ABSENTEEISM FOR MEDICAL REASONS IN THE WORKPLACE: CASE OF A HANDLING AND TRANSPORT COMPANY IN CONAKRY

ABSTRACT

Context: Absences from work generate financial costs and reduce the productivity of the company. The objective was to study absences for medical reasons in the workplace.

Material and methods: this was a 2-year retrospective study of the files of workers absent for medical reasons. We had carried out a descriptive analysis of absences and an evaluation of the financial costs and the number of working days lost by the company.

Results: fifty-five percent (55%) of the workers had had at least one absence with an average absenteeism rate of 1.58%/year. The average number of days of absence per worker was 12.85 days and the average number of stoppages was 2.25. The main medical reasons for stoppages were ordinary pathologies 66.27% of stoppages and surgical pathologies i.e. 22.34%. Multiple stops were statistically significant with gender ($p=0.01$), age ($p=0.03$) and seniority ($p<0.001$).

Conclusion: ordinary infectious or non-infectious diseases and surgical pathologies were the main medical reasons for absenteeism in this company. Furthermore, gender, age and seniority were closely related to multiple stops.

Keywords : absenteeism , medical reason , handling and transport company , Conakry.

Introduction: Absenteeism refers to the fact of a worker not being physically present at the workstation assigned to them when they should be there[1]. Almost present in all sectors of activity, this phenomenon of multifactorial cause is influenced by demographic characteristics, working conditions and especially state of health [2].

Due to their repetition in the workplace, work or commuting accidents, ordinary infectious or non-infectious diseases and occupational diseases are the medical reasons leading to absenteeism.

In handling and transport companies, requirements in terms of cost, flexibility, quality and especially deadlines expose employees to constraints which influence mental as well as physical health and can thus lead to absenteeism[3] . Absenteeism has become a scourge in the workplace; absences are more numerous, longer and more varied and their consequences constitute a real concern for the employer and for society [4].

These absences generate significant financial costs for the employer who, in addition to directly bearing the cost of the loss of working days, must also suffer the loss of opportunity due to the absence of the employee at his or her workstation [5].

In developed countries, the cost of absences in the workplace is estimated at 16 billion dollars in Canada [6] in 2016 and 60 billion/year in France [7] in 2015.

The losses are more enormous in terms of the number of working days lost, a systematic review of the literature, reported that approximately 150 million working days are lost each year in 15 European countries for health reasons[8] .

In **Finland** in 2020, Mauramo E. et al. reported respectively 7% and 13% absences due to mental disorders and musculoskeletal disorders [2].

In Africa, very few studies have been published on the subject; in Ivory Coast 121.33 months of absence due to malaria in a company during 2010[9].

In **Guinea** , no specific studies have been found on this subject.

Thus, the extent of this phenomenon in companies, the lack of previous study on the subject in our country are among other reasons which motivated the choice of this theme whose general objective is to study absenteeism for medical reason in the workplace.

Material and methods

This was a retrospective study of a descriptive and analytical type lasting two years from June 1, 2018 to May 31, 2020 where we targeted the medical files of the company's workers and then studied the medical files of the workers. absent for medical reasons. The medical department of a handling and transport company at the autonomous port of Conakry served as a framework for carrying out the work. The company's main activities consist of ensuring conventional handling activities through the continuous loading and unloading of all types of goods (bags, bulk, rolling, heavy packages, containers, etc.), container berthing activities, storage of containers with a workforce of 541 employees. As support, we used workers' individual medical files, sick leave logs, and an investigation sheet pre-established for this purpose. Included were the files of workers absent for medical reasons certified by the company's medical service during the study period. We had excluded the files of workers absent on maternity leave. Our variables were quantitative and qualitative divided into three types of data including socio-professional (sex, age, residence, seniority in the company, work position), medical (medical history or field), relating to absenteeism (frequency of absence, period , duration, number of stops, medical cause of absence, cost of care).

Data recording and analysis were carried out using EPI INFO 7.2 software. Quantitative variables were described with mean and standard deviation. Qualitative variables were described with proportions. The chi-square test was used to compare proportions or to estimate the association between two qualitative variables. (If $p<0.05$ the statistical test is qualified as significant).

The complexity of certain data, particularly those linked to costs, constituted our main difficulty.

The data collected is kept confidential and anonymous; they were used only for scientific purposes.

Results

Of a total of 541 workers, 296 (55%) had at least one absence for medical reasons (**Fig 1)** . During this study, 667 stoppages were recorded for 3864 days of work lost over two years. The average number of stoppages per year in this company was 333.5 stoppages for an average loss of 1932 days per year. The average rate of absenteeism was 1.58% per year with a clear increase from 0.94% during the first year to 2.22% during the second year (**table I**). It appears from this study that the average number of stoppages in this company is 2.25 stoppages with extremes of 1 and 10 stoppages (**table II**) and that the total average number of days of absence for medical reasons per absent worker in this company is 12.85 days/2 years with extremes of 1 and 214 days, or approximately 6.42 days/year (**table III**).

During our study we noted a clear male predominance of 85%, the most represented age group was that over 40 years old, i.e. 55.41% with an average age of 42.61 years ± 8.6 years with extremes of 26 and 63 years. The majority of employees surveyed, i.e. 65.20%, had their residences very far away (municipality of Matoto – Ratoma, Dubréka and Coyah) from the workplace and the average seniority of workers in this company was 6.54 years ± 2.4 with extremes of 2 and 9 years. We note a high representativeness of operators (58.10%) (**Table IV**).

musculoskeletal disorders (29.72%), hypertension (23.64%) and hemorrhoidal disease (8.1%).

More than half of the pathologies which motivated the work stoppages were ordinary pathologies (infectious and not), i.e. 445 stoppages representing 66.27% of the total work stoppages followed by surgical pathologies, 149 work stoppages or 22.34% .

Depending on the number of days of work lost, surgical pathologies constituted the reasons having favored the most days of absence with 1756 days of work lost or 45.44% followed by ordinary pathologies, 1256 days or 32.50% (**table V**).

Speaking of ordinary infectious pathologies, malaria was strongly represented constituting the medical reason for 206 stoppages or 62.42% with 475 working days lost (**table VI**).

Concerning ordinary non-infectious pathologies, MSDs remain the majority in terms of the number of work stoppages, i.e. 33.91% with 90 working days lost (**table VII**).

In the surgical pathologies section, stoppages linked to traumatic wounds were the majority, i.e. 57 work stoppages (38.25%), followed by stoppages due to limb fractures, i.e. 52 stoppages (34.90%). It also emerges from this study that limb fractures, most of which result from commuting accidents, are responsible for 62.93% of working days lost, i.e. 1105 days followed by traumatic wounds 13.72% of working days lost. and hip osteoarthritis, i.e. 12.64% of working days lost (**Table VIII**).

Diabetes and hypertension were the main chronic pathologies that caused the most sick leave during our study with respective proportions of 14 and 11 sick leave, i.e. 46.66% and 36.67% respectively.

Regarding the number of work days lost, diabetes caused 139 work days lost, followed by high blood pressure and vaso-occusivecrises , respectively 36 and 27 work days lost (**Table IX**).

In terms of cost, it appears from our study that the cost of expenses linked to illnesses during our study was 967,740,000 FG with an average cost of 483,870,000 FG per year. In fact, the largest expenses were due to surgical pathologies, i.e. 77.14% of the total cost, followed by ordinary pathologies, i.e. 13.41% (**table X**).

The statistical tests carried out show significant links between sex, age and seniority and multiple stops (**table XI**).

Discussion

The objective of this study was to study absences for medical reasons in a port handling and transport company.

Around one in two workers was absent at least once, Casimirri in Italy in 2014 found a frequency of 52.33% of workers having had at least one sick leave for a chronic pathology [10]. Frequencies between 23% to 28% have been found [11,12] in several European studies. This low frequency observed in these countries could be justified on the one hand by health and medico-legal policies which are more advanced and on the other hand by the geographical distribution of tropical infectious pathologies which are more frequent in Africa.

The increase in the rate (0.9% to 2.2%) observed in our study could be justified on the one hand by the increase in the workload over the years (improvement in port productivity) generating more constraints and thus impacting the health of the worker and on the other hand by the occurrence of COVID-19 during the second period. Speaking of the total average number of days of absence, Vuorio [13] in Finland in 2019 found an average number of 11 days/year. This result could be justified by the high frequency of ordinary pathologies, particularly infectious ones, and not in our study where the duration of treatment remains relatively short.

Male predominance in our study

could be justified by the main activity of this company requiring physical endurance and therefore employing more people. Vuorio [13] in Finland in 2019 found in his study an average age of 49 years. Indeed, age remains one of the few variables easily available for

studying absenteeism and it probably corresponds to the state of health of the worker. It is noted that the older the employees became, the more they tended to be absent; Absenteeism would then reflect an increase in the risk of illness with age.

In relation to residence, it is reported that the risk of commuting accidents increases due to the increase in distances traveled to get to work.

The high representativeness of operators could be explained on the one hand by the fact that operators constitute the most represented category of the company and on the other hand by the fact that this category of agent is more exposed to occupational diseases (MSD) and work accidents than others, due to working conditions and the use of machines and/or equipment presenting risks.

Speaking of medical history, Mikponhoue in Benin in 2018 reported in his study a frequency of 52.6% of lumbar MSD [14]. These results could be justified on the one hand by the working conditions including postural constraints, stress, vibrations associated with work in a port environment and on the other hand the advanced age of the workers which is a risk factor for chronic disease.

The high representation of malaria could be justified by the fact that we are in an endemic area where tropical diseases, particularly malaria, continue to affect populations.

The high frequency of MSDs observed could be justified by the restrictive working conditions in the port environment, among other atypical schedules, stress, use of vibrating equipment.

Regarding the bivariate analysis , Chevalier A. in France [15] found in his study a direct link between age and the significant number of days of absence, therefore concluding that the age of workers plays a role. role on the occurrence and characteristics of absence for medical reasons.

Furthermore, the influence of gender on absenteeism seems to be proven. Indeed, our observations are in line with the hypothesis according to which women are more frequently absent than men [16] on the one hand due to the double workload, professional and family, which they assume especially when they are married and on the other hand in certain cases due to their physiological states relating to family status (pregnancy).

In terms of absenteeism, it seems that the workstation has a significant influence on the occurrence of absence. Which is not the case in our series; there was no statistically established relationship between workstation and multiple absences in our series.

Conclusion

Absenteeism remains a growing concern for companies. Our study contributes to the acquisition of knowledge on the phenomenon of absenteeism in the workplace, particularly in the port sector. The results obtained using our analysis methods allowed us to see that ordinary infectious or non-infectious diseases and surgical pathologies were the main medical reasons for absenteeism in this company. Furthermore, gender, age and seniority were closely linked to multiple stops. Even if several types of factors were evaluated in the study, there are still many factors that can affect the level of absenteeism, thus putting into perspective the need for additional prospective study in order to further explore this phenomenon..

References

[1] Rocheleau I. Absence management policies and their effects on absenteeism at work 1999.

[2] Mauramo E, Lallukka T, Mänty M, Sumanen H, Pietiläinen O, Lahelma E, et al. Diagnosis -

Specific Sickness Absence and Subsequent

Common Mental Disorders : A Register - Linkage

Cohort Study among Finnish Public Sector Employees . Int J Environ Res Public Health 2020; 17:782. https://doi.org/10.3390/ijerph17030782.

[3] Mansour S. The influence ofWorking conditions on the professional stress of staff in contact with customers: the case of the hotel sector in .

[4] Moshokwa LK. Managing absenteeism in vocational education in Botswana. Thesis . Cape Peninsula University of Technology , 2016.

[5] amien management P holds a D in higher accounting and financial studies I have been working for several years withstudents in accounting and management, ÀQIELCD, Advanced LC,Management L, Taxation L, et al. Absenteeism: how to calculate its real cost? GERESO HR experts 2018.

https://www.gereso.com/actualites/2018/06/05/ab senteisme -comment-calculer-son-cout-reel / (accessed February 26, 2020).

[6] Kocakulah MC, Kelley AG, Mitchell KM, Ruggieri MP. Absenteeism Problems And Costs : Causes, Effects And Cures. Int Bus Econ Res J IBER 2016; 15:89–96. https://doi.org/10.19030/iber.v15i3.9673.

[7] Guigné A de. Absenteeism costs French companies 60 billion each year. Le Figaro.fr 2016.https://www.lefigaro.fr/conjoncture/2016/09/07/2 0002-20160907ARTFIG00016-l-absenteismecoute-chaque-annee-60-milliards-aux-entreprisesfrancaises.php (accessed November 12, 2019).

[8] Hassard J, Milczarek M, EuropejskaAgencja Safety and Health at Work , Union European , Office Publications , European Agency Occupational Safety and Health , et al . Calculating the cost of work-related stress and psychosocial risks literature review . Luxembourg:
Publications Office of the European Union; 2014.

[9] Tchicaya AF, Wognin SB, Aka INA, Kouassi YM, Guiza J, Bonny JS. Professional and economic impacts of Plasmodium falciparum malaria on a private sector company in Côte d'Ivoire. Arch Mal Prof Environ 2014; 75:406–11. https://doi.org/10.1016/j.admp.2014.02.005.

[10] Casimirri E, Vaccari A, Schito M, Bonci M, Stendardo M, Stefanati A, et al. Chronic diseases are strongly associated with sickness absences in a sample of Italian public employees. Int J Occup Med Environ Health 2014;27:343–54. https://doi.org/10.2478/s13382-014-0256-x.

[11] Bouville G. The progression of absenteeism: new employee behaviors or new organizational constraints? HAL; 2010.

[12] Parent-Thirion A. Fourth European Working Conditions Survey. http://www.eurofound.europa.eu/pubdocs/2006/98/en/2/ef0698en.pdf 2007.

[13] Vuorio T, Suominen S, Kautiainen H, Korhonen P. Determinants of sickness absence rate among Finnish municipal employees . Scand J Prim Health Care 2019.

[14] Mikponhoue RC, Hinson AV, Fayomi BE. Musculoskeletal problems

In a company ofport handling in cotonou (BENIN). Rev AfrMalagache Rech Sci Santé 2018; 5.

[15] Chevalier A, Chastang JF, Blanc C. Absenteeism for medical reasons at Electricité et Gaz de France: comparison according to gender. Sci Soc Santé 1987; 5:19–40. https://doi.org/10.3406/sosan.1987.1066.

[16] Chaupain -Guillot S, Guillot O. Individual determinants of absenteeism at work. Rev Econ 2011;Vol. 62:419–27.

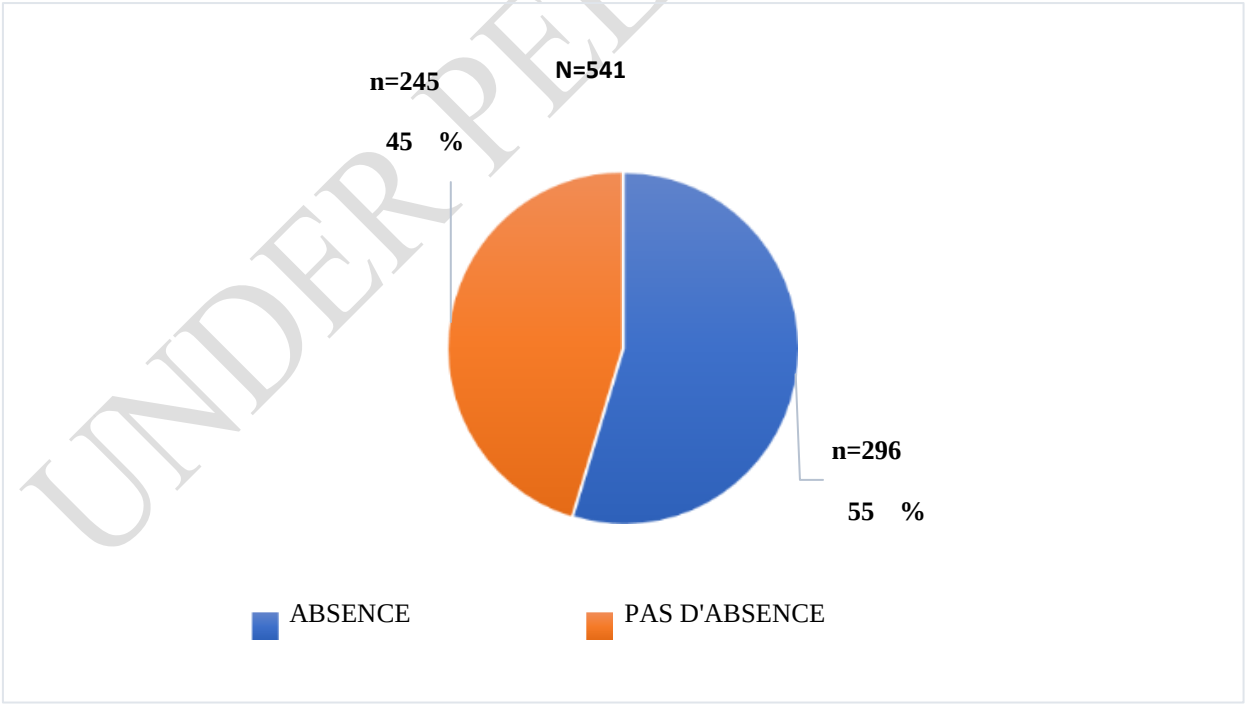

Fig 1: frequency of absences for medical reasons among workers.

Table I: distribution of workers according to the number of stoppages and number of working days lost in total

Period of absence	Number of stops	Number of days lost	Absenteeism _ (%)
1st year _ (**06/01/2018 to 05/31/2019)**	303 (45.43%)	1154 (29.71%)	**0.94**
2nd year – (**06/01/2019 to 05/31/2020)**	364 (54.57%)	2710 (70.29%)	**2.22**
Total	**667**	**3864**	-

Table II: distribution of workers absent for medical reasons according to the number of work stoppages

Number of stops	Effective	(%)
1 – 2	212	71.62
3 – 4	58	19.59
≥5	26	8.78
TOTAL	296	100

Table III: distribution of workers absent for medical reasons according to the number of working days lost

Number of days	Effective	(%)
1 - 3	116	39.19
4 - 7	73	24.66
7 - 28	84	28.38
> 28	23	7.77
TOTAL	296	100

Table IV: socio-professional characteristics of workers surveyed

Variables (N=296)		Pourcentage(%)
Sex		
	Male	253(85.47%)
	Female	43(14.52%)
Age (Mean ± SD)	**42.61 ± 8.6**	
	≤ 30	15(5.07%)
	31– 40	117(39.53%)
	>40	164(55.41 %)
Place of domicile		
	City center (less distant)	85(34.80%)
	Suburb (very remote)	193(65.20%)
Seniority (years) (Average ± SD)	**6.54 ± 2.4 (year)**	
	≥ 5	238(80.41%)
	< 5	58 (19.59%)
Workstation		
	Operation departments operator	172 (58.10%)
	administrator operator	94 (31.76%)
	Technician operator	30 (10.14%)

Table VI: distribution of sick leave and working days lost according to ordinary infectious diseases

Ordinary infectious diseases	Number of Stops **(%)**	Number of lost days**(%)**
Malaria	**206(62.42)**	**475(53.25)**
Flu	**36(10.9)**	66(7.40)
Acute gastroenteritis	25(7.57)	38(4.26)
Conjunctivitis	23(6.97)	50(5.60)
Boil	8(2.42)	19(2.13)
Angina	6(1.82)	12(1.34)
Gastritis	5(1.51)	10(1.12)
Erysipelas	5(1.51)	43(4.82)
Bacterial infection	3(0.9)	45(5.04)
Typhoid fever	3(0.9)	9(1.01)
Tuberculosis	3(0.9)	**105(11.77)**
Whitlow	2(0.6)	6(0.67)
Onychomycosis	2(0.6)	5(0.56)
Rheumatism	1(0.3)	3(0.33)
Sinusitis	1(0.3)	3(0.33)
Streptococcal	1(0.3)	3(0.33)
Total	**330(100)**	892(100)

Table VII: distribution of sick leave and work days lost according to ordinary no-infectious diseases

Pathologies systémiques non infectieuses	**Number of stops n(%)**	**Number of lost days (%)**
Musculoskeletal disorder	**39(33,91)**	**90(24,72)**
Asthenia	**37(32,17)**	**78(21,43)**
Eczema	9(7,83)	29(7,97)
Haemorrhoid	8(6,95)	19(5,21)
Pregnancy	6(5,22)	26(7,14)
Herniated disc	4(3,48)	50(13,73)
Thrombophlebitis	4(3,48)	19(5,22)
Gout	3(2,61)	5(1,37)
Renal calculus	2(1,74)	8(2,20)
Hepatomegaly	2(1,74)	10(2,75)
Renal impairment	1(0,87)	30(8,24)
Total	**115(100,00)**	**364(100,00)**

Table VIII: distribution of socio-professional work according to surgical disease

Type de pathologies chirurgicales	**Nombre d'arrêt**	**Nombre de jours perdus**
Traumatic wound	**57(38,25)**	**241(13,72)**
Fracture of members	**52(34,90)**	**1105(62,93)**
Dental caries	16(10,74)	40(2,28)
Cataract surgery	6(4,02)	50(2,85)
Coxarthrosis	6(4,02)	222(12,64)
Burning	4(2,68)	17(0,97)
Varicocele	3(2,01)	36(2,05)
Luxation	2(1,34)	11(0,63)
Lipectomy	2(1,34)	14(0,80)
Myomectomy	1(0,67)	20(1,14)
TOTAL	**149(100)**	**1756(100)**

Table IX: distribution of sick leave and work days days lost according to chronic pathologies

Type of chronic diseases of	Number n(%)	stop	Number oLost day n(%)
Diabetes	**14(46.66)**		**139(66.82)**
HBP*	**11(36.67)**		**36(17.31)**
CVO (sickle cell anemia)	3(10)		27(12.98)
Epilepsy	2(6.67)		6(2.88)
Total	30(100)		208(100)

*High blood pressure

Table X: distribution of pathologies according to the estimated average direct cost of care

Type of Disease	Cost (FG)	(%)
Surgical pathology	**746,500,000**	**77.14**
Ordinary pathology	129,740,000	13.41
Tumor	60,000,000	6.20
Chronic pathology	30,000,000	3.1
Psychiatric pathology	1,500,000	0.15
Covid-19	00	00
Total	967,740,000	100%

TableXI: bivariateanalysisbetween socio-occupational data and multiple stops

professional data	**Multiple stop**	**Multiple stop**	OR	IC	P-value

	(YES)	(NO)			
		Sex			
female/Male	13/54	30/199	1,59	0,77-3,27	0,23
		Age			
>40 / ≤40	37/30	127/102	0,99	0,57-1,71	1,00
		Seniority			
>5 / ≤5 (years)	42/25	156/73	0,78	0,44-1,38	0,46
		Workstation			
Operation departments operator	49/18	153/76	1,35	0,73-2,47	0,37

*more than 2.25 stops (> average number of stops)