = 0.96. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: own elaboration.

Table 8. Results of structural model estimates for the independent variable from the fourth group: assessment of characteristics of the employer (with one factor EMP CHAR).

Latent	>	Assessment	<i>B</i>	s.e.	<i>Z</i>	DPU	GPU	β	R^2
EMP CHAR	->	CEMP1	0.69	0.03	25.11***	0.63	0.74	0.69	0.47
EMP CHAR	->	CEMP2	0.83	0.02	34.27***	0.79	0.88	0.83	0.69
EMP CHAR	->	CEMP3	0.83	0.02	34.95***	0.78	0.87	0.83	0.69
EMP CHAR	->	CEMP4	0.79	0.03	29.05***	0.74	0.84	0.79	0.62
EMP CHAR	->	CEMP5	0.74	0.03	26.40***	0.68	0.79	0.74	0.54
EMP CHAR	->	CEMP6	0.77	0.03	29.39***	0.72	0.82	0.77	0.59

Note: > = Direction of effect of latent variable on assessment; *B* = Non-standardised factor loading; s.e. = Standard estimation error; *Z* = Statistic *Z*; DPU and GPU = 95% confidence intervals (appropriately lower and higher); β = Standardised factor loading; $\chi^2(9) = 94.28$; $p < 0.001$; *CFI* = 0.98; *TLI* = 0.96; *NFI* = 0.97; *IFI* = 0.98; *RMSEA* = 0.09; 90%PUJ[0.08–0.11]; *PCLOSE* = 0.000; *SRMR* = 0.03; *GFI* = 0.97; *AGFI* = 0.93. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Source: own elaboration.

- QUALIFICATION (latent variable),

Confounding variables:

- Character of work (reference category: intellectual work),
- Reward (reference category: difficult to define),
- Position (reference category: other),
- Work experience (reference category: less than 1 year),
- Form of ownership (reference category: public),
- Number of employees (reference category: up to 10).

In order to assess robustness of regression estimates *B* for main variables (MOTIOTIONAL COND, SOCIAL COND, EMP CHAR, QUALIFICATION), a comparison of two tested models was done: with all variables (model 1), and only with the main variables (model 2). Such procedure was conducted for all three categories of abuse (COMPULSION, ESCAPE, and RECREATION). Results are presented graphically in Figures 2–4. Putting both tested models together enables comparison similarity of regression estimates only for the main variables with regression estimates for the same variables but nested with the confounding variables.

6. Results

6.1. Estimate of the predictive model for the COMPULSION abuse category

In order to estimate the effect of the previously defined work-related factors on abuse in the COMPULSION category, multivariate linear regression analysis was conducted. The obtained model proved to be statistically significant, $F(24, 1042) = 2.55$; $p < 0.001$. It explains around 6% (3% after correction) of the variability of the tested variable ($R^2 = 0.06$, $\text{adj.}R^2 = 0.03$). The results of the model estimation are presented in Figure 2.

In the model, four predictors were shown to be statistically significant: MOTIVATIONAL COND, SOCIAL COND, Work experience 5–9 years and Form of

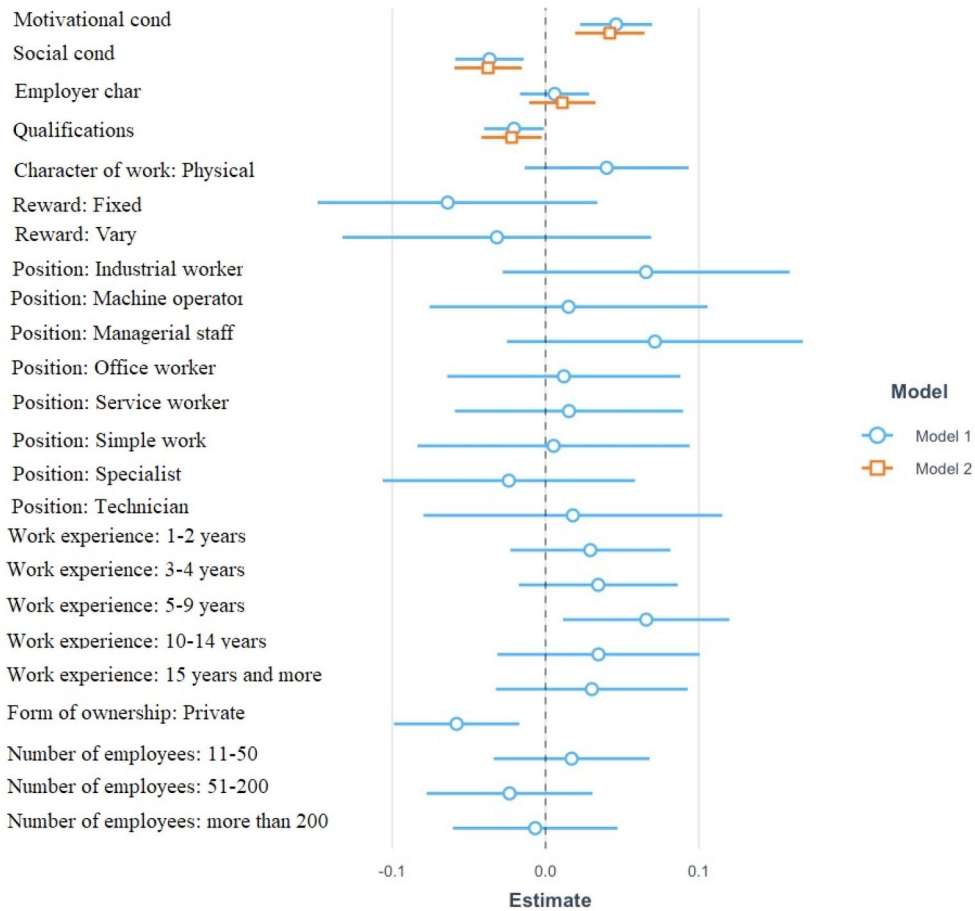


Figure 2. Results of the predictive model estimates for the abuse category COMPULSION (model 1: all variables, model 2: only the main variables). *Note:* The error whisker bars present 95% of the confidence interval for estimate B. Lines that cross one another represent the lack of differences between the predictors in the effect on the level of Compulsion. However, lines that do not cross one another represent important differences in the effect on the level of the Compulsion variable. Overlapped orange and blue whiskers means that there were no differences between estimates in two different models (model with [blue] and without [orange] confounding variables). *Source:* own elaboration.

ownership Private. In addition, one factor turned out to be on the borderline of statistical significance: Qualification.

An increase in results for the variable MOTIVATIONAL COND was linked to an increase in results for COMPULSION. This means that a better assessment of motivational working conditions increases the degree of abuse in this category. In turn, an increase in results for the variables SOCIAL COND and QUALIFICATION had the opposite effect, i.e., it was linked to a decrease in the results for COMPULSION. This means that a better assessment of social aspects of working conditions as well as of one’s own professional qualifications reduces the degree of abuse.

An increase in results for the variable Work Experience 5–9 years was linked to an increase in results for COMPULSION, while an increase in results for the variable

Form of ownership Private was linked to a drop in the results for COMPULSION. This means that employees who have worked for a given employer for a period of between 5 to 9 years more often declare a propensity to abuse sick leave than employees who have worked for under 1 year. As far as employees employed in private enterprises are concerned, they less frequently declare the abuse of sick leave than employees in the civil service.

In the remaining cases, the effect of the variables was shown not to be statistically significant.

6.2. Estimate of the predictive model for the ESCAPE abuse category

Similarly to the previous category, multivariate linear regression analysis was conducted. The obtained model was shown to be statistically significant, $F(24, 1042) = 2.54$; $p < 0.001$. It explains around 6% (3% after correction) of the variability of the tested variable ($R^2 = 0.06$, $\text{adj.}R^2 = 0.03$). The results of the model estimation are presented in Figure 3.

In the model, six predictors were found to be statistically significant: MOTIVATIONAL COND, SOCIAL COND, Reward Fixed, Position Industrial worker, Work Experience 1–2 years and Work experience 5–9 years. In addition, one factor turned out to be on the borderline of statistical significance: Form of ownership Private.

Similarly to the previous category, an increase in the value MOTIVATIONAL COND was linked to an increase in the results for ESCAPE, and an increase in the value SOCIAL COND had the opposite effect, i.e., it was linked to a decrease. This means that a higher assessment of motivational working conditions increases the degree of abuse in this category, while a higher assessment of the social aspects of working conditions reduces the amount of abuse.

An increase in the values of the variables Reward Fixed and Form of ownership Private was linked to a drop in the value for ESCAPE, which means that people who receive stable remuneration and those employed in private firms less frequently declare abuse than people with an undefined form of remuneration and civil servants.

Increases in the values of the variables Position Industrial worker, Work Experience 1–2 years and Work experience 5–9 years are linked to a rise in ESCAPE, which means that employees who have worked for a given employer for 1–2 years and 5–9 years more frequently declare abuse than people who have worked for up to 1 year, while industrial workers more often declare abuse than employees of undetermined sectors.

In the remaining cases, the effect of the variables was shown not to be statistically significant.

6.3. Estimate of the predictive model for the RECREATION abuse category

Similarly to the previous cases, multivariate linear regression analysis was conducted. The obtained model was shown to be statistically significant, $F(24, 1042) = 1.40$; $p > 0.05$. It explains around 3% (1% after correction) of the variability of the tested

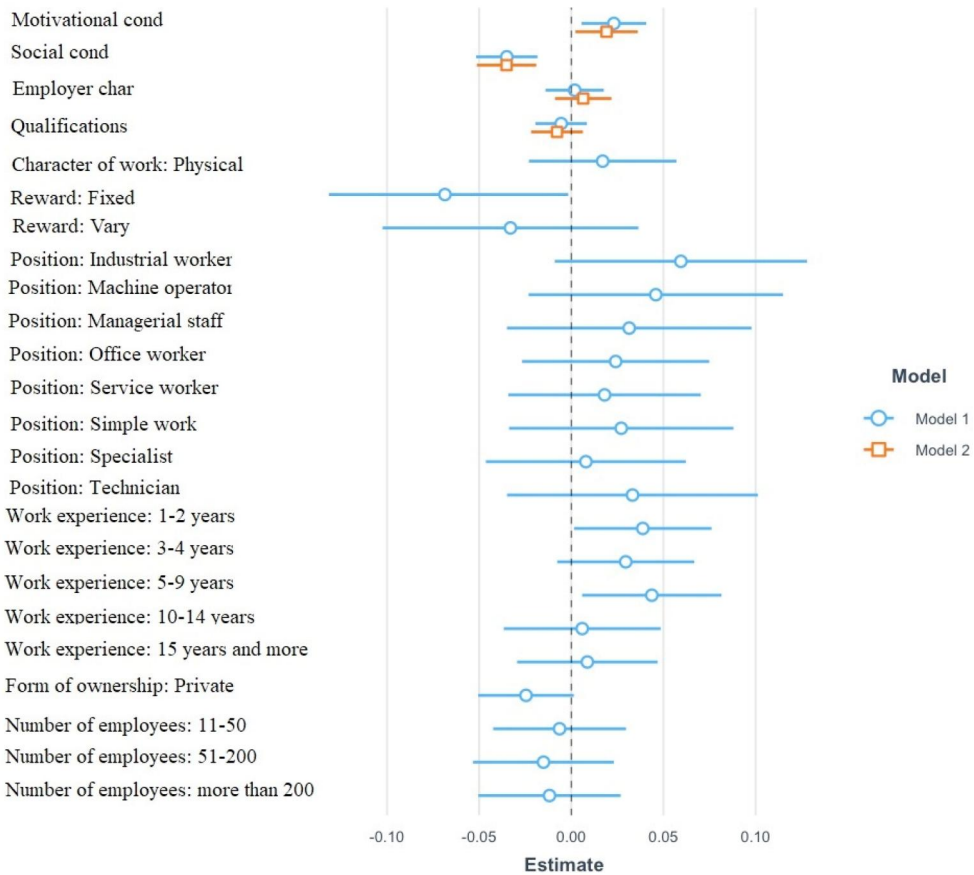


Figure 3. Results of the predictive model estimates for the abuse category ESCAPE (model 1: all variables, model 2: only the main variables). *Note:* The error whisker bars present 95% of the confidence interval for estimate B. Lines that cross one another represent the lack of differences between the predictors in the effect on the level of Escape. However, lines that do not cross one another represent important differences in the effect on the level of the Escape variable. Overlapped orange and blue whiskers mean that there were no differences between estimates in two different models (model with [blue] and without [orange] confounding variables). *Source:* own elaboration.

variable ($R^2 = 0.03$, $adj.R^2 = 0.01$). The results of the model estimation are presented in [Figure 4](#).

In the model, only one predictor was found to be statistically significant: SOCIAL COND. An increase in the value of this factor was linked to a drop in the value for RECREATION, which means that a higher assessment of the social aspects of working conditions decreases the declared propensity to abuse sick leave.

6.4. Summary of estimation results for all three models

The study confirms that certain work-related factors influence the abuse of sickness absence. [Table 9](#) summarises the results, including the direction of the effect of certain predictors on each category of abuse.

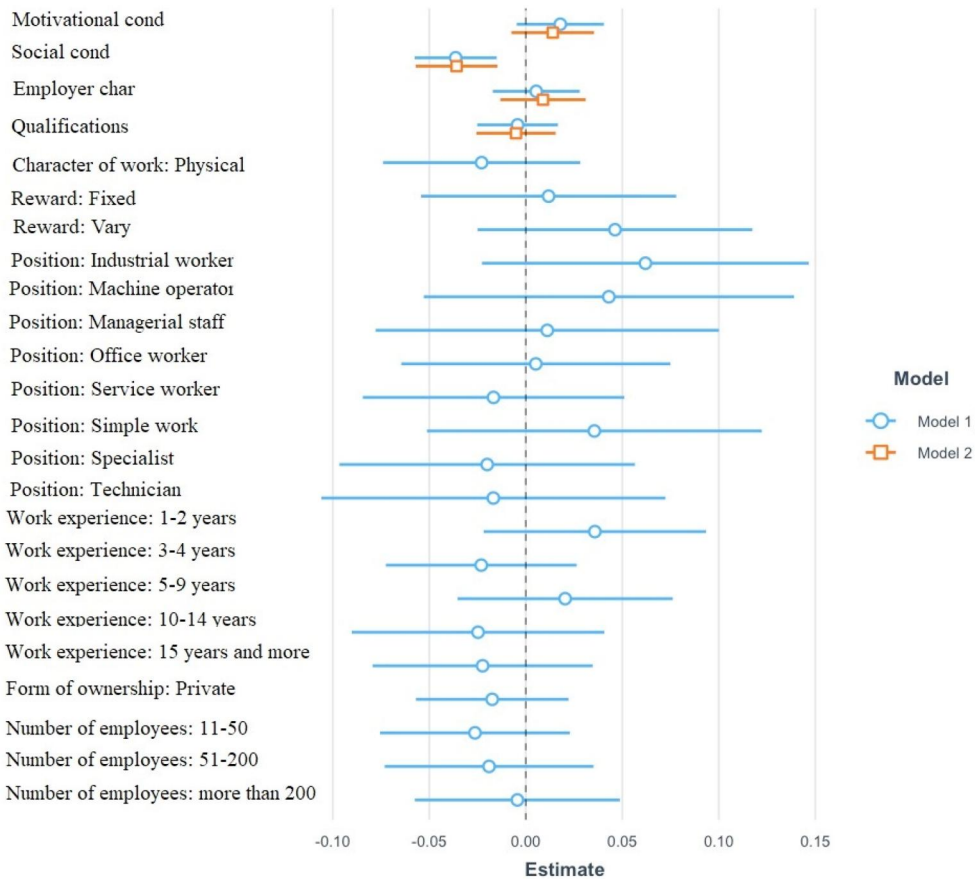


Figure 4. Results of the predictive model estimates for the abuse category RECREATION (model 1: all variables, model 2: only the main variables). *Note:* The error whisker bars present 95% of the confidence interval for estimate B. Lines that cross one another represent the lack of differences between the predictors in the effect on the level of Recreation. However, lines that do not cross one another represent important differences in the effect on the level of the Recreation variable. Overlapped orange and blue whiskers mean that there were no differences between estimates in two different models (model with [blue] and without [orange] confounding variables). *Source:* own elaboration.

The study analysed the impact of ten factors: (1) motivational working conditions, (2) social working conditions, (3) characteristic of employer, (4) level of professional qualifications, (5) character of work, (6) remuneration method, (7) position held, (8) work experience, (9) form of ownership, (10) company size (number of employees),

Motivational working conditions have a positive effect on all categories of sickness absence abuse. This impact is partially statistically significant (in one of the three categories). It means that an increase in job satisfaction, commitment and career opportunities leads to an increase in the propensity to abuse sickness absence. Such a result strongly contradicts previous theoretical findings (Steers & Rhodes, 1978) and empirical evidence (Böckerman & Ilmakunnas, 2008; Luz & Green, 1997). It means that the relationship between work motivation and unethical organisational behaviour is

Table 9. Direction of effect of work-related factors on each category of sickness absence abuse.

Predictor	Sickness absence abuse category		
	COMPULSION	ESCAPE	RECREATION
Motivational cond	↑*	↑	↑
Social cond	↓*	↓*	↓*
Employer char	↑	-	↓
Qualifications	↓*	↓	↓
Character of work Physical work	↑	↓	↓
Reward Fixed	↓	↓*	↑
Reward Vary	↓	↓	↑
Position Industrial worker	↑	↑	↑
Position Machine operator	↑	↑	↑
Position Managerial staff	↑	↑	↑
Position Office worker	↑	↑	↑
Position Service worker	↑	↑	↓
Position Simple work	↑	↑	↑
Position Specialist	↓	↑	↓
Position Technician	↑	↑	↓
Work Experience 1 2 years	↑	↑*	↑
Work Experience 3 4 years	↑	↑	↓
Work Experience 5 9 years	↑*	↑*	↓
Work Experience 10 14 years	↑	↑	↑
Work Experience 15 years and more	↑	↑	↓
Form of ownership: Private	↓*	↓*	↓
Number of employees 11–50	↑	↓	↓
Number of employees 51–250	↓	↓	↓
Number of employees More than 250	↓	↓	-

Description: ↑ an increase in the factor value represents an increase in abuse in a given category. ↓ an increase in the factor value represents a decrease in abuse in a given category. - relation close to zero for the level of abuse in a given category. *Statistically significant effect. Source: own elaboration.

complex and ambiguous. An increase in motivation does not lead to a reduction in abuse, as is commonly believed. It is difficult to provide a clear explanation for this phenomenon. Presumably it is an effect of the specific cultural background in Poland, where the abuse of social benefits (such as sickness absence) is perceived as an action against the welfare state rather than the employer. It can also be a manifestation of hypocrisy, consisting in the belief that a high level of work motivation can be compensated (if necessary) by additional absence. Time off work may be perceived as a form of additional reward for commitment and dedication to the company. Further in-depth research is certainly needed to unravel this issue.

Social working conditions have the opposite effect to motivational ones. An increase in the quality of interpersonal relationships (both with colleagues and superiors) reduces the propensity to abuse. This effect is statistically significant in all three cases. It is consistent with previous findings that greater group cohesion reduces shirking (Miraglia & Johns, 2021).

The assessment of employer characteristics has a positive effect on sickness absence misuse. The more positive the employees' opinion of the organisation they work for, the greater the tendency to engage in unethical absenteeism in the COMPULSION and RECREATION categories. Although these effects are not statistically significant, they are contrary to intuitive expectations and the findings of previous research (Bekker et al., 2009; Kangas et al., 2017). A positive evaluation of characteristics such as concern for employee-related issues, social responsibility, management style and organisational culture should lead to a restriction of unethical practices. This paradox,

as in the case of motivational working conditions, is difficult to explain and requires further in-depth research.

Self-assessed qualifications have a negative effect on all categories of sickness absence abuse. This effect is partially statistically significant (in one of the three categories). It means that the better employees feel about their knowledge and skills, the less likely they are (at least as far as reporting is concerned) to engage in unethical behaviour with regard to absenteeism. It can be concluded that people who are better educated and more familiar with their professional duties are more aware of the harmful effects of excessive absenteeism. However, it cannot be excluded that to some extent this is the effect of a psychological phenomenon (coherence bias), i.e., people who have a positive view of their own qualifications will also have a positive view of their own attitude to sickness absence.

The character of work has an inconsistent effect on excessive absenteeism. Blue-collar workers are more likely to commit abuses from the COMPULSION and ESCAPE categories, while white-collar workers are more likely to commit abuses from the RECREATION category. However, none of these effects are statistically significant.

The remuneration method has a mixed effect on sickness absence abuse. Employees paid on a fixed and variable basis are less prone to abuse in the COMPULSION and ESCAPE categories, while employees who find it difficult to determine the method of payment are more prone to abuse in the RECREATION category. This effect is only partly statistically significant.

In terms of the position held, it is difficult to see any regularity in the abuse of sickness absence. Moreover, the effect was not shown to be statistically significant.

Working experience has mixed effects on abusing sick leave. Employees with a short work experience (up to 1 year) are less prone to abuse in the COMPULSION and ESCAPE categories than those with a longer work experience. In the category RECREATION, this effect is diverse and it is difficult to indicate a logical relationship. In most cases these effects are not statistically significant.

Public sector employees are much more likely to abuse sick leave than private sector employees. This is true for all categories of abuse. This effect is partly statistically significant (in two of the three categories). Such a result is consistent with previous research (J. R. Hansen et al., 2019; Løkke & Krøtel, 2020) and confirms that excessive absenteeism is the domain of public administration. Moreover, it can now be clearly confirmed that this high level of absenteeism is not due to poorer health, but to unethical behaviour. It can be assumed that public organisations are less successful in attendance management - managers are not properly trained and management tools are not used effectively. It is also possible that unethical behaviour in terms of absenteeism is a reaction by employees to poor employment and working conditions.

The final factor is the size of the organisation (number of employees). In general (with one exception), employees in larger organisations are less likely to abuse sickness absence than those in the smallest organisations (up to ten employees). This effect is not statistically significant. It suggests, however, that the tendency towards unethical behaviour is not influenced by the size of the organisation, but rather by its structure, the management style, the organisational culture and, above all, the quality

of relations between employees (cohesion of teams within the organisation). Moreover, large companies are more likely to implement formalised attendance management programmes, which (at least to some degree) solve the problem of sickness absence abuse.

7. Discussion and conclusions

According to R. Gardiner (1992, p. 290) *absenteeism is probably the most common and often the most frustrating problem with which a supervisor deals*. It causes a number of negative consequences, both financial (payment of benefits) and non-financial (work disorganisation) (Grinza & Rycx, 2020).

The negative consequences of excessive absenteeism have led to increased interest in the problem. Identifying its determinants is therefore an increasingly important area of research. Employers use this theoretical knowledge to develop practical solutions that increase their effectiveness in limiting the abuse of sick leave.

Absenteeism is a complex issue that depends on a number of different individual and contextual factors that relate to the personal characteristics (micro factors), the work environment (meso factors) and the wider environment (macro factors). The ability of employers to influence these factors is, of course, limited. They can only modify the working environment and, to some extent, the qualifications of the employees (micro factors). These work-related factors are the focus of this article.

The results of the survey suggest that the abuse of sick leave is quite common practice in Poland. Almost one in four respondents reported abusing sick leave in situations of higher necessity, e.g., to attend an important family celebration. Almost one in five respondents reported abusing sickness absence to take care of a loved one or animal, and also to deal with important administrative (non-work) matters. Each of these circumstances is of course important and urgent, but they are not excuses for using sick leave, which is intended for treatment and rehabilitation. Sickness absence in such cases is unethical behaviour. It constitutes welfare abuse.

The statistical analysis concerned the impact of ten work-related factors on three specific categories of abuse ('compulsion', 'escape', and 'recreation'). The potential predictors covered different aspects of the work situation: social and motivational conditions, characteristics of the employer (including number of employees and form of ownership), professional qualifications, methods of remuneration, professional experience, position held and type of work performed. The study showed the influence of many of these on sickness absence abuse, but the most consistent and statistically significant results were obtained in four cases: (1) motivational working conditions, (2) social working conditions, (3) qualifications and (4) form of ownership.

The obtained conclusions provide many practical implications. First and foremost, companies that want to limit excessive absenteeism should focus on the "interpersonal" issues. The quality of the relationships between employees and between employees and their superiors is crucial in combating unethical behaviour. Therefore, human resources policies should expand the range of activities aimed at integration, cohesion, trust and mutual responsibility.

The second key issue is qualifications. Employees are less likely to abuse sickness absence if they consider themselves as qualified and highly skilled. It is therefore worth investing in people's development and building their self-esteem so that they believe in their own abilities.

Another conclusion is that abuse of sickness absence is widespread in public administration. Policy-makers should try to resolve this difficult situation. It will not be easy because it is a structural and deep-rooted problem. It results from low employment standards, underpaid working conditions and (often) inappropriate management behaviour. Such a situation has persisted over a long period of time. It has led to the development of a damaging 'culture of absence', where social norms provide widespread consent to abuse. It cannot be improved by a single measure, but requires a radical and multidimensional reorganisation of the way the public sphere functions.

Another conclusion is that abuse of sickness absence is widespread in public administration. Policy-makers should try to resolve this difficult situation. It will not be easy because it is a structural and deep-rooted problem. It results from low employment standards, underpaid working conditions, and (often) inappropriate management behaviour. Such a situation has persisted over a long period and has led to the development of a harmful 'culture of absence', where social norms provide widespread consent to abuse. It definitely cannot be improved by a single measure but requires a radical and multidimensional reorganisation of the way the public sphere functions.

Finally, the case of work motivation and its impact on the tendency to abuse sickness absence is the most intriguing results of this study. It turns out that highly motivated employees commit fraud more often than those who are less motivated. This contradicts the common belief that absenteeism can be reduced by increasing job satisfaction. It turns out that high satisfaction not only does not reduce abuse, but even increases it. Such finding is contradictory. Explanation of this paradox requires additional research. It should be clarified whether such effect applies only to Poland and results from some specific cultural or institutional conditions, or rather it is a general phenomenon.

As for the research limitations, the source material used in the statistical analysis was the results of the survey. Therefore, the collected data do not reflect actual behaviour, but only the declarations of the respondents. It should be noted that respondents do not present facts as they really are, but as they perceive them and wish to present them. As the subject of research was morally reprehensible, it can be assumed that respondents were reluctant to reveal their true behaviour. Therefore, it seems necessary to develop this type of research in the future, but using other methods (e.g., experiments) that allow for a better recognition of the respondents' real inclinations.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Łukasz Jurek  <http://orcid.org/0000-0002-0078-471X>

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Appendix A

Table A1. Abuse of sick leave absence and the character of work and place of employment (in percent).

Characteristic	Description	Circumstance										
		CIR1	CIR2	CIR3	CIR4	CIR5	CIR6	CIR7	CIR8	CIR9	CIR10	CIR11
Character of work	Blue-collar position	9.79	18.13	11.67	9.17	11.04	11.25	25.00	17.29	12.29	20.83	20.63
	White-collar position	10.56	17.38	9.71	7.84	7.67	11.07	21.12	11.75	7.50	16.70	18.40
Form of ownership	Public entity	11.84	16.45	12.50	9.21	7.89	11.18	25.33	16.78	11.18	19.41	24.01
	Private entity	9.57	18.22	9.83	8.13	9.70	11.14	21.89	13.24	9.04	18.22	17.56
Number of employees	Micro (up to 10)	11.39	19.31	9.90	8.91	10.40	12.38	25.25	15.84	12.87	18.32	17.82
	Small (11–50)	9.58	16.29	12.46	9.90	9.90	10.86	25.56	15.97	10.54	21.73	22.36
	Medium-sized (51–250)	11.55	15.88	10.47	9.39	7.94	12.64	22.02	11.91	7.58	15.52	18.41
Work experience	Large (above 250)	8.73	20.00	9.09	5.45	8.73	9.09	18.91	13.45	8.36	18.18	18.18
	Less than 1 year	7.48	20.56	7.48	6.54	8.41	8.41	22.90	8.88	8.88	17.76	15.42
	1–2 years	14.43	20.62	14.95	9.79	9.79	14.95	22.68	13.40	9.79	19.07	21.65
	3–4 years	10.05	12.44	10.05	10.53	11.48	11.96	21.05	15.79	10.05	18.18	21.53
	5–9 years	11.27	20.66	11.27	8.45	10.80	13.62	26.29	16.90	10.80	20.19	21.13
	10–14 years	9.90	12.87	10.89	8.91	6.93	3.96	20.79	19.80	9.90	17.82	13.86
Reward	15 years or more	7.35	16.18	8.82	5.88	5.15	10.29	22.06	13.24	8.09	17.65	20.59
	Fixed remuneration	10.35	15.91	9.31	6.73	7.76	10.09	22.12	13.32	8.28	17.08	18.11
Position	Variable remuneration	10.20	23.67	13.47	13.47	13.88	12.65	24.90	16.33	12.65	22.04	22.45
	Difficult to say	8.16	16.33	16.33	10.20	8.16	20.41	24.49	18.37	16.33	24.49	24.49
	Managerial staff, higher civil servant	15.79	14.47	11.84	10.53	9.21	11.84	26.32	18.42	9.21	22.37	28.95
	Office worker	10.13	18.63	10.78	8.82	9.48	8.82	21.24	12.09	7.19	16.01	16.99
	Service worker, salesperson	7.56	15.12	7.56	10.47	9.30	14.53	21.51	16.28	11.05	20.93	21.51
	Specialist	9.65	14.04	10.53	6.14	3.51	10.53	20.18	7.89	7.89	14.91	17.54
	Technician	9.52	14.29	9.52	11.11	9.52	12.70	23.81	14.29	12.70	15.87	23.81
	Machine/device operator	12.50	18.75	13.75	7.50	10.00	16.25	21.25	15.00	6.25	17.50	18.75
	Industrial worker	12.79	23.26	12.79	8.14	15.12	11.63	34.88	25.58	17.44	25.58	16.28
	Worker carrying out simple work	8.54	23.17	13.41	6.10	8.54	9.76	21.95	9.76	10.98	18.29	20.73
Other	9.09	18.18	7.95	5.68	9.09	7.95	21.59	14.77	10.23	20.45	17.05	

Source: own elaboration.

Table A2. Abuse of sick leave absence and assessments of employment conditions and work atmosphere (in percent).

Category	Assessment	Circumstance										
		CIR1	CIR2	CIR3	CIR4	CIR5	CIR6	CIR7	CIR8	CIR9	CIR10	CIR11
ECON1 quality of relations with superiors	Very bad	12.50	34.38	21.88	21.88	15.63	3.13	31.25	28.13	18.75	25.00	34.38
	Quite bad	13.04	15.94	10.14	14.49	15.94	17.39	14.49	8.70	8.70	21.74	14.49
	Average	10.07	18.35	14.03	11.15	10.07	11.87	21.58	15.47	9.71	19.42	17.99
	Quite good	11.74	19.25	9.39	7.04	7.98	11.50	25.12	14.08	10.09	19.48	23.47
ECON2 quality of relations with co-workers	Very good	6.87	12.98	7.63	4.58	7.63	9.16	21.76	12.98	8.02	14.50	13.74
	Very bad	0.00	33.33	25.00	16.67	8.33	8.33	0.00	25.00	16.67	8.33	8.33
	Quite bad	19.30	24.56	14.04	21.05	14.04	14.04	22.81	22.81	14.04	33.33	31.58
	Average	15.22	20.11	19.02	13.59	16.85	14.67	22.83	18.48	13.59	25.00	17.93
ECON3 satisfaction with remuneration	Quite good	8.53	16.63	7.89	5.97	7.25	9.17	23.45	11.94	8.96	17.48	19.62
	Very good	8.70	16.23	8.70	6.67	6.96	11.59	22.90	13.33	7.54	14.49	18.26
	Very bad	12.77	21.28	10.64	12.77	8.51	10.64	17.02	8.51	6.38	12.77	19.15
	Average	10.32	19.27	10.32	8.72	9.40	11.93	21.79	13.53	10.78	18.58	21.33
ECON4 satisfaction with non-material working conditions	Quite bad	6.67	12.00	12.00	3.33	7.33	11.33	16.67	12.00	8.00	16.00	18.00
	Very good	11.48	18.13	9.97	8.76	9.37	10.27	25.08	14.80	8.46	19.94	16.31
	Very bad	9.71	16.50	11.65	11.65	10.68	10.68	32.04	21.36	12.62	20.39	23.30
	Average	17.65	5.88	7.84	15.69	5.88	11.76	23.53	13.73	5.88	17.65	17.65
ECON5 stability of employment	Quite bad	17.42	18.18	13.64	8.33	12.88	9.09	17.42	9.85	11.36	15.15	17.42
	Very good	22.35	20.95	11.73	8.10	10.06	13.97	25.14	15.36	9.22	20.11	22.35
	Quite good	17.97	16.93	9.64	8.59	8.59	9.90	23.96	16.41	10.42	20.05	17.97
	Average	18.31	15.49	8.45	6.34	6.34	9.15	19.01	9.86	8.45	14.08	18.31
ECON6 satisfaction with position held	Very bad	8.70	21.74	8.70	8.70	26.09	13.04	17.39	30.43	26.09	26.09	34.78
	Quite bad	14.93	19.40	14.93	16.42	17.91	10.45	17.91	13.43	13.43	19.40	20.90
	Average	13.64	19.32	10.23	11.36	8.33	15.53	23.11	15.53	10.23	22.35	19.32
	Quite good	10.07	17.10	11.71	7.73	8.67	10.77	25.06	15.22	9.84	20.37	19.91
ECON7 prestige of profession/work	Very good	6.29	16.43	8.39	4.90	7.34	7.69	20.98	10.49	6.64	11.54	17.13
	Very bad	16.67	25.00	16.67	16.67	20.83	12.50	20.83	33.33	20.83	25.00	29.17
	Quite bad	12.75	25.49	10.78	10.78	11.76	13.73	21.57	13.73	12.75	22.55	16.67
	Average	9.60	16.56	8.94	9.27	9.60	10.60	20.53	14.90	10.26	20.86	21.19
ECON7 prestige of profession/work	Quite good	10.51	16.82	11.21	7.24	8.88	11.68	25.93	14.72	9.58	17.76	19.39
	Very good	8.53	16.59	10.90	7.58	6.64	9.48	20.85	10.43	6.16	14.22	17.06
	Very bad	7.14	14.29	9.52	7.14	16.67	7.14	14.29	7.14	9.52	4.76	9.52
	Average	8.63	19.42	10.07	8.63	12.23	10.79	18.71	12.23	10.07	19.42	20.86
ECON7 prestige of profession/work	Quite bad	11.99	18.11	9.69	9.44	8.42	10.20	23.21	13.27	8.93	18.11	20.66
	Very good	9.30	18.60	11.34	7.85	9.88	13.08	24.42	15.99	10.76	20.06	19.19
	Quite good	10.00	14.00	12.00	7.33	4.67	10.67	24.67	16.67	8.67	19.33	18.00
	Average	6.82	11.36	8.33	3.79	10.61	6.06	12.12	5.30	9.09	6.06	12.88

(continued)

Table A2. Continued.

Category	Assessment	Circumstance										
		CIR1	CIR2	CIR3	CIR4	CIR5	CIR6	CIR7	CIR8	CIR9	CIR10	CIR11
ECON8 opportunities for promotion	Quite bad	9.22	17.48	10.19	5.83	4.85	9.22	19.42	12.62	8.25	17.48	21.36
	Average	11.21	18.88	10.91	10.03	9.73	12.09	26.55	15.04	10.32	24.19	20.65
	Quite good	11.39	20.64	10.32	9.25	11.39	14.23	25.62	17.44	9.25	17.79	19.93
ECON9 opportunity to fulfil one's passion and professional interests	Very good	10.09	14.68	13.76	11.93	8.26	10.09	23.85	17.43	11.93	20.18	18.35
	Very bad	5.41	13.51	5.41	4.50	7.21	5.41	13.51	7.21	8.11	11.71	14.41
	Quite bad	12.50	18.45	11.31	5.36	13.10	8.33	22.62	13.69	9.52	17.26	23.21
ECON10 motivation to work and level of engagement in delegated tasks	Average	9.23	21.23	12.00	10.46	8.31	12.92	22.77	13.85	10.15	17.85	19.08
	Quite good	12.20	15.59	11.19	8.81	9.83	11.86	24.07	18.31	11.19	24.75	21.02
	Very good	9.52	16.67	9.52	9.52	7.14	13.10	27.38	13.10	7.14	14.88	16.67
ECON11 a sense of agency and an effect on events within the firm	Very bad	4.65	13.95	16.28	4.65	13.95	11.63	11.63	11.63	16.28	13.95	16.28
	Quite bad	14.29	22.56	13.53	13.53	12.78	14.29	18.80	12.78	13.53	16.54	24.06
	Average	10.55	19.27	9.45	8.36	9.45	8.73	23.27	12.73	6.55	19.27	18.55
ECON12 accordance between work and personal interests	Quite good	10.43	16.35	9.48	8.29	8.29	11.85	24.17	16.82	9.95	18.25	19.91
	Very good	7.73	15.98	11.34	6.19	7.22	10.82	24.74	12.37	9.28	20.62	17.01
	Very bad	3.95	14.47	3.95	3.95	5.26	9.21	13.16	5.26	5.26	9.21	11.84
ECON12 accordance between work and personal interests	Quite bad	12.78	17.78	14.44	8.33	10.56	9.44	21.11	13.89	12.78	16.11	20.56
	Average	11.30	20.00	10.43	8.70	11.01	12.17	26.67	14.49	9.57	20.87	23.77
	Quite good	9.75	17.61	8.81	9.12	8.18	11.95	22.01	16.98	8.81	20.13	16.98
ECON12 accordance between work and personal interests	Very good	8.78	14.19	13.51	8.78	7.43	10.14	22.97	12.84	10.14	17.57	16.89
	Very bad	9.09	15.58	5.19	2.60	9.09	7.79	16.88	6.49	7.79	12.99	18.18
	Quite bad	7.25	18.84	9.42	7.25	11.59	6.52	20.29	9.42	10.14	15.94	13.77
ECON12 accordance between work and personal interests	Average	13.27	20.06	13.92	10.03	8.41	12.30	21.68	15.86	7.77	18.45	19.42
	Quite good	9.14	17.70	8.85	9.14	10.62	13.86	26.84	18.58	13.27	22.71	23.60
	Very good	9.80	14.22	11.27	7.84	6.37	9.31	22.06	10.78	6.86	15.69	16.67

Source: own elaboration.

Table A3. Abuse of sick leave absence and assessment of own professional qualifications (in percent).

Category	Assessment	Circumstance										
		CIR1	CIR2	CIR3	CIR4	CIR5	CIR6	CIR7	CIR8	CIR9	CIR10	CIR11
PQUA1 professional potential	Very bad	10.34	24.14	6.90	27.59	13.79	3.45	17.24	31.03	17.24	24.14	27.59
	Quite bad	17.02	21.28	10.64	10.64	12.77	10.64	24.47	11.70	13.83	15.96	26.60
	Average	9.70	16.34	10.80	8.59	12.19	14.96	23.82	17.45	7.20	22.16	16.34
PQUA2 creativity and innovativeness	Quite good	9.32	17.05	11.59	7.27	6.36	9.09	23.86	11.59	10.45	17.73	19.32
	Very good	9.79	19.58	7.69	6.29	6.99	9.79	17.48	12.59	9.09	12.59	20.98
	Very bad	0.00	8.00	8.00	8.00	16.00	4.00	0.00	12.00	12.00	28.00	12.00
PQUA3 professional experience	Quite bad	12.68	19.72	12.68	14.08	15.49	11.27	19.72	23.94	11.27	19.72	18.31
	Average	10.39	16.02	9.20	8.61	9.79	10.98	21.36	11.57	10.68	15.73	21.66
	Quite good	11.23	18.50	11.23	8.37	8.15	11.45	25.55	15.86	9.25	20.04	18.94
PQUA4 interpersonal skills	Very good	7.78	19.44	11.11	6.11	7.22	11.67	23.33	11.67	7.78	18.33	17.78
	Very bad	14.29	7.14	14.29	14.29	14.29	14.29	28.57	14.29	14.29	28.57	21.43
	Quite bad	15.29	30.59	9.41	20.00	16.47	10.59	25.88	21.18	18.82	20.00	27.06
PQUA5 familiarity with new technologies	Average	11.07	18.82	10.33	7.75	9.96	10.33	22.51	14.76	8.49	22.51	18.45
	Quite good	8.80	14.81	9.95	7.87	7.87	10.88	22.45	12.96	9.03	15.51	19.68
	Very good	9.81	17.74	12.08	6.04	7.92	12.45	22.64	13.58	8.68	18.49	17.36
PQUA6 knowledge of foreign languages	Very bad	10.53	21.05	0.00	15.79	10.53	5.26	26.32	15.79	21.05	21.05	10.53
	Quite bad	17.86	20.24	14.29	10.71	11.90	19.05	25.00	20.24	7.14	17.86	21.43
	Average	10.74	19.94	9.20	8.90	10.43	10.74	22.09	14.72	12.58	19.94	21.78
PQUA5 familiarity with new technologies	Quite good	8.62	14.45	10.49	8.16	8.86	10.49	23.54	13.29	7.46	17.95	17.95
	Very good	9.57	19.62	12.44	6.70	6.70	10.53	21.53	12.92	9.57	18.66	18.66
	Very bad	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	12.50	0.00
PQUA6 knowledge of foreign languages	Quite bad	25.58	30.23	16.28	18.60	11.63	20.93	16.28	23.26	16.28	25.58	25.58
	Average	18.30	18.75	9.82	11.16	13.39	12.05	25.00	16.07	8.93	23.21	18.30
	Quite good	20.78	16.89	12.33	8.90	9.36	10.50	22.37	14.61	11.87	17.81	20.78
PQUA6 knowledge of foreign languages	Very good	18.08	16.95	8.47	5.08	6.21	10.45	23.45	11.58	6.78	15.82	18.08
	Very bad	5.32	14.89	11.70	2.13	4.26	7.45	18.09	12.77	7.45	17.02	18.09
	Quite bad	15.23	19.29	8.63	10.15	11.17	10.66	22.84	16.75	8.12	16.24	23.86
PQUA6 knowledge of foreign languages	Average	8.65	16.49	11.08	8.11	9.19	12.16	22.43	12.97	10.00	18.65	18.92
	Quite good	10.92	16.72	11.95	8.87	9.90	12.97	26.62	13.65	10.92	19.45	18.09
	Very good	8.85	23.89	7.96	10.62	7.96	7.08	18.58	16.81	9.73	21.24	17.70

Source: own elaboration.

Table A4. Abuse of sick leave absence and assessment of characteristics of the employer (in percent).

Category	Assessment	Circumstance										
		CIR1	CIR2	CIR3	CIR4	CIR5	CIR6	CIR7	CIR8	CIR9	CIR10	CIR11
CEMP1 company reputation	Very bad	0.00	10.00	15.00	15.00	20.00	5.00	15.00	20.00	15.00	15.00	10.00
	Quite bad	11.83	23.66	8.60	10.75	11.83	12.90	21.51	16.13	16.13	16.13	18.28
	Average	12.21	17.44	11.63	7.85	8.14	13.08	22.67	13.08	8.43	20.35	19.77
CEMP2 company management style	Quite good	8.80	17.36	10.19	8.33	9.49	11.11	21.99	12.96	8.80	17.13	18.29
	Very good	10.11	16.85	10.11	7.87	7.87	7.30	26.97	17.98	10.11	20.22	23.03
	Very bad	7.32	14.63	12.20	7.32	7.32	4.88	17.07	7.32	4.88	12.20	9.76
CEMP3 organisational culture	Quite bad	9.16	19.08	12.21	10.69	9.16	12.21	18.32	14.50	7.63	14.50	18.32
	Average	12.39	18.88	10.32	10.62	11.50	10.91	23.60	14.75	10.91	17.70	21.83
	Quite good	9.41	18.32	9.90	7.43	8.91	12.38	23.76	13.86	9.90	22.03	20.05
CEMP4 social responsibility and ethically appropriate activities	Very good	9.21	13.16	11.18	4.61	5.26	9.21	24.34	15.79	9.21	16.45	15.79
	Very bad	9.52	14.29	14.29	4.76	14.29	4.76	4.76	9.52	4.76	9.52	0.00
	Quite bad	16.52	22.61	13.04	12.17	9.57	14.78	25.22	12.17	12.17	19.13	20.87
CEMP5 modernity and dynamic development	Average	9.72	17.55	13.17	11.29	11.60	8.46	22.88	14.42	10.03	20.38	20.06
	Quite good	9.56	15.93	8.09	7.60	9.31	13.48	24.75	15.93	10.29	18.63	21.81
	Very good	8.82	19.12	9.80	3.92	4.41	9.31	19.61	12.25	6.86	16.18	14.71
CEMP6 engagement in and care for matters concerning employees	Very bad	5.26	15.79	5.26	0.00	5.26	0.00	15.79	0.00	15.79	0.00	10.53
	Quite bad	15.46	19.59	10.31	12.37	14.43	16.49	25.77	16.49	11.34	18.56	21.65
	Average	8.36	17.91	11.94	10.75	10.45	10.15	22.69	12.24	9.55	20.00	20.00
CEMP7 modernity and dynamic development	Quite good	10.82	17.18	10.59	6.82	8.71	12.94	23.06	16.71	10.12	18.82	19.06
	Very good	9.95	17.80	8.90	6.81	5.76	7.33	21.99	12.57	7.33	17.28	18.85
	Very bad	3.85	19.23	7.69	7.69	7.69	7.69	19.23	7.69	7.69	3.85	15.38
CEMP8 engagement in and care for matters concerning employees	Quite bad	16.38	18.97	8.62	12.07	6.90	9.48	22.41	10.34	12.07	15.52	17.24
	Average	8.90	18.40	10.98	9.50	10.39	9.79	23.15	15.73	8.31	21.36	19.58
	Quite good	8.96	15.50	11.14	7.51	9.44	12.83	22.28	14.53	10.17	19.61	20.10
CEMP9 engagement in and care for matters concerning employees	Very good	12.57	20.57	10.29	6.29	8.00	11.43	24.57	14.29	9.71	14.86	19.43
	Very bad	6.00	22.00	8.00	14.00	4.00	6.00	16.00	4.00	4.00	6.00	16.00
	Quite bad	14.17	11.81	7.87	6.30	10.24	7.87	20.47	9.45	9.45	17.32	18.11
CEMP10 engagement in and care for matters concerning employees	Average	9.45	19.21	12.20	8.84	11.28	12.20	24.39	16.77	11.59	21.95	23.17
	Quite good	11.08	17.15	9.50	8.44	9.23	12.40	23.75	16.89	8.71	18.73	19.53
	Very good	8.20	19.13	12.57	7.65	6.01	10.38	21.86	10.38	9.84	16.39	14.21

Source: own elaboration.